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Project/Site: 130 Environmental Pa	nrk		Citv/Cou	_{inty:} Lockhai	rt/Caldwell	_ Sampling Date: 06/24/2013
Applicant/Owner: 130 Environmenta			-			Sampling Point: T16-DP1
Investigator(s): Troegle, Josh & Boo				, Township, Rai		
Landform (hillslope, terrace, etc.): Hillsl						X Slope (%): 7
Subregion (LRR): J - Southwestern						
Soil Map Unit Name: FeE - Fett grave						
Are climatic / hydrologic conditions on the						
						present? Yes ✓ No
Are Vegetation, Soil, or H						
Are Vegetation, Soil, or H					eded, explain any answ	•
SUMMARY OF FINDINGS – At	tach site ma	p showing	samp	ling point le	ocations, transect	s, important features, etc.
Hydrophytic Vegetation Present?	Yes	No <u></u> ✓		s the Sampled	Area	
Hydric Soil Present?	Yes	No <u>√</u>		vithin a Wetlar		No <u>√</u>
Wetland Hydrology Present?	Yes	No <u>√</u>		vitriii a vvetiai		
Remarks:						
Cedar elm - post oak transition. Wo	oodland type in	upland area	a in wes	stern part of p	roperty.	

VEGETATION – Use scientific	names of pla					
Tree Stratum (Plot size: 30')	Absolute % Cover		ant Indicator	Dominance Test wor	
1. Ulmus crassifolia	/	50	Yes	FAC	Number of Dominant : That Are OBL, FACW	
2. Quercus stellata		30	Yes	FACU	(excluding FAC-):	3 (A)
3.					Total Number of Dom	inant
4.					Species Across All St	7
		80	= Total	Cover	Percent of Dominant S	Snecies
Sapling/Shrub Stratum (Plot size: 15')				That Are OBL, FACW	
1. Prosopis glandulosa			Yes	FACU	Prevalence Index wo	rkehoot:
2. Ilex vomitoria			Yes	FAC	Total % Cover of:	
3						x 1 =
4						x 2 =
5		40				x 3 =
Herb Stratum (Plot size: 5')	40	= Total	Cover	1	x 4 =
1. Elymus virginicus		30	Yes	FAC	UPL species	
2. Opuntia lindheimeri		10	Yes	UPL		(A)(B)
3. Vernonia baldwinii		5	No	FACU		
4.						x = B/A =
5.					Hydrophytic Vegetat	
6.					1	Hydrophytic Vegetation
7					2 - Dominance Te	
8					3 - Prevalence In	
9		450			data in Remar	Adaptations ¹ (Provide supporting ks or on a separate sheet)
10.					1	ophytic Vegetation ¹ (Explain)
201		45	= Total	Cover		
Woody Vine Stratum (Plot size: 30')	15	Yes	FACU		oil and wetland hydrology must turbed or problematic.
1. Smilax bona-nox	_	13	168	TACO		
2		15		<u> </u>	Hydrophytic Vegetation	
% Bare Ground in Herb Stratum 55		13	= Total	Cover	Present? Y	es No <u> </u>
Remarks:					1	
Upland woods. Hydrophytic vegeta	ation criterion is	not met.				
, , ,						
US Army Corps of Engineers			-			Great Plains - Version 2.0

Profile Des	cription: (Descri	e to the depth i	needed to docur	nent the i	ndicator	or confirm	the absence	of indicators.)	
Depth	Matrix			x Feature		2			
(inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks	<u> </u>
0-10	10 YR 6/3	100					Sand	Gravelly	
								-	
¹Type: C=C	oncentration, D=D	epletion, RM=Re	duced Matrix, CS	S=Covered	d or Coate	d Sand Gi	rains. ² Lo	cation: PL=Pore Lining,	M=Matrix.
Hydric Soil	Indicators: (App	licable to all LR	Rs, unless othe	rwise not	ed.)		Indicators	for Problematic Hydri	c Soils³:
Histosol	I (A1)		Sandy (Gleyed Ma	ıtrix (S4)		1 cm l	Muck (A9) (LRR I, J)	
Histic E	pipedon (A2)			Redox (S5	•			Prairie Redox (A16) (LF	RR F, G, H)
_	istic (A3)			Matrix (S				Surface (S7) (LRR G)	
	en Sulfide (A4)	D.E.\		Mucky Mir	, ,			Plains Depressions (F16	
ı —	d Layers (A5) (LR	-		Gleyed Ma d Matrix (I				RR H outside of MLRA	12 & 13)
_	uck (A9) (LRR F, (d Below Dark Surf			а матлх (і Dark Surfa	•		_	ed Vertic (F18) arent Material (TF2)	
ı —	ark Surface (A12)	aco (/ / / /			rface (F7)			Shallow Dark Surface (T	F12)
	Mucky Mineral (S1)		Depressio	, ,			(Explain in Remarks)	
	Mucky Peat or Pea		l) High Pla	ains Depre	essions (F	16)	³ Indicators	of hydrophytic vegetation	on and
5 cm Mu	ucky Peat or Peat	(S3) (LRR F)	(ML	RA 72 & 7	73 of LRR	H)		d hydrology must be pre	
							unless	disturbed or problemat	ic.
	Layer (if present)	:							
Type: Ha			-						,
Depth (in	ches): 10						Hydric Soil	Present? Yes	No <u> </u>
Remarks:									
No hydric s	oil indicators obs	served.							
HYDROLO	GY								
Wetland Hy	drology Indicator	rs:							
-	cators (minimum c		heck all that appl	y)			Seconda	ary Indicators (minimum	of two required)
	Water (A1)		Salt Crust					face Soil Cracks (B6)	
_	ater Table (A2)		Aquatic In		s (B13)			rsely Vegetated Concav	e Surface (B8)
Saturati			Hydrogen					inage Patterns (B10)	` ' 1
Water M	Marks (B1)		Dry-Seaso	n Water 1	able (C2)		Oxi	dized Rhizospheres on I	iving Roots (C3)
Sedime	nt Deposits (B2)		Oxidized F	Rhizosphe	res on Liv	ing Roots	(C3) (v	vhere tilled)	
Drift De	posits (B3)		(where	not tilled)			Cra	yfish Burrows (C8)	
Algai Ma	at or Crust (B4)		Presence	of Reduce	d Iron (C4	!)	Sat	uration Visible on Aerial	Imagery (C9)
Iron Dep	posits (B5)		Thin Muck	Surface (C7)		Geo	omorphic Position (D2)	
Inundati	ion Visible on Aeria	al Imagery (B7)	Other (Exp	olain in Re	marks)		FAC	C-Neutral Test (D5)	
Water-S	Stained Leaves (B9	9)					Fros	st-Heave Hummocks (D	7) (LRR F)
Field Obser	vations:								
Surface Wat	er Present?		✓ Depth (in	ches):					
Water Table	Present?	Yes No	✓ Depth (in	ches):		_			
Saturation P		Yes No	✓ Depth (in	ches):		_ Wetl	and Hydrolog	y Present? Yes	No <u>√</u>
	pillary fringe) corded Data (strea	am gauge monit	oring well aerial	photos pr	evious ins	pections)	if available:		
Describe IVe	Conded Data (Sties	am gaago, mome	oig iron, donar	μ.ιοτου, μι	- 110d0 iilo	p 2000110),	aranapio.		
Pomerke:		- Dr.							
Remarks:	e on Floodalaia	Zone At hower	er no other hus	irology in	dicators	were obs	enved Mete	and hydrology criterio	n is not met
Data point i	s on Piooupiain	Zone A, nowev	or no other nyc	nology in	uicators	Meie ODS	orveu. Wella	and hydrology chileflor	i is not met.
10									

Project/Site: 130 Environmental Park		City/C	ounty	Lockha	rt/Caldwell	Sampling Date: 06/24/201
Applicant/Owner: 130 Environmental Park, LLC						Sampling Point: T16-DP2
Investigator(s): Troegle, Josh & Boe, Brian						
Landform (hillslope, terrace, etc.): Valley						Slone (%): 2
Subregion (LRR): J - Southwestern Prairies						
Soil Map Unit Name: FeE - Fett gravelly soils, 1-12						
•						cation: None available
Are climatic / hydrologic conditions on the site typical for t	_				•	
Are Vegetation, Soil, or Hydrology				Are "	"Normal Circumstances"	present? Yes No
Are Vegetation, Soil, or Hydrology	naturally pro	blema	atic?	(If ne	eeded, explain any answe	ers in Remarks.)
SUMMARY OF FINDINGS - Attach site ma	p showing	san	plin	g point l	ocations, transects	s, important features, e
Hydrophytic Vegetation Present? Yes	No √		1- 41-	. 6	14	
Hydric Soil Present? Yes				e Sampled in a Wetlar		No <u>√</u>
Wetland Hydrology Present? Yes	No <u>√</u>		with	in a wellai	id! Tes	NO <u>*</u>
Remarks:				-		
Grassy open meadow.						
VEGETATION – Use scientific names of pla	ints					
	Absolute	Don	ninant	Indicator	Dominance Test work	ksheet:
Tree Stratum (Plot size: 30'	% Cover	Spe	cies?	Status	Number of Dominant S	Species
1					That Are OBL, FACW,	or FAC
2					(excluding FAC-):	(A)
3					Total Number of Domir	2
4					Species Across All Stra	ata: <u>-</u> (B)
Sapling/Shrub Stratum (Plot size: 15'		= Tot	al Cov	/er	Percent of Dominant S	
1.					That Are OBL, FACW,	or FAC: _50 (A/E
2.					Prevalence Index wor	rksheet:
3						Multiply by:
4.						x 1 =
5						x 2 =
<u></u>		= Tot	al Cov	ver		x 3 =
Herb Stratum (Plot size: 5'	(0)	37		EACW		x 4 =
1. Phalaris caroliniana	$-\frac{60}{10}$	Yes No		FACW	UPL species	
2. Tridens albescens 3. Solanum elaeagnifolium	10	No		UPL	Column Totals:	(A) (B
4 Ambrosia psilostachya	$-\frac{10}{10}$	No	_	FACU	Prevalence Index	c = B/A =
5. Iva annua	10	No		FAC	Hydrophytic Vegetati	on Indicators:
•					1 - Rapid Test for	Hydrophytic Vegetation
6					2 - Dominance Tes	st is >50%
7. 8.					3 - Prevalence Ind	lex is ≤3.0 ¹
9						Adaptations ¹ (Provide supportin
10.						(s or on a separate sheet)
	100	= Tot	tal Cov	ver		ophytic Vegetation¹ (Explain)
Woody Vine Stratum (Plot size: 30'					¹ Indicators of hydric so be present, unless dist	oil and wetland hydrology must
1. Smilax bona-nox		Yes		FACU	be present, unless dist	urbed or problematic.
2					Hydrophytic	
% Bare Ground in Herb Stratum 0	10	= To	tal Cov	ver	Vegetation Present? Ye	es No
Remarks:						
Herbaceous meadow dominated by canary grass	and greenbr	ier. I	Hydro	phytic vec	getation criterion is not	met.
, , , , , , , , , , , , , , , , , , , ,	3		,	. ,		

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Depth (inches) 0-16	Matrix		Redov	x Features					
	Color (moist)	% C	olor (moist)	%	Type ¹	Loc²	Texture	Remarks	
	10 YR 2/1	100					Silty clay		
									-
	-								
¹ Type: C=C	Concentration, D=Dep	oletion, RM=Redu	uced Matrix, CS	=Covered	or Coate	d Sand Gr	ains. ² Location	n: PL=Pore Lining, M	=Matrix.
Hydric Soil	Indicators: (Applic	able to all LRRs	, unless other	wise note	d.)		Indicators for	Problematic Hydric S	
Histoso				Sleyed Mat			1 cm Muck	(A9) (LRR I, J)	
	pipedon (A2)		Sandy F					ie Redox (A16) (LRR	F, G, H)
	listic (A3)		Stripped	Matrix (S6	3)		Dark Surface	ce (S7) (LRR G)	
	en Sulfide (A4)		Loamy N	Mucky Mine	eral (F1)		High Plains	Depressions (F16)	
Stratifie	ed Layers (A5) (LRR	F)		Sleyed Mat			•	outside of MLRA 72	& 73)
_	uck (A9) (LRR F, G,		Deplete				Reduced V	, ,	
_	ed Below Dark Surfac	ce (A11)	Redox D		, ,		Red Parent		0)
	ark Surface (A12)			d Dark Sur	, ,			w Dark Surface (TF1	2)
_	Mucky Mineral (S1) Mucky Peat or Peat	(S2) (I DD C H)		epression		16)		ain in Remarks) drophytic vegetation	and
	lucky Peat or Peat (S			RA 72 & 7				Irology must be prese	
J CIII M	doky real or real (C	(L itti)	(0 0, 2, , , ,	,		urbed or problematic.	,
Restrictive	Layer (if present):						1		
	nches):						Hydric Soil Pres	sent? Yes	No ✓
Remarks:	101100):								
	soil indicators obse	rved							
NO Hydric 3	son maicators obsc	1400.							
							10.00		
YDROLO	OGY								
Wetland Hy	drology Indicators								
			ck all that apply	v)			0	dicators (minimum of	
Primary Indi	icators (minimum of o	one required; che					Secondary in		two required
	icators (minimum of o	one required; che							two required
Surface	e Water (A1)	one required; che	Salt Crust	(B11)	: (B13)		Surface	Soil Cracks (B6)	
Surface High W	e Water (A1) /ater Table (A2)	one required; che	Salt Crust Aquatic Inv	(B11) vertebrates			Surface Sparsely	Soil Cracks (B6) Vegetated Concave	
Surface High W Saturati	e Water (A1) /ater Table (A2) ition (A3)	one required; che	Salt Crust Aquatic Inv Hydrogen	(B11) vertebrates Sulfide Od	or (C1)		Surface Sparsely Drainage	Soil Cracks (B6) Vegetated Concave Patterns (B10)	Surface (B8)
Surface High W Saturati Water M	e Water (A1) /ater Table (A2) tion (A3) Marks (B1)	one required; che	Salt Crust Aquatic Inv Hydrogen Dry-Seaso	(B11) vertebrates Sulfide Ode on Water Ta	or (C1) able (C2)	ing Roots	Surface Sparsely Drainage Oxidized	Soil Cracks (B6) Vegetated Concave Patterns (B10) Rhizospheres on Liv	Surface (B8)
Surface High W Saturati Water M Sedime	e Water (A1) /ater Table (A2) rion (A3) Marks (B1) ent Deposits (B2)	one required; che	Salt Crust Aquatic Inv Hydrogen Dry-Seaso Oxidized F	(B11) vertebrates Sulfide Ode n Water Ta Rhizosphere	or (C1) able (C2)	ing Roots	Surface Sparsely Drainage Oxidized (C3) (where	Soil Cracks (B6) Vegetated Concave Patterns (B10)	Surface (B8)
Surface High W Saturati Water M Sedime Drift De	e Water (A1) /ater Table (A2) /ion (A3) Marks (B1) ent Deposits (B2) eposits (B3)	one required; che	Salt Crust Aquatic Inv Hydrogen Dry-Seaso Oxidized F	(B11) vertebrates Sulfide Ode on Water Ta Rhizosphere not tilled)	or (C1) able (C2) es on Livi		Surface Sparsely Drainage Oxidized (C3) (where	Soil Cracks (B6) Vegetated Concave Patterns (B10) Rhizospheres on Liv tilled) Burrows (C8)	Surface (B8)
Surface High W Saturati Water M Sedime Drift De Algal M	e Water (A1) later Table (A2) lion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4)	one required; che	Salt Crust Aquatic Inv Hydrogen Dry-Seaso Oxidized F (where r	(B11) vertebrates Sulfide Ode on Water Ta Rhizosphere not tilled) of Reduced	or (C1) able (C2) es on Livi d Iron (C4		Surface Sparsely Drainage Oxidized (C3) (where Crayfish Saturation	Soil Cracks (B6) Vegetated Concave Patterns (B10) Rhizospheres on Live tilled) Burrows (C8) on Visible on Aerial Im	Surface (B8)
Surface High W Saturati Water M Sedime Drift De Algal M Iron De	e Water (A1) Vater Table (A2) Vion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) eposits (B5)		Salt Crust Aquatic Inv Hydrogen Dry-Seaso Oxidized F (where r Presence of Thin Muck	(B11) vertebrates Sulfide Oden Water Ta Rhizosphere not tilled) of Reduced Surface (C	or (C1) able (C2) es on Livi d Iron (C4		Surface Sparsely Drainage Oxidized (C3) (where Crayfish Saturatio Geomory	Soil Cracks (B6) Vegetated Concave Patterns (B10) Rhizospheres on Live Itiled) Burrows (C8) on Visible on Aerial Imobic Position (D2)	Surface (B8)
Surface High W Saturati Water M Sedime Drift De Algal M Iron De	e Water (A1) Vater Table (A2) vion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) eposits (B5) tion Visible on Aerial		Salt Crust Aquatic Inv Hydrogen Dry-Seaso Oxidized F (where r	(B11) vertebrates Sulfide Ode on Water Ta Rhizosphere not tilled) of Reduced Surface (C	or (C1) able (C2) es on Livi d Iron (C4		Surface Sparsely Drainage Oxidized (C3) (where Saturatic Geomory FAC-Net	Soil Cracks (B6) Vegetated Concave Patterns (B10) Rhizospheres on Live Itiled) Burrows (C8) On Visible on Aerial Imohic Position (D2)	Surface (B8) ing Roots (C3
Surface High W Saturat Water M Sedime Drift De Algal M Iron De Inundat Water-S	e Water (A1) Vater Table (A2) vion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) eposits (B5) tion Visible on Aerial Stained Leaves (B9)		Salt Crust Aquatic Inv Hydrogen Dry-Seaso Oxidized F (where r Presence of Thin Muck	(B11) vertebrates Sulfide Ode on Water Ta Rhizosphere not tilled) of Reduced Surface (C	or (C1) able (C2) es on Livi d Iron (C4		Surface Sparsely Drainage Oxidized (C3) (where Saturatic Geomory FAC-Net	Soil Cracks (B6) Vegetated Concave Patterns (B10) Rhizospheres on Live Itiled) Burrows (C8) on Visible on Aerial Imobic Position (D2)	Surface (B8) ing Roots (C3
Surface High W Saturat Water M Sedime Drift De Algal M Iron De Inundat Water-S	e Water (A1) /ater Table (A2) /ater Table (A2) /ater Table (A2) /ater Table (A2) /ater Cast (B2) /ater Deposits (B2) /ater Deposits (B3) /ater Crust (B4) /ater Crust (B4) /ater Crust (B5)	Imagery (B7)	Salt Crust Aquatic Inv Hydrogen Dry-Seaso Oxidized F (where r Presence of Thin Muck Other (Exp	(B11) vertebrates Sulfide Ode on Water Ta Rhizosphere not tilled) of Reduced Surface (Collain in Rer	or (C1) able (C2) es on Livi d Iron (C4 C7) marks)	()	Surface Sparsely Drainage Oxidized (C3) (where Saturatic Geomory FAC-Net	Soil Cracks (B6) Vegetated Concave Patterns (B10) Rhizospheres on Live Itiled) Burrows (C8) On Visible on Aerial Imohic Position (D2)	Surface (B8) ing Roots (C3
Surface High W Saturati Water M Sedime Drift De Algal M Iron De Inundat Water-S Field Obse	e Water (A1) /ater Table (A2) /ater Table (A2) /ater Table (A2) /ater Table (A2) /ater Cast (B2) /ater Deposits (B2) /ater Deposits (B3) //ater Crust (B4) //ater Crust (B4) //ater Crust (B4) //ater Crust (B4) //ater Crust (B5) //ater Crust (B9) //ater Crust (B9) //ater Crust (B9) //ater Crust (B9)	Imagery (B7) ∕es No <u>•</u>	Salt Crust Aquatic Inv Hydrogen Dry-Seaso Oxidized F (where r Presence of Thin Muck Other (Exp	(B11) vertebrates Sulfide Oden Water Ta Rhizosphere not tilled) of Reduced Surface (Colain in Rer	or (C1) able (C2) es on Livi d Iron (C4 C7) marks)	-	Surface Sparsely Drainage Oxidized (C3) (where Saturatic Geomory FAC-Net	Soil Cracks (B6) Vegetated Concave Patterns (B10) Rhizospheres on Live Itiled) Burrows (C8) On Visible on Aerial Imohic Position (D2)	Surface (B8) ing Roots (C3
Surface High W Saturati Water M Sedime Drift De Algal M Iron De Inundat Water-S Field Obse Surface Wa	e Water (A1) Vater Table (A2) Vater Table (A2) Vater Table (A2) Vater Table (B2) Vater Deposits (B2) Vater Deposits (B3) Vater Crust (B4) Vater Present? Vater Present?	Imagery (B7) ∕es No <u>•</u> ∕es No <u>•</u>	Salt Crust Aquatic Inv Hydrogen Dry-Seaso Oxidized F (where r Presence c Thin Muck Other (Exp	(B11) vertebrates Sulfide Od- on Water Ta Rhizosphere not tilled) of Reduced Surface (Colain in Rer ches):	or (C1) able (C2) es on Livi d Iron (C4 C7) marks)	-	Surface Sparsely Drainage Oxidized (C3) (where Crayfish Saturatio Geomory FAC-Net	Soil Cracks (B6) Vegetated Concave Patterns (B10) Rhizospheres on Livetilled) Burrows (C8) On Visible on Aerial Imphic Position (D2) Lutral Test (D5) ave Hummocks (D7)	Surface (B8) ing Roots (C3 nagery (C9) (LRR F)
Surface High W Saturati Water M Sedime Drift De Algal M Iron De Inundat Water-S Field Obset Surface Wa Water Table Saturation F	e Water (A1) Vater Table (A2) Vater Table (A2) Vater Table (A2) Vater Table (A2) Marks (B1) Perposits (B2) Perposits (B3) Interest (B4) Perposits (B5) Vation Visible on Aerial Stained Leaves (B9) Present? Present?	Imagery (B7) ∕es No <u>•</u>	Salt Crust Aquatic Inv Hydrogen Dry-Seaso Oxidized F (where r Presence c Thin Muck Other (Exp	(B11) vertebrates Sulfide Oden Water Ta Rhizosphere not tilled) of Reduced Surface (Colain in Rer	or (C1) able (C2) es on Livi d Iron (C4 C7) marks)	-	Surface Sparsely Drainage Oxidized (C3) (where Crayfish Saturatio Geomory FAC-Net	Soil Cracks (B6) Vegetated Concave Patterns (B10) Rhizospheres on Live Itiled) Burrows (C8) On Visible on Aerial Imohic Position (D2)	Surface (B8) ing Roots (C3 nagery (C9) (LRR F)
Surface High W Saturati Water M Sedime Drift De Algal M Iron De Inundat Water-\$ Field Obse Surface Wa Water Table Saturation F	e Water (A1) /ater Table (A2) /ater Deposits (B2) /ater Deposits (B3) /ater Orust (B4) /ater Orus	Imagery (B7) /es No ▼ /es No ▼	Salt Crust Aquatic Inv Hydrogen Dry-Seaso Oxidized F (where r Presence of Thin Muck Other (Exp Depth (inc) Depth (inc)	(B11) vertebrates Sulfide Ode on Water Ta Rhizosphere not tilled) of Reduced Surface (Colain in Rer ches): ches):	or (C1) able (C2) es on Livi d Iron (C4 C7) marks)	Wetl	Surface Sparsely Drainage Oxidized (C3) (where Crayfish Saturatio Geomory FAC-Nee Frost-He	Soil Cracks (B6) Vegetated Concave Patterns (B10) Rhizospheres on Livetilled) Burrows (C8) On Visible on Aerial Imphic Position (D2) Lutral Test (D5) ave Hummocks (D7)	Surface (B8) ing Roots (C3 nagery (C9) (LRR F)
Surface High W Saturati Water M Sedime Drift De Algal M Iron De Inundat Water-\$ Field Obse Surface Wa Water Table Saturation F	e Water (A1) Vater Table (A2) Vater Table (A2) Vater Table (A2) Vater Table (A2) Marks (B1) Perposits (B2) Perposits (B3) Interest (B4) Perposits (B5) Vation Visible on Aerial Stained Leaves (B9) Present? Present?	Imagery (B7) /es No ▼ /es No ▼	Salt Crust Aquatic Inv Hydrogen Dry-Seaso Oxidized F (where r Presence of Thin Muck Other (Exp Depth (inc) Depth (inc)	(B11) vertebrates Sulfide Ode on Water Ta Rhizosphere not tilled) of Reduced Surface (Colain in Rer ches): ches):	or (C1) able (C2) es on Livi d Iron (C4 C7) marks)	Wetl	Surface Sparsely Drainage Oxidized (C3) (where Crayfish Saturatio Geomory FAC-Nee Frost-He	Soil Cracks (B6) Vegetated Concave Patterns (B10) Rhizospheres on Livetilled) Burrows (C8) On Visible on Aerial Imphic Position (D2) Lutral Test (D5) ave Hummocks (D7)	Surface (B8) ing Roots (C3 nagery (C9) (LRR F)
Surface High W Saturati Water M Sedime Drift De Algal M Iron De Inundat Water-S Field Obse Surface Wa Water Table Saturation F (includes ca Describe Re	e Water (A1) /ater Table (A2) /ater Deposits (B2) /ater Deposits (B3) /ater Orust (B4) /ater Orus	Imagery (B7) /es No ▼ /es No ▼	Salt Crust Aquatic Inv Hydrogen Dry-Seaso Oxidized F (where r Presence of Thin Muck Other (Exp Depth (inc) Depth (inc)	(B11) vertebrates Sulfide Ode on Water Ta Rhizosphere not tilled) of Reduced Surface (Colain in Rer ches): ches):	or (C1) able (C2) es on Livi d Iron (C4 C7) marks)	Wetl	Surface Sparsely Drainage Oxidized (C3) (where Crayfish Saturatio Geomory FAC-Nee Frost-He	Soil Cracks (B6) Vegetated Concave Patterns (B10) Rhizospheres on Livetilled) Burrows (C8) On Visible on Aerial Imphic Position (D2) Lutral Test (D5) ave Hummocks (D7)	Surface (B8) ing Roots (C3 nagery (C9) (LRR F)
Surface High W Saturati Water M Sedime Drift De Algal M Iron De Inundat Water-S Field Obser Surface Wa Water Table Saturation F (includes ca Describe Re	e Water (A1) /ater Table (A2) /ater Marks (B1) /ater Deposits (B2) /aposits (B3) /ater Crust (B4) /aposits (B5) /ater Marks (B5) /ater Marks (B9) //ater Marks (B1) //ater Marks (B2) //ater Marks (Imagery (B7) Yes No ▼ Yes No ▼ Yes No ▼	Salt Crust Aquatic Inv Hydrogen Dry-Seaso Oxidized F (where r Presence Thin Muck Other (Exp Depth (inc) Depth (inc) Depth (inc)	(B11) vertebrates Sulfide Ode on Water Ta Rhizosphere not tilled) of Reduced Surface (Colain in Rer ches): ches):	or (C1) able (C2) es on Livi d Iron (C4 C7) marks)	Wetl	Surface Sparsely Drainage Oxidized (C3) (where Crayfish Saturatic Geomory FAC-Net Frost-He	Soil Cracks (B6) Vegetated Concave Patterns (B10) Rhizospheres on Live Itiled) Burrows (C8) On Visible on Aerial Imphic Position (D2) Outral Test (D5) Outral Test (D5) Outral Test (D7) Outral Test (D7) Outral Test (D7)	Surface (B8) ing Roots (C3 nagery (C9) (LRR F)
Surface High W Saturati Water M Sedime Drift De Algal M Iron De Inundat Water-S Field Obser Surface Wa Water Table Saturation Fincludes ca Describe Re	e Water (A1) /ater Table (A2) /ater Marks (B1) /ater Deposits (B2) /aposits (B3) /ater Crust (B4) /aposits (B5) /ater Marks (B5) /ater Marks (B9) //ater Marks (B1) //ater Marks (B2) //ater Marks (Imagery (B7) Yes No ▼ Yes No ▼ Yes No ▼	Salt Crust Aquatic Inv Hydrogen Dry-Seaso Oxidized F (where r Presence Thin Muck Other (Exp Depth (inc) Depth (inc) Depth (inc)	(B11) vertebrates Sulfide Ode on Water Ta Rhizosphere not tilled) of Reduced Surface (Colain in Rer ches): ches):	or (C1) able (C2) es on Livi d Iron (C4 C7) marks)	Wetl	Surface Sparsely Drainage Oxidized (C3) (where Crayfish Saturatic Geomory FAC-Net Frost-He	Soil Cracks (B6) Vegetated Concave Patterns (B10) Rhizospheres on Livetilled) Burrows (C8) On Visible on Aerial Imphic Position (D2) Lutral Test (D5) ave Hummocks (D7)	Surface (B8) ing Roots (C nagery (C9) (LRR F)

Project/Site: 130 Environmental Park		City/Co	ounty: Loc	khart/Caldwell Sampling Date: 06/24/2013
Applicant/Owner: 130 Environmental Park, LLC				State: TX Sampling Point: T16-DP3
Investigator(s): Troegle, Josh & Boe, Brian				
• . ,				
Landform (hillslope, terrace, etc.): Swale				
• • • • • • • • • • • • • • • • • • • •				Long: <u>-97.65</u> Datum: <u>NAD 83</u>
Soil Map Unit Name: FeE - Fett gravelly soils, 1-12%	slopes			NWI classification: None available
Are climatic / hydrologic conditions on the site typical for this	s time of year	ar? Ye	es <u>√</u>	No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrologys	ignificantly	disturb	ed?	Are "Normal Circumstances" present? Yes ✓ No
Are Vegetation, Soil, or Hydrology n				(If needed, explain any answers in Remarks.)
				int locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes ✓ N	0			
Hydric Soil Present? Yes ✓ N				npled Area /etland?
Wetland Hydrology Present? Yes ✓ N			within a W	/etland? Yes <u>√</u> No
Remarks:				
Swale that drains to channel south of transect.				

VEGETATION – Use scientific names of plan	ts.			
Tree Stratum (Plot size: 30'			inant Indica	
			cies? Stat	Number of Dominant Species That Are OBL, FACW, or FAC
1				(excluding FAC+): 2 (A)
2				Total Number of Dominant
3				Species Across All Strata: 2 (B)
4			al Cover	Bereat of Devices Consider
Sapling/Shrub Stratum (Plot size: 15'	****	. 1010	21 00101	Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)
1				
2				Prevalence Index worksheet:
3				
4				OBL species x 1 =
5				FACW species x 2 = FAC species x 3 =
Herb Stratum (Plot size: 5')		= Tota	al Cover	FACU species x 4 =
1. Carex brevior	50	Yes	FAC	•
2 Eleocharis engelmannii	50	Yes	FAC	
3	-			(5)
4,				Prevalence Index = B/A =
5.				Hydrophytic Vegetation Indicators:
6.				1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
8				3 - Prevalence Index is ≤3.0¹
9.				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
10				Problematic Hydrophytic Vegetation (Explain)
	100	= Tota	al Cover	. , , , ,
Woody Vine Stratum (Plot size: 30'		-		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1				be present, unless disturbed of problematic.
2			-	Hydrophytic
% Bare Ground in Herb Stratum 0		_ = Tota	al Cover	Vegetation Present? Yes ✓ No
Remarks:				
Emergent wetland dominated by sedge and spike ru	ısh. Hvdr	ophytic	c vegetatio	on criterion is met.
gone reading and applied to		٠٠٠,٠٠٠		
US Army Corps of Engineers				Great Plains – Version 2.0

	cription: (Describe	e to the depth ne				or confirm	the absence of ir	ndicators.)
Depth (inches)	Matrix Color (moist)		Redo olor (moist)	x Feature: %	Type ¹	Loc ²	Texture	Remarks
(inches) 0-4	Color (moist) 10 YR 2/1		olor (moist) YR 5/6	3	туре		Clay	I/elliquy2
0-4	10 1 1 2/1	_ = 10	11 3/0				Clay	
								-
			<u></u>					40.00
1Type: C=C	Concentration, D=De	nletion RM=Red	uced Matrix C	S=Covere	d or Coate	ed Sand G	rains ² Location	n: PL=Pore Lining, M=Matrix.
	Indicators: (Appli					d Cana Ci		Problematic Hydric Soils ³ :
Histoso				Gleyed Ma			1 cm Muck	(A9) (LRR I, J)
_	pipedon (A2)			Redox (S5	. ,			rie Redox (A16) (LRR F, G, H)
	listic (A3)			d Matrix (S				ce (S7) (LRR G)
	en Sulfide (A4)			Mucky Mir			High Plains	Depressions (F16)
	ed Layers (A5) (LRR	(F)		Gleyed Ma				outside of MLRA 72 & 73)
1 cm M	uck (A9) (LRR F, G	, H)		ed Matrix (Reduced V	. ,
· — ·	ed Below Dark Surfa	ice (A11)	✓ Redox					t Material (TF2)
_	ark Surface (A12)			ed Dark Su)		ow Dark Surface (TF12)
_ /	Mucky Mineral (S1)			Depressio		16)		lain in Remarks) ydrophytic vegetation and
	Mucky Peat or Peat (a ucky Peat or Peat (a			RA 72 &		•		drology must be present,
5 CIN IVI	ucky real of real (33) (LKK F)	(1412	NA 12 G	3 OI LIKIN	11)	•	urbed or problematic.
Restrictive	Layer (if present):							
l								
ı . –	nches):						Hydric Soil Pres	sent? Yes ✓ No
Remarks:			-					
	criterion is met.							
l Hydric 30ii	ontenon to met.							
HYDROLO	OGY							
Wetland Hy	drology Indicators	s:						
Primary Indi	icators (minimum of	one required; che	eck all that app	ly)			Secondary Ir	ndicators (minimum of two required)
Surface	Water (A1)		Salt Crust	(B11)			Surface	Soil Cracks (B6)
High W	ater Table (A2)		Aquatic Ir	vertebrate	s (B13)		✓ Sparsely	Vegetated Concave Surface (B8)
Saturat	ion (A3)		Hydrogen	Sulfide O	dor (C1)		Drainage	e Patterns (B10)
Water N	Marks (B1)		Dry-Seas	on Water 1	Table (C2)		Oxidized	Rhizospheres on Living Roots (C3)
Sedime	ent Deposits (B2)		Oxidized	Rhizosphe	res on Liv	ing Roots	(C3) (where	e tilled)
Drift De	posits (B3)		(where	not tilled)			Crayfish	Burrows (C8)
Algal M	at or Crust (B4)		Presence	of Reduce	ed Iron (C	4)	Saturation	on Visible on Aerial Imagery (C9)
Iron De	posits (B5)		Thin Muc	k Surface ((C7)		✓ Geomor	phic Position (D2)
Inundat	tion Visible on Aeria	Imagery (B7)	Other (Ex	plain in Re	emarks)		FAC-Ne	utral Test (D5)
Water-S	Stained Leaves (B9))					Frost-He	eave Hummocks (D7) (LRR F)
Field Obse	rvations:							
Surface Wa	ter Present?	Yes No _	Depth (ir	nches):		_		
Water Table		Yes No _				1		
Saturation F		Yes No _					land Hydrology Pro	esent? Yes ✓ No
(includes ca	pillary fringe)							
Describe Re	ecorded Data (strea	m gauge, monitor	ring well, aerial	photos, pr	evious ins	spections),	if available:	
						10.		
Remarks:					4 6	-1-17	4-4-4 0	
			logy criterion	is not me	et. Spars	ely Vege	tated Concave St	urface (B8) was within the swale,
TIW TON TUG	nin the five foot he	a stratum piot.						

Project/Site: 130 Environmental Park	(Citv/Cou	_{intv:} Lockha	rt/Caldwell	_ Sampling Date: 06/24/2013
Applicant/Owner: 130 Environmental Park, LLC					Sampling Point: T16-DP4
			, Township, Ra		
Landform (hillslope, terrace, etc.): Depression			-		Ve Slone (%): 2
Subregion (LRR): J - Southwestern Prairies					
Soil Map Unit Name: Ts - Tinn soils, frequently floo					ication: None available
•			_		
Are climatic / hydrologic conditions on the site typical for the					
Are Vegetation, Soil, or Hydrology					present? Yes No
Are Vegetation, Soil, or Hydrology	naturally pro	blematio	c? (If ne	eeded, explain any answ	ers in Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing	samp	ling point l	ocations, transect	s, important features, etc.
Hydrophytic Vegetation Present? Yes ✓	No				
	No	- 1	s the Sampled		
	No	\ \ \	vithin a Wetla	nd? Yes <u>▼</u>	No
Remarks:					
Emergent wetland in a backwater in riparian area n	ear channe	1.			
				Ann and an	
VEGETATION – Use scientific names of plan					
Tree Stratum (Plot size: 30')	Absolute % Cover		ant Indicator	Dominance Test wor	
1				Number of Dominant S That Are OBL, FACW,	or FAC
2.				(excluding FAC-):	<u>3</u> (A)
3				Total Number of Domi	nant
4				Species Across All Str	2
		= Total	Cover	Percent of Dominant S	Species
Sapling/Shrub Stratum (Plot size: 15')				That Are OBL, FACW,	
1. Fraxinus pennsylvanica	5		FAC	Prevalence Index wo	rksheet
2				Total % Cover of:	
3.					x 1 =
4					x 2 =
5	- - - - -	= Total			x 3 =
Herb Stratum (Plot size: 5')		- Total	Cover		x 4 =
1. Eleocharis palustris	50	Yes	OBL	1	x 5 =
2. Persicaria pensylvanicum	50	Yes	FACW	Column Totals:	(A) (B)
3. Iva annua	_ 5	No	FAC	Decretario de la dec	D/A
4					x = B/A =
5				Hydrophytic Vegetat	Hydrophytic Vegetation
6				2 - Dominance Te	
7				3 - Prevalence Inc	
8					Adaptations ¹ (Provide supporting
9.				data in Remark	ks or on a separate sheet)
10				Problematic Hydro	ophytic Vegetation¹ (Explain)
Woody Vine Stratum (Plot size: 30')	105	= Total	Cover	1Indicators of hydric so	oil and wetland hydrology must
1				be present, unless dist	
2.				Hydrophytic	
		= Total	Cover	Vegetation	
% Bare Ground in Herb Stratum 0				Present? Yo	es No
Remarks:					
Emergent wetland dominated by spikerush and sm	artweed. H	ydroph	ytic vegetation	on criterion is met.	

Profile Des	cription: (Describ	e to the depth ne				or confirm	the absence of in	dicators.)
Depth	Matrix	- N		x Feature		1.002	Toyturo	Bomorko
(inches)	Color (moist)		Color (moist)	<u>%</u> 15	Type'	Loc ²	Texture Clay	Remarks
0-12	10 YR 2/1	<u>85 5 Y</u>	R 6/4	15			Clay	
1Type: C=C	Concentration, D=De	nletion RM=Red	luced Matrix C	S=Covere	d or Coate	d Sand G	rains ² Location	n: PL=Pore Lining, M=Matrix.
	Indicators: (Appl					d Garia Ci		Problematic Hydric Soils ³ :
Histoso				Gleyed Ma				(A9) (LRR I, J)
	pipedon (A2)			Redox (S				ie Redox (A16) (LRR F, G, H)
	listic (A3)			d Matrix (S				ce (S7) (LRR G)
	en Sulfide (A4)			Mucky Mi			High Plains	Depressions (F16)
	ed Layers (A5) (LRF	RF)		Gleyed M			(LRR H	outside of MLRA 72 & 73)
	uck (A9) (LRR F, G	•		ed Matrix (,		Reduced V	. ,
	ed Below Dark Surfa	ace (A11)	✓ Redox					Material (TF2)
_	ark Surface (A12)			ed Dark St Depressio	urface (F7))		w Dark Surface (TF12) ain in Remarks)
	Mucky Mineral (S1) Mucky Peat or Pea			-	essions (F	16)		drophytic vegetation and
_	lucky Peat or Peat (73 of LRR		-	Irology must be present,
0 0111 111	dony i out or i out (00) (=1111)	(,		urbed or problematic.
Restrictive	Layer (if present):							
Type: H	ardpan							
	nches): 12						Hydric Soil Pres	sent? Yes / No
Remarks:								
	criterion is met.							
							-	
HYDROLO								
_	drology Indicator							
Primary Ind	icators (minimum o	f one required; ch	eck all that app	ly)			Secondary In	dicators (minimum of two required)
	Water (A1)		Salt Crust	, ,				Soil Cracks (B6)
High W	ater Table (A2)		Aquatic Ir					Vegetated Concave Surface (B8)
	ion (A3)		Hydrogen					Patterns (B10)
	Marks (B1)		_ ,		Table (C2)			Rhizospheres on Living Roots (C3)
_	ent Deposits (B2)				eres on Liv	ing Roots		e tilled)
	eposits (B3)		`	not tilled	,			Burrows (C8)
	lat or Crust (B4)				ed Iron (C4	4)		on Visible on Aerial Imagery (C9)
_	posits (B5)		Thin Muc		. ,			phic Position (D2)
_	tion Visible on Aeria		Other (Ex	plain in Re	emarks)			utral Test (D5)
	Stained Leaves (B9)					Frost-He	ave Hummocks (D7) (LRR F)
Field Obse	rvations:		,					
Surface Wa	iter Present?	Yes No _	_			1		
Water Table	e Present?	Yes No _						
Saturation F		Yes No _	✓ Depth (ir	nches):		_ Wet	land Hydrology Pre	esent? Yes / No
(includes ca	apillary fringe) ecorded Data (strea	m gauge monito	ring well aerial	nhotos n	revious ins	enections)	if available	
Describe Re	ecolueu Data (sties	iiii gaage, monito	mig Hon, donal	ρποιου, ρ	. 511046 1116	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	374114101	
Remarks:								
	slought in riparia	n area: within fl	oodplain Zone	A Wet	land hydr	ology crit	terion is not met	
Dackwaler	Siought in riparia	ir arou, within in	ocapiani zon		.a.i.a. iiyai	2.087 0111		

Project/Site: 130 Environmental Park		City/Count	ty: Lockhar	rt/Caldwell	Sampling Date: 06/24/2013
Applicant/Owner: 130 Environmental Park, LLC					Sampling Point: T16-DP5
_		Section, T	ownship, Rai	nge: NA	
Landform (hillslope, terrace, etc.): Terrace					Slope (%): 4
Subregion (LRR): J - Southwestern Prairies	Lat: 29.	95		Long: <u>-97.65</u>	Datum: NAD 83
Soil Map Unit Name: W - Water				NWI classific	cation: None available
Are climatic / hydrologic conditions on the site typical for	this time of yea	ar? Yes			
Are Vegetation, Soil, or Hydrology					oresent? Yes ✓ No
Are Vegetation, Soil, or Hydrology				eded, explain any answe	
SUMMARY OF FINDINGS – Attach site ma					
Hydrophytic Vegetation Present? Yes	No ✓				
Hydric Soil Present? Yes	No <u>√</u>		the Sampled thin a Wetlar		No <u>√</u>
Wetland Hydrology Present? Yes	No <u>√</u>	Wit	illill a vvetial	id: Tes	NO
Remarks:					
Upland point between depression and channel.					
VEGETATION – Use scientific names of pl	ante				
VEGETATION - Use scientific fames of pr		Dominar	nt Indicator	Dominance Test work	rsheet
Tree Stratum (Plot size: 30'			? Status_	Number of Dominant S	
1				That Are OBL, FACW,	or FAC
2				(excluding FAC-):	<u>2</u> (A)
3				Total Number of Domir	
4				Species Across All Stra	ata: <u>5</u> (B)
Sapling/Shrub Stratum (Plot size: 15'		= Total C	over	Percent of Dominant S	
1. Melia azedarach	15	Yes	FACU	That Are OBL, FACW,	or FAC: 40 (A/B)
2. Celtis laevigata	5	Yes	FAC	Prevalence Index wor	ksheet:
3.				Total % Cover of:	Multiply by:
4.					x 1 =
5					x 2 =
51	20	= Total C	over		x 3 =
Herb Stratum (Plot size: 5'	15	Yes	FAC		x 4 = x 5 =
2. Vernonia baldwinii	20	Yes	FACU		(A) (B)
				Coldinii Totals.	(A) (B)
34.				Prevalence Index	c = B/A =
5				Hydrophytic Vegetati	
6.					Hydrophytic Vegetation
7				2 - Dominance Tes	
8				3 - Prevalence Ind	
9.					Adaptations ¹ (Provide supporting is or on a separate sheet)
10				1	phytic Vegetation ¹ (Explain)
30'	35	= Total C	over	1 Indicators of budgie on	il and wetland hydrology must
Woody Vine Stratum (Plot size: 30') 1. Rubus trivialis	60	Yes	FACU	be present, unless dist	
				Hudrophytic	
2	60	= Total C	over	Hydrophytic Vegetation	,
% Bare Ground in Herb Stratum 65		. Total C	0.01	Present? Ye	es No <u>√</u>
Remarks:		-			
Hydrophytic vegetation criterion is not met.					

Donth	ription. (Describ	o to the depth he	eded to docu	ment the n	aloutor (or commitm	the absence of inc	ilcators.)
Depth	Matrix			x Features	T 1	1 - 2	Tarabasa	Demonto
(inches)	Color (moist)		olor (moist)	%	Type ¹	Loc	Texture	Remarks
0-16	10 YR 3/1	<u>100</u>						
								-
				- —				
		1						
1Tuno: C=Co	ncentration, D=De	anletion RM=Red	uced Matrix C	S=Covered	or Coate	d Sand Gr	ains ² Location	PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators: (Appl	icable to all LRRs	s. unless othe	rwise note	d.)	d Salid Gi		roblematic Hydric Soils ³ :
Histosol		iouble to all Elite	Sandy					A9) (LRR I, J)
	ipedon (A2)		Sandy					Redox (A16) (LRR F, G, H)
Black His				d Matrix (S				e (S7) (LRR G)
	n Sulfide (A4)		Loamy	Mucky Min	eral (F1)		High Plains	Depressions (F16)
	Layers (A5) (LRF	RF)	Loamy	Gleyed Ma	trix (F2)		(LRR H c	utside of MLRA 72 & 73)
_	ck (A9) (LRR F, G		Deplete	-			Reduced Ve	, ,
	Below Dark Surfa	ace (A11)	Redox		, ,			Material (TF2)
	rk Surface (A12)			ed Dark Sui	, ,			v Dark Surface (TF12)
	ucky Mineral (S1)		Redox High P	•	, ,	16)		in in Remarks) Irophytic vegetation and
	lucky Peat or Pea cky Peat or Peat (RA 72 & 7			•	ology must be present,
5 0// //	cky real or real (00) (21111)	(0 01 2.1.1	•••,	•	bed or problematic.
Restrictive L	ayer (if present):			-	-			
Type:								
• • • • • • • • • • • • • • • • • • • •	:hes):						Hydric Soil Pres	ent? Yes No ✓
Remarks:								
	il indicators obs	erved.						
itto ily anto oo								
							7.00	100-54
HYDROLOG								
	Irology Indicator							
Primary Indic	ators (minimum of	one required; che	eck all that app	ly)			Secondary Inc	licators (minimum of two required)
Surface \	Water (A1)		Salt Crus	t (B11)				oil Cracks (B6)
High Wat	ter Table (A2)		Aquatic Ir	vertebrates	s (B13)		Sparsely	Vegetated Concave Surface (B8)
Saturatio	n (A3)			Sulfide Od				Patterns (B10)
	arks (B1)			on Water T				Rhizospheres on Living Roots (C3)
Water Ma	t Donneite (R2)		Oxidized	Phizocohor	oe on Liv			
	i Deposits (BZ)			Mizospilei	C3 OII LIV	ing Roots		,
Water Ma	osits (B3)		(where	not tilled)		-	Crayfish E	Burrows (C8)
Water Ma Sedimen Drift Dep Algal Ma	osits (B3) t or Crust (B4)		(where	not tilled) of Reduce	d Iron (C4	-	Crayfish E	Burrows (C8) Visible on Aerial Imagery (C9)
Water Ma Sedimen Drift Dep Algal Ma Iron Dep	osits (B3) t or Crust (B4) osits (B5)		(where Presence Thin Muc	not tilled) of Reduce k Surface (d Iron (C4	-	Crayfish ESaturation✓ Geomorph	Burrows (C8) n Visible on Aerial Imagery (C9) nic Position (D2)
Water Ma Sedimen Drift Dep Algal Ma Iron Dep Inundation	osits (B3) t or Crust (B4) osits (B5) on Visible on Aeria		(where Presence Thin Muc	not tilled) of Reduce	d Iron (C4	-	Crayfish E Saturation ✓ Geomorp FAC-Neu	Burrows (C8) n Visible on Aerial Imagery (C9) nic Position (D2) tral Test (D5)
Water Ma Sedimen Drift Dep Algal Ma Iron Dep Inundatic Water-St	osits (B3) t or Crust (B4) osits (B5) on Visible on Aeria ained Leaves (B9		(where Presence Thin Muc	not tilled) of Reduce k Surface (d Iron (C4	-	Crayfish E Saturation ✓ Geomorp FAC-Neu	Burrows (C8) n Visible on Aerial Imagery (C9) nic Position (D2)
Water Ma Sedimen Drift Dep Algal Ma Iron Dep Inundation	osits (B3) t or Crust (B4) osits (B5) on Visible on Aeria ained Leaves (B9)	(where Presence Thin Muc Other (Ex	not tilled) of Reduce k Surface (plain in Re	d Iron (C4 C7) marks)	1)	Crayfish E Saturation ✓ Geomorp FAC-Neu	Burrows (C8) n Visible on Aerial Imagery (C9) nic Position (D2) tral Test (D5)
Water Ma Sedimen Drift Dep Algal Ma Iron Dep Inundatic Water-St	osits (B3) t or Crust (B4) osits (B5) on Visible on Aeria ained Leaves (B9 vations:) Yes No <u>•</u>	(where Presence Thin Muc Other (Ex	not tilled) of Reduce k Surface (i	d Iron (C4 C7) marks)		Crayfish E Saturation ✓ Geomorp FAC-Neu	Burrows (C8) n Visible on Aerial Imagery (C9) nic Position (D2) tral Test (D5)
Water Ma Sedimen Drift Dep Algal Ma Iron Dep Inundatic Water-St	osits (B3) t or Crust (B4) osits (B5) on Visible on Aeria tained Leaves (B9 vations: or Present?	Yes No <u>•</u>	(where Presence Thin Muc Other (Ex	not tilled) of Reduce k Surface (plain in Re	d Iron (C4 C7) marks)		Crayfish E Saturation ✓ Geomorp FAC-Neu Frost-Hea	Burrows (C8) n Visible on Aerial Imagery (C9) nic Position (D2) tral Test (D5) tve Hummocks (D7) (LRR F)
Water Ma Sedimen Drift Dep Algal Ma Iron Dep Inundatio Water-St Field Observ Surface Water Water Table I Saturation Pr	osits (B3) t or Crust (B4) osits (B5) on Visible on Aeria ained Leaves (B9 vations: er Present? Present?) Yes No <u>•</u>	(where Presence Thin Muc Other (Ex	not tilled) of Reduce k Surface (i	d Iron (C4 C7) marks)		Crayfish E Saturation ✓ Geomorp FAC-Neu Frost-Hea	Burrows (C8) n Visible on Aerial Imagery (C9) nic Position (D2) tral Test (D5)
Water Ma Sedimen Drift Dep Algal Ma Iron Depo Inundatic Water-St Field Observ Surface Water Water Table I Saturation Pr (includes cap	osits (B3) t or Crust (B4) osits (B5) on Visible on Aeria tained Leaves (B9 vations: or Present? Present? esent?	Yes No _ \(\) Yes No _ \(\) Yes No _ \(\)	(where Presence Thin Muc Other (Ex Depth (ir Depth (ir Depth (ir	not tilled) of Reduce k Surface (i pplain in Re inches): nches): nches): nches):	d Iron (C4 C7) marks)	Wetl	Crayfish E Saturation Geomorp FAC-Neu Frost-Hea	Burrows (C8) n Visible on Aerial Imagery (C9) nic Position (D2) tral Test (D5) tve Hummocks (D7) (LRR F)
Water Ma Sedimen Drift Dep Algal Ma Iron Depo Inundatic Water-St Field Observ Surface Water Water Table I Saturation Pr (includes cap	osits (B3) t or Crust (B4) osits (B5) on Visible on Aeria ained Leaves (B9 vations: er Present? Present?	Yes No _ \(\) Yes No _ \(\) Yes No _ \(\)	(where Presence Thin Muc Other (Ex Depth (ir Depth (ir Depth (ir	not tilled) of Reduce k Surface (i pplain in Re inches): nches): nches): nches):	d Iron (C4 C7) marks)	Wetl	Crayfish E Saturation Geomorp FAC-Neu Frost-Hea	Burrows (C8) n Visible on Aerial Imagery (C9) nic Position (D2) tral Test (D5) tve Hummocks (D7) (LRR F)
Water Ma Sedimen Drift Dep Algal Ma Iron Dep Inundatio Water-St Field Observ Surface Water Water Table I Saturation Pr (includes cap Describe Rec	osits (B3) t or Crust (B4) osits (B5) on Visible on Aeria tained Leaves (B9 vations: or Present? Present? esent?	Yes No _ \(\) Yes No _ \(\) Yes No _ \(\)	(where Presence Thin Muc Other (Ex Depth (ir Depth (ir Depth (ir	not tilled) of Reduce k Surface (i pplain in Re inches): nches): nches): nches):	d Iron (C4 C7) marks)	Wetl	Crayfish E Saturation Geomorp FAC-Neu Frost-Hea	Burrows (C8) n Visible on Aerial Imagery (C9) nic Position (D2) tral Test (D5) tve Hummocks (D7) (LRR F)
Water Ma Sedimen Drift Dep Algal Ma Iron Dep Inundatic Water-St Field Observ Surface Water Water Table I Saturation Pr (includes cap) Describe Rec	osits (B3) t or Crust (B4) osits (B5) on Visible on Aeria ained Leaves (B9 vations: er Present? Present? esent? eillary fringe) corded Data (strea	Yes No y Yes No y Yes No y The gauge, monitor	(where Presence Thin Muc Other (Ex Depth (ii Depth (ii Depth (ii Depth (iii	not tilled) of Reduce k Surface (i plain in Re nches): nches): photos, pre	d Iron (C4 C7) marks)	Wetl	Crayfish E Saturation ✓ Geomorpi FAC-Neu Frost-Hea and Hydrology Pres	Burrows (C8) n Visible on Aerial Imagery (C9) nic Position (D2) tral Test (D5) tve Hummocks (D7) (LRR F) sent? Yes No
Water Ma Sedimen Drift Dep Algal Ma Iron Dep Inundatic Water-St Field Observ Surface Water Water Table I Saturation Pr (includes cap) Describe Rec	osits (B3) t or Crust (B4) osits (B5) on Visible on Aeria ained Leaves (B9 vations: er Present? Present? esent? eillary fringe) corded Data (strea	Yes No y Yes No y Yes No y The gauge, monitor	(where Presence Thin Muc Other (Ex Depth (ii Depth (ii Depth (ii Depth (iii	not tilled) of Reduce k Surface (i plain in Re nches): nches): photos, pre	d Iron (C4 C7) marks)	Wetl	Crayfish E Saturation ✓ Geomorpi FAC-Neu Frost-Hea and Hydrology Pres	Burrows (C8) n Visible on Aerial Imagery (C9) nic Position (D2) tral Test (D5) tve Hummocks (D7) (LRR F)

Project/Site: 130 Environmental Park		City/Coun	_{ity:} Lockhai	rt/Caldwell	Sampling Date: 06/2x/2013
Applicant/Owner: 130 Environmental Park, LLC				State: TX	Sampling Point: T16-DP6
Investigator(s): Troegle, Josh & Boe, Brian		Section, 7	Fownship, Rai	nge: NA	
Landform (hillslope, terrace, etc.): Lake edge		Local reli	ef (concave,	convex, none): None	Slope (%): 2
Subregion (LRR): J - Southwestern Prairies	Lat: <u>29.</u>	95		Long: <u>-97</u> .65	Datum: NAD 83
Soil Map Unit Name: FeE - Fett gravelly soils, 1-12	2% slopes			NWI classific	ation: None available
Are climatic / hydrologic conditions on the site typical for t	his time of yea	ar? Yes _	✓ No	(If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology	significantly	disturbed	? Are "	Normal Circumstances" p	oresent? Yes ✓ No
Are Vegetation, Soil, or Hydrology	_ naturally pro	blematic?	(If ne	eded, explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS - Attach site ma	p showing	sampli	ing point le	ocations, transects	, important features, etc.
Hydrophytic Vegetation Present? Yes	No. ✓				
Hydric Soil Present? Yes	No √		the Sampled		/
Wetland Hydrology Present? Yes	No ✓	wi	thin a Wetlar	nd? Yes	No <u>√</u>
Remarks:				-	
Upland grass meadow fringe of lake, on west side					
VEGETATION – Use scientific names of pla	ants.				
Tree Stratum (Plot size: 30'			nt Indicator	Dominance Test work	
			? Status	Number of Dominant S	pecies
1				That Are OBL, FACW, (excluding FAC-):	1 (A)
2				1	. ,
3				Total Number of Domin Species Across All Stra	
4		= Total C	Cover		,
Sapling/Shrub Stratum (Plot size: 15'		= Total C	ovei	Percent of Dominant Sp That Are OBL, FACW, of	
1. Prosopis glandulosa	5	Yes	FACU	mat Are OBE, I AOVV,	7/1 AO (A/B)
2. Ulmus crassifolia	2	Yes	FAC	Prevalence Index wor	
3.					Multiply by:
4.					x 1 =
5					x 2 =
	7	= Total C	over		x 3 =
Herb Stratum (Plot size: 5'				l .	x 4 =
1. Buchloe dactyloides	80	Yes	UPL THE TENT		x 5 =
2. Cynodon dactylon		No	FACU	Column Totals:	(A) (B)
3. Solanum elaeagnifolium		No	UPL	Prevalence Index	= B/A =
4				Hydrophytic Vegetation	
5				1 - Rapid Test for H	
6				2 - Dominance Tes	
7				3 - Prevalence Inde	
8					Adaptations ¹ (Provide supporting
9					s or on a separate sheet)
10				Problematic Hydro	phytic Vegetation¹ (Explain)
Woody Vine Stratum (Plot size: 30')	95	= Total C	Cover	1Indicators of hydric soi	l and wetland hydrology must
				be present, unless distu	
1				11	
2				Hydrophytic Vegetation	
% Bare Ground in Herb Stratum 5		= rotar C	Jover	Present? Ye	s No <u>√</u>
Remarks:				1	
Upland herbaceous area dominated by buffalo gra	ss. Hydropi	hytic veg	etation crite	rion is not met.	

Depth							n the absence of ir	
	Matrix	% C	Red olor (moist)	ox Feature %	Type ¹	Loc ²	Texture	Remarks
	olor (moist) /R 3/1	100	JOI (IIIOISL)		Type		Clay	I Verifial No
100 101							Ciay	
¹Type: C=Concent	tration, D=Dep	letion, RM=Redu	uced Matrix, C	S=Covere	d or Coate	d Sand G	rains. ² Location	n: PL=Pore Lining, M=Matrix.
Hydric Soil Indica	tors: (Applic	able to all LRRs	, unless othe	erwise not	ed.)			Problematic Hydric Soils ³ :
Histosol (A1)			Sandy	Gleyed Ma	trix (S4)		1 cm Muck	(A9) (LRR I, J)
Histic Epipedo	n (A2)		Sandy	Redox (S5)			ie Redox (A16) (LRR F, G, H)
Black Histic (A	•			ed Matrix (S				ce (S7) (LRR G)
Hydrogen Sulf				Mucky Mir				Depressions (F16)
Stratified Laye				Gleyed Ma				outside of MLRA 72 & 73)
1 cm Muck (AS				ed Matrix (Dark Surfa			Reduced V	ertic (F18) Material (TF2)
Depleted Below Thick Dark Sur		e (ATT)		ed Dark Sun				w Dark Surface (TF12)
Sandy Mucky				Depressio				ain in Remarks)
		S2) (LRR G, H)		lains Depre	, ,	16)		drophytic vegetation and
5 cm Mucky P			_	LRA 72 &				Irology must be present,
_							unless dist	rbed or problematic.
Restrictive Layer	(if present):							
Type:								,
Depth (inches):							Hydric Soil Pres	sent? Yes No ✓
Remarks:					"-			
No hydric soil ind								
110 Hyano con ma	icators obser	ved.						
110 flyano con ma	icators obser	ved.						
	icators obser	ved.						
HYDROLOGY		ved.						
HYDROLOGY Wetland Hydrolog	gy Indicators:							
HYDROLOGY	gy Indicators:							dicators (minimum of two required)
HYDROLOGY Wetland Hydrolog Primary Indicators Surface Water	gy Indicators: (minimum of o		Salt Crus	st (B11)			Surface	Soil Cracks (B6)
HYDROLOGY Wetland Hydrolog Primary Indicators Surface Water High Water Ta	gy Indicators: (minimum of o (A1) ble (A2)		Salt Crus	st (B11) nvertebrate			Surface Sparsely	Soil Cracks (B6) Vegetated Concave Surface (B8)
HYDROLOGY Wetland Hydrolog Primary Indicators Surface Water High Water Ta Saturation (A3	gy Indicators: (minimum of o (A1) ble (A2)		Salt Crus Aquatic li Hydroger	st (B11) nvertebrate n Sulfide O	dor (C1)		Surface Sparsely Drainage	Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10)
HYDROLOGY Wetland Hydrolog Primary Indicators Surface Water High Water Ta Saturation (A3 Water Marks (y Indicators: (minimum of o (A1) bble (A2)) B1)		Salt Crus Aquatic li Hydroger Dry-Seas	st (B11) nvertebrate n Sulfide O son Water	dor (C1) 「able (C2)		Surface Sparsely Drainage Oxidized	Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3)
HYDROLOGY Wetland Hydrolog Primary Indicators Surface Water High Water Ta Saturation (A3 Water Marks (Sediment Dep	yy Indicators: (minimum of o (A1) ble (A2)) B1) osits (B2)		Salt Crus Aquatic II Hydroger Dry-Seas Oxidized	st (B11) nvertebrate n Sulfide O son Water ⁻ Rhizosphe	dor (C1) Γable (C2) eres on Liv		Surface Sparsely Drainage Oxidized (C3) (where	Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3)
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HYDROLOGY Wetland Hydrolog Primary Indicators Surface Water High Water Ta Saturation (A3 Water Marks (Sediment Dep Drift Deposits Algal Mat or C	gy Indicators: (minimum of o (A1) ble (A2)) B1) osits (B2) (B3) rust (B4)		Salt Crus Aquatic II Hydroger Dry-Seas Oxidized (where	ot (B11) Invertebrate In Sulfide O Ison Water In Rhizosphe Is not tilled	dor (C1)	ing Roots	Surface Sparsely Drainage Oxidized (C3) (where Crayfish Saturatio	Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3) Hilled) Burrows (C8) Visible on Aerial Imagery (C9)
HYDROLOGY Wetland Hydrolog Primary Indicators Surface Water High Water Ta Saturation (A3 Water Marks (Sediment Dep Drift Deposits Algal Mat or C Iron Deposits	gy Indicators: (minimum of o (A1) ble (A2)) B1) osits (B2) (B3) rust (B4) (B5)	ne required; che	Salt Crus Aquatic II Hydroger Dry-Seas Oxidized (where Presence Thin Muc	st (B11) nvertebrate n Sulfide O son Water Rhizosphe not tilled e of Reduce ck Surface	dor (C1) Fable (C2) Fres on Live Fred Iron (C4	ing Roots	Surface Sparsely Drainage Oxidized (C3) (where Crayfish Saturatio ✓ Geomore	Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3) Itiled) Burrows (C8) In Visible on Aerial Imagery (C9) Chic Position (D2)
HYDROLOGY Wetland Hydrolog Primary Indicators Surface Water High Water Ta Saturation (A3 Water Marks (Sediment Dep Drift Deposits Algal Mat or C Iron Deposits (Inundation Vis	y Indicators: (minimum of o (A1) ble (A2)) B1) osits (B2) (B3) rust (B4) (B5) ible on Aerial I	ne required; che	Salt Crus Aquatic II Hydroger Dry-Seas Oxidized (where	st (B11) nvertebrate n Sulfide O son Water Rhizosphe not tilled e of Reduce ck Surface	dor (C1) Fable (C2) Fres on Live Fred Iron (C4	ing Roots	Surface Sparsely Drainage Oxidized (C3) (where Crayfish Saturatio ✓ Geomory FAC-Ne	Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3) Itiled) Burrows (C8) In Visible on Aerial Imagery (C9) Inchic Position (D2) Intral Test (D5)
HYDROLOGY Wetland Hydrolog Primary Indicators Surface Water High Water Ta Saturation (A3 Water Marks (Sediment Dep Drift Deposits Algal Mat or C Iron Deposits (Inundation Vis Water-Stained	gy Indicators: (minimum of of (A1)) (ble (A2)) B1) osits (B2) (B3) rust (B4) (B5) ible on Aerial I Leaves (B9)	ne required; che	Salt Crus Aquatic II Hydroger Dry-Seas Oxidized (where Presence Thin Muc	st (B11) nvertebrate n Sulfide O son Water Rhizosphe not tilled e of Reduce ck Surface	dor (C1) Fable (C2) Fres on Live Fred Iron (C4	ing Roots	Surface Sparsely Drainage Oxidized (C3) (where Crayfish Saturatio ✓ Geomory FAC-Ne	Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3) Itiled) Burrows (C8) In Visible on Aerial Imagery (C9) Chic Position (D2)
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HYDROLOGY Wetland Hydrolog Primary Indicators Surface Water High Water Ta Saturation (A3 Water Marks (Sediment Dep Drift Deposits Algal Mat or C Iron Deposits (Inundation Vis Water-Stained Field Observation	gy Indicators: (minimum of of of (A1)) ble (A2)) B1) osits (B2) (B3) rust (B4) (B5) ible on Aerial I Leaves (B9) is: sent? Y	magery (B7)	Salt Crus Aquatic II Hydroger Dry-Seas Oxidized (where Presence Thin Muc Other (E)	st (B11) nvertebrate n Sulfide O son Water Rhizosphe e not tilled; e of Reduce k Surface xplain in Re	dor (C1) Fable (C2) Fres on Liv ed Iron (C4 (C7) emarks)	ing Roots	Surface Sparsely Drainage Oxidized (C3) (where Crayfish Saturatio Geomory FAC-Net Frost-He	Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3) Itiled) Burrows (C8) In Visible on Aerial Imagery (C9) In Cosition (D2) Itral Test (D5) ave Hummocks (D7) (LRR F)
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HYDROLOGY Wetland Hydrolog Primary Indicators Surface Water High Water Ta Saturation (A3 Water Marks (Sediment Dep Drift Deposits Algal Mat or C Iron Deposits (Inundation Vis Water-Stained Field Observation Surface Water Prewider Table Present (includes capillary)	gy Indicators: (minimum of or (A1)) ble (A2)) B1) osits (B2) (B3) rust (B4) (B5) ible on Aerial I Leaves (B9) is: sent? ? ? ? Y fringe)	magery (B7) es No _v es No _v	Salt Crus Aquatic li Hydroger Dry-Seas Oxidized (where Presence Thin Muc Other (Ex	st (B11) nvertebrate n Sulfide O son Water Rhizosphe not tilled) e of Reduce ck Surface xplain in Re nches):	dor (C1) Fable (C2) Fres on Liv ed Iron (C4 (C7) emarks)	ing Roots	Surface Sparsely Drainage Oxidized (C3) (where Crayfish Saturatio Geomore FAC-Nee Frost-He	Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3) Itiled) Burrows (C8) In Visible on Aerial Imagery (C9) In Cosition (D2) Itral Test (D5) ave Hummocks (D7) (LRR F)
HYDROLOGY Wetland Hydrolog Primary Indicators Surface Water High Water Ta Saturation (A3 Water Marks (Sediment Dep Drift Deposits Algal Mat or C Iron Deposits (Inundation Vis Water-Stained Field Observation Surface Water Prese Saturation Present	gy Indicators: (minimum of or (A1)) ble (A2)) B1) osits (B2) (B3) rust (B4) (B5) ible on Aerial I Leaves (B9) is: sent? ? ? ? Y fringe)	magery (B7) es No _v es No _v	Salt Crus Aquatic li Hydroger Dry-Seas Oxidized (where Presence Thin Muc Other (Ex	st (B11) nvertebrate n Sulfide O son Water Rhizosphe not tilled) e of Reduce ck Surface xplain in Re nches):	dor (C1) Fable (C2) Fres on Liv ed Iron (C4 (C7) emarks)	ing Roots	Surface Sparsely Drainage Oxidized (C3) (where Crayfish Saturatio Geomore FAC-Nee Frost-He	Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3) Itiled) Burrows (C8) In Visible on Aerial Imagery (C9) In Cosition (D2) Itral Test (D5) ave Hummocks (D7) (LRR F)
HYDROLOGY Wetland Hydrolog Primary Indicators Surface Water High Water Ta Saturation (A3 Water Marks (Sediment Dep Drift Deposits Algal Mat or C Iron Deposits (Inundation Vis Water-Stained Field Observation Surface Water Pre Water Table Prese Saturation Present (includes capillary) Describe Recorded	gy Indicators: (minimum of or (A1)) ble (A2)) B1) osits (B2) (B3) rust (B4) (B5) ible on Aerial I Leaves (B9) is: sent? ? ? ? Y fringe)	magery (B7) es No _v es No _v	Salt Crus Aquatic li Hydroger Dry-Seas Oxidized (where Presence Thin Muc Other (Ex	st (B11) nvertebrate n Sulfide O son Water Rhizosphe not tilled) e of Reduce ck Surface xplain in Re nches):	dor (C1) Fable (C2) Fres on Liv ed Iron (C4 (C7) emarks)	ing Roots	Surface Sparsely Drainage Oxidized (C3) (where Crayfish Saturatio Geomore FAC-Nee Frost-He	Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3) Itiled) Burrows (C8) In Visible on Aerial Imagery (C9) In Cosition (D2) Itral Test (D5) ave Hummocks (D7) (LRR F)
HYDROLOGY Wetland Hydrolog Primary Indicators Surface Water High Water Ta Saturation (A3 Water Marks (Sediment Dep Drift Deposits Algal Mat or C Iron Deposits (Inundation Vis Water-Stained Field Observation Surface Water Pre Water Table Prese Saturation Present (includes capillary) Describe Recorded	gy Indicators: (minimum of or (A1) bble (A2)) B1) osits (B2) (B3) rust (B4) (B5) ible on Aerial I Leaves (B9) is: sent? Y ent? Y fringe) d Data (stream	magery (B7) es No _v es No _v gauge, monitor	Salt Crus Aquatic li Hydroger Dry-Seas Oxidized (where Presence Thin Muc Other (Ex	st (B11) nvertebrate n Sulfide O son Water Rhizosphe e not tilled; e of Reduce sk Surface skplain in Re nches): nches): I photos, pi	dor (C1) Fable (C2) Fres on Liv ed Iron (C4 (C7) emarks)	wet	Surface Sparsely Drainage Oxidized (C3) (where Crayfish Saturatic ✓ Geomore FAC-Nee Frost-He	Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3) Itiled) Burrows (C8) In Visible on Aerial Imagery (C9) In Dhic Position (D2) Itral Test (D5) ave Hummocks (D7) (LRR F)
HYDROLOGY Wetland Hydrolog Primary Indicators Surface Water High Water Ta Saturation (A3 Water Marks (Sediment Dep Drift Deposits Algal Mat or C Iron Deposits (Inundation Vis Water-Stained Field Observation Surface Water Pre Water Table Prese Saturation Present (includes capillary) Describe Recorded	gy Indicators: (minimum of or (A1) bble (A2)) B1) osits (B2) (B3) rust (B4) (B5) ible on Aerial I Leaves (B9) is: sent? Y ent? Y fringe) d Data (stream	magery (B7) es No _v es No _v gauge, monitor	Salt Crus Aquatic li Hydroger Dry-Seas Oxidized (where Presence Thin Muc Other (Ex	st (B11) nvertebrate n Sulfide O son Water Rhizosphe e not tilled; e of Reduce sk Surface skplain in Re nches): nches): I photos, pi	dor (C1) Fable (C2) Fres on Liv ed Iron (C4 (C7) emarks)	wet	Surface Sparsely Drainage Oxidized (C3) (where Crayfish Saturatic ✓ Geomore FAC-Nee Frost-He	Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3) Itiled) Burrows (C8) In Visible on Aerial Imagery (C9) In Cosition (D2) Itral Test (D5) ave Hummocks (D7) (LRR F)

Project/Site: 130 Environmental Park	(City/Cr	ounty. Lockha	rt/Caldwell	_ Sampling Date: 06/26/2013
Applicant/Owner: 130 Environmental Park, LL					_ Sampling Point: T16-DP7
Investigator(s): Troegle, Josh & Boe, Brian					_ camping rount.
• • • • • • • • • • • • • • • • • • • •					Slope (%): 3
Subregion (LRR): J - Southwestern Prairies					
Soil Map Unit Name: CrC2 - Crockett soils, 2-5					
Are climatic / hydrologic conditions on the site typical					
Are Vegetation, Soil, or Hydrology	significantly	disturb	ped? Are	"Normal Circumstances"	' present? Yes ✓ No
Are Vegetation, Soil, or Hydrology	naturally pro	blema	tic? (If ne	eeded, explain any answ	ers in Remarks.)
SUMMARY OF FINDINGS – Attach site	map showing	sam	pling point l	ocations, transect	s, important features, etc.
Hydrophytic Vegetation Present? Yes	No <u>√</u>				
	No ✓		Is the Sampled		No √
	No ✓		within a Wetla	nd? Tes	NO_ <u>*</u>
Remarks:	-				
Open grassland in spillway east of lake.					
ACCULATION II	_1				-
VEGETATION – Use scientific names of				1	
Tree Stratum (Plot size: 30'	Absolute % Cover		inant Indicator cies? Status	Dominance Test wor	
1				Number of Dominant That Are OBL, FACW	or FAC
2				(excluding FAC-):	<u>0</u> (A)
3				Total Number of Dom	inant
4				Species Across All St	^
			al Cover	Percent of Dominant	Species
Sapling/Shrub Stratum (Plot size: 15'	_)			That Are OBL, FACW	
1				Prevalence Index wo	orkshoot.
2					: Multiply by:
3				1	x1=
4				1	x 2 =
5					x 3 =
Herb Stratum (Plot size: 5'		= Tota	al Cover		x 4 =
1. Buchloe dactyloides	60	Yes	UPL	UPL species	
2. Cynodon dactylon	40	Yes	FACU		(A) (B)
3					
4					ex = B/A =
5				Hydrophytic Vegetat	
6				1 -	r Hydrophytic Vegetation
7				2 - Dominance Te	
8				3 - Prevalence In	
9				4 - Morphological	Adaptations ¹ (Provide supporting this or on a separate sheet)
10					rophytic Vegetation ¹ (Explain)
201	100	= Tota	al Cover	-	
Woody Vine Stratum (Plot size: 30'					oil and wetland hydrology must sturbed or problematic.
1					,
2				Hydrophytic Vegetation	
% Bare Ground in Herb Stratum 0		_ = Tota	al Cover		′es No <u>√</u>
Remarks:					
Upland grassland dominated by buffalo grass.	Hydrophytic ve	egetati	ion criterion is	not met.	
·					

Great Plains - Version 2.0

Depth Matrix Redox Features (inches) Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks 0-6 10 YR 3/1 100 Clay	
	e
0-6 10 TK 3/1 100 Olay	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining,	M=Matrix.
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric	
Histosol (A1) Sandy Gleyed Matrix (S4) 1 cm Muck (A9) (LRR I, J)	
Histic Epipedon (A2) Sandy Redox (S5) Coast Prairie Redox (A16) (LF	RR F, G, H)
Black Histic (A3) Stripped Matrix (S6) Dark Surface (S7) (LRR G)	
Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) High Plains Depressions (F16	5)
Stratified Layers (A5) (LRR F) Loamy Gleyed Matrix (F2) (LRR H outside of MLRA	
1 cm Muck (A9) (LRR F, G, H) Depleted Matrix (F3) Reduced Vertic (F18)	
Depleted Below Dark Surface (A11) Redox Dark Surface (F6) Red Parent Material (TF2)	
Thick Dark Surface (A12) Depleted Dark Surface (F7) Very Shallow Dark Surface (T	F12)
Sandy Mucky Mineral (S1) Redox Depressions (F8) Other (Explain in Remarks)	an and
2.5 cm Mucky Peat or Peat (S2) (LRR G, H) High Plains Depressions (F16) 5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) wetland hydrology must be pre-	
5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) wetland hydrology must be pre- unless disturbed or problemat	
Restrictive Layer (if present):	
Type: Claypan	
Depth (inches): 6 Hydric Soil Present? Yes	No ✓
Remarks:	
No hydric soil indicators observed.	
The flydric con indicators 5550 (154).	
HYDROLOGY	
Wetland Hydrology Indicators:	
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)	
High Water Table (A2) Aquatic Invertebrates (B13) Sparsely Vegetated Concar	ve Surface (B8)
Saturation (A3) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10)	
Water Marks (B1) Dry-Season Water Table (C2) Oxidized Rhizospheres on	Living Roots (C3)
Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) (where tilled)	
Drift Deposits (B3) (where not tilled) Crayfish Burrows (C8)	
Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Saturation Visible on Aerial	Imagery (C9)
Iron Deposits (B5) Thin Muck Surface (C7) ✓ Geomorphic Position (D2)	
	7) (LRR F)
Iron Deposits (B5) Thin Muck Surface (C7) Geomorphic Position (D2)	
Iron Deposits (B5) Thin Muck Surface (C7) Geomorphic Position (D2) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) FAC-Neutral Test (D5)	
Iron Deposits (B5) Thin Muck Surface (C7) ✓ Geomorphic Position (D2) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) FAC-Neutral Test (D5) Water-Stained Leaves (B9) Frost-Heave Hummocks (D	
Iron Deposits (B5)	
Iron Deposits (B5) Thin Muck Surface (C7) Geomorphic Position (D2) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) FAC-Neutral Test (D5) Frost-Heave Hummocks (D Surface Water Present? Yes No Depth (inches):	No <u>√</u>
Iron Deposits (B5) Thin Muck Surface (C7) Geomorphic Position (D2) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) FAC-Neutral Test (D5) Frost-Heave Hummocks (D Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Wetland Hydrology Present? Yes (includes capillary fringe)	No <u>√</u>
Iron Deposits (B5) Thin Muck Surface (C7) Geomorphic Position (D2) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) FAC-Neutral Test (D5) Water-Stained Leaves (B9) Frost-Heave Hummocks (D Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes	No <u> </u>
Iron Deposits (B5) Thin Muck Surface (C7) Geomorphic Position (D2) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) FAC-Neutral Test (D5) Frost-Heave Hummocks (D5)	No <u>√</u>
Iron Deposits (B5) Thin Muck Surface (C7) Geomorphic Position (D2) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) FAC-Neutral Test (D5) Frost-Heave Hummocks (D5)	
Iron Deposits (B5) Thin Muck Surface (C7) Geomorphic Position (D2) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) FAC-Neutral Test (D5) Fost-Heave Hummocks (D Frost-Heave Hummocks (D	

Project/Site: 130 Environmental Park		City/Cou	inty: Lockhai	rt/Caldwell	Sampling Date: 06/26/2013
Applicant/Owner: 130 Environmental Park, LLC					Sampling Point: T16-DP8
			Township, Rai		
Landform (hillslope, terrace, etc.): Shoreline/depression					/e Slope (%): 0
Subregion (LRR): J - Southwestern Prairies					
					cation: None available
Are climatic / hydrologic conditions on the site typical for this					
Are Vegetation, Soil, or Hydrologys					present? Yes ✓ No
Are Vegetation, Soil, or Hydrology r				eeded, explain any answe	
SUMMARY OF FINDINGS – Attach site map					
Hydrophytic Vegetation Present? Yes ✓ N	lo.				
	0		s the Sampled		
	0	W	vithin a Wetlar	nd? Yes_ <u>▼</u>	No
Remarks:					
Emergent wetland along shoreline, eastern side of la	ake.				
VEGETATION III - ' - '' - ''					
VEGETATION – Use scientific names of plan		Damin	ant Indicator	Dominanas Tast was	rahaat.
Tree Stratum (Plot size: 30'	Absolute % Cover		ant Indicator	Dominance Test work Number of Dominant S	
1				That Are OBL, FACW,	or FAC
2.				(excluding FAC-):	1 (A)
3.				Total Number of Domin	nant
4				Species Across All Stra	ata: 1 (B)
15!		= Total	Cover	Percent of Dominant S	
Sapling/Shrub Stratum (Plot size: 15') 1. Sesbania drummondii	2		FACW	That Are OBL, FACW,	or FAC: 100 (A/B)
1. Sesbania drummondii 2.				Prevalence Index wo	rksheet:
3.				Total % Cover of:	Multiply by:
4.				OBL species	x 1 =
5.					x 2 =
-	0	= Total	Cover	· —	x 3 =
Herb Stratum (Plot size: 5'		X7	ODI		x 4 =
1. Eleocharis palustris	10	Yes No	OBL FAC		x 5 =
2. Xanthium strumarium 3. Persicaria pensylvanicum	15	No	FACW	Column Lotals:	(A) (B)
				Prevalence Index	x = B/A =
4				Hydrophytic Vegetati	on Indicators:
5				1 - Rapid Test for	Hydrophytic Vegetation
6. 7.				✓ 2 - Dominance Te	
8				3 - Prevalence Ind	
9.				4 - Morphological	Adaptations ¹ (Provide supporting s or on a separate sheet)
10.					ophytic Vegetation ¹ (Explain)
201	105	= Total	Cover		
Woody Vine Stratum (Plot size: 30')				Indicators of hydric so be present, unless dist	oil and wetland hydrology must turbed or problematic.
1		- —			1
2		- T-4-1	Cover	Hydrophytic Vegetation	
% Bare Ground in Herb Stratum 0		_= rotal	Cover	Present? Ye	es No
Remarks:				.1	
Emergent wetland along shoreline, dominated by sp	oikerush. I	Hydroph	hytic vegetati	on criterion is not met.	

Profile Des	cription: (Describe	to the de	pth needed to docur	nent the	indicator	or confirm	n the absence of in	dicators.)
Depth	Matrix			x Feature				
(inches)	Color (moist)		Color (moist)	<u>%</u> 10	Type ¹	Loc ²	Texture	Remarks
0-3	10 YR 2/1	90	5 YR 5/8				Clay	
3-7	10 YR 3/1	97	5 YR 5/8	3				
7-10	10 YR 4/1	97	7.5 YR 5/8	3				
		_						
						-		
								- AMA
1- 0.0			A. D. durand Markin, Of				21 cotion	DI - Dona Lining M-Matrix
			M=Reduced Matrix, CS II LRRs, unless other			a Sana G		Problematic Hydric Soils ³ :
Histosol		cubic to u			atrix (S4)			(A9) (LRR I, J)
_	pipedon (A2)		Sandy F	-				e Redox (A16) (LRR F, G, H)
	istic (A3)			d Matrix (e (S7) (LRR G)
_	en Sulfide (A4)				ineral (F1)		High Plains	Depressions (F16)
	d Layers (A5) (LRR	F)			latrix (F2)		(LRR H	outside of MLRA 72 & 73)
	uck (A9) (LRR F, G,		Deplete	d Matrix	(F3)		Reduced Ve	ertic (F18)
Deplete	d Below Dark Surfa	ce (A11)	✓ Redox I		, ,		_	Material (TF2)
	ark Surface (A12)				urface (F7)			w Dark Surface (TF12)
	Mucky Mineral (S1)			Depression		40)		ain in Remarks)
_	Mucky Peat or Peat				73 of LRR			drophytic vegetation and rology must be present,
5 cm MI	ucky Peat or Peat (53) (LKK F) (IVIL	KA 12 &	13 OI LKK	n)	-	rology must be present,
Restrictive	Layer (if present):							
Type:								
Depth (in	ches):						Hydric Soil Pres	ent? Yes ✓ No
Remarks:								
Hydric soil	criterion is met.							
HYDROLO	iGY							
	drology Indicators							
			ed; check all that appl	v)			Secondary Inc	dicators (minimum of two required)
	Water (A1)	one requi	Salt Crust					Soil Cracks (B6)
	ater Table (A2)		Aquatic In	, ,	es (B13)			Vegetated Concave Surface (B8)
Saturati			Hydrogen					Patterns (B10)
ı —	Marks (B1)				Table (C2)			Rhizospheres on Living Roots (C3)
	nt Deposits (B2)		✓ Oxidized F					, - , ,
_	posits (B3)			not tilled		g . tooto		Burrows (C8)
	at or Crust (B4)		•		ed Iron (C4	1)		n Visible on Aerial Imagery (C9)
	posits (B5)		Thin Muck		-	.,	-	phic Position (D2)
	ion Visible on Aeria	l imagery (. ,			itral Test (D5)
_	Stained Leaves (B9)				,			ave Hummocks (D7) (LRR F)
Field Obser			- 49/8/03			-T $-$		
Surface Wat		Yes	No ✓ Depth (in	ches):		_		
Water Table			No ✓ Depth (in					
Saturation P			,				land Hydrology Pre	esent? Yes ✓ No
(includes ca	pillary fringe)	m ac.::==	nonitoring well, aerial	photos	revieus is-	pections)	if available:	
Describe Re	corded Data (streat	ın gauge, i	nomicing well, aerial	priotos, p	DI CAIOUS IIJS	pections)	, ii available.	
Remarks:								
	f large lake: flood	lplain Zon	e A. Wetland hydro	ology cri	terion is m	net.		
23.3			,	3,				

Project/Site: 130 Environmental Pa	rk		City/C	ounty:	Lockha	rt/Caldwell	Sampling Date: 06/26/2013
Applicant/Owner: 130 Environmenta							Sampling Point: T16-DP9a
Investigator(s): Troegle, Josh & Boe							
Landform (hillslope, terrace, etc.): Depr							ave Slope (%): 0
Subregion (LRR): J - Southwestern							Datum: NAD 83
Soil Map Unit Name: CrC2 - Crockett							ification: None available
Are climatic / hydrologic conditions on the							1 200,000
Are Vegetation, Soil, or H							" present? Yes ✓ No
Are Vegetation, Soil, or H							
SUMMARY OF FINDINGS – Att						eeded, explain any ansv	,
Hydrophytic Vegetation Present?	Yes <u>√</u>	No		1 41	0 1		
Hydric Soil Present?	Yes 🗸				e Sampled n a Wetlaı		No
Wetland Hydrology Present?	Yes <u></u> ✓	No		Withi	n a wedai	nd? Yes <u>v</u>	Nо
Remarks: Scrub-shrub fringe outside of emerg VEGETATION – Use scientific I			shore	e of la	ke.		
VEGETATION - Use scientific i	iailles oi pia	Absolute	Dom	inant	Indicator	Dominance Test wo	rksheet:
Tree Stratum (Plot size: 30')	% Cover				Number of Dominant	
1						That Are OBL, FACW	V, or FAC
2						(excluding FAC-):	<u>Z</u> (A)
3						Total Number of Dom	ninant
4			-			Species Across All Si	<u>2</u> (B)
Sapling/Shrub Stratum (Plot size: 15'	_ ,		= Tota	al Cove	er	Percent of Dominant	
1. Sesbania drummondii	/	70	Yes		FACW	That Are OBL, FACW	/, or FAC: 100 (A/B)
2.						Prevalence Index w	orksheet:
3						Total % Cover of	
4							x 1 =
5							x 2 =
51		70	= Tota	al Cove	er		x 3 =
Herb Stratum (Plot size: 5' 1. Eleocharis engelmannii)	80	Yes		FACW		x 4 =
2. Phyla lanceolata		$-\frac{80}{20}$	No		FACW		x 5 =
3. Iva annua		$-\frac{20}{2}$	No		FAC	Column Totals:	(A) (B)
4. Xanthium strumarium		$-\frac{2}{2}$	No		FAC	Prevalence Inde	ex = B/A =
5.						Hydrophytic Vegeta	tion Indicators:
6.						1	r Hydrophytic Vegetation
7						✓ 2 - Dominance T	est is >50%
8.						3 - Prevalence In	
9.						4 - Morphologica	I Adaptations ¹ (Provide supporting rks or on a separate sheet)
10							rks or on a separate sneet) rophytic Vegetation¹ (Explain)
Woody Vine Stratum (Plot size: 30'		40.4	= Tota	al Cov	er	¹ Indicators of hydric s	soil and wetland hydrology must
1						be present, unless dis	sturbed or problematic.
2			= Tota	al Cove	 er	Hydrophytic Vegetation Present?	(oc √ No
% Bare Ground in Herb Stratum 0 Remarks:						riesentr	/es No
Scrub-shrub wetland dominated by	Sesbania. Hyd	rophytic ve	getati	on cri	terion is r	not met.	

US Army Corps of Engineers

Sampling Point: T16-DP9a

Profile Desc	cription: (Describ	e to the de	pth needed to docu			or confir	m the absence of i	ndicators.)
Depth	Matrix	%	Color (moist)	x Featur %	esType ¹	_Loc ²	Texture	Remarks
(inches) 0-3	Color (moist) 10 YR 2/1	<u>%</u> 90	5 YR 5/8	10	C Type	M/PL	Clay	L'ellaiva
		- 90	5 YR 5/8	3	- c	M/PL		
3-7	10 YR 3/1							4.0
7-10	10 YR 4/1	97	7.5 YR 5/8	3	_ <u>C</u>	M		
1Type: C=C	oncentration D=D	enletion RM	/=Reduced Matrix, C	S=Cover	ed or Coat	ed Sand G	Grains ² Locatio	on: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (App	licable to al	I LRRs, unless othe	rwise no	oted.)	ou ouris c		Problematic Hydric Soils ³ :
Histosol					Matrix (S4)		1 cm Mucl	(A9) (LRR I, J)
_	pipedon (A2)		Sandy					irie Redox (A16) (LRR F, G, H)
_	istic (A3)			d Matrix	, ,			ace (S7) (LRR G)
1	en Sulfide (A4) d Layers (A5) (LR I	D E\		•	lineral (F1) Matrix (F2)			s Depressions (F16) I outside of MLRA 72 & 73)
	uck (A9) (LRR F, C			ed Matrix			Reduced \	
_	d Below Dark Surf		✓ Redox					nt Material (TF2)
	ark Surface (A12)				Surface (F7	")		ow Dark Surface (TF12)
	Mucky Mineral (S1) Mucky Peat or Pea				ions (F8)	=16)		olain in Remarks) hydrophytic vegetation and
	ииску Реаt ог Реа ucky Peat or Peat				73 of LR			drology must be present,
_ 0 0111111	acity i out of i out	(00) (=:::::	, (,		turbed or problematic.
Restrictive	Layer (if present)	:						
Type:								
Depth (in	ches):						Hydric Soil Pre	esent? Yes V No No
Remarks:								
Hydric soil	criterion is met.							
HYDROLO	GY							
Wetland Hy	drology Indicator	s:						
Primary Indi	cators (minimum o	fone require	ed; check all that app	ly)			Secondary I	ndicators (minimum of two required)
Surface	Water (A1)		Salt Crus	t (B11)			Surface	Soil Cracks (B6)
High Wa	ater Table (A2)		Aquatic Ir		, ,			y Vegetated Concave Surface (B8)
Saturati			Hydrogen					e Patterns (B10)
1 —	farks (B1)		Dry-Seas Oxidized		r Table (C2	-		d Rhizospheres on Living Roots (C3)
_	nt Deposits (B2)		_	not tille		virig Rook	, ,	re tilled) n Burrows (C8)
	posits (B3) at or Crust (B4)		•		ced Iron (C	24)		ion Visible on Aerial Imagery (C9)
	posits (B5)		Thin Muc			,	,	rphic Position (D2)
	on Visible on Aeri	al Imagery (i						eutral Test (D5)
Water-S	stained Leaves (B	9)					Frost-H	eave Hummocks (D7) (LRR F)
Field Obser	vations:							
Surface Wat	er Present?		No ✓ Depth (ir					
Water Table	Present?		No ✓ Depth (ir					
Saturation P	pillary fringe)		No ✓ Depth (ir					resent? Yes <u>√</u> No
Describe Re	corded Data (stre	am gauge, n	nonitoring well, aerial	photos,	previous in	spections), if available:	
Remarks:								
	icators observed	I. Site on I	Floodplain Zone A.	Wetlar	nd hydrolo	gy criteri	on is met.	

Project/Site: 130 Environmental Park		City/County	Lockha	rt/Caldwell	Sampling Date: 06/26/2013
Applicant/Owner: 130 Environmental Park, LLC				State: TX	Sampling Point: T16-DP9b
		Section, To	wnship, Ra	nge: NA	
_ :: -					/e Slope (%): 0
Subregion (LRR): J - Southwestern Prairies	Lat: 29.	95		Long: -97.65	Datum: NAD 83
Soil Map Unit Name: W - Water					cation: None available
Are climatic / hydrologic conditions on the site typical for this	time of ve				
Are Vegetation, Soil, or Hydrologys					present? Yes ✓ No
Are Vegetation, Soil, or Hydrology n				eeded, explain any answe	
SUMMARY OF FINDINGS – Attach site map					
Hydrophytic Vegetation Present? Yes ✓ No.	0	le th	e Sampled	I Area	
Hydric Soil Present? Yes ✓ No.			e Sampleu in a Wetlar		No
	<u> </u>				
Remarks:	0				
Finger of land between south shore of lake and dam	. Scrub-si	nrub wetla	na.		
VEGETATION – Use scientific names of plan	ts.				
201	Absolute	Dominant	Indicator	Dominance Test work	sheet:
Tree Stratum (Plot size: 30')	% Cover	Species?	Status	Number of Dominant S	
1				That Are OBL, FACW, (excluding FAC-):	or FAC (A)
2					
3				Total Number of Domir Species Across All Stra	4
4		= Total Cov	/er		
Sapling/Shrub Stratum (Plot size: 15'		- 10101 001	, 01	Percent of Dominant S That Are OBL, FACW,	
1. Sesbania drummondii	25	Yes	FACW	Prevalence Index wor	rkehoof
2. Ulmus crassifolia	10	Yes	FAC		Multiply by:
3. Fraxinus pennsylvanica	15	Yes	FAC		x 1 =
4					x 2 =
5	50	= Total Cov			x 3 =
Herb Stratum (Plot size: 5'		- Total Cov	761	FACU species	x 4 =
1. Iva annua	80	Yes	FAC	UPL species	x 5 =
2. Eleocharis engelmannii	20	No	FACW	Column Totals:	(A) (B)
3. Carex brevior	10	No	FAC	Prevalence Index	c = B/A =
4				Hydrophytic Vegetati	
5					Hydrophytic Vegetation
6				✓ 2 - Dominance Tes	st is >50%
7				3 - Prevalence Ind	ex is ≤3.0 ¹
8				4 - Morphological	Adaptations ¹ (Provide supporting
9					s or on a separate sheet)
	110	= Total Co	ver	Problematic Hydro	ophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size: 30')				¹ Indicators of hydric so be present, unless dist	il and wetland hydrology must urbed or problematic.
2				Hydrophytic	
% Bare Ground in Herb Stratum 20		= Total Co	ver	Vegetation Present? Ye	es No
Remarks:					
Scrub-shrub wetland dominated by sesbania. Hydro	phytic ve	getation cr	iterion is n	net.	

Sampling Point: T16-DP9b

SOIL

Profile Desc	cription: (Describ	e to the dep				or confir	m the absence of indicators.)	
Depth	Matrix			x Featur	es	12	Touture Demonto	
(inches)	Color (moist)	%	Color (moist)		Type ¹	M/CL		
0-5	10 YR 2/1	70	10 YR 4/6	20	_ <u>C</u>		Clay	
			2.5 Y 5/6	10	_ <u>c</u>	M		
5-12	10 YR 3/1	55	10 YR 5/6	40	_ <u>C</u>		Shaley clay	
			10 YR 7/1	5	_ <u>D</u>	M		
				-				
1		enletion DM		S=Cover	od or Coot	od Sand G	Grains. ² Location: PL=Pore Lining, M=Matrix.	
Hydric Soil	Indicators: (App	epietion, Kivi	=Reduced Matrix, C LRRs, unless other	rwise no	ed or Coal	eu Sanu C	Indicators for Problematic Hydric Soils ³ :	
Histosol		iloubio to un			fatrix (S4)		1 cm Muck (A9) (LRR I, J)	
	pipedon (A2)			Redox (S			Coast Prairie Redox (A16) (LRR F, G, H)	
_	istic (A3)			d Matrix			Dark Surface (S7) (LRR G)	
_	en Sulfide (A4)				lineral (F1)	1	High Plains Depressions (F16)	
Stratifie	d Layers (A5) (LRI	RF)	Loamy	Gleyed M	Matrix (F2)		(LRR H outside of MLRA 72 & 73)	
1 cm Mi	uck (A9) (LRR F, G	S, H)		ed Matrix	. ,		Reduced Vertic (F18)	
	d Below Dark Surf	ace (A11)	✓ Redox				Red Parent Material (TF2)	
	ark Surface (A12)				Surface (F7	()	Very Shallow Dark Surface (TF12)	
	Mucky Mineral (S1) Mucky Peat or Pea		_	Depressi	ons (Fo) ressions (I	=16)	Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and	
	ucky Peat or Peat		· · — -		73 of LR	•	wetland hydrology must be present,	
_ 3 cm w	doky i editor i edit	(00) (21111)	(,	unless disturbed or problematic.	
Restrictive	Layer (if present)							
Type: Cl	ay pan							
Depth (in	ches): <u>12</u>						Hydric Soil Present? Yes ✓ No	
Remarks:	***							
No hydric s	oil criterion is me	et.						
HYDROLO	GY							
	drology Indicator	.e.						
			d; check all that app	lv)			Secondary Indicators (minimum of two requ	uired)
	Water (A1)	one require	Salt Crus				Surface Soil Cracks (B6)	0 0 7
	ater Table (A2)		Aquatic Ir	` '	tes (B13)		Sparsely Vegetated Concave Surface ((B8)
Saturati			Hydroger				Drainage Patterns (B10)	20,
	/larks (B1)				Table (C2	2)	Oxidized Rhizospheres on Living Roots	s (C3)
	nt Deposits (B2)		✓ Oxidized					` '
_	posits (B3)		_	not tille			Crayfish Burrows (C8)	
	at or Crust (B4)		·		ced Iron (C	(4)	✓ Saturation Visible on Aerial Imagery (C	9)
Iron De			Thin Muc			,	✓ Geomorphic Position (D2)	,
1 —	ion Visible on Aeria	al Imagery (B					✓ FAC-Neutral Test (D5)	
	Stained Leaves (B9						Frost-Heave Hummocks (D7) (LRR F)	,
Field Obser	vations:							
Surface Wat	ter Present?	Yes	No ✓ Depth (in	nches): _				
Water Table	Present?		No ✓ Depth (in			1		
Saturation F			No ✓ Depth (ii				etland Hydrology Present? Yes ✓ No	
(includes ca	pillary fringe)						N. 17 11 11 11 11 11 11 11 11 11 11 11 11	
			onitoring well, aerial			spections	s), ii avaliable:	
	tograpny: 2012	2, 2010, 20	08-2009, 2005,	2004,	1990			
Remarks:	!t cb	l Cite	loodalair 7aaa A	- امریمط	tion visit-	0 00 000	Itinle years of imageny. Wetland hydrolessy said	torion
Several ind is met.	icators observed	ı. Site on F	iooqpiain Zone A.	inunda	ILION VISID	e on mul	Itiple years of imagery. Wetland hydrology crit	EHOH
is met.								

Project/Site: 130 Environmental Park		City/Co	ounty:	Lockha	rt/Caldwell Sampling Date: 06/26/2013
Applicant/Owner: 130 Environmental Park, LLC					State: TX Sampling Point: T16-DP10
Investigator(s): Troegle, Josh & Boe, Brian		Section	n. Tov	vnship. Ra	nge: NA
Landform (hillslope, terrace, etc.): Lake shore					convex, none): Concave Slope (%): 2
					Long: -97.65 Datum: NAD 83
_					
					NWI classification: None available
Are climatic / hydrologic conditions on the site typical fo	r this time of yea	ar? Ye	es 🗸		
Are Vegetation, Soil, or Hydrology	significantly	disturb	ed?	Are '	"Normal Circumstances" present? Yes ✓ No
Are Vegetation, Soil, or Hydrology	naturally pro	blema	tic?	(If ne	eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site m	ap showing	sam	pling	g point l	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes ✓	No	İ			
	No			Sampled	,
	No		withi	n a Wetlar	nd? Yes v No
Remarks:					
Emergent wetland along shore of lake just north	of dam.				
VEGETATION – Use scientific names of p	lants.				
T = 01-4 ··· (Blut-i 30'	Absolute				Dominance Test worksheet:
Tree Stratum (Plot size: 30'					Number of Dominant Species
1.					That Are OBL, FACW, or FAC (excluding FAC-): 2 (A)
2					
3					Total Number of Dominant Species Across All Strata: 2 (B)
4					(B)
Sapling/Shrub Stratum (Plot size: 15'		= lota	al Cov	er	Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)
1. Sesbania drummondii	5	Yes		FACW	(180)
2.					Prevalence Index worksheet:
3					Total % Cover of: Multiply by:
4					OBL species x 1 =
5.					FACW species x 2 =
0	5	= Tota	al Cov	er	FAC species x 3 =
Herb Stratum (Plot size: 5'				-	FACU species x 4 =
1. Eleocharis engelmannii	80	Yes		FACW	UPL species x 5 =
2. Xanthium strumarium	20	No		FAC	Column Totals: (A) (B)
3. Iva annua	10	No		FAC	Provolence Index = P/A =
4. Polygonum pensylvanicum	5	No		FACW	Prevalence Index = B/A =
5					Hydrophytic Vegetation Indicators:
6					1 - Rapid Test for Hydrophytic Vegetation ✓ 2 - Dominance Test is >50%
7					2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹
8					1—
9					4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
10					Problematic Hydrophytic Vegetation¹ (Explain)
201	115	= Tota	al Cov	er	
Woody Vine Stratum (Plot size: 30')					¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1		-			
2			_		Hydrophytic Vegetation
% Bare Ground in Herb Stratum 0		= Tota	al Cov	er	Present? Yes No
Remarks:					
Emergent wetland dominated by spikerush. Hyd	drophytic yeae	etation	crite	rion is me	et.
	., .,				
			-		

Great Plains – Version 2.0

(inches)	Color (moist)	%	Color (moist)	%_	Type ¹	Loc ²	<u>Texture</u>	Remarks
0-5	10 YR 2/1	80	5 YR 5/8	20	С	M/PL	Clay	
5-10	10 YR 3/1	45	10 YR 6/2	40	D	М		
-	10 11101		5 YR 5/8	15	C	М		
			3 11(3/0			141		
Type: C=Co	oncentration, D=De	pletion, RM	M=Reduced Matrix, C	S=Covere	ed or Coate	d Sand G	Grains. ² Locati	ion: PL=Pore Lining, M=Matrix.
			II LRRs, unless other			1		r Problematic Hydric Soils ³ :
_ Histosol	(A1)		Sandy	Gleyed M	atrix (S4)			ck (A9) (LRR I, J)
	pipedon (A2)		_ ′	Redox (S	,			airie Redox (A16) (LRR F, G, H)
Black Hi	. ,			d Matrix (,			face (S7) (LRR G)
	en Sulfide (A4)	-\			ineral (F1)			ns Depressions (F16)
	d Layers (A5) (LRR uck (A9) (LRR F, G			ed Matrix	latrix (F2)		•	H outside of MLRA 72 & 73) Vertic (F18)
	d Below Dark Surfa		✓ Redox				_	ent Material (TF2)
	ark Surface (A12)	(/)			urface (F7)	•		llow Dark Surface (TF12)
	Mucky Mineral (S1)		Redox	Depression	ons (F8)		Other (Ex	plain in Remarks)
2.5 cm N	Mucky Peat or Peat	(S2) (LRR	G, H) High Pl	lains Depr	ressions (F	16)	³ Indicators of	hydrophytic vegetation and
5 cm Mu	icky Peat or Peat (S3) (LRR F	·) (MI	LRA 72 &	73 of LRR	(H)		ydrology must be present,
							unless di	sturbed or problematic.
Postrictive I								
	Layer (if present):							
Type:								
Туре:	ches):						Hydric Soil Pr	resent? Yes_✓ No
Type: Depth (inc Remarks:	ches):						Hydric Soil Pr	resent? Yes_✓ No
Type: Depth (inc Remarks:							Hydric Soil Pr	resent? Yes <u>√</u> No
Type: Depth (inc Remarks:	ches):						Hydric Soil Pr	resent? Yes_✓ No
Type: Depth (inc Remarks: ydric soil c	ches):						Hydric Soil Pr	resent? Yes_✓ No
Type: Depth (ind lemarks: ydric soil c	criterion is met.						Hydric Soil Pr	resent? Yes_✓ No
Type: Depth (ind Remarks: ydric soil c	ches): criterion is met. GY drology Indicators	s:		alv)				
Type: Depth (inclemarks: ydric soil control YDROLO Vetland Hydrimary Indice	ches): criterion is met. GY drology Indicators cators (minimum of	s:	ed; check all that app				Secondary	Indicators (minimum of two require
Type: Depth (ind lemarks: lydric soil of YDROLO Vetland Hydrimary Indic Surface	ches): criterion is met. GY drology Indicators cators (minimum of	s:	ed; check all that app Salt Crus	t (B11)	es (R13)		Secondary Surface	Indicators (minimum of two required
Type: Depth (ind Remarks: ydric soil c YDROLO Vetland Hyd Trimary Indic Surface High Wa	ches): Criterion is met. GY drology Indicators cators (minimum of Water (A1) ater Table (A2)	s:	ed; check all that app Salt Crus Aquatic Ir	t (B11) nvertebrat			Secondary Surfac	Indicators (minimum of two required e Soil Cracks (B6) ely Vegetated Concave Surface (B8
Type: Depth (ind lemarks: ydric soil c YDROLO Vetland Hyd rimary Indic Surface High Wa Saturatio	GY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3)	s:	ed; check all that app Salt Crus Aquatic Ir Hydrogen	t (B11) nvertebrat n Sulfide C	odor (C1)		Secondary Surfac Sparse Draina	Indicators (minimum of two required e Soil Cracks (B6) ely Vegetated Concave Surface (B8 ge Patterns (B10)
Type: Depth (indicements: ydric soil of the color of	GY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1)	s:	ed; check all that app Salt Crus Aquatic Ir Hydrogen Dry-Seas	t (B11) nvertebrat Sulfide C on Water	odor (C1) Table (C2)		Secondary Surfac Sparse Draina Oxidize	Indicators (minimum of two required e Soil Cracks (B6) ely Vegetated Concave Surface (B8 ge Patterns (B10) ed Rhizospheres on Living Roots (C
Type: Depth (ind lemarks: ydric soil co /DROLO /etland Hydrimary Indic Surface High Wa Saturatic Water M Sedimer	ches):	s:	ed; check all that app Salt Crus Aquatic Ir Hydrogen Dry-Seas Oxidized	t (B11) nvertebrat n Sulfide C on Water Rhizosph	odor (C1) Table (C2) eres on Liv		Secondary Surface Sparse Draina Oxidize S (C3)	Indicators (minimum of two require e Soil Cracks (B6) ely Vegetated Concave Surface (B8 ge Patterns (B10) ed Rhizospheres on Living Roots (Cere tilled)
Type: Depth (ind lemarks: ydric soil co /DROLO /etland Hydrimary Indic Surface High Wa Saturatio Water M Sedimer Drift Dep	ches):	s:	ed; check all that app Salt Crus Aquatic Ir Hydrogen Dry-Seas Oxidized (where	t (B11) nvertebrate Sulfide Con Water Rhizosphe not tilled	Odor (C1) Table (C2) eres on Liv l)	ing Roots	Secondary Surface Sparse Draina Oxidize s (C3) (whe	Indicators (minimum of two require e Soil Cracks (B6) ely Vegetated Concave Surface (B8 ge Patterns (B10) ed Rhizospheres on Living Roots (Cere tilled) sh Burrows (C8)
Type: Depth (inclements: ydric soil contents of the property of the prope	ches):	s:	ed; check all that app Salt Crus Aquatic Ir Hydrogen Dry-Seas Oxidized (where	t (B11) nvertebrate Sulfide Coon Water Rhizospho not tilled	Odor (C1) Table (C2) eres on Liv l) ed Iron (C	ing Roots	Secondary Surface Sparse Draina Oxidize s (C3) (whee Crayfis	Indicators (minimum of two require e Soil Cracks (B6) ely Vegetated Concave Surface (B8 ge Patterns (B10) ed Rhizospheres on Living Roots (Cere tilled) sh Burrows (C8) tion Visible on Aerial Imagery (C9)
Type: Depth (ind lemarks: ydric soil of YDROLO Yetland Hyd rimary Indic Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep	ches):	s: one requir	ed; check all that app Salt Crus: Aquatic Ir Hydrogen Dry-Seas _✓ Oxidized (where Presence Thin Muc	t (B11) nvertebrate Sulfide Con Water Rhizosphe not tilled tof Reduce	Odor (C1) Table (C2) eres on Liv I) eed Iron (C4) (C7)	ing Roots	Secondary Surface Sparse Draina Oxidize S (C3) Crayfis ✓ Satura ✓ Geome	Indicators (minimum of two required e Soil Cracks (B6) ely Vegetated Concave Surface (B8) ge Patterns (B10) ed Rhizospheres on Living Roots (Cere tilled) sh Burrows (C8) tion Visible on Aerial Imagery (C9) orphic Position (D2)
Type: Depth (indicemarks: ydric soil of the color of	ches):	one requir	ed; check all that app Salt Crus: Aquatic Ir Hydrogen Dry-Seas _✓ Oxidized (where Presence Thin Muc	t (B11) nvertebrate Sulfide Con Water Rhizosphe not tilled tof Reduce	Odor (C1) Table (C2) eres on Liv I) eed Iron (C4) (C7)	ing Roots	Secondary Surfac Sparse Draina Oxidize S (C3) Crayfis ✓ Satura ✓ Geome	Indicators (minimum of two require e Soil Cracks (B6) ely Vegetated Concave Surface (B8 ge Patterns (B10) ed Rhizospheres on Living Roots (Cere tilled) sh Burrows (C8) tion Visible on Aerial Imagery (C9)
Type: Depth (ind Remarks: ydric soil of YDROLO Yetland Hyd Yimary Indic Surface High Wa Saturatic Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatic Water-S	ches):	one requir	ed; check all that app Salt Crus: Aquatic Ir Hydrogen Dry-Seas _✓ Oxidized (where Presence Thin Muc	t (B11) nvertebrate Sulfide Con Water Rhizosphe not tilled tof Reduce	Odor (C1) Table (C2) eres on Liv I) eed Iron (C4) (C7)	ing Roots	Secondary Surfac Sparse Draina Oxidize S (C3) Crayfis ✓ Satura ✓ Geome	Indicators (minimum of two required e Soil Cracks (B6) sely Vegetated Concave Surface (B8 ge Patterns (B10) ed Rhizospheres on Living Roots (Cere tilled) sh Burrows (C8) tion Visible on Aerial Imagery (C9) orphic Position (D2) leutral Test (D5)
Type: Depth (ind Remarks: lydric soil of YDROLO Yetland Hyd Primary Indic Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma _ Iron Dep _ Inundatio Water-S Gield Observir	ches):	one requir	ed; check all that app Salt Crus Aquatic Ir Hydrogen Dry-Seas Oxidized (where Presence Thin Muc	t (B11) nvertebrate n Sulfide Con Water Rhizosphe not tilled of Reduct k Surface	Odor (C1) Table (C2) eres on Liv I) ed Iron (C4 (C7) emarks)	ing Roots	Secondary Surfac Sparse Draina Oxidize S (C3) Crayfis ✓ Satura ✓ Geome	Indicators (minimum of two required e Soil Cracks (B6) sely Vegetated Concave Surface (B8 ge Patterns (B10) ed Rhizospheres on Living Roots (Cere tilled) sh Burrows (C8) tion Visible on Aerial Imagery (C9) orphic Position (D2) leutral Test (D5)
Type: Depth (income and income and inc	ches):	one requir	ed; check all that app Salt Crus Aquatic Ir Hydrogen Dry-Seas Oxidized (where Presence Thin Muc B7) Other (Ex	t (B11) nvertebrat n Sulfide C on Water Rhizosphe not tilled of Reduc k Surface xplain in R	Odor (C1) Table (C2) eres on Liv I) ed Iron (C4 (C7) emarks)	ing Roots	Secondary Surfac Sparse Draina Oxidize S (C3) Crayfis ✓ Satura ✓ Geome	Indicators (minimum of two required e Soil Cracks (B6) sely Vegetated Concave Surface (B8 ge Patterns (B10) ed Rhizospheres on Living Roots (Cere tilled) sh Burrows (C8) tion Visible on Aerial Imagery (C9) orphic Position (D2) leutral Test (D5)
Type: Depth (ind Remarks: lydric soil of the color	ches):	s: one requir I Imagery (ed; check all that app Salt Crust Aquatic Ir Hydrogen Oxidized (where Presence Thin Muc B7) Other (Ex	t (B11) nvertebrate n Sulfide Con Water Rhizospho not tilled of Reduce k Surface collain in R	Odor (C1) Table (C2) eres on Liv I) Led Iron (C4) (C7) Lemarks)	ing Roots	Secondary Surface Sparse Draina Oxidize (whee Crayfis Satura FAC-N Frost-h	Indicators (minimum of two required e Soil Cracks (B6) ely Vegetated Concave Surface (B8) ge Patterns (B10) ed Rhizospheres on Living Roots (Cere tilled) sh Burrows (C8) tion Visible on Aerial Imagery (C9) orphic Position (D2) leutral Test (D5) Heave Hummocks (D7) (LRR F)
Type: Depth (ind Remarks: lydric soil of the color	ches):	I Imagery (Yes Yes	ed; check all that app Salt Crus Aquatic Ir Hydrogen Dry-Seas Oxidized (where Presence Thin Muc B7) Other (Ex	t (B11) nvertebrate n Sulfide Con Water Rhizosphe not tilled of Reduct k Surface xplain in R	Odor (C1) Table (C2) eres on Liv I) ed Iron (C- (C7) emarks)	4) We	Secondary Surface Sparse Draina Oxidize (whee Crayfis ✓ Satura ✓ Geome Frost-H	Indicators (minimum of two required e Soil Cracks (B6) sely Vegetated Concave Surface (B8 ge Patterns (B10) ed Rhizospheres on Living Roots (Cere tilled) sh Burrows (C8) tion Visible on Aerial Imagery (C9) orphic Position (D2) leutral Test (D5)
Type: Depth (ind Remarks: ydric soil of YDROLO Yetland Hyd Primary Indic Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma _ Iron Dep _ Inundatio Water-S Gurface Water Surface Water Vater Table Saturation Princludes can	ches):	I Imagery (Yes Yes	ed; check all that app Salt Crust Aquatic Ir Hydrogen Oxidized (where Presence Thin Muc B7) Other (Ex	t (B11) nvertebrate n Sulfide Con Water Rhizosphe not tilled of Reduct k Surface xplain in R	Odor (C1) Table (C2) eres on Liv I) ed Iron (C- (C7) emarks)	4) We	Secondary Surface Sparse Draina Oxidize (whee Crayfis ✓ Satura ✓ Geome Frost-H	Indicators (minimum of two require e Soil Cracks (B6) ely Vegetated Concave Surface (B8 ge Patterns (B10) ed Rhizospheres on Living Roots (Cere tilled) sh Burrows (C8) tion Visible on Aerial Imagery (C9) orphic Position (D2) leutral Test (D5) Heave Hummocks (D7) (LRR F)
Type: Depth (ind Remarks: lydric soil of the color	ches):	I Imagery (Yes Yes	ed; check all that app Salt Crus Aquatic Ir Hydrogen Dry-Seas Oxidized (where Presence Thin Muc B7) Other (Ex	t (B11) nvertebrate n Sulfide Con Water Rhizosphe not tilled of Reduct k Surface xplain in R	Odor (C1) Table (C2) eres on Liv I) ed Iron (C- (C7) emarks)	4) We	Secondary Surface Sparse Draina Oxidize (whee Crayfis ✓ Satura ✓ Geome Frost-H	Indicators (minimum of two required e Soil Cracks (B6) ely Vegetated Concave Surface (B8) ge Patterns (B10) ed Rhizospheres on Living Roots (Cere tilled) sh Burrows (C8) tion Visible on Aerial Imagery (C9) orphic Position (D2) leutral Test (D5) Heave Hummocks (D7) (LRR F)

Project/Site: 130 Environmental Pa	ark		City/C	County	Lockha	rt/Caldwell	Sam	nnling Date: (06/27/2013
Applicant/Owner: 130 Environmenta			-			State: TX			
Investigator(s): Troegle, Josh & Bo							Sain	ipiing Point	110 01 11
							ncave		2.4
Landform (hillslope, terrace, etc.): Dep									
Subregion (LRR): <u>J - Southwestern</u>	Prairies	Lat: 29.	95						
Soil Map Unit Name: W - Water						NWi cl	assification	None ava	ailable
Are climatic / hydrologic conditions on the	e site typical for	this time of yea	ar? Ye	es <u>√</u>	No _	(If no, expla	in in Remar	ks.)	
Are Vegetation, Soil, or H	Hydrology	_ significantly	disturt	bed?	Are '	'Normal Circumstar	ices" presei	nt? Yes <u>√</u>	No
Are Vegetation, Soil, or I-	Hydrology	_ naturally pro	blema	atic?	(If ne	eded, explain any	answers in I	Remarks.)	
SUMMARY OF FINDINGS - At	tach site ma	p showing	sam	npling	point l	ocations, trans	sects, im	portant fe	atures, etc.
Hydrophytic Vegetation Present?	Yes ✓	No		la tha	Sampled	I Aron			
Hydric Soil Present?	Yes <u></u> ✓	No			a Wetlar		. ✓	No	
Wetland Hydrology Present?	Yes <u></u> ✓	No		within	i a vvetiai	id: Tes			
Remarks:									
Edge of lake									
VEGETATION – Use scientific	names of pl								
Tree Stratum (Plot size: 30')	Absolute % Cover				Dominance Test			
1					Otatao	Number of Domir That Are OBL, F		С	
2						(excluding FAC-		2	(A)
3.						Total Number of	Dominant		
4						Species Across A		2	(B)
				al Cove		Percent of Domir	ant Specie	•	
Sapling/Shrub Stratum (Plot size: 10						That Are OBL, F			(A/B)
1. Sesbania drummondii			Yes		FACW	Prevalence Inde	v worksho	ot:	
2						Total % Cov			, bu
3						OBL species			
4						FACW species			
5						FAC species			
Herb Stratum (Plot size: 5')	10	= Tota	tal Cove	er	FACU species			
1. Eleocharis engelmannii	/	90	Yes		FACW	UPL species			
2. Persicaria pensylvanicum		20	No		FACW	Column Totals:			(B)
3. Phyla lanceolata		25	No		FACW				
4. Cyperus reflexus		5	No		FAC			A =	
5.						Hydrophytic Ve	-		
6						1 - Rapid Te			ation
7						✓ 2 - Dominan			
8						3 - Prevalence			do ourre d'
9.						4 - Morpholo data in Re		ations" (Provi n a separate	
10						Problematic		-	,
201		140	= Tota	tal Cove	er	1.		_	
Woody Vine Stratum (Plot size: 30'	-					¹ Indicators of hyd be present, unles			
1									
2				tol Co	\r	Hydrophytic Vegetation			
% Bare Ground in Herb Stratum 0			= 100	iai Cove	er.	Present?	Yes <u></u> ✓	No	
Remarks:									·
Emergent wetland dominated by sp	ikerush. Hyd	rophytic vege	tation	n criter	ion is me	et.			
, ,	•								
US Army Corps of Engineers			-				(Great Plains -	- Version 2.0

	cription: (Describe	to the depth n				or comir	ii the absence of i	ndicators.)
Depth (inches)	Matrix Color (moist)		Color (moist)	ox Feature %	Type ¹	Loc²	Texture	Remarks
0-4	10 YR 3/2		YR 4/6	30	C	M/PL	Clay	Remarks
	10 113/2		11(4/0			IVI/I L	Clay	
	- +							
							2	
	oncentration, D=De					ed Sand G		n: PL=Pore Lining, M=Matrix.
-	Indicators: (Applie	cable to all LRR						Problematic Hydric Soils ³ :
Histosol				Gleyed Ma				(A9) (LRR I, J)
	oipedon (A2)			Redox (S				rie Redox (A16) (LRR F, G, H)
Black Hi	, ,			d Matrix (S	,			ice (S7) (LRR G)
	en Sulfide (A4)	E \		Mucky Mi				s Depressions (F16)
	Layers (A5) (LRR			Gleyed M	, ,			outside of MLRA 72 & 73)
	ick (A9) (LRR F, G, d Below Dark Surfac		✓ Redox	ed Matrix (,		Reduced \	/ertic (F18) it Material (TF2)
	ark Surface (A12)	æ (ATT)	_	ed Dark Sun	, ,)		ow Dark Surface (TF12)
	lucky Mineral (S1)			Depressio	•	,		plain in Remarks)
	Aucky Peat or Peat	(S2) (L RR G. H)		ains Depr		16)		ydrophytic vegetation and
	icky Peat or Peat (S			RA 72 &				drology must be present,
_	(-	, (=				,		urbed or problematic.
Restrictive L	ayer (if present):							•
Type: Co								
Depth (inc							Hydric Soil Pre	sent? Yes ✓ No
Remarks:						_	,	
	riterion is met.							
riyane son e	interior is met.							
HYDROLO	GY							
	drology Indicators							
-	cators (minimum of		ack all that ann	14)			Secondon/I	adjectors (minimum of two required)
		one required, cri						ndicators (minimum of two required)
	Water (A1)		Salt Crust	. ,	(= 40)		_	Soil Cracks (B6)
	ter Table (A2)		Aquatic In					y Vegetated Concave Surface (B8)
Saturation	` '		Hydrogen		. ,			e Patterns (B10)
	arks (B1)		Dry-Seas					d Rhizospheres on Living Roots (C3)
Sedimen	t Deposits (B2)		✓ Oxidized	-		ing Roots		e tilled)
Drift Dep	. ,			not tilled)				Burrows (C8)
Algal Ma	t or Crust (B4)		Presence	of Reduce	ed Iron (C	4)		on Visible on Aerial Imagery (C9)
Iron Dep	osits (B5)		Thin Muci	Surface	(C7)		-	phic Position (D2)
Inundatio	on Visible on Aerial	Imagery (B7)	Other (Ex	plain in Re	emarks)		✓ FAC-Ne	utral Test (D5)
Water-St	tained Leaves (B9)						Frost-He	eave Hummocks (D7) (LRR F)
Field Observ	vations:							
Surface Water	er Present?	′es No <u></u>	Depth (in	ches):		_		
Water Table		/es No _	_	ches):				
		es No _					land Hydrology Dr	esent? Yes ✓ No
Saturation Dr		140 _	Debui (III			_ ****	and Hydrology Fr	Coeffici 165 · NO
Saturation Pr (includes cap			ring well aerial	photos, pr	revious ins	spections),	if available:	
(includes cap	corded Data (stream	n gauge, monito	ing wen, acriai					
(includes cap		n gauge, monito	ing wen, denai					
(includes cap Describe Rec		gauge, monito	——————————————————————————————————————				*P	
(includes cap Describe Red Remarks:	corded Data (stream				ology crite	erion is m	net.	
(includes cap Describe Red Remarks:					ology crite	erion is m	net.	

Project/Site: 130 Environmental Park		City/Cou	_{inty:} Lockha	rt/Caldwell	Sampling Date: 06/27/2013	
Applicant/Owner: 130 Environmental Park, LLC			-		Sampling Point: T16-DP12	
nvestigator(s): Troegle, Josh & Boe, Brian Section, Township, Range: NA						
Landform (hillslope, terrace, etc.):		Local re	elief (concave,	convex, none): Convex	Slope (%): 2	
Subregion (LRR): J - Southwestern Prairies						
					cation: None available	
Are climatic / hydrologic conditions on the site typical for thi						
Are Vegetation, Soil, or Hydrologys					present? Yes ✓ No	
Are Vegetation, Soil, or Hydrology r				eeded, explain any answe		
SUMMARY OF FINDINGS – Attach site map					•	
Hydrophytic Vegetation Present? Yes N	lo 🗸		. N. 10 V			
Hydric Soil Present? Yes N			s the Sampled		/	
Wetland Hydrology Present? Yes N	lo 🗸	V	vithin a Wetlar	nd? Yes	No <u>✓</u>	
Remarks:						
Upland area adjacent to fringe wetland along lakesh	nore.					
VEGETATION – Use scientific names of plan	nts.			******		
TEST INTIGHT GOOD COLONIANO NAMES OF PIAN	Absolute	Domin	ant Indicator	Dominance Test work	ksheet;	
Tree Stratum (Plot size: 30'			es? Status_	Number of Dominant S		
1				That Are OBL, FACW,		
2				(excluding FAC-):	<u>1</u> (A)	
3				Total Number of Domin	2	
4				Species Across All Str	(6)	
Sapling/Shrub Stratum (Plot size: 15')		= Total	Cover	Percent of Dominant S That Are OBL, FACW,		
1. Ulmus crassifolia	5	Yes	FAC		(12)	
2. Prosopis glandulosa	5	Yes	FACU	Prevalence Index wo		
3.				Total % Cover of:		
4					x 1 =	
5					x 2 = x 3 =	
Herb Stratum (Plot size: 5'	10	= Total	Cover		x 4 =	
1 Buchloe dactyloides	90	Yes	UPL		x 5 =	
2. Phalaris caroliniana	10	No	FACW		(A)(B)	
3. Solanum elaeagnifolium	5	No	UPL			
4.					x = B/A =	
5				Hydrophytic Vegetati		
6				2 - Dominance Te	Hydrophytic Vegetation	
7				3 - Prevalence Ind		
8				I —	Adaptations ¹ (Provide supporting	
9				data in Remark	ss or on a separate sheet)	
10.	105			Problematic Hydro	ophytic Vegetation¹ (Explain)	
Woody Vine Stratum (Plot size: 30'	105	= Total	Cover	¹ Indicators of hydric so	oil and wetland hydrology must	
1				be present, unless dist		
2				Hydrophytic		
% Bare Ground in Herb Stratum 0		= Total	Cover	Vegetation	es No <u>√</u>	
Remarks:						
Upland grassland area dominated by buffalograss.	Hydrophy	tic vege	etation criterio	on is not met.		

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Profile Description: (Describe Depth Matrix		Redo	x Features	3					
inches) Color (moist)	% C	olor (moist)	%	Type ¹	Loc ²	<u>Texture</u>		Remarks	
0-4 10 YR 3/1	100					Clay	Cobble		
		-							
		···							
		-							
Type: C=Concentration, D=De					d Sand G			Pore Lining, M=Matrix	
lydric Soil Indicators: (Appl	icable to all LRRs							matic Hydric Soils ³ :	
_ Histosol (A1)		_	Gleyed Ma	. ,		_	Muck (A9) (L	. ,	
Histic Epipedon (A2)			Redox (S5) d Matrix (S				Surface (S7)	ox (A16) (LRR F, G, H)
Black Histic (A3) Hydrogen Sulfide (A4)			Mucky Min					ssions (F16)	
Stratified Layers (A5) (LRR	(F)		Gleyed Ma					e of MLRA 72 & 73)	
1 cm Muck (A9) (LRR F, G	•		d Matrix (F				ced Vertic (F	,	
Depleted Below Dark Surfa			Dark Surfa			Red F	arent Materi	al (TF2)	
Thick Dark Surface (A12)			d Dark Su	, ,				Surface (TF12)	
Sandy Mucky Mineral (S1)			Depression				(Explain in F		
2.5 cm Mucky Peat or Peat			ains Depre					tic vegetation and	
_ 5 cm Mucky Peat or Peat (S3) (LRR F)	(ML	.RA 72 & 7	3 of LRR	H)			must be present, r problematic.	
lestrictive Layer (if present):						Turiles	s disturbed 0	problematic.	
Type: Cobble						Hydric Soi	l Present?	Vac No V	,
Type: Cobble Depth (inches): 4						Hydric Soi	I Present?	Yes No _	,
Type: Cobble Depth (inches): 4 Remarks:						Hydric Soi	I Present?	Yes No <u>*</u>	<i>(</i>
Type: Cobble Depth (inches): 4						Hydric Soi	I Present?	Yes No _•	
Type: Cobble Depth (inches): 4 Remarks:						Hydric Soi	I Present?	Yes No <u>v</u>	<u> </u>
Type: Cobble Depth (inches): 4 Remarks: o hydric soil indicators obs						Hydric Soi	I Present?	Yes No <u>*</u>	<u> </u>
Type: Cobble Depth (inches): 4 Remarks: O hydric soil indicators observed.	erved.					Hydric Soi	I Present?	Yes No _•	
Type: Cobble Depth (inches): 4 Remarks: O hydric soil indicators observed. COMPANY OF THE PROPERTY OF THE PRO	erved.	ack all that anni							
Type: Cobble Depth (inches): 4 Remarks: O hydric soil indicators observed by the company of the	erved.					Second	ary Indicator	s (minimum of two rec	
Type: Cobble Depth (inches): 4 demarks: To hydric soil indicators observed by the complete by	erved.	Salt Crust	(B11)	s (B13)		Second Sui	ary Indicator	s (minimum of two rec	quire
Type: Cobble Depth (inches): 4 demarks: To hydric soil indicators observed by the complete by	erved.	Salt Crust Aquatic In	(B11) vertebrate			Second Sui Spa	ary Indicator face Soil Cra arsely Vegeta	s (minimum of two red acks (B6) ated Concave Surface	quired
Type: Cobble Depth (inches): 4 lemarks: In hydric soil indicators observed by the complete by	erved.	Salt Crust Aquatic In Hydrogen	(B11) vertebrate Sulfide Oc	for (C1)		Second Sur Spr Dre	ary Indicator face Soil Cra arsely Vegeta inage Patter	s (minimum of two red acks (B6) ated Concave Surface ns (B10)	quirec
Type: Cobble Depth (inches): 4 lemarks: In hydric soil indicators observed by the complete of	erved.	Salt Crust Aquatic In Hydrogen Dry-Seaso	(B11) vertebrate Sulfide Od on Water T	dor (C1) able (C2)	ng Roots	Second Sur Spr Dra Oxi	ary Indicator face Soil Cra arsely Vegeta inage Patter dized Rhizos	s (minimum of two rec acks (B6) ated Concave Surface rns (B10) spheres on Living Roc	quirec
Type: Cobble Depth (inches): 4 Remarks: O hydric soil indicators observed by the complete of	erved.	Salt Crust Aquatic In Hydrogen Dry-Seaso Oxidized F	(B11) vertebrate Sulfide Oc on Water T Rhizosphe	for (C1) able (C2) res on Livi	ng Roots	Second Sur Spa Dre Oxi (C3)	ary Indicator face Soil Cra arsely Vegeta ninage Patter dized Rhizos where tilled)	s (minimum of two rec acks (B6) ated Concave Surface rns (B10) spheres on Living Roc	quirec
Type: Cobble Depth (inches): 4 lemarks: In hydric soil indicators observed by the complete of	erved.	Salt Crust Aquatic In Hydrogen Dry-Seasc Oxidized F	(B11) vertebrate Sulfide Oco n Water T Rhizosphe not tilled)	dor (C1) able (C2) res on Livi		Second Sur Spr Dre Oxi (C3) Cre	ary Indicator face Soil Cra arsely Vegeta inage Patter dized Rhizos where tilled)	s (minimum of two reconcts (B6) ated Concave Surface rns (B10) spheres on Living Roco	(B8)
Type: Cobble Depth (inches): 4 Itemarks: O hydric soil indicators observed by the complete of	erved.	Salt Crust Aquatic In Hydrogen Dry-Seaso Oxidized F (where Presence	(B11) vertebrate Sulfide Oc on Water T Rhizosphei not tilled) of Reduce	dor (C1) able (C2) res on Livi d Iron (C4		Second Sur Spa Dra Oxi (C3) (v Sat	ary Indicator face Soil Cra arsely Vegeta inage Patter dized Rhizos where tilled) ayfish Burrow curation Visib	s (minimum of two red acks (B6) ated Concave Surface rns (B10) spheres on Living Rod vs (C8)	(B8)
Type: Cobble Depth (inches): 4 temarks: o hydric soil indicators obsection TDROLOGY Vetland Hydrology Indicators rimary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	erved.	Salt Crust Aquatic In Hydrogen Dry-Seaso Oxidized F (where Presence Thin Muck	(B11) vertebrate Sulfide Oc on Water T Rhizosphei not tilled) of Reduce c Surface (dor (C1) Table (C2) Tes on Livi d Iron (C4		Second Sui Spa Dra Oxi (C3) Cra Sat Gee	ary Indicator face Soil Cra arsely Vegeta inage Patter dized Rhizos where tilled) ayfish Burrow turation Visib	s (minimum of two red acks (B6) ated Concave Surface rns (B10) spheres on Living Rod vs (C8) de on Aerial Imagery (sition (D2)	(B8)
Type: Cobble Depth (inches): 4 Itemarks: O hydric soil indicators observed by the comment of th	erved. s: one required; che	Salt Crust Aquatic In Hydrogen Dry-Seaso Oxidized F (where Presence	(B11) vertebrate Sulfide Oc on Water T Rhizosphei not tilled) of Reduce c Surface (dor (C1) Table (C2) Tes on Livi d Iron (C4		Second 	ary Indicator face Soil Cra arsely Vegeta inage Patter dized Rhizos where tilled) ayfish Burrow curation Visib omorphic Po C-Neutral Te	s (minimum of two recacks (B6) ated Concave Surface rns (B10) spheres on Living Roc vs (C8) ble on Aerial Imagery (sition (D2) st (D5)	(B8)
Type: Cobble Depth (inches): 4 Remarks: O hydric soil indicators observed by the complete of	erved. s: one required; che	Salt Crust Aquatic In Hydrogen Dry-Seaso Oxidized F (where Presence Thin Muck	(B11) vertebrate Sulfide Oc on Water T Rhizosphei not tilled) of Reduce c Surface (dor (C1) Table (C2) Tes on Livi d Iron (C4		Second 	ary Indicator face Soil Cra arsely Vegeta inage Patter dized Rhizos where tilled) ayfish Burrow curation Visib omorphic Po C-Neutral Te	s (minimum of two red acks (B6) ated Concave Surface rns (B10) spheres on Living Rod vs (C8) de on Aerial Imagery (sition (D2)	uuirec (B8) ots (C
Type: Cobble Depth (inches): 4 lemarks: In hydric soil indicators observed by the property of	erved. s: one required; che	Salt Crust Aquatic In Hydrogen Dry-Seasc Oxidized F (where Presence Thin Muck Other (Exp	(B11) vertebrate: Sulfide Ocon Water T Rhizospher not tilled) of Reduce c Surface (plain in Re	dor (C1) rable (C2) res on Livi d Iron (C4 C7) marks))	Second 	ary Indicator face Soil Cra arsely Vegeta inage Patter dized Rhizos where tilled) ayfish Burrow curation Visib omorphic Po C-Neutral Te	s (minimum of two recacks (B6) ated Concave Surface rns (B10) spheres on Living Roc vs (C8) ble on Aerial Imagery (sition (D2) st (D5)	uuirec (B8) ots (C
Type: Cobble Depth (inches): 4 Itemarks: O hydric soil indicators observed POROLOGY Vetland Hydrology Indicators Immary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aeria Water-Stained Leaves (B9) ield Observations: urface Water Present?	erved. s: one required; che	Salt Crust Aquatic In Hydrogen Dry-Seasc Oxidized F (where Presence Thin Muck Other (Exp	(B11) vertebrate Sulfide Oc on Water T Rhizospher not tilled) of Reduce c Surface (plain in Re	dor (C1) Table (C2) Tes on Livi d Iron (C4 C7) marks))	Second 	ary Indicator face Soil Cra arsely Vegeta inage Patter dized Rhizos where tilled) ayfish Burrow curation Visib omorphic Po C-Neutral Te	s (minimum of two recacks (B6) ated Concave Surface rns (B10) spheres on Living Roc vs (C8) ble on Aerial Imagery (sition (D2) st (D5)	(B8)
Type: Cobble Depth (inches): 4 temarks: o hydric soil indicators observed POROLOGY Vetland Hydrology Indicators rimary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aeria Water-Stained Leaves (B9) ield Observations: vater Table Present?	erved. s: one required; che l Imagery (B7) Yes No Yes No	Salt Crust Aquatic In Hydrogen Dry-Seaso Oxidized F (where Presence Thin Muck Other (Exp	(B11) vertebrate Sulfide Oc on Water T Rhizospher not tilled) of Reduce c Surface (plain in Re	dor (C1) Table (C2) Tes on Livi d Iron (C4 C7) marks)	_	Second Sui Spa Dra Oxi (C3) (\(\) Cra Sat ✓ Gee FAI	ary Indicator face Soil Cra ersely Vegeta inage Patter dized Rhizos where tilled) ayfish Burrow curation Visib omorphic Po C-Neutral Te est-Heave Hu	s (minimum of two red acks (B6) ated Concave Surface rns (B10) spheres on Living Rod vs (C8) ele on Aerial Imagery (sition (D2) est (D5)	(B8) ots (CC9)
Type: Cobble Depth (inches): 4 Itemarks: O hydric soil indicators observed by the property of	erved. s: one required; che	Salt Crust Aquatic In Hydrogen Dry-Seaso Oxidized F (where Presence Thin Muck Other (Exp	(B11) vertebrate Sulfide Oc on Water T Rhizospher not tilled) of Reduce c Surface (plain in Re	dor (C1) Table (C2) Tes on Livi d Iron (C4 C7) marks)	_	Second Sui Spa Dra Oxi (C3) (\(\) Cra Sat ✓ Gee FAI	ary Indicator face Soil Cra ersely Vegeta inage Patter dized Rhizos where tilled) ayfish Burrow curation Visib omorphic Po C-Neutral Te est-Heave Hu	s (minimum of two recacks (B6) ated Concave Surface rns (B10) spheres on Living Roc vs (C8) ble on Aerial Imagery (sition (D2) st (D5)	(B8) ots (CC9)
Type: Cobble Depth (inches): 4 Itemarks: O hydric soil indicators observed POROLOGY Vetland Hydrology Indicators Immary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aeria Water-Stained Leaves (B9) ield Observations: urface Water Present? Vater Table Present? aturation Present? includes capillary fringe)	erved. I Imagery (B7) Yes No Yes No Yes No Yes No	Salt Crust Aquatic In Hydrogen Dry-Seasc Oxidized F (where Presence Thin Muck Other (Exp	(B11) vertebrate Sulfide Oco on Water T Rhizospher not tilled) of Reduce c Surface (plain in Re uches): uches): uches):	dor (C1) Table (C2) Tes on Livi d Iron (C4 C7) marks)) Weti	Second Sui Spa Dra Oxi (C3) (v Cra Sat ✓ Gee FAc	ary Indicator face Soil Cra ersely Vegeta inage Patter dized Rhizos where tilled) ayfish Burrow curation Visib omorphic Po C-Neutral Te est-Heave Hu	s (minimum of two red acks (B6) ated Concave Surface rns (B10) spheres on Living Rod vs (C8) ele on Aerial Imagery (sition (D2) est (D5)	(B8) ots (CC) C9)
Type: Cobble Depth (inches): 4 Itemarks: O hydric soil indicators observed by the property of	erved. I Imagery (B7) Yes No Yes No Yes No Yes No	Salt Crust Aquatic In Hydrogen Dry-Seasc Oxidized F (where Presence Thin Muck Other (Exp	(B11) vertebrate Sulfide Oco on Water T Rhizospher not tilled) of Reduce c Surface (plain in Re uches): uches): uches):	dor (C1) Table (C2) Tes on Livi d Iron (C4 C7) marks)) Weti	Second Sui Spa Dra Oxi (C3) (v Cra Sat ✓ Gee FAc	ary Indicator face Soil Cra ersely Vegeta inage Patter dized Rhizos where tilled) ayfish Burrow curation Visib omorphic Po C-Neutral Te est-Heave Hu	s (minimum of two red acks (B6) ated Concave Surface rns (B10) spheres on Living Rod vs (C8) ele on Aerial Imagery (sition (D2) est (D5)	(B8) ots (CC9)
Type: Cobble Depth (inches): 4 Remarks: O hydric soil indicators obsite of hydric soil indicators (minimum of surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aeria Water-Stained Leaves (B9) Ield Observations: Furface Water Present? Water Table Present? Furface Water Present	erved. I Imagery (B7) Yes No Yes No Yes No Yes No	Salt Crust Aquatic In Hydrogen Dry-Seasc Oxidized F (where Presence Thin Muck Other (Exp	(B11) vertebrate Sulfide Oco on Water T Rhizospher not tilled) of Reduce c Surface (plain in Re uches): uches): uches):	dor (C1) Table (C2) Tes on Livi d Iron (C4 C7) marks)) Weti	Second Sui Spa Dra Oxi (C3) (v Cra Sat ✓ Gee FAc	ary Indicator face Soil Cra ersely Vegeta inage Patter dized Rhizos where tilled) ayfish Burrow curation Visib omorphic Po C-Neutral Te est-Heave Hu	s (minimum of two red acks (B6) ated Concave Surface rns (B10) spheres on Living Rod vs (C8) ele on Aerial Imagery (sition (D2) est (D5)	(B8) ots (CC9)
Type: Cobble Depth (inches): 4 lemarks: In hydric soil indicators observed by the lemarks: In hydric soil indicators observed by the lemarks: In hydric soil indicators observed by the lemarks obser	erved. I Imagery (B7) Yes No Yes No The same and the sa	Salt Crust Aquatic In Hydrogen Dry-Seasc Oxidized F (where Presence Thin Muck Other (Exp	(B11) vertebrate: Sulfide Ocon Water T Rhizospher not tilled) of Reduce c Surface (plain in Re uches): uches): photos, pro	dor (C1) able (C2) res on Livi d Iron (C4 C7) marks)) Weti	Second Sur Spr Dra Oxi (C3) (v Cra Sat ✓ Gee FAI Fro and Hydrolog if available:	ary Indicator face Soil Cra arsely Vegeta inage Patter dized Rhizos where tilled) ayfish Burrow curation Visib omorphic Po C-Neutral Te st-Heave Hu	s (minimum of two recacks (B6) ated Concave Surface rns (B10) spheres on Living Roc vs (C8) ale on Aerial Imagery (sition (D2) st (D5) ammocks (D7) (LRR I	(B8 ots (CC))



Data Point 1 Mesquite Woods



Data Point 1 Mesquite Grassland Mosaic



Data Point 2 Floodplain Meadows

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Data Point 2 Floodplain Meadows



Data Point 3 Emergent Wetlands



Data Point 4
Riparian Woods (Cedar Elm/Oak)



Data Point 4
Riparian Woods (Cedar Elm/Oak)



Data Point 5 Riparian Woods (Cedar Elm/Oak)



Data Point 6 Mesquite Grassland Mosaic



Data Point 6 Mesquite Grassland Mosaic



Data Point 7 Floodplain Meadows



Data Point 8
Emergent Wetlands

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Data Point 9 Scrub/ Shrub Wetlands



Data Point 10 Emergent Wetlands



Data Point 11
Emergent Wetlands

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Data Point 12 Mesquite Grassland Mosaic

Project/Site: 130 Environmental Park		City/County: Lockhart/Caldwell			Sampling Date: 07/10/2013	
Applicant/Owner: 130 Environmental Park, LLC		State: T				
Investigator(s): Troegle, Josh & Littleton, Brandyr						
Landform (hillslope, terrace, etc.): None			Slope (%): 0-1			
Subregion (LRR): J - Southwestern Prairies						
Soil Map Unit Name: FeE - Fett gravelly soils, 1-12						
Are climatic / hydrologic conditions on the site typical for the						
Are Vegetation, Soil, or Hydrology					present? Yes No	
Are Vegetation, Soil, or Hydrology	naturally pro	blematic?	(If ne	eeded, explain any answe	ers in Remarks.)	
SUMMARY OF FINDINGS - Attach site map	showing	samplin	g point l	ocations, transects	s, important features, etc.	
Hydrophytic Vegetation Present? Yes	No 🗸					
Hydric Soil Present? Yes	Soil Present?					
Wetland Hydrology Present? Yes	No ✓	with	in a Wetla	nd? Yes	No <u>v</u>	
Remarks:						
		_				
VEGETATION - Use scientific names of pla	nts.					
201	Absolute	Dominant	Indicator	Dominance Test work	ksheet:	
Tree Stratum (Plot size: 30')		Species?		Number of Dominant S		
1. Quercus stellata	_ 30	Yes	FACU	That Are OBL, FACW, (excluding FAC-):	or FAC (A)	
2. Prosopis glandulosa	_ 8	No	FACU	(excluding PAC=).	(A)	
3. Ulmus crassifolia	_ 5	No	FAC	Total Number of Domin		
4				Species Across All Stra	ata: 6 (B)	
Sapling/Shrub Stratum (Plot size: 15')	43	= Total Co	ver	Percent of Dominant S		
1. Prosopis glandulosa	10	Yes	FACU	That Are OBL, FACW,	or FAC: 0 (A/B)	
2. Ulmus crassifolia	5	No	FAC	Prevalence Index wo	rksheet:	
3. Diospyros texana	2	No	NI	Total % Cover of:	Multiply by:	
4. Mahonia trifoliolata	25	Yes	NI	OBL species	x 1 =	
5				FACW species	x 2 =	
·-	42	= Total Co	ver	1	x 3 =	
Herb Stratum (Plot size: 5'				1	x 4 =	
1. Dichanthelium linearifolium	10	Yes	NI	UPL species		
2. Schizachyrium scoparium	30	Yes	FACU	Column Totals:	(A) (B)	
3. Euphorbia tirucalli	_ 2	No	NI	Prevalence Index	x = B/A =	
4				Hydrophytic Vegetati		
5					Hydrophytic Vegetation	
6				2 - Dominance Te		
7				3 - Prevalence Ind		
8				4 - Morphological	Adaptations ¹ (Provide supporting	
9				data in Remark	s or on a separate sheet)	
10	42			Problematic Hydro	ophytic Vegetation ¹ (Explain)	
Woody Vine Stratum (Plot size: 30')	42	= Total Co	ver	¹ Indicators of hydric so	oil and wetland hydrology must	
1 Smilax bona-nox	5	Yes	FACU	be present, unless dist		
2.				Hydrophytic		
	5	= Total Co	ver	Vegetation		
% Bare Ground in Herb Stratum 70				Present? Ye	es No	
Remarks:						

Profile Desc	ription: (Describ	e to the depth		ment the indicator	or confirm	n the absence of i	ndicators.)
Depth	Matrix		Redo	ox Features			
(inches)	Color (moist)	%	Color (moist)	%Type ¹	_Loc ²	Texture	Remarks
							-
l							
100							
¹ Type: C=Co	ncentration, D=De	epletion, RM=R	Reduced Matrix, C	S≃Covered or Coate	ed Sand Gr	rains. ² Locatio	n: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators: (Appl	icable to all LI	RRs, unless othe	rwise noted.)			Problematic Hydric Soils ³ :
Histosol	(A1)		Sandy	Gleyed Matrix (S4)		1 cm Muck	(A9) (LRR I, J)
_	ipedon (A2)			Redox (S5)			rie Redox (A16) (LRR F, G, H)
Black His	stic (A3)		Strippe	d Matrix (S6)			ce (S7) (LRR G)
Hydrogei	n Sulfide (A4)		Loamy	Mucky Mineral (F1)		High Plains	Depressions (F16)
Stratified	Layers (A5) (LRF	R F)	Loamy	Gleyed Matrix (F2)		(LRR H	outside of MLRA 72 & 73)
1 cm Mu	ck (A9) (LRR F, G	, H)		ed Matrix (F3)		Reduced V	ertic (F18)
	Below Dark Surfa	ace (A11)	-	Dark Surface (F6)		_	t Material (TF2)
	rk Surface (A12)			ed Dark Surface (F7)		ow Dark Surface (TF12)
	ucky Mineral (S1)		_	Depressions (F8)			lain in Remarks)
	lucky Peat or Pea		. — -	ains Depressions (F			ydrophytic vegetation and
5 cm Mu	cky Peat or Peat (S3) (LRR F)	(ML	RA 72 & 73 of LRF	(H)		drology must be present,
Do odnikali in 1	(:6					uniess dist	urbed or problematic.
	ayer (if present):						
Type:			_				
Depth (inc	hes):		_			Hydric Soil Pres	sent? Yes No ✓
Remarks:							
	274						
HYDROLOG							
Wetland Hyd	Irology Indicators	s:					
Primary Indica	ators (minimum of	one required;	check all that app	ly)		Secondary In	dicators (minimum of two required)
Surface V	Nater (A1)		Salt Crust	(B11)		Surface	Soil Cracks (B6)
High Wat	ter Table (A2)		Aquatic In	vertebrates (B13)		Sparsely	Vegetated Concave Surface (B8)
Saturatio	n (A3)		Hydrogen	Sulfide Odor (C1)		Drainage	Patterns (B10)
Water Ma	arks (B1)		Dry-Seaso	on Water Table (C2)	+	Oxidized	Rhizospheres on Living Roots (C3)
Sediment	t Deposits (B2)		Oxidized I	Rhizospheres on Liv	ing Roots		e tilled)
Drift Dep	osits (B3)		(where	not tilled)		Crayfish	Burrows (C8)
l —	t or Crust (B4)			of Reduced Iron (C	4)		on Visible on Aerial Imagery (C9)
I	osits (B5)			Surface (C7)	-		phic Position (D2)
l —	on Visible on Aeria	I Imagery (B7)		plain in Remarks)			utral Test (D5)
_	ained Leaves (B9)	,		,			ave Hummocks (D7) (LRR F)
Field Observ							27) (2111)
		Vec N	Denth (in	ches):			
Surface Wate							
Water Table F				ches):			
Saturation Pre		Yes No	Depth (in	ches):	_ Wetla	and Hydrology Pre	esent? Yes No
(includes capi Describe Rec	orded Data (strea	m gauge, moni	itoring well, aerial	photos, previous ins	spections)	if available:	
December 1.60	200 Data (0110a	gaago, mom		p	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
D							
Remarks:							



Data Point 1 Mesquite Woods



Data Point 1 Mesquite Woods



Data Point 1 Mesquite Woods

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Project/Site: 130 Environmental Park		Citv/C	ountv:	Lockhai	rt/Caldwell	Sampling Date: 07/08/2013
Applicant/Owner: 130 Environmental Park, LLC		-	-	_		Sampling Point: T19-DP1
Investigator(s): Troegle, Josh & Littleton, Brandyr						Cumpling Folia.
Landform (hillslope, terrace, etc.): Floodplain						/e α
Subregion (LRR): J - Southwestern Prairies						
Soil Map Unit Name: Ts - Tinn soils, frequently floo			_			cation: None available
Are climatic / hydrologic conditions on the site typical for the	his time of ye	ar? Y	es <u>√</u>	No _	(If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology	significantly	distur	bed?	Are "	'Normal Circumstances" p	oresent? Yes ✓ No
Are Vegetation, Soil, or Hydrology	naturally pro	blema	atic?	(If ne	eded, explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS – Attach site map	showing	sam	pling	g point l	ocations, transects	, important features, etc.
Hydrophytic Vegetation Present? Yes ✓	No		le th	e Sampled	Aroa	
Hydric Soil Present? Yes ✓	No			n a Wetlar		No
Wetland Hydrology Present? Yes ✓	No			ii a victiai		
Remarks:						-
				_		
VEGETATION - Use scientific names of pla	nts.					
201	Absolute				Dominance Test work	sheet:
Tree Stratum (Plot size: 30')	% Cover	Spe	cies?	Status	Number of Dominant S	
1		_			That Are OBL, FACW, (excluding FAC-):	or FAC (A)
2					(excluding 1 AO).	(^)
3					Total Number of Domir Species Across All Stra	^
4					Species Across Air Stra	ild. <u>-</u> (b)
Sapling/Shrub Stratum (Plot size: 15'		= Tot	al Cov	er	Percent of Dominant S	
1					That Are OBL, FACW,	or FAC: 100 (A/B)
2.					Prevalence Index wor	ksheet:
3					Total % Cover of:	Multiply by:
4					OBL species	x 1 =
5.					FACW species	x 2 =
		= Tot	al Cov	er		x 3 =
Herb Stratum (Plot size: 5'						x 4 =
1. Iva annua	70	_			UPL species	
2. Persicaria hydropiperoides	30	Yes		OBL	Column Totals:	(A)(B)
3. Cyperus polystachyos		No		FACW	Prevalence Index	c = B/A =
4. Elymus virginicus	$-\frac{5}{10}$	No		FAC	Hydrophytic Vegetati	
5. Sporobolus compositus		No		UPL		Hydrophytic Vegetation
6					✓ 2 - Dominance Tes	st is >50%
7					3 - Prevalence Ind	ex is ≤3.0 ¹
8					4 - Morphological	Adaptations ¹ (Provide supporting
9		_	_		data in Remark	s or on a separate sheet)
10	135				Problematic Hydro	phytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size: 30')	133	= 101	tal Cov	er		il and wetland hydrology must
1					be present, unless dist	
2.					Hydrophytic	
			tal Cov	/er	Vegetation	
% Bare Ground in Herb Stratum 25					Present? Ye	es No
Remarks:						
Abundant cedar elm snags						
US Army Corps of Engineers						Great Plains - Version 2.0

						or confir	m the absence of ir	ndicators.)
Depth (inches)	Matrix Color (moist)	%	Red Color (moist)	ox Feature %	Type ¹	Loc ²	Texture	Remarks
(inches) 0-12	10 YR 2/1		5 YR 4/6		C	M	Clay	Remarks
0-12	10 11 2/1		7 110 470		_ —	101	Oldy	
				_				
				_				
				_				
1 	Concentration, D=D	onlation DM-E	Peduced Matrix C	S=Covere	ed or Coat	ed Sand G	Grains ² Location	n: PL=Pore Lining, M=Matrix.
	Indicators: (App					eu Sariu C		Problematic Hydric Soils ³ :
•		neable to all E		Gleyed M				(A9) (LRR I, J)
Histoso	pipedon (A2)			Redox (S			_	rie Redox (A16) (LRR F, G, H)
	listic (A3)			ed Matrix (•			ce (S7) (LRR G)
	en Sulfide (A4)			Mucky M)		Depressions (F16)
	ed Layers (A5) (LRI	RF)		Gleyed M				outside of MLRA 72 & 73)
	uck (A9) (LRR F, C			ed Matrix			Reduced V	'ertic (F18)
	ed Below Dark Surf		✓ Redox	Dark Sur	face (F6)		Red Paren	t Material (TF2)
Thick D	ark Surface (A12)			ed Dark S	`	7)		ow Dark Surface (TF12)
	Mucky Mineral (S1			Depressi				lain in Remarks)
	Mucky Peat or Pea							ydrophytic vegetation and
5 cm M	ucky Peat or Peat	(S3) (LRR F)	(M)	LRA 72 &	73 of LR	RH)	-	drology must be present,
D 41.41.	1 ('f						uniess dist	urbed or problematic.
	Layer (if present)							
			_					10 V 1
. ,	nches):						Hydric Soil Pre	sent? Yes / No
Remarks:								
HYDROLO	OGY							
	drology Indicator	rs.						
	icators (minimum o		check all that an	oly)			Secondary Ir	ndicators (minimum of two required)
		or one required,	Salt Crus					Soil Cracks (B6)
	Water (A1)				loo (B12)			` '
	ater Table (A2)			nvertebrat				/ Vegetated Concave Surface (B8) e Patterns (B10)
Saturat			Hydrogei Dry-Seas			٥١		Rhizospheres on Living Roots (C3)
_	Marks (B1)		Oxidized					e tilled)
	ent Deposits (B2)		_	not tilled		Villy Rook		Burrows (C8)
	eposits (B3)		,			24)		, ,
	lat or Crust (B4)		Presence			,4)		on Visible on Aerial Imagery (C9) phic Position (D2)
Iron De		-1 l (D 7)	_	ck Surface				utral Test (D5)
	tion Visible on Aeri		Other (E:	xpiain in r	(emarks)			, .
	Stained Leaves (BS	9)					Frost-He	eave Hummocks (D7) (LRR F)
Field Obse			/			1		
Surface Wa	ter Present?		o V Depth (i			1		
Water Table	Present?		o Depth (i					,
Saturation I		Yes N	o 🗸 Depth (i	inches): _		We	tland Hydrology Pr	esent? Yes 🗸 No
(Includes Ca	apillary fringe) ecorded Data (stre	am daude mor	itoring well aeria	I photos	orevious ir	spections), if available:	
Describe IV	coolded Data (oron	am gaago, mor	morning tron, dorna	p.110100, p			,,	
Damester								
Remarks:								

Project/Site: 130 Environmental Park		Citv/Count	tv: Lockhai	rt/Caldwejj	Sampling Date: 07/8/2013
Applicant/Owner: 130 Environmental Park, LLC					Sampling Point: T19-DP2
Investigator(s): Troegle, Josh & Littleton, Brandyn					
Landform (hillslope, terrace, etc.): None					Slope (%): 0-2
Subregion (LRR): J - Southwestern Prairies					
Soil Map Unit Name: WgC - Wilson gravelly loam, 1-					
Are climatic / hydrologic conditions on the site typical for this			_		
Are Vegetation, Soil, or Hydrologys					oresent? Yes ✓ No
Are Vegetation, Soil, or Hydrology n				eded, explain any answe	
SUMMARY OF FINDINGS – Attach site map	showing	samplii	ng point l	ocations, transects	, important features, etc.
Hydrophytic Vegetation Present? Yes N	o √	15.4	the Sampled	Araa	
Hydric Soil Present? Yes N	o <u>✓</u>		thin a Wetlar		No <u>√</u>
Wetland Hydrology Present? Yes N	∘ <u>√</u>		·	10. 105	
Remarks:					
VEGETATION – Use scientific names of plan	ts				
VEGETATION GOO SOLUTION HARMOO OF PRAIN	Absolute	Dominar	nt Indicator	Dominance Test work	sheet:
Tree Stratum (Plot size: 30'		Species'	? Status	Number of Dominant S	
1. Quercus stellata	75	Yes	FACU	That Are OBL, FACW, (2
2. Ulmus crassifolia	30	Yes	FAC	(excluding FAC-):	<u>3</u> (A)
3	. ——			Total Number of Domin Species Across All Stra	•
4	105			Species Across Air Stra	(b)
Sapling/Shrub Stratum (Plot size: 15')	103	= Total Co	over	Percent of Dominant Sp That Are OBL, FACW, 6	
1. Ulmus crassifolia	5	Yes	FAC	Contraction of the Contraction o	(///)
2. Ligustrum sinense	10	Yes	UPL	Prevalence Index wor	
3. Diospyros texana	10	Yes	NI	Total % Cover of:	
4					x1=
5				1	x 2 = x 3 =
Herb Stratum (Plot size: 51)	25	= Total Co	over		x 4 =
1 Elymus virginicus	60	Yes	FAC	UPL species	
2					(A)(B)
3.					
4			_		= B/A =
5				Hydrophytic Vegetation	
6				1 - Rapid Test for H 2 - Dominance Tes	
7				3 - Prevalence Inde	
8					Adaptations ¹ (Provide supporting
9				data in Remarks	s or on a separate sheet)
10				Problematic Hydro	phytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size: 30')	60	= Total Co	over	¹ Indicators of hydric soi	il and wetland hydrology must
1				be present, unless distu	
2.				Hydrophytic	
		= Total C	over	Vegetation	s No.✓
% Bare Ground in Herb Stratum 55				Present? Ye	5 NO <u>V</u>
Remarks:					

Profile Description: (De	escribe to the depth r	eeded to document th	e indicator c	or confirm	the absence of inc	dicators.)
	Matrix	Redox Featu		1 - 2	T	Bennedia
(inches) Color (m	oist) %	Color (moist) %	Type ¹	Loc ²	Texture	Remarks
¹ Type: C=Concentration				d Sand Gra		PL=Pore Lining, M=Matrix.
Hydric Soil Indicators:	(Applicable to all LRI	Rs, unless otherwise n	oted.)		Indicators for P	roblematic Hydric Soils ³ :
Histosol (A1)		Sandy Gleyed	Matrix (S4)		1 cm Muck ((A9) (LRR I, J)
Histic Epipedon (A2)		Sandy Redox (e Redox (A16) (LRR F, G, H)
Black Histic (A3)		Stripped Matrix				e (S7) (LRR G)
Hydrogen Sulfide (A	•	Loamy Mucky I	, ,			Depressions (F16)
Stratified Layers (A5		Loamy Gleyed			•	outside of MLRA 72 & 73)
1 cm Muck (A9) (LRI		Depleted Matrix			Reduced Ve	, ,
Depleted Below Dark Thick Dark Surface (, ,	Redox Dark Su Depleted Dark				Material (TF2) w Dark Surface (TF12)
Sandy Mucky Minera	,	Redox Depress				ain in Remarks)
_ , ,	r Peat (S2) (LRR G, H			16)		drophytic vegetation and
5 cm Mucky Peat or	, , ,	. — -	3 73 of LRR			rology must be present,
_ 0 0.11 111001, 1 001 01	(00) (====,	(**************************************		,	•	rbed or problematic.
Restrictive Layer (if pre	sent):					
Type:						
Depth (inches):		-			Hydric Soil Pres	ent? Yes No ✓
Remarks:						
Nemarks.						

HYDROLOGY						
Wetland Hydrology Indi	cators:					
Primary Indicators (minin	num of one required; c	heck all that apply)			Secondary Inc	dicators (minimum of two required)
Surface Water (A1)		Salt Crust (B11)			Surface S	Soil Cracks (B6)
High Water Table (A	2)	Aquatic Invertebra	ates (B13)			Vegetated Concave Surface (B8)
Saturation (A3)	-,	Hydrogen Sulfide				Patterns (B10)
Water Marks (B1)		Dry-Season Wate	` '			Rhizospheres on Living Roots (C3)
Sediment Deposits (B2)	Oxidized Rhizosp	, ,	na Roots (
Drift Deposits (B3)	52)	(where not tille		ing riooto (Burrows (C8)
Algal Mat or Crust (B	4)	Presence of Redu	,)		n Visible on Aerial Imagery (C9)
	7)	Thin Muck Surface		')		hic Position (D2)
Iron Deposits (B5)	Aprial Imagan, (P7)	Other (Explain in				tral Test (D5)
Inundation Visible or		Other (Explain in	(Ciliaiks)			ave Hummocks (D7) (LRR F)
Water-Stained Leave	es (D9)					ave Hummocks (D7) (ERRT)
Field Observations:		/ 5 0 0 1)				
Surface Water Present?	Yes No			- 1		
	Yes No			1		
Water Table Present?		/ D () ())		Wetla	and Hydrology Pre	sent? Yes No ✓
Saturation Present?	Yes No	✓ Depth (inches):				
Saturation Present? (includes capillary fringe)				nections)	if available	
Saturation Present?				pections), i	if available:	
Saturation Present? (includes capillary fringe) Describe Recorded Data				pections),	if available:	
Saturation Present? (includes capillary fringe)				pections),	if available:	
Saturation Present? (includes capillary fringe) Describe Recorded Data				pections),	if available:	

TRANSECT 19 SITE PHOTOGRAPHS



Data Point 1 Sumpweed Depressions



Data Point 1 Sumpweed Depressions



Data Point 1 Sumpweed Depressions

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TRANSECT 19 SITE PHOTOGRAPHS



Data Point 2
Post Oak Woods



Data Point 2
Post Oak Woods

Project/Site: 130 Environmental Park		City/Cou	unty: Lockha	rt/Caldwell	Sampling Date: 07/8/2013
Applicant/Owner: 130 Environmental Park, LLC					Sampling Point: T20-DP1
Investigator(s): Troegle, Josh & Littleton, Brandyr					
Landform (hillslope, terrace, etc.): Hillslope					x Slope (%): 4-6
Subregion (LRR): J - Southwestern Prairies					
Soil Map Unit Name: WgC - Wilson gravelly loam,					
Are climatic / hydrologic conditions on the site typical for th					
Are Vegetation, Soil, or Hydrology					present? Yes ✓ No
Are Vegetation, Soil, or Hydrology				eeded, explain any answe	
SUMMARY OF FINDINGS – Attach site map					•
SUMMART OF FINDINGS - Attach site map	Silowing	Samp	ning point	Tocations, transects	s, important features, etc.
Hydrophytic Vegetation Present? Yes	No <u>√</u>	١,	s the Sample	d Area	
Hydric Soil Present? Yes	No 🗸		within a Wetla		No <u>√</u>
Wetland Hydrology Present? Yes	No <u>▼</u>				
Remarks:					
VEGETATION – Use scientific names of pla	nts.				
201	Absolute		nant Indicator	Dominance Test wor	ksheet:
Tree Stratum (Plot size: 30')	% Cover 50	Specie Yes	es? Status FACU	Number of Dominant S	
Quercus stellata Ulmus crassifolia	25	Yes	FAC	That Are OBL, FACW, (excluding FAC-):	2 (A)
3					
3			_	Total Number of Domi	•
7.	75	= Total	Cover	Percent of Dominant S	Procios
Sapling/Shrub Stratum (Plot size: 15')				That Are OBL, FACW,	
1. Ulmus crassifolia		Yes	FAC	Prevalence Index wo	rkshoot
2				Total % Cover of:	
3					x 1 =
4				1	x 2 =
5	15	= Total	Cover	FAC species	x 3 =
Herb Stratum (Plot size: 5')		- Total	COVE	FACU species	x 4 =
1. Opuntia engelmannii	_ 5	Yes	NI	UPL species	
2. Cylindropuntia leptocaulis	_ 5	Yes	NI NI	Column Totals:	(A) (B)
3. Dichanthelium linearifolium	_ 5	Yes	NI NI	Prevalence Inde	x = B/A =
4				Hydrophytic Vegetati	
5					Hydrophytic Vegetation
6				2 - Dominance Te	
7				3 - Prevalence Inc	fex is ≤3.0 ¹
9				4 - Morphological	Adaptations ¹ (Provide supporting
10.					ks or on a separate sheet)
	15	= Total	Cover		ophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size: 30'					oil and wetland hydrology must
1				be present, unless dis	lurbed or problematic.
2				Hydrophytic	
% Bare Ground in Herb Stratum 45		= Total	Cover	Vegetation Present? Yes	es No <u> </u>
Remarks:					

F	trix	Redox Fe	eatures			
(inches) Color (mois		olor (moist)	% Type ¹	Loc ²	Texture	Remarks
Type: C=Concentration, D				d Sand Gra	ins. ² Locatio	n: PL=Pore Lining, M=Matrix.
lydric Soil Indicators: (A	pplicable to all LRRs	, unless otherwis	se noted.)		Indicators for	Problematic Hydric Soils ³ :
Histosol (A1)		Sandy Gley	ed Matrix (S4)		1 cm Mucl	(A9) (LRR I, J)
Histic Epipedon (A2)		Sandy Red	ox (S5)			irie Redox (A16) (LRR F, G, H)
Black Histic (A3)		Stripped Ma	, ,			ace (S7) (LRR G)
Hydrogen Sulfide (A4)		_ ′	ky Mineral (F1)			s Depressions (F16)
Stratified Layers (A5) (I			yed Matrix (F2)		,	outside of MLRA 72 & 73)
1 cm Muck (A9) (LRR F		Depleted M			Reduced \	` '
Depleted Below Dark S		***************************************	k Surface (F6)			nt Material (TF2) ow Dark Surface (TF12)
Thick Dark Surface (A1			ark Surface (F7) ressions (F8))		ow Dark Surface (1F12) blain in Remarks)
Sandy Mucky Mineral (2.5 cm Mucky Peat or F			Depressions (Fo)	16)		ydrophytic vegetation and
5 cm Mucky Peat or Pe			72 & 73 of LRF			drology must be present,
5 cm Mucky real of re	at (00) (Ettit)	(1112121	72 0 70 0 12 11	,		turbed or problematic.
Restrictive Layer (if prese	nt):					
Type:						
Depth (inches):					Hydric Soil Pre	esent? Yes No V
Dopan (money)						
Pomorke:						
Remarks:						
Remarks:						
Remarks:						
YDROLOGY	tors:					
YDROLOGY Vetland Hydrology Indica		ck all that apply)			Secondary	ndicators (minimum of two require
YDROLOGY Vetland Hydrology Indica Primary Indicators (minimur			1)			ndicators (minimum of two require
YDROLOGY Vetland Hydrology Indica Primary Indicators (minimur Surface Water (A1)		Salt Crust (B1	•		Surface	Soil Cracks (B6)
YDROLOGY Vetland Hydrology Indica Primary Indicators (minimur Surface Water (A1) High Water Table (A2)		Salt Crust (B1 Aquatic Invert	ebrates (B13)		Surface Sparsel	Soil Cracks (B6) y Vegetated Concave Surface (B6
YDROLOGY Vetland Hydrology Indica Primary Indicators (minimur Surface Water (A1) High Water Table (A2) Saturation (A3)		Salt Crust (B1 Aquatic Invert Hydrogen Sul	tebrates (B13) fide Odor (C1)		Surface Sparsel Drainag	Soil Cracks (B6) y Vegetated Concave Surface (B8 e Patterns (B10)
YDROLOGY Vetland Hydrology Indica Primary Indicators (minimur Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	n of one required; che	Salt Crust (B1 Aquatic Invert Hydrogen Sul Dry-Season V	ebrates (B13) fide Odor (C1) Vater Table (C2)		Surface Sparsel Drainag Oxidize	Soil Cracks (B6) y Vegetated Concave Surface (B6 le Patterns (B10) d Rhizospheres on Living Roots (
YDROLOGY Vetland Hydrology Indica Primary Indicators (minimur Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2	n of one required; che	Salt Crust (B1 Aquatic Invert Hydrogen Sul Dry-Season V Oxidized Rhiz	ebrates (B13) fide Odor (C1) Vater Table (C2) cospheres on Liv		Surface Sparsel Drainag Oxidize (when	Soil Cracks (B6) y Vegetated Concave Surface (B6 te Patterns (B10) d Rhizospheres on Living Roots (te tilled)
YDROLOGY Vetland Hydrology Indicators (minimum of the primary Indicators (minimum of	m of one required; che	Salt Crust (B1 Aquatic Invert Hydrogen Sul Dry-Season V Oxidized Rhiz (where not	ebrates (B13) fide Odor (C1) Vater Table (C2) cospheres on Liv tilled)	ring Roots (Surface Sparsel Drainag Oxidize (where	Soil Cracks (B6) y Vegetated Concave Surface (B8 le Patterns (B10) d Rhizospheres on Living Roots (le te tilled) n Burrows (C8)
YDROLOGY Vetland Hydrology Indica Primary Indicators (minimur Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	m of one required; che	Salt Crust (B1 Aquatic Invert Hydrogen Sul Dry-Season V Oxidized Rhiz (where not Presence of F	tebrates (B13) fide Odor (C1) Vater Table (C2) tospheres on Liv tilled) Reduced Iron (C	ring Roots (Surface Sparsel Drainag Oxidize C3) (whei Crayfish Saturati	Soil Cracks (B6) y Vegetated Concave Surface (B6) te Patterns (B10) d Rhizospheres on Living Roots (for tilled) n Burrows (C8) on Visible on Aerial Imagery (C9)
YDROLOGY Vetland Hydrology Indica Primary Indicators (minimur Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	n of one required; che	Salt Crust (B1 Aquatic Invert Hydrogen Sul Dry-Season V Oxidized Rhiz (where not Presence of F Thin Muck Su	rebrates (B13) fide Odor (C1) Vater Table (C2) cospheres on Liv tilled) Reduced Iron (Carrace (C7)	ring Roots (Surface Sparsel Drainag Oxidize Saturati Geomo	Soil Cracks (B6) y Vegetated Concave Surface (B8 e Patterns (B10) d Rhizospheres on Living Roots (e tilled) n Burrows (C8) on Visible on Aerial Imagery (C9) rphic Position (D2)
YDROLOGY Vetland Hydrology Indica Primary Indicators (minimur Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on A	n of one required; che) erial Imagery (B7)	Salt Crust (B1 Aquatic Invert Hydrogen Sul Dry-Season V Oxidized Rhiz (where not Presence of F	rebrates (B13) fide Odor (C1) Vater Table (C2) cospheres on Liv tilled) Reduced Iron (Carrace (C7)	ring Roots (Surface Sparsel Drainag Oxidize C3) (wher Crayfish Saturati Geomo	Soil Cracks (B6) y Vegetated Concave Surface (B6) te Patterns (B10) d Rhizospheres on Living Roots (te tilled) in Burrows (C8) on Visible on Aerial Imagery (C9) rephic Position (D2) sutral Test (D5)
YDROLOGY Vetland Hydrology Indica Primary Indicators (minimur Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	n of one required; che) erial Imagery (B7)	Salt Crust (B1 Aquatic Invert Hydrogen Sul Dry-Season V Oxidized Rhiz (where not Presence of F Thin Muck Su	rebrates (B13) fide Odor (C1) Vater Table (C2) cospheres on Liv tilled) Reduced Iron (Carrace (C7)	ring Roots (Surface Sparsel Drainag Oxidize C3) (wher Crayfish Saturati Geomo	Soil Cracks (B6) y Vegetated Concave Surface (B8 e Patterns (B10) d Rhizospheres on Living Roots (e tilled) n Burrows (C8) on Visible on Aerial Imagery (C9) rphic Position (D2)
YDROLOGY Vetland Hydrology Indica Primary Indicators (minimur Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on A Water-Stained Leaves	n of one required; che) erial Imagery (B7)	Salt Crust (B1 Aquatic Invert Hydrogen Sul Dry-Season V Oxidized Rhiz (where not Presence of F Thin Muck Su	rebrates (B13) fide Odor (C1) Vater Table (C2) cospheres on Liv tilled) Reduced Iron (Carrace (C7)	ring Roots (Surface Sparsel Drainag Oxidize C3) (wher Crayfish Saturati Geomo	Soil Cracks (B6) y Vegetated Concave Surface (B6) te Patterns (B10) d Rhizospheres on Living Roots (te tilled) in Burrows (C8) on Visible on Aerial Imagery (C9) rephic Position (D2) sutral Test (D5)
YDROLOGY Wetland Hydrology Indica Primary Indicators (minimur Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on A Water-Stained Leaves Field Observations:	n of one required; che) erial Imagery (B7)	Salt Crust (B1 Aquatic Invert Hydrogen Sul Dry-Season V Oxidized Rhiz (where not Presence of F Thin Muck Su Other (Explain	rebrates (B13) fide Odor (C1) Vater Table (C2) cospheres on Liv tilled) Reduced Iron (Carrace (C7)	ring Roots (0	Surface Sparsel Drainag Oxidize C3) (wher Crayfish Saturati Geomo	Soil Cracks (B6) y Vegetated Concave Surface (B6) te Patterns (B10) d Rhizospheres on Living Roots (te tilled) in Burrows (C8) on Visible on Aerial Imagery (C9) rephic Position (D2) sutral Test (D5)
YDROLOGY Wetland Hydrology Indica Primary Indicators (minimur Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on A Water-Stained Leaves Field Observations: Surface Water Present?	n of one required; che) erial Imagery (B7) (B9)	Salt Crust (B1 Aquatic Invert Hydrogen Sul Dry-Season V Oxidized Rhiz (where not Presence of F Thin Muck Su Other (Explain	rebrates (B13) fide Odor (C1) Vater Table (C2) cospheres on Liv tilled) Reduced Iron (Carface (C7) in in Remarks)	ring Roots (0	Surface Sparsel Drainag Oxidize C3) (wher Crayfish Saturati Geomo	Soil Cracks (B6) y Vegetated Concave Surface (B6) te Patterns (B10) d Rhizospheres on Living Roots (te tilled) in Burrows (C8) on Visible on Aerial Imagery (C9) rephic Position (D2) sutral Test (D5)
YDROLOGY Wetland Hydrology Indica Primary Indicators (minimur Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on A Water-Stained Leaves Field Observations: Surface Water Present?	n of one required; che	Salt Crust (B1 Aquatic Invert Hydrogen Sul Dry-Season V Oxidized Rhiz (where not Presence of F Thin Muck Su Other (Explain	rebrates (B13) fide Odor (C1) Vater Table (C2) cospheres on Liv tilled) Reduced Iron (Carface (C7) In in Remarks)	ing Roots (0	Surface Sparsel Drainag Oxidize Saturati Geomo FAC-Ne Frost-H	Soil Cracks (B6) y Vegetated Concave Surface (B6) te Patterns (B10) d Rhizospheres on Living Roots (te tilled) in Burrows (C8) on Visible on Aerial Imagery (C9) rephic Position (D2) sutral Test (D5)
YDROLOGY Wetland Hydrology Indica Primary Indicators (minimur Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on A Water-Stained Leaves Field Observations: Surface Water Present? Water Table Present? Saturation Present? Saturation Present?	erial Imagery (B7) (B9) Yes No Yes No Yes No Yes No Yes No	Salt Crust (B1 Aquatic Invert Hydrogen Sul Dry-Season V Oxidized Rhiz (where not Presence of F Thin Muck Su Other (Explain Depth (inche	tebrates (B13) fide Odor (C1) Vater Table (C2) cospheres on Liv tilled) Reduced Iron (Carface (C7) in in Remarks)	ing Roots (04) Wetla	Surface Sparsel Drainag Oxidize Saturati Geomo FAC-Ne Frost-H	Soil Cracks (B6) y Vegetated Concave Surface (B6) e Patterns (B10) d Rhizospheres on Living Roots (re tilled) in Burrows (C8) ion Visible on Aerial Imagery (C9) rephic Position (D2) eutral Test (D5) eave Hummocks (D7) (LRR F)
YDROLOGY Vetland Hydrology Indica Primary Indicators (minimur Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on A Water-Stained Leaves Field Observations: Surface Water Present? Vater Table Present? Saturation Present? Saturation Present?	erial Imagery (B7) (B9) Yes No Yes No Yes No Yes No Yes No	Salt Crust (B1 Aquatic Invert Hydrogen Sul Dry-Season V Oxidized Rhiz (where not Presence of F Thin Muck Su Other (Explain Depth (inche	tebrates (B13) fide Odor (C1) Vater Table (C2) cospheres on Liv tilled) Reduced Iron (Carface (C7) in in Remarks)	ing Roots (04) Wetla	Surface Sparsel Drainag Oxidize Saturati Geomo FAC-Ne Frost-H	Soil Cracks (B6) y Vegetated Concave Surface (B6) e Patterns (B10) d Rhizospheres on Living Roots (re tilled) in Burrows (C8) ion Visible on Aerial Imagery (C9) rephic Position (D2) eutral Test (D5) eave Hummocks (D7) (LRR F)
YDROLOGY Wetland Hydrology Indica Primary Indicators (minimur Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on A Water-Stained Leaves Field Observations: Surface Water Present? Water Table Present?	erial Imagery (B7) (B9) Yes No Yes No Yes No Yes No Yes No	Salt Crust (B1 Aquatic Invert Hydrogen Sul Dry-Season V Oxidized Rhiz (where not Presence of F Thin Muck Su Other (Explain Depth (inche	tebrates (B13) fide Odor (C1) Vater Table (C2) cospheres on Liv tilled) Reduced Iron (Carface (C7) in in Remarks)	ing Roots (04) Wetla	Surface Sparsel Drainag Oxidize Saturati Geomo FAC-Ne Frost-H	Soil Cracks (B6) y Vegetated Concave Surface (B6) e Patterns (B10) d Rhizospheres on Living Roots (re tilled) in Burrows (C8) ion Visible on Aerial Imagery (C9) rephic Position (D2) eutral Test (D5) eave Hummocks (D7) (LRR F)
YDROLOGY Vetland Hydrology Indica Primary Indicators (minimur Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on A Water-Stained Leaves Field Observations: Surface Water Present? Vater Table Present? Saturation Present? Saturation Present?	erial Imagery (B7) (B9) Yes No Yes No Yes No Yes No Yes No	Salt Crust (B1 Aquatic Invert Hydrogen Sul Dry-Season V Oxidized Rhiz (where not Presence of F Thin Muck Su Other (Explain Depth (inche	tebrates (B13) fide Odor (C1) Vater Table (C2) cospheres on Liv tilled) Reduced Iron (Carface (C7) in in Remarks)	ing Roots (04) Wetla	Surface Sparsel Drainag Oxidize Saturati Geomo FAC-Ne Frost-H	Soil Cracks (B6) y Vegetated Concave Surface (B6) e Patterns (B10) d Rhizospheres on Living Roots (re tilled) in Burrows (C8) ion Visible on Aerial Imagery (C9) rephic Position (D2) eutral Test (D5) eave Hummocks (D7) (LRR F)
YDROLOGY Vetland Hydrology Indica Primary Indicators (minimur Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on A Water-Stained Leaves Field Observations: Surface Water Present? Vater Table Present? Saturation Present? Saturation Present? Sincludes capillary fringe) Describe Recorded Data (st	erial Imagery (B7) (B9) Yes No Yes No Yes No Yes No Yes No	Salt Crust (B1 Aquatic Invert Hydrogen Sul Dry-Season V Oxidized Rhiz (where not Presence of F Thin Muck Su Other (Explain Depth (inche	tebrates (B13) fide Odor (C1) Vater Table (C2) cospheres on Liv tilled) Reduced Iron (Carface (C7) in in Remarks)	ing Roots (04) Wetla	Surface Sparsel Drainag Oxidize Saturati Geomo FAC-Ne Frost-H	Soil Cracks (B6) y Vegetated Concave Surface (B6) e Patterns (B10) d Rhizospheres on Living Roots (re tilled) in Burrows (C8) ion Visible on Aerial Imagery (C9) rephic Position (D2) eutral Test (D5) eave Hummocks (D7) (LRR F)

Project/Site: 130 Environmental Park		City/Co	ounty:	Lockha	rt/Caldwell	Sampling Da	_{ite:} 07/9/20	013
Applicant/Owner: 130 Environmental Park, LLC					State: TX	Sampling Po	int: T20-D	P2_
Investigator(s): Troegle, Josh & Littleton, Brandyr		Section	n. Tov	nship. Ra	nge: NA			
Landform (hillslope, terrace, etc.): Floodplain						/e	Slone (%)	0-1
Subregion (LRR): J - Southwestern Prairies								
Soil Map Unit Name: FeE - Fett gravelly soils, 1-12							available	
Are climatic / hydrologic conditions on the site typical for the	•							
Are Vegetation, Soil, or Hydrology	significantly	disturb	oed?	Are '	'Normal Circumstances"	present? Yes	✓ No	
Are Vegetation, Soil, or Hydrology	naturally pro	blema	itic?	(If ne	eded, explain any answe	rs in Remarks	.)	
SUMMARY OF FINDINGS - Attach site map	showing	sam	pling	point l	ocations, transects	, importan	t features	s, etc.
Hydrophytic Vegetation Present? Yes ✓	No		la Aba	C				
Hydric Soil Present? Yes ✓				Sampled		No		
Wetland Hydrology Present? Yes ✓	No		withi	n a Wetlar	id? Yes <u>v</u>	NO	_	
Remarks:								
Pond fringe wetland.								
VEGETATION – Use scientific names of pla	nts.							
Tree Stratum (Plot size: 30')	Absolute				Dominance Test worl	sheet:		
					Number of Dominant S	•		
1.					That Are OBL, FACW, (excluding FAC-):	or FAC		(A)
2								` '
3					Total Number of Domin Species Across All Stra	nant _{ata} . 1		(B)
4					Cpcolod / tolodo / til Ctil			(5)
Sapling/Shrub Stratum (Plot size: 15')		= 10ta	al Cov	er	Percent of Dominant S That Are OBL, FACW,	pecies	0	///B
1					Tilat Ale Obl., I-ACVV,	011AC	1000	(AVD)
2					Prevalence Index wo	ksheet:		
3					Total % Cover of:	Μι	ultiply by:	_
4					OBL species	x 1 = .		_
5.					FACW species	x 2 = .		_
0		= Tota	al Cov	er	FAC species	x 3 = .		_
Herb Stratum (Plot size: 5'					FACU species	x 4 = .		_
1. Eleocharis compressa	80	Yes		OBL	UPL species	x 5 = .		_
2. Persicaria hydropiper	25	No		OBL	Column Totals:	(A)		_ (B)
3. Iva annua	30	No		FAC	Prevalence Index	- DIA -		
4. Cyperus polystachyos	15	No		FACW	Hydrophytic Vegetati			
5. Carex brevior	25	No		FAC	1 - Rapid Test for			
6					✓ 2 - Dominance Te		egetation	
7					3 - Prevalence Ind			
8					1 —		Danida	
9					4 - Morphological data in Remark	s or on a sepa	rate sheet)	Joiling
10					Problematic Hydro			n)
201	175	= Tota	al Cov	er	I .			
Woody Vine Stratum (Plot size: 30'					¹ Indicators of hydric so be present, unless dist			iust
1						-		
2					Hydrophytic Vegetation			
% Bare Ground in Herb Stratum 15		= Fota	al Cov	er	Present? Ye	es V No	o	
Remarks:	-			-				

Great Plains - Version 2.0

Profile Des	cription: (Describe	to the depth				or confirm	n the absence of i	ndicators.)
Depth	Matrix	%	Redo Color (moist)	x Feature	Type ¹	_Loc ²	Texture	Remarks
(inches) 0-4	Color (moist) 10 YR 4/1		YR 4/6	<u>%</u> 25	C	M/PL	Clay	Remarks
4-10	2.5 Y 6/4) YR 5/8	15	<u>c</u>	M/PL	Clay	
	2.5 Y 6/2	<u> 45 </u>						
	Concentration, D=De					ed Sand G		n: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Appli	cable to all LR	Rs, unless othe	rwise no	ted.)		Indicators for	Problematic Hydric Soils ³ :
Histoso	l (A1)			-	atrix (S4)			(A9) (LRR I, J)
	pipedon (A2)			Redox (S				irie Redox (A16) (LRR F, G, H)
_	listic (A3)			d Matrix (,			ace (S7) (LRR G)
, , ~	en Sulfide (A4)	E\		-	ineral (F1) latrix (F2)			s Depressions (F16) I outside of MLRA 72 & 73)
	ed Layers (A5) (LRR luck (A9) (LRR F, G ,		✓ Deplete					Vertic (F18)
	ed Below Dark Surfa	-		Dark Surf				nt Material (TF2)
	ark Surface (A12)	,			urface (F7)		ow Dark Surface (TF12)
	Mucky Mineral (S1)			Depression				olain in Remarks)
	Mucky Peat or Peat				-			ydrophytic vegetation and
5 cm M	ucky Peat or Peat (S	83) (LRR F)	(ML	.RA 72 &	73 of LRF	RH)		drology must be present,
	(17						unless dis	turbed or problematic.
	Layer (if present):							
			_				Undela Call Dea	esent? Yes ✓ No
	nches):					· ·	Hydric 3011 Fre	esent? Yes ✓ No
Remarks:								
HYDROLO	OGY							
Wetland Hy	drology Indicators	;;	- A					
	icators (minimum of		heck all that app	ly)			Secondary I	ndicators (minimum of two required)
	Water (A1)		Salt Crust				Surface	Soil Cracks (B6)
	ater Table (A2)		Aquatic In	vertebrat	es (B13)		Sparsel	y Vegetated Concave Surface (B8)
✓ Saturat			Hydrogen	Sulfide C	Odor (C1)			e Patterns (B10)
	Marks (B1)		Dry-Seaso	on Water	Table (C2)	Oxidize	d Rhizospheres on Living Roots (C3)
Sedime	ent Deposits (B2)		✓ Oxidized I	Rhizosph	eres on Liv	ing Roots	(C3) (wher	re tilled)
Drift De	eposits (B3)		(where	not tilled	f)		✓ Crayfish	n Burrows (C8)
Algal M	at or Crust (B4)		Presence	of Reduc	ed Iron (C	4)	Saturati	on Visible on Aerial Imagery (C9)
Iron De	posits (B5)		Thin Mucl	k Surface	(C7)		Geomo	rphic Position (D2)
✓ Inundat	tion Visible on Aerial	Imagery (B7)	Other (Ex	plain in R	emarks)		FAC-Ne	eutral Test (D5)
Water-9	Stained Leaves (B9)						Frost-H	eave Hummocks (D7) (LRR F)
Field Obse								
Surface Wa			Depth (in			_		
Water Table			✓ Depth (in					
Saturation F		Yes <u></u> ✓ No	Depth (in	nches): <u>S</u>	urface	Wet	land Hydrology Pi	resent? Yes <u>√</u> No
(includes ca	ipillary fringe) ecorded Data (streai	m gougo monit	oring well periol	nhotos r	revious in	enections)	if available:	
Describe Re	ecolued Data (sifeat	n gauge, moni	omig well, acidi	prioros, p	A GYIOUS III	opeodons)	, ii avaliable.	
Demorto								
Remarks:								

Project/Site: 130 Environmental Park		City/County	. Lockha	rt/Caldwell	Sampling Date: 07/09/2013
Applicant/Owner: 130 Environmental Park, LLC					Sampling Point: T20-DP3
Investigator(s): Troegle, Josh & Littleton, Brandyn					
Landform (hillslope, terrace, etc.): On-Channel					ve Slope (%): 0-1
Subregion (LRR): J - Southwestern Prairies					
Soil Map Unit Name: FeE - Fett gravelly soils, 1-12%					
Are climatic / hydrologic conditions on the site typical for this					
Are Vegetation, Soil, or Hydrology si					present? Yes ✓ No
Are Vegetation, Soil, or Hydrology n				eeded, explain any answ	
SUMMARY OF FINDINGS – Attach site map				· · · · · ·	•
		<u> </u>	<u> </u>		
Hydrophytic Vegetation Present? Yes ✓ No. Hydric Soil Present? Yes ✓ No.			ne Sampled		
Wetland Hydrology Present? Yes ✓ No.		with	nin a Wetlai	nd? Yes <u>√</u>	No
Remarks:					
On-channel wetland.					
VECETATION . Her exicutific names of plans	<u> </u>				
VEGETATION – Use scientific names of plant	Absolute	Dominan	t Indicator	Dominance Test wor	kahaati
Tree Stratum (Plot size: 30'		Species?		Number of Dominant S	
1. Ulmus crassifolia	30	Yes	FAC	That Are OBL, FACW,	or FAC
2				(excluding FAC-):	<u>6</u> (A)
3				Total Number of Domi	^
4		-		Species Across All Str	ata: <u>6</u> (B)
Sapling/Shrub Stratum (Plot size: 15')	30	= Total Co	ver	Percent of Dominant S	
1. Sesbania drummondii	5	Yes	FACW	That Are OBL, FACW,	or FAC: 100 (A/B)
2.				Prevalence Index wo	rksheet:
3					Multiply by:
4.					x 1 =
5				1	x 2 =
51	5	= Total Co	ver		x 3 =
Herb Stratum (Plot size: 5'	20	No	FAC		x 4 =
2. Persicaria hydropiper	45	Yes	OBL	UPL species	x 5 = (B)
3. Cyperus polystachyos	25	Yes	FACW	Coldinii Totals.	(A) (B)
4. Eleocharis compressa	30	Yes	OBL	Prevalence Inde	x = B/A =
5				Hydrophytic Vegetat	
6				1	Hydrophytic Vegetation
7.				✓ 2 - Dominance Te	
8.				3 - Prevalence Inc	
9				data in Remark	Adaptations ¹ (Provide supporting ks or on a separate sheet)
10.					ophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size: 30')	120	= Total Co	over	¹ Indicators of hydric so	oil and wetland hydrology must
woody Vine Stratum (Plot size: 30)	5	Yes	FAC	be present, unless dis	
2.				Hydrophytic	
	5	= Total Co	over	Vegetation	/ No
% Bare Ground in Herb Stratum				Present? You	es No
Remarks:					
Trees at edge of depression.					

Profile Des	cription: (Describ	e to the dept	h needed to doci	ment the	indicator	or confirm	n the absence of i	ndicators.)
Depth	Matrix	%	Color (moist)	lox Feature %	Type ¹	Loc ²	Texture	Remarks
(inches) 0-1	Color (moist) 10 YR 5/2	90	5 YR 5/8	 10	C	M/PL	Clay/Sandy Clay	Remarks
				_ —	- C	M/PL	Clay	
1-5	10 YR 4/1	55	5 YR 5/8	_ 45	<u> </u>	W/PL	Clay	
								-
				_				
¹ Type: C=C	oncentration, D=D	epletion, RM=	Reduced Matrix, (CS=Covere	d or Coat	ed Sand G	rains. ² Locatio	n: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Appl	icable to all						Problematic Hydric Soils ³ :
Histoso	, .			Gleyed M				(A9) (LRR I, J)
_	pipedon (A2)			Redox (S				rie Redox (A16) (LRR F, G, H)
	istic (A3)			ed Matrix (/ Mucky Mi	•			ce (S7) (LRR G) s Depressions (F16)
	en Sulfide (A4) d Layers (A5) (LRF	R F)		Gleyed M				outside of MLRA 72 & 73)
	uck (A9) (LRR F, G			ted Matrix			•	/ertic (F18)
	d Below Dark Surfa			Dark Surf			Red Paren	t Material (TF2)
Thick D	ark Surface (A12)		Deple	ted Dark S	urface (F7	')		ow Dark Surface (TF12)
	Mucky Mineral (S1)			Depression			_	elain in Remarks)
	Mucky Peat or Pea			Plains Depi		•		ydrophytic vegetation and
5 cm Mi	ucky Peat or Peat (S3) (LRR F)	(N	LRA 72 &	73 of LR	RH)		drology must be present, urbed or problematic.
Pantriotius	Lavor (if procent)						uniess dist	urbed of problematic.
Type: Co	Layer (if present)	·						
1 3							Durdeia Cail Dea	sent? Yes ✓ No
Depth (in	cnes):						Hydric 30ii Fre	sentr res No
Remarks:								
- 0								
HYDROLO	GY							
	drology Indicator	s:						
,	cators (minimum o		l: check all that ap	ply)			Secondary I	ndicators (minimum of two required)
	Water (A1)	TOTAL TOTAL	Salt Crus					Soil Cracks (B6)
I —	ater Table (A2)			nvertebrat	es (B13)			y Vegetated Concave Surface (B8)
Saturati				n Sulfide C	, ,			e Patterns (B10)
I —	Marks (B1)		-	son Water		2)		d Rhizospheres on Living Roots (C3)
1—	nt Deposits (B2)			Rhizosph		•		e tilled)
1 —	posits (B3)			not tilled				Burrows (C8)
	at or Crust (B4)		Presenc	e of Reduc	ed Iron (C	(4)	Saturati	on Visible on Aerial Imagery (C9)
	posits (B5)		Thin Mu	ck Surface	(C7)		✓ Geomor	phic Position (D2)
	ion Visible on Aeria	al Imagery (B	7) Other (E	xplain in R	emarks)		FAC-Ne	utral Test (D5)
	Stained Leaves (B9						Frost-He	eave Hummocks (D7) (LRR F)
Field Obser								
Surface Wat	ter Present?	Yes	No ✓ Depth (inches):				
Water Table			No ✓ Depth (
Saturation F			No ✓ Depth (land Hydrology Pr	esent? Yes ✓ No
(includes ca	pillary fringe)							
Describe Re	corded Data (stream	ım gauge, mo	nitoring well, aeria	al photos, p	revious in	spections)	, if available:	
Remarks:								
On-channe	I wetland.							

TRANSECT 20 SITE PHOTOGRAPHS



Data Point 1
Post Oak Woods



Data Point 1
Post Oak Woods



Data Point 2 Lacustrine Fringe Wetlands

T20 - Page 1

TRANSECT 20 SITE PHOTOGRAPHS



Data Point 2 Lacustrine Fringe Wetlands



Data Point 2 Lacustrine Fringe Wetlands



Data Point 3
Emergent Wetlands

T20 - Page 2

TRANSECT 20 SITE PHOTOGRAPHS



Data Point 3 Emergent Wetlands



Data Point 3
Emergent Wetlands

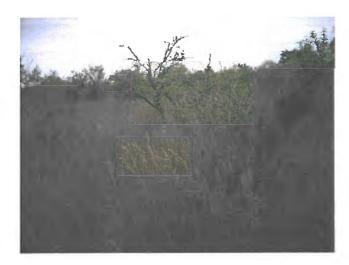
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Speciment/Owner_130 Environmental Park, LLC State: TX Sampling Point: T21-DP1	Project/Site: 130 Environmental Par							
androm (hillistope, terrace, etc.): Hillistope		_ ~					Sampling Point: T21	-DP1
Long: -97.67 Datum: NAD E	•						· · · · · · · · · · · · · · · · · · ·	
oil Map Unit Name: WgC - Wilson gravelly loam, 1-5% slopes re climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No (ff no, explain in Remarks.) re Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No re Vegetation Soil or Hydrology naturally problematic? (if needed, explain any answers in Remarks.) UMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, ethydrophytic Vegetation Present? Yes No ✓ Is the Sampled Area within a Wetland? Yes No ✓ Westland Hydrology Present? Yes No ✓ Is the Sampled Area within a Wetland? Yes No ✓ Westland Hydrology Present? Yes No ✓ Is the Sampled Area within a Wetland? Yes No ✓ Westland Hydrology Present? Yes No ✓ Is the Sampled Area within a Wetland? Yes No ✓ Westland Hydrology Present? Yes No ✓ Is the Sampled Area within a Wetland? Yes No ✓ Westland Hydrology Present? Yes No ✓ Is The Stratum (Plot size: 30' Section 1 Species Across All Strata 4 (B) Present of Dominant Species That Are OBL, FACW, or FAC (excluding FAC): 1 Total Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC): 1 Total Number of Dominant Species That Area (B) Prevalence Index worksheet: 1 Total % Cover of the Saping/Shrub Stratum (Plot size: 15' No Ni Doll Species X 1 = FACW Species X 2 = FACW Species X 2 = FACW Species X 3 = FACW Species X 3 = FACW Species X 4 = FACW Species X 5 = GACW Species X 4 = FACW Species X 5 = GACW Speci								
re climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No (If no, explain in Remarks.) re Vegetation — Soil — or Hydrology — significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No — re Vegetation — Soil — or Hydrology — naturally problematic? (If needed, explain any answers in Remarks.) WMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, ethydrophytic Vegetation Present? Yes — No ✓ Is the Sampled Area within a Wetland? Yes — No ✓ Wetland Hydrology Present? Yes — No ✓ Is the Sampled Area within a Wetland? Yes _ Yes _ No ✓ I	ubregion (LRR): <u>J - Southwestern F</u>	Prairies	Lat: 29.	.97		Long: <u>-97.</u> 67	Datum: 1	IAD 8
re climatic / hydrologic conditions on the site typical for this time of year? Yes \(\sqrt{No} \) (If no, explain in Remarks.) re Vegetation \(\) Soil \(\) or Hydrology \(\) significantly disturbed? Revegetation \(\) Soil \(\) or Hydrology \(\) significantly disturbed? Revegetation \(\) Soil \(\) or Hydrology \(\) naturally problematic? If needed, explain any answers in Remarks.) WMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, each ydrophytic Vegetation Present? Yes \(\) No \(\sqrt{\sqrt	oil Map Unit Name: <mark>WgC - Wilson gr</mark>	avelly loam,	1-5% slope	es		NWI classifi	cation: None	
Percention								
UMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, et- dydrophytic Vegetation Present? Yes No ✓ Is the Sampled Area within a Wetland? Yes No ✓ Within a Wetlan								No
UMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, experience from the features of plants. Is the Sampled Area within a Wetland? Ves No ✓ Ves No								
Hydrophytic Vegetation Present? Yes No V within a Wetland? Yes No V within							•	res, e
Hydric Soil Present? Yes	Hydrophytic Vegetation Present?	Yes	No ✓			· -	•	
Remarks:		Yes	No ✓				No. J	
Absolute Species Sp	-	Yes	No ✓	Wit	nın a wetlai	nu? Yes	No <u>*</u>	
Absolute Species Statum Cover Species Status Status Species Status Status Species Status Status Species Status Sp	lemarks:							
	EGETATION – Use scientific n	ames of pla	ants.					
That Are OBL, FACW, or FAC (excluding FAC): 1	From Streeture (Blot size: 30'	\	Absolute			Dominance Test work	sheet:	
(excluding FAC-): 1								
Total Number of Dominant Species Across All Strate: 4 (B)								_ (A)
Species Across All Strata: 4 (B)						Total Number of Domir	ant	
Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/ Prosopis glandulosa 15 Yes FACU								_ (B)
That Are OBL, FACW, or FAC: 25 (A/ Prosopis glandulosa 15					over	Percent of Dominant S	necies	
Mahonia trifoliolata 2 No NI Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species x 1 = FACW species x 2 = FAC species x 3 = FACW species x 4 = FACW species x 5 = FACW spec							or FAC: 25	_ (A/E
Total % Cover of: Multiply by:						Prevalence Index wor	kehoot.	
OBL species	C-stale sussta							
FACW species x 2 = FAC species x 3 = FACU species x 4 = FACU species x 5 = FACU species x 4 = FACU species x 5 = FACU species x 4 = FACU species x 5 =					- NI			
Ar						1		
FACU species)			- T-4-1 O		1		
Monarda citriodora 10 No NI Coreopsis tinctoria 35 Yes FAC Column Totals: (A) (E Nassella leucotricha 25 Yes NI Prevalence Index = B/A = Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporti data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes No ✓ No	lerb Stratum (Plot size: 5')		= Total Co	over	1		
Coreopsis tinctoria 35 Yes FAC Column Totals:			10	No	NI	1		
Prevalence Index = B/A =	Coreopsis tinctoria		35	Yes	FAC			(B
Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation2 - Dominance Test is >50%3 - Prevalence Index is ≤3.0¹4 - Morphological Adaptations¹ (Provide supporti data in Remarks or on a separate sheet)	Nassella leucotricha		25	Yes	NI			
1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supportidata in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes No ✓								
— 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) — Problematic Hydrophytic Vegetation¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes No ✓						I —		
data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Fesent? Yes No ✓								ınnortii
Voody Vine Stratum (Plot size: 30' Total Cover Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes No ✓						data in Remark	s or on a separate shee	t)
Voody Vine Stratum (Plot size: 30') Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes No ✓	0					Problematic Hydro	phytic Vegetation ¹ (Exp	lain)
Hydrophytic Vegetation 60 = Total Cover Present? Yes No ✓					over			/ must
					over	Vegetation	s No_ <u>√</u>	

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Profile Description: (Describe to the depth ne	eded to document the	indicator	or confirm	the absence of ir	ndicators.)
Depth Matrix	Redox Feature	es			
(inches) Color (moist) % C	olor (moist) %	Type ¹	_Loc ² _	Texture	Remarks
		- —			
¹ Type: C=Concentration, D=Depletion, RM=Red			d Sand Gra		n: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to all LRRs	s, unless otherwise no	ted.)		Indicators for I	Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Gleyed M				(A9) (LRR I, J)
Histic Epipedon (A2)	Sandy Redox (S				rie Redox (A16) (LRR F, G, H)
Black Histic (A3)	Stripped Matrix (ce (S7) (LRR G)
Hydrogen Sulfide (A4)	Loamy Mucky M				Depressions (F16)
Stratified Layers (A5) (LRR F)	Loamy Gleyed M				outside of MLRA 72 & 73)
1 cm Muck (A9) (LRR F, G, H)	Depleted Matrix			Reduced V	'ertic (F18) t Material (TF2)
Depleted Below Dark Surface (A11)	Redox Dark Surface Depleted Dark S	. ,			ow Dark Surface (TF12)
Thick Dark Surface (A12) Sandy Mucky Mineral (S1)	Redox Depression	. ,			lain in Remarks)
2.5 cm Mucky Peat or Peat (S2) (LRR G, H)			16)		ydrophytic vegetation and
5 cm Mucky Peat or Peat (S3) (LRR F)	(MLRA 72 &				drology must be present,
	(=.		,		urbed or problematic.
Restrictive Layer (if present):					
Type:					
Depth (inches):				Hydric Soil Pres	sent? Yes No ✓
Remarks:	······································				344
LIVEROL OCV					
HYDROLOGY					
Wetland Hydrology Indicators:				0	Finding () to me of the standard
Primary Indicators (minimum of one required; che				Secondary In	ndicators (minimum of two required)
Surface Water (A1)	Salt Crust (B11)				Soil Cracks (B6)
High Water Table (A2)	Aquatic Invertebrat	es (B13)		Sparsely	Vegetated Concave Surface (B8)
Saturation (A3)	Hydrogen Sulfide C	` '			e Patterns (B10)
Water Marks (B1)	Dry-Season Water				Rhizospheres on Living Roots (C3)
Sediment Deposits (B2)	Oxidized Rhizosph	eres on Liv	ng Roots (C3) (where	e tilled)
Drift Deposits (B3)	(where not tilled	l)		Crayfish	Burrows (C8)
Algal Mat or Crust (B4)	Presence of Reduc	ed Iron (C4	4)	Saturation	on Visible on Aerial Imagery (C9)
Iron Deposits (B5)	Thin Muck Surface	(C7)		Geomor	phic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Other (Explain in R	emarks)		FAC-Ne	utral Test (D5)
Water-Stained Leaves (B9)				Frost-He	eave Hummocks (D7) (LRR F)
Field Observations:					
Surface Water Present? Yes No _	Depth (inches):	****	_		
Water Table Present? Yes No _					
Saturation Present? Yes No _				and Hydrology Pro	esent? Yes No ✓
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitor	ing well, aerial photos, p	revious iris	pections), i	if available:	
Remarks:					

TRANSECT 21 SITE PHOTOGRAPHS



Data Point 1 Mesquite Grassland Mosaic



Data Point 1 Mesquite Grassland Mosaic

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Project/Site: 130 Environmental Par	k	(City/Cou	_{inty:} Lockha	rt/Caldwell	Sampling Date: <u>07/8/2013</u>
Applicant/Owner: 130 Environmental			-	-		Sampling Point: T22-DP1
Investigator(s): Troegle, Josh & Little						
Landform (hillslope, terrace, etc.): Hillslo						Slone (%): 2-4
Subregion (LRR): J - Southwestern P						
Soil Map Unit Name: FeE - Fett gravel						
Are climatic / hydrologic conditions on the	site typical for t	this time of yea	ar? Yes			
Are Vegetation, Soil, or Hy	drology	_significantly	disturbe	d? Are '	"Normal Circumstances"	present? Yes 🗸 No
Are Vegetation, Soil, or Hy	drology	_ naturally pro	blematic	? (If ne	eeded, explain any answe	ers in Remarks.)
SUMMARY OF FINDINGS - Atta	ach site ma	p showing	samp	ling point l	ocations, transects	, important features, etc
Hydrophytic Vegetation Present?	Yes	No ✓		s the Sampled	I Area	
Hydric Soil Present?	Yes	No ✓		vithin a Wetlar		No <u>√</u>
Wetland Hydrology Present?	Yes	No ✓	"	VILITIII A VVELIAI	nu! Tes	
Remarks:						
					, , , , , , , , , , , , , , , , , , , ,	
VEGETATION - Use scientific n	ames of pla	ants.				
Tree Stratum (Plot size: 30'	\	Absolute % Cover		ant Indicator	Dominance Test work	
1. Quercus stellata	/	75	Yes	FACU	Number of Dominant S That Are OBL, FACW,	
		_			(excluding FAC-):	1 (A)
2					Total Number of Demir	ant .
3					Total Number of Domir Species Across All Stra	A
4			- Total	Cover	'	. ,
Sapling/Shrub Stratum (Plot size: 15')		- IUlai	COVEI	Percent of Dominant S That Are OBL, FACW,	
1. Ulmus crassifolia		10	Yes	FAC		
2. Ligustrum sinense		10	Yes	UPL	Prevalence Index wor	
3						Multiply by:
4					1	x 1 =
5						x 2 =
5!		20	= Total	Cover		x 3 =
Herb Stratum (Plot size: 5'		10	Voc	NI		x 4 =
1. Dichanthelium linearifolium			Yes			x 5 =
2					Column Totals:	(A) (B)
3					Prevalence Index	c = B/A =
4					Hydrophytic Vegetati	on Indicators:
5					1 - Rapid Test for	Hydrophytic Vegetation
6.					2 - Dominance Tes	st is >50%
7					3 - Prevalence Ind	ex is ≤3.0 ¹
8					4 - Morphological	Adaptations ¹ (Provide supporting
9						ss or on a separate sheet)
10			= Total	Cover	Problematic Hydro	phytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size: 30')				¹ Indicators of hydric so be present, unless dist	il and wetland hydrology must urbed or problematic.
2.					Hydrophytic	
					Vegetation	es No <u>√</u>
% Bare Ground in Herb Stratum 85					riesent: 16	NO <u>·</u>
Remarks:						

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Depth Matrix		aca to accumi				the absence of in	dicators.
		Redox	Features 3	r 1	12	Touture	Remarks
(inches) Color (moist)	<u>%</u> Co	olor (moist)	<u> </u>	ype	LOC	Texture	Remarks
				~			
¹ Type: C=Concentration, D=D	epletion, RM=Redu	ced Matrix, CS=	Covered or	r Coated	Sand Gra		: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (App	licable to all LRRs						Problematic Hydric Soils ³ :
Histosol (A1)		Sandy Gl		(S4)		1 cm Muck	
Histic Epipedon (A2)		Sandy Re					e Redox (A16) (LRR F, G, H)
Black Histic (A3)			Matrix (S6)				e (S7) (LRR G)
Hydrogen Sulfide (A4)			ucky Minera				Depressions (F16)
Stratified Layers (A5) (LRI		Loamy GI				•	outside of MLRA 72 & 73)
1 cm Muck (A9) (LRR F, C	. ,		Matrix (F3)			Reduced V	. ,
Depleted Below Dark Surf Thick Dark Surface (A12)		Redox Da	ırк Suпасе Dark Surfa				w Dark Surface (TF12)
Sandy Mucky Mineral (S1			pressions				ain in Remarks)
2.5 cm Mucky Peat or Pea		High Plair			6)		drophytic vegetation and
5 cm Mucky Peat or Peat			A 72 & 73			-	rology must be present,
0 din modily r out or r out	(, (,	,			,		rbed or problematic.
Restrictive Layer (if present)):						
Type:							
Depth (inches):						Hydric Soil Pres	ent? Yes No ✓
Remarks:				_			
Remarks.							
A 40-2 to 1 - 10-2							
HYDROLOGY							
Wetland Hydrology Indicator	rs:						
Primary Indicators (minimum o	of one required; che	ck all that apply)					di-stars (injesses of tors as accional)
						Secondary In	dicators (minimum of two required)
Surface Water (A1)		Sair Crust (r	311)				dicators (minimum of two required) Soil Cracks (B6)
Surface Water (A1)		Salt Crust (E Aquatic Inve	,	B13)		Surface S	Soil Cracks (B6)
High Water Table (A2)		Aquatic Inve	rtebrates (Surface S	Soil Cracks (B6) Vegetated Concave Surface (B8)
High Water Table (A2)Saturation (A3)		Aquatic Inve	rtebrates (ulfide Odor	(C1)		Surface S Sparsely Drainage	Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10)
High Water Table (A2)Saturation (A3)Water Marks (B1)		Aquatic Inve	ertebrates (ulfide Odor Water Tab	(C1) le (C2)	ng Roots (Surface S Sparsely Drainage Oxidized	Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3
High Water Table (A2)Saturation (A3)Water Marks (B1)Sediment Deposits (B2)		Aquatic Inve Hydrogen S Dry-Season Oxidized Rh	ertebrates (ulfide Odor Water Tab izospheres	(C1) le (C2)	ng Roots (Surface S Sparsely Drainage Oxidized C3) (where	Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3 tilled)
 High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) 		Aquatic Inve Hydrogen S Dry-Season Oxidized Rh	ertebrates (ulfide Odor Water Tab iizospheres ot tilled)	(C1) le (C2) on Livir		Surface S Sparsely Drainage Oxidized C3) (where	Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3 tilled) Burrows (C8)
 High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) 		Aquatic Inve Hydrogen S Dry-Season Oxidized Rh (where no	ertebrates (ulfide Odor Water Tab izospheres ot tilled)	(C1) le (C2) on Livir		Surface S Sparsely Drainage Oxidized C3) (where Crayfish Saturatio	Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3 tilled) Burrows (C8) n Visible on Aerial Imagery (C9)
 High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) 	al Images (P7)	Aquatic Inve Hydrogen S Dry-Season Oxidized Rh (where no	ertebrates (ulfide Odor Water Tab sizospheres ot tilled) Reduced I Surface (C7	(C1) le (C2) s on Livir ron (C4)		Surface S Sparsely Drainage Oxidized C3) (where Crayfish Saturatio Geomorp	Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3 tilled) Burrows (C8) n Visible on Aerial Imagery (C9) chic Position (D2)
 High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aeri 		Aquatic Inve Hydrogen S Dry-Season Oxidized Rh (where no	ertebrates (ulfide Odor Water Tab sizospheres ot tilled) Reduced I Surface (C7	(C1) le (C2) s on Livir ron (C4)		Surface S Sparsely Drainage Oxidized C3) (where Crayfish Saturation Geomory FAC-Net	Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3 tilled) Burrows (C8) n Visible on Aerial Imagery (C9) ohic Position (D2)
 High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aeri Water-Stained Leaves (B5) 		Aquatic Inve Hydrogen S Dry-Season Oxidized Rh (where no	ertebrates (ulfide Odor Water Tab sizospheres ot tilled) Reduced I Surface (C7	(C1) le (C2) s on Livir ron (C4)		Surface S Sparsely Drainage Oxidized C3) (where Crayfish Saturation Geomory FAC-Net	Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3 tilled) Burrows (C8) n Visible on Aerial Imagery (C9) chic Position (D2)
 High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aeri Water-Stained Leaves (B5) 	9)	Aquatic Inve	ertebrates (ulfide Odor Water Tab aizospheres ot tilled) Reduced I Surface (C7	(C1) le (C2) s on Livir ron (C4)) arks)		Surface S Sparsely Drainage Oxidized C3) (where Crayfish Saturation Geomory FAC-Net	Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3 tilled) Burrows (C8) n Visible on Aerial Imagery (C9) ohic Position (D2)
 High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aeri Water-Stained Leaves (B5) Field Observations: Surface Water Present? 	9) Yes No <u> </u>	Aquatic Inve	ertebrates (ulfide Odor Water Tab aizospheres ot tilled) Reduced I Surface (C7 ain in Rema	(C1) le (C2) s on Livir fron (C4)) arks)	_	Surface S Sparsely Drainage Oxidized C3) (where Crayfish Saturation Geomory FAC-Net	Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3 tilled) Burrows (C8) n Visible on Aerial Imagery (C9) ohic Position (D2)
 High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aeri Water-Stained Leaves (B5) 	9) Yes No <u>✓</u> Yes No <u>✓</u>	Aquatic Inve	ertebrates (ulfide Odor Water Tab ilzospheres of tilled) Reduced I Gurface (C7 ain in Rema	(C1) le (C2) s on Livir ron (C4)) arks)		Surface S Sparsely Drainage Oxidized C3) (where Crayfish Saturation Geomory FAC-Net Frost-He	Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3 tilled) Burrows (C8) n Visible on Aerial Imagery (C9) ohic Position (D2) stral Test (D5) ave Hummocks (D7) (LRR F)
 High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aeri Water-Stained Leaves (B5) Field Observations: Surface Water Present? Water Table Present? Saturation Present? 	9) Yes No <u> </u>	Aquatic Inve	ertebrates (ulfide Odor Water Tab ilzospheres of tilled) Reduced I Gurface (C7 ain in Rema	(C1) le (C2) s on Livir ron (C4)) arks)		Surface S Sparsely Drainage Oxidized C3) (where Crayfish Saturation Geomory FAC-Net Frost-He	Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3 tilled) Burrows (C8) n Visible on Aerial Imagery (C9) ohic Position (D2)
 High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aeri Water-Stained Leaves (BS) Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) 	9) Yes No Yes No Yes No Yes No ✓	Aquatic Inve	ertebrates (ulfide Odor Water Tab aizospheres ot tilled) Reduced I Surface (C7 ain in Rema	(C1) le (C2) s on Livir ron (C4)) arks)	- - - Wetla	Surface S Sparsely Drainage Oxidized C3) (where Crayfish Saturatio Geomory FAC-Net Frost-He	Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3 tilled) Burrows (C8) n Visible on Aerial Imagery (C9) ohic Position (D2) stral Test (D5) ave Hummocks (D7) (LRR F)
 High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aeri Water-Stained Leaves (B5) Field Observations: Surface Water Present? Water Table Present? Saturation Present? 	9) Yes No Yes No Yes No ✓	Aquatic Inve	ertebrates (ulfide Odor Water Tab aizospheres ot tilled) Reduced I Surface (C7 ain in Rema	(C1) le (C2) s on Livir ron (C4)) arks)	- - - Wetla	Surface S Sparsely Drainage Oxidized C3) (where Crayfish Saturatio Geomory FAC-Net Frost-He	Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3 tilled) Burrows (C8) n Visible on Aerial Imagery (C9) ohic Position (D2) stral Test (D5) ave Hummocks (D7) (LRR F)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aeri Water-Stained Leaves (B5) Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (stres	9) Yes No Yes No Yes No ✓	Aquatic Inve	ertebrates (ulfide Odor Water Tab aizospheres ot tilled) Reduced I Surface (C7 ain in Rema	(C1) le (C2) s on Livir ron (C4)) arks)	- - - Wetla	Surface S Sparsely Drainage Oxidized C3) (where Crayfish Saturatio Geomory FAC-Net Frost-He	Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3 tilled) Burrows (C8) n Visible on Aerial Imagery (C9) ohic Position (D2) stral Test (D5) ave Hummocks (D7) (LRR F)
 High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aeri Water-Stained Leaves (BS) Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) 	9) Yes No Yes No Yes No ✓	Aquatic Inve	ertebrates (ulfide Odor Water Tab aizospheres ot tilled) Reduced I Surface (C7 ain in Rema	(C1) le (C2) s on Livir ron (C4)) arks)	- - - Wetla	Surface S Sparsely Drainage Oxidized C3) (where Crayfish Saturatio Geomory FAC-Net Frost-He	Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3 tilled) Burrows (C8) n Visible on Aerial Imagery (C9) ohic Position (D2) stral Test (D5) ave Hummocks (D7) (LRR F)
 High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aeri Water-Stained Leaves (B5) Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (strest 	9) Yes No Yes No Yes No ✓	Aquatic Inve	ertebrates (ulfide Odor Water Tab aizospheres ot tilled) Reduced I Surface (C7 ain in Rema	(C1) le (C2) s on Livir ron (C4)) arks)	- - - Wetla	Surface S Sparsely Drainage Oxidized C3) (where Crayfish Saturatio Geomory FAC-Net Frost-He	Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3 tilled) Burrows (C8) n Visible on Aerial Imagery (C9) ohic Position (D2) stral Test (D5) ave Hummocks (D7) (LRR F)

TRANSECT 22 SITE PHOTOGRAPHS



Data Point 1
Post Oak Woods



Data Point 1
Post Oak Woods

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1. Ulmus crassifolia 20 Yes FAC 2. Total % Cover of: Multiply by: 3. OBL species x 1 = 5. FACW species x 2 = FACW species x 3 = FAC species x 3 = FACU species x 4 = 1. Iva annua 35 Yes FAC UPL species x 5 =	Project/Site: 130 Environmental Par				rt/Caldwell Sampling Date: 07/10/2013
Landform (hillstope, terrace, etc.); Floodplain Local retief (concave, convex, none); Concave Stope (%); O-1 Subregion (LRR); J - Southwestern Prairies Lat 29.96 Long; 97.67 Datum: NAD 8 Soli Map Junit Name FeE - Fett gravelly soils, 1-1296 slopes Now ideastification. Mone available New climatic / hydrologic conditions on the site typical for this time of year? Yes					
Soil Map Unit Name: F6E - Fett gravelly soils, 1-12% slopes Normal 2016	Investigator(s): Troegle, Josh & Little	ton, Brandyn	Section,	Township, Ra	inge: NA
Solid Map Unit Name: FeE - Fett gravelly soils, 1-12% slopes	andform (hillslope, terrace, etc.): Flood	olain	Local re	elief (concave,	convex, none): Concave Slope (%): 0-1
Soil Map Unit Name: FEE - Fett gravelly soils, 1-12% slopes New climator in protection None available					
Ner climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No (Iff no, explain in Remarks.) Are VegetationSoil or Hydrology significantly disturbed?					
Very Vegetation	· ——				
Summary Soil					
SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, et Hydrophytic Vegetation Present? Yes No within a Wetland? Yes No w					
Hydrophylic Vegetation Present?	Are Vegetation, Soil, or Hy	drology naturally pro	oblematio	? (If ne	eeded, explain any answers in Remarks.)
Hydric Soli Present? Yes No	SUMMARY OF FINDINGS – Atta	ich site map showing	samp	ling point l	ocations, transects, important features, et
Within a Wetland? Yes	Hydrophytic Vegetation Present?	Yes No <u></u> ✓	10	s the Sampled	1 Area
Remarks:	Hydric Soil Present?	Yes ✓ No	- 1		
Absolute Species 30'	Wetland Hydrology Present?	Yes No <u>√</u>		ricinii a vveciai	16510
Absolute	Remarks:				
Absolute	/EGETATION – Use scientific n	ames of plants.			
1. Ulmus crassifolia 2		Absolute	Domin	ant Indicator	Dominance Test worksheet:
2					Number of Dominant Species
Sapiling/Shrub Stratum (Plot size: 15' 20 Yes FAC Percent of Dominant Species Across All Stratat: 6 (B)					1
Species Across All Strata: 6 (B)					(excluding FAC-): 3 (A)
Sapling/Shrub Stratum (Plot size: 15' 20	3				
Sapling/Shrub Stratum (Plot size: 15') 20 Yes FAC	4				Species Across All Strata: 6 (B)
1. Ulmus crassifolia 20 Yes FAC 2. 3. 4. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5.	Continue (Obsert Charter (Diet sies 15)		= Total	Cover	
Prevalence Index worksheet: Total % Cover of:		·	Yes	FAC	That Are OBL, FACW, or FAC: 50 (A/B)
Total % Cover of: Multiply by:			-		Prevalence Index worksheet:
DBL species x 1 = SCW species x 2 = SCW species x 3 = SCW species x 3 = SCW species x 4 = SCW species x 5 =					Total % Cover of: Multiply by:
FACW species x 2 =					
Herb Stratum (Plot size: 5')					FACW species x 2 =
Herb Stratum (Plot size: 5') 1. Iva annua	o		= Total (Cover	FAC species x 3 =
2. Rottboellia cochinchinensis 3. Ambrosia artemisiifolia 4. Schizachyrium scoparium 5. Schizachyrium scoparium 6. Schizachyrium scoparium 7. Schizachyrium scoparium 8. Schizachyrium scoparium 9. Schizachyrium scoparium 10. Smilax bona-nox 1. Smilax bona-nox 1. Smilax bona-nox 1. Smilax bona-nox 1. Smilax bona-nox 2. Schizachyrium scoparium 10. Scoparium 11. Scoparium 12. Scoparium 13. Scoparium 14. Scoparium 14. Scoparium 15. No FACU 16. Scoparium 16. Scoparium 16. Scoparium 17. Scoparium 18. Scoparium 18. Scoparium 19. Scopar	Herb Stratum (Plot size: 5'		_ Total \	COVEI	FACU species x 4 =
3. Ambrosia artemisiifolia 4. Schizachyrium scoparium 2 No FACU Prevalence Index = B/A =		35	Yes	FAC	UPL species x 5 =
A. Schizachyrium scoparium 2 No FACU Prevalence Index = B/A =	-	90	Yes	FACU	Column Totals: (A) (B)
Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supportir data in Remarks or on a separate sheet) 10. Woody Vine Stratum (Plot size: 30¹ 1. Smilax bona-nox 5 Yes FACU Hydrophytic Vegetation Indicators:	·	15	No	FACU	Providence I. J. B. B.
1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supportindata in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) 1 - Smilax bona-nox 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supportindata in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes No ✓	4. Schizachyrium scoparium	2	No	FACU	
7	5				
7. 8. 9. 10. Woody Vine Stratum (Plot size: 30') 1. Smilax bona-nox	6				
9	7				
data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) 1. Smilax bona-nox The problematic Hydrophytic Vegetation¹ (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Yes No ✓ No ✓	8				
10 Problematic Hydrophytic Vegetation¹ (Explain) 1. Smilax bona-nox 1. Smilax bona-nox 2 FACU Bare Ground in Herb Stratum 10 142 = Total Cover 1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes No ✓	9				data in Remarks or on a separate sheet)
Woody Vine Stratum (Plot size: 30') 1. Smilax bona-nox 5 Yes FACU Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 2 5 = Total Cover Hydrophytic Vegetation Present? Yes No ✓	10				1
1. Smilax bona-nox 5 Yes FACU be present, unless disturbed or problematic. 2	Wanda Vina Charles (Distance 30)	142	= Total	Cover	
2)	Yes	FACU	
% Bare Ground in Herb Stratum 10 5 = Total Cover Present? Yes No ✓					Hydronhytic
% Bare Ground in Herb Stratum 10 Present? Yes No Y		5	= Total	Cover	Vegetation
	% Bare Ground in Herb Stratum 10		_ Total	00101	

US Army Corps of Engineers

Profile Desc	cription: (Describe	to the dept	h needed to docur	nent the	indicator	or confirm	the absence of inc	licators.)
Depth	Matrix			x Feature				
(inches)	Color (moist)		Color (moist)		Type ¹	Loc ²	Texture	Remarks
0-4	10 YR 5/2	60	10 YR 5/8	20			Sandy clay	
	10 YR 7/1	20						
			Reduced Matrix, CS			d Sand Gr		PL=Pore Lining, M=Matrix.
, -		cable to all	LRRs, unless othe					roblematic Hydric Soils ³ :
Histosol	, ,			Gleyed Ma	. ,			A9) (LRR I, J)
'	oipedon (A2) stic (A3)			Redox (St d Matrix (S	,			Redox (A16) (LRR F, G, H) (S7) (LRR G)
_	en Sulfide (A4)			•	neral (F1)			Depressions (F16)
	d Layers (A5) (LRR	F)		-	atrix (F2)			utside of MLRA 72 & 73)
1 cm Mu	ıck (A9) (LRR F, G,	H)	✓ Deplete	d Matrix (F3)		Reduced Ve	rtic (F18)
	d Below Dark Surfa	ce (A11)		Dark Surfa	` '			Material (TF2)
	ark Surface (A12)				urface (F7)			Dark Surface (TF12)
	Mucky Mineral (S1)	(S2) /I DD (_	Depressio	กร (Fช) essions (F	16\		in in Remarks) Irophytic vegetation and
_	Mucky Peat or Peat ucky Peat or Peat (S	. , .	· , —		73 of LRR		-	ology must be present,
0 0111 1410	long i car of i car (c) (L IIII)	(,		bed or problematic.
Restrictive	Layer (if present):					-		
Type: Co	bble							
Depth (in	ches): <u>4</u>						Hydric Soil Prese	ent? Yes ✓ No
Remarks:								
100								
HYDROLO	GY							
	drology Indicators							
			I; check all that app	v)			Secondary Ind	icators (minimum of two required)
	Water (A1)	one required	Salt Crust					oil Cracks (B6)
	iter Table (A2)		Aquatic In	, - ,	es (B13)			/egetated Concave Surface (B8)
Saturation			Hydrogen					Patterns (B10)
	larks (B1)				Table (C2)			Rhizospheres on Living Roots (C3)
	nt Deposits (B2)		Oxidized I					
	posits (B3)			not tilled		_		Burrows (C8)
	at or Crust (B4)		Presence	of Reduc	ed Iron (C4	1)	Saturation	Visible on Aerial Imagery (C9)
	oosits (B5)		Thin Muck	Surface	(C7)		✓ Geomorpl	nic Position (D2)
Inundati	on Visible on Aerial	Imagery (B7	7) Other (Ex	plain in R	emarks)		FAC-Neut	ral Test (D5)
Water-S	tained Leaves (B9)						Frost-Hea	ve Hummocks (D7) (LRR F)
Field Obser	vations:							
Surface Wat			No ✓ Depth (in					
Water Table			No <u>√</u> Depth (in			1		,
Saturation P		Yes	No <u>✓</u> Depth (ir	ches):		_ Wetl	and Hydrology Pres	sent? Yes No ✓
(includes car	oillary fringe) corded Data (strear	n gauge, mo	nitoring well, aerial	photos, p	revious ins	pections).	if available:	
Describe No	co. doc para foriour			,, p		, ,		
Remarks:								VIII.
. comanto.								

Applicant/Owner_130 Environmental Park, LLC State: TX Sampling Point. T23-DP2	Project/Site: 130 Environmental Park		City/Co	ounty:	Lockhai	rt/Caldwell	Sampling Date: 07	/10/2013
Section, Township, Range: NA Landform (hillslope, terrace, etc.): Floodplain Local relief (concrew, convex, none): Concave Slope (%): D-1								
Landform (hillslope, terrace, etc.): Floodplain	••							
Submeption (LRR): J - Southwestern Prairies Lat: 29.96 Long: 47.67 Datum: NAD 83	• , , ===						/e Slone	(%)· 0-1
Soil Map Unit Name: FEE - Fett gravelly soils, 1-12% slopes								
Are climatic / hydrologic conditions on the site hybical for this time of year? Yes ✓ No (If no, explain in Remarks.) Are Vegetation Soil or Hydrology significantly disturbed? Are Normal Circumstances' present? Yes ✓ No Are Normal Circumstances' present? Yes ✓ No Are Vegetation — Soil or Hydrology anaturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes ✓ No Is the Sampled Area within a Wetland? Yes No ✓ No Wetland Hydrology Present? Yes ✓ No Wetland Hydrology Present? Yes ✓ No Yes FAC (excluding FAC-): VEGETATION — Use scientific names of plants. Tree Stratum (Plot size: 30' 9	-							
Are Vegetation	•							able
Are Vegetation								
Summary Company Comp					Are "	"Normal Circumstances" p	present? Yes	_ No
Hydrophytic Vegetation Present?	Are Vegetation, Soil, or Hydrology	_ naturally pro	blema	tic?	(If ne	eeded, explain any answe	ers in Remarks.)	
Hydric Soil Present? Yes	SUMMARY OF FINDINGS - Attach site ma	p showing	sam	pling	point l	ocations, transects	, important feat	ures, etc.
Hydric Soil Present? Yes	Hydrophytic Vegetation Present? Yes ✓	No						
VEGETATION - Use scientific names of plants. Dominant Indicator Stratum (Plot size: 30'			- 1				n /	
VEGETATION - Use scientific names of plants. Dominant Indicator Species 2 Status Provided Species 2 Status Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-):	Wetland Hydrology Present? Yes	No ✓		withii	i a wetiar	nd? Yes	No <u>*</u>	
Dominant Indicator								-
Dominant Indicator								
Dominant Indicator								
Dominant Indicator						-		
Number of Dominant Species Status A	VEGETATION – Use scientific names of pla	ants.						
1. Ulmus crassifolia 2.	T = 20 4 = (D) 4 = = 30'		-			Dominance Test work	sheet:	
2.								
3.	1. Olmus Crussifoliu							(A)
Species Across All Strata: 4 (B)								_ ` ` ′
Sapling/Shrub Stratum (Plot size: 15' 100 (A/B)				<u> </u>			A	(B)
Percent of Dominant Species 100 (A/B)	4			·				(-)
1	Sapling/Shrub Stratum (Plot size: 15')		- 1012	ai Cove	, 1			(A/R)
2							0117(0.	(746)
3						Prevalence Index wor	ksheet:	
4								
Herb Stratum (Plot size: 5'	4.							
Herb Stratum (Plot size: 5'	5					1		
1. Iva annua 50 Yes FAC UPL species x 5 =	61		= Tota	al Cove	er			
2. Elymus virginicus 30 Yes FAC 30 Yes FAC 30 Yes FAC 4. Prevalence Index = B/A =		50	V		EAC			_
3. Cyperus setigerus 4.								
4						Column Totals:	(A)	(B)
Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 10	V			—	FAC	Prevalence Index	c = B/A =	
6								
7						1 - Rapid Test for I	Hydrophytic Vegetatio	n
8						✓ 2 - Dominance Tes	st is >50%	
9						3 - Prevalence Ind	ex is ≤3.0 ¹	
10								
Woody Vine Stratum (Plot size: 30') 130								-
Woody Vine Stratum (Plot size: 30') 1	10					Problematic Hydro	phytic Vegetation ¹ (Ex	xplain)
1. 2 Hydrophytic Vegetation Present? Yes ✓ No	Woody Vine Stratum (Plot size: 30'		= 100	ai Cov	er			gy must
% Bare Ground in Herb Stratum 35 = Total Cover Vegetation Present? Yes ✓ No	1					be present, unless dist	urbed or problematic.	
% Bare Ground in Herb Stratum 35 Present? Yes V No	2							
70 Bale Ground III From Gradelli	25		= Tota	al Cov	er	Vegetation	ne √ Na	
Remarks:						rieseitt 16		
	Remarks:							

Great Plains - Version 2.0

epth	Matrix		Redo	x Feature:				
	lor (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
-8 10 Y	R 2/1	98 1	10 YR 4/6	2	С	M	Sandy clay	
pe: C=Concentr	ation, D=Dep	letion, RM=F	Reduced Matrix, CS	S=Covered	or Coate	d Sand G	rains. ² Locatio	n: PL=Pore Lining, M=Matrix.
dric Soil Indicat	ors: (Applic	able to all L	RRs, unless other	rwise not	ed.)		Indicators for	Problematic Hydric Soils ³ :
Histosol (A1)			Sandy (Gleyed Ma	trix (S4)		1 cm Muck	(A9) (LRR I, J)
Histic Epipedon	(A2)		Sandy F	Redox (S5)			rie Redox (A16) (LRR F, G, H)
Black Histic (A3				d Matrix (S	•			ce (S7) (LRR G)
Hydrogen Sulfid				Mucky Mir	` '			s Depressions (F16)
Stratified Layer				Gleyed Ma			•	outside of MLRA 72 & 73)
_ 1 cm Muck (A9)				d Matrix (,		Reduced V	` '
_ Depleted Below		e (A11)	✓ Redox [t Material (TF2)
_ Thick Dark Surf				d Dark Su	•			ow Dark Surface (TF12) slain in Remarks)
_ Sandy Mucky N		(C2) /I PP G		Depressionains Depre		16)		ydrophytic vegetation and
2.5 cm Mucky F 5 cm Mucky Pe				.RA 72 &				drology must be present,
_ 5 cm Mucky Fe	at of Feat (o.	5) (LIXIX I)	(1412		O OI LIN			urbed or problematic.
estrictive Layer (if present):							
Type: Claypan								
Depth (inches):	8		_				Hydric Soil Pro	sent? Yes ✓ No
Deput (mones).							I I Julio Coll I I C	Jene: 100
emarks:				-				
emarks:						9,994		
emarks:								
DROLOGY								
DROLOGY	y Indicators:		check all that appl	lv)				adicators (minimum of two requir
DROLOGY etland Hydrolog imary Indicators (y Indicators: minimum of c		check all that appl				Secondary I	
DROLOGY etland Hydrology imary Indicators (i	y Indicators: minimum of c (A1)		Salt Crust	(B11)	o (P42)		Secondary I	Soil Cracks (B6)
DROLOGY etland Hydrology imary Indicators (i _ Surface Water i _ High Water Tab	y Indicators: minimum of c (A1) lle (A2)		Salt Crust Aquatic In	(B11) vertebrate			Secondary II Surface Sparsely	Soil Cracks (B6) y Vegetated Concave Surface (B
DROLOGY etland Hydrology imary Indicators (i _ Surface Water i _ High Water Tab _ Saturation (A3)	y Indicators: minimum of c (A1) ole (A2)		Salt Crust Aquatic In Hydrogen	(B11) vertebrate Sulfide O	dor (C1)		Secondary II Surface Sparsely Drainag	Soil Cracks (B6) y Vegetated Concave Surface (B e Patterns (B10)
DROLOGY etland Hydrology imary Indicators (i _ Surface Water i _ High Water Tab _ Saturation (A3) _ Water Marks (B	y Indicators: minimum of c (A1) ble (A2)		Salt Crust Aquatic In Hydrogen Dry-Seaso	(B11) vertebrate Sulfide O on Water l	dor (C1) Fable (C2)		Secondary II Surface Sparsely Drainag Oxidized	Soil Cracks (B6) y Vegetated Concave Surface (B e Patterns (B10) d Rhizospheres on Living Roots
DROLOGY etland Hydrology imary Indicators (i _ Surface Water to High Water Tab _ Saturation (A3) Water Marks (B _ Sediment Depo	y Indicators: minimum of c (A1) ble (A2) (1) sits (B2)		Salt Crust Aquatic In Hydrogen Dry-Seaso Oxidized F	(B11) vertebrate Sulfide O on Water I Rhizosphe	dor (C1) Fable (C2) res on Liv		Secondary II Surface Sparsely Drainag Oxidized (C3) (wher	Soil Cracks (B6) y Vegetated Concave Surface (B e Patterns (B10) d Rhizospheres on Living Roots (e tilled)
DROLOGY etland Hydrology imary Indicators (i _ Surface Water _ High Water Tab _ Saturation (A3) _ Water Marks (B _ Sediment Depo _ Drift Deposits (I	y Indicators: minimum of c (A1) ble (A2) (1) sits (B2) (33)		Salt Crust Aquatic In Hydrogen Dry-Seaso Oxidized F	(B11) vertebrate Sulfide Or on Water T Rhizosphe not tilled)	dor (C1) Table (C2) res on Liv	ing Roots	Secondary II Surface Sparsely Drainag Oxidized (C3) (wher Crayfish	Soil Cracks (B6) y Vegetated Concave Surface (Bee Patterns (B10) d Rhizospheres on Living Roots e tilled) Burrows (C8)
DROLOGY etland Hydrology imary Indicators (i _ Surface Water to the control of th	y Indicators: minimum of c (A1) ble (A2) (1) sits (B2) (33)		Salt Crust Aquatic In Hydrogen Dry-Seaso Oxidized F	(B11) vertebrate Sulfide Or on Water T Rhizosphe not tilled) of Reduce	dor (C1) Table (C2) Tres on Lived Iron (C	ing Roots	Secondary II Surface Sparsely Drainag Oxidized (C3) (wher Crayfish Saturation	Soil Cracks (B6) y Vegetated Concave Surface (Bee Patterns (B10) d Rhizospheres on Living Roots (e tilled) Burrows (C8) on Visible on Aerial Imagery (C9)
etland Hydrology imary Indicators (Surface Water High Water Tab Saturation (A3) Water Marks (B Sediment Depo	y Indicators: minimum of c (A1) ble (A2) c1) sits (B2) 33) ust (B4)		Salt Crust Aquatic In Hydrogen Dry-Seaso Oxidized F	(B11) vertebrate Sulfide Or on Water T Rhizosphe not tilled) of Reduce	dor (C1) Table (C2) Tres on Lived Iron (C	ing Roots	Secondary II Surface Sparsely Drainag Oxidized (C3) (wher Crayfish Saturati	y Vegetated Concave Surface (Be Patterns (B10) d Rhizospheres on Living Roots (etilled) Burrows (C8) on Visible on Aerial Imagery (C9) phic Position (D2)
etland Hydrology imary Indicators (Surface Water High Water Tab Saturation (A3) Water Marks (B Sediment Depo	y Indicators: minimum of c (A1) ble (A2) c1) sits (B2) 33) ust (B4)	one required;	Salt Crust Aquatic In Hydrogen Dry-Seaso Oxidized F	(B11) vertebrate Sulfide Or on Water T Rhizosphe not tilled) of Reduce c Surface (dor (C1) Table (C2) Tres on Live The ded Iron (C4) Tres on C7)	ing Roots	Secondary II Surface Sparsely Drainag Oxidized (C3) (wher Crayfish Saturati	Soil Cracks (B6) y Vegetated Concave Surface (Bee Patterns (B10) d Rhizospheres on Living Roots (e tilled) Burrows (C8) on Visible on Aerial Imagery (C9)
etland Hydrology imary Indicators (Surface Water of High Water Table Saturation (A3) Water Marks (Begen Sediment Deposits (I) Algal Mat or Crulinon Deposits (I)	y Indicators: minimum of c (A1) ble (A2) sits (B2) 33) ust (B4) 35) ble on Aerial	one required;	Salt Crust Aquatic In Hydrogen Dry-Seaso Oxidized F	(B11) vertebrate Sulfide Or on Water T Rhizosphe not tilled) of Reduce c Surface (dor (C1) Table (C2) Tres on Live The ded Iron (C4) Tres on C7)	ing Roots	Secondary II Surface Sparsely Drainag Oxidized (C3) (wher Crayfish Saturati ✓ Geomor FAC-Ne	Soil Cracks (B6) y Vegetated Concave Surface (Bee Patterns (B10) d Rhizospheres on Living Roots (Bee tilled) Burrows (C8) on Visible on Aerial Imagery (C9) phic Position (D2)
etland Hydrology imary Indicators (Surface Water of High Water Table Saturation (A3) Water Marks (Be Sediment Deposits (I Algal Mat or Crolling Inundation Visit Water-Stained	y Indicators: minimum of c (A1) ble (A2) sits (B2) sits (B4) sits (B4) ble on Aerial Leaves (B9)	one required;	Salt Crust Aquatic In Hydrogen Dry-Seaso Oxidized F	(B11) vertebrate Sulfide Or on Water T Rhizosphe not tilled) of Reduce c Surface (dor (C1) Table (C2) Tres on Live The ded Iron (C4) Tres on C7)	ing Roots	Secondary II Surface Sparsely Drainag Oxidized (C3) (wher Crayfish Saturati ✓ Geomor FAC-Ne	Soil Cracks (B6) y Vegetated Concave Surface (B e Patterns (B10) d Rhizospheres on Living Roots e tilled) B Burrows (C8) on Visible on Aerial Imagery (C9 phic Position (D2) utral Test (D5)
DROLOGY etland Hydrology imary Indicators (Surface Water High Water Tab Saturation (A3) Water Marks (B Sediment Deposits (I Algal Mat or Cri Iron Deposits (I Inundation Visit Water-Stained	y Indicators: minimum of c (A1) cle (A2) c1) sits (B2) c33) cust (B4) c35) cle on Aerial Leaves (B9)	one required;	Salt Crust Aquatic In Hydrogen Dry-Seaso Oxidized F	(B11) vertebrate Sulfide Or on Water T Rhizosphe not tilled) of Reduce c Surface (dor (C1) Fable (C2) Fres on Live Fred Iron (C-1)	ing Roots	Secondary II Surface Sparsely Drainag Oxidized (C3) (wher Crayfish Saturati ✓ Geomor FAC-Ne	Soil Cracks (B6) y Vegetated Concave Surface (B e Patterns (B10) d Rhizospheres on Living Roots e tilled) B Burrows (C8) on Visible on Aerial Imagery (C9 phic Position (D2) utral Test (D5)
etland Hydrology imary Indicators (Surface Water e High Water Tab Saturation (A3) Water Marks (B Sediment Depo Drift Deposits (I Algal Mat or Cri Iron Deposits (I Inundation Visit Water-Stained eld Observations	y Indicators: minimum of o (A1) cle (A2) c1) sits (B2) c33) cust (B4) c35) cle on Aerial cleaves (B9) c: ent?	Imagery (B7)	Salt Crust Aquatic In Hydrogen Dry-Seasc Oxidized F (where Presence Thin Muck Other (Exp	(B11) vertebrate Sulfide Or on Water T Rhizosphe not tilled) of Reduce c Surface (plain in Re	dor (C1) Fable (C2) Fres on Live ed Iron (C- (C7) Fres on Live emarks)	ing Roots	Secondary II Surface Sparsely Drainag Oxidized (C3) (wher Crayfish Saturati ✓ Geomor FAC-Ne	Soil Cracks (B6) y Vegetated Concave Surface (B e Patterns (B10) d Rhizospheres on Living Roots e tilled) B Burrows (C8) on Visible on Aerial Imagery (C9 phic Position (D2) utral Test (D5)
etland Hydrology imary Indicators (Surface Water High Water Tab Saturation (A3) Water Marks (B Sediment Depo Drift Deposits (I Algal Mat or Cri Iron Deposits (II Inundation Visit Water-Stained eld Observations arface Water Preser	y Indicators: minimum of c (A1) ble (A2) sits (B2) 33) ust (B4) 35) ble on Aerial (Leaves (B9) s: ent? Y	Imagery (B7) /es N /es N	Salt Crust Aquatic In Hydrogen Dry-Seasc Oxidized F (where Presence Thin Muck Other (Exp	(B11) vertebrate Sulfide Or on Water T Rhizosphe not tilled) of Reduce c Surface (plain in Re	dor (C1) Fable (C2) Fres on Liv ed Iron (C4 (C7) emarks)	ing Roots	Secondary II Surface Sparsely Drainag Oxidized (C3) (wher Crayfish Saturati ✓ Geomor FAC-Ne Frost-He	Soil Cracks (B6) y Vegetated Concave Surface (B e Patterns (B10) d Rhizospheres on Living Roots e tilled) B Burrows (C8) on Visible on Aerial Imagery (C9 phic Position (D2) eave Hummocks (D7) (LRR F)
etland Hydrology imary Indicators (i Surface Water High Water Tab Saturation (A3) Water Marks (B Sediment Deposits (I Algal Mat or Cri Iron Deposits (I Inundation Visit Water-Stained eld Observations urface Water Preser	y Indicators: minimum of o (A1) sle (A2) sts (B2) s3) sust (B4) s5) ble on Aerial (Leaves (B9) s: ent? Y ringe)	Imagery (B7) /es N /es N	Salt Crust Aquatic In Hydrogen Dry-Seasc Oxidized F (where Presence Thin Muck Other (Exp	(B11) vertebrate Sulfide Or on Water Technicosphe not tilled) of Reduce (Surface (plain in Reduce) uches): uches): uches):	dor (C1) Fable (C2) Fres on Liv ed Iron (C- (C7) emarks)	ing Roots i) Wet	Secondary II Surface Sparsely Drainag Oxidized (C3) (wher Crayfish Saturati ✓ Geomor FAC-Ne Frost-He	Soil Cracks (B6) y Vegetated Concave Surface (B e Patterns (B10) d Rhizospheres on Living Roots e tilled) B Burrows (C8) on Visible on Aerial Imagery (C9 phic Position (D2) utral Test (D5)
etland Hydrology imary Indicators (i Surface Water High Water Tab Saturation (A3) Water Marks (B Sediment Deposits (I Algal Mat or Cri Iron Deposits (I Inundation Visit Water-Stained eld Observations urface Water Preser	y Indicators: minimum of o (A1) sle (A2) sts (B2) s3) sust (B4) s5) ble on Aerial (Leaves (B9) s: ent? Y ringe)	Imagery (B7) /es N /es N	Salt Crust Aquatic In Hydrogen Dry-Seasc Oxidized F (where Presence Thin Muck Other (Exp	(B11) vertebrate Sulfide Or on Water Technicosphe not tilled) of Reduce (Surface (plain in Reduce) uches): uches): uches):	dor (C1) Fable (C2) Fres on Liv ed Iron (C- (C7) emarks)	ing Roots i) Wet	Secondary II Surface Sparsely Drainag Oxidized (C3) (wher Crayfish Saturati ✓ Geomor FAC-Ne Frost-He	Soil Cracks (B6) y Vegetated Concave Surface (B e Patterns (B10) d Rhizospheres on Living Roots e tilled) B Burrows (C8) on Visible on Aerial Imagery (C9 phic Position (D2) eave Hummocks (D7) (LRR F)
etland Hydrology imary Indicators (i Surface Water High Water Tab Saturation (A3) Water Marks (B Sediment Deposits (I Algal Mat or Cri Iron Deposits (I Inundation Visit Water-Stained eld Observations urface Water Presenter Table Present atturation Present?	y Indicators: minimum of o (A1) sle (A2) sts (B2) s3) sust (B4) s5) ble on Aerial (Leaves (B9) s: ent? Y ringe)	Imagery (B7) /es N /es N	Salt Crust Aquatic In Hydrogen Dry-Seasc Oxidized F (where Presence Thin Muck Other (Exp	(B11) vertebrate Sulfide Or on Water Technicosphe not tilled) of Reduce (Surface (plain in Reduce) uches): uches): uches):	dor (C1) Fable (C2) Fres on Liv ed Iron (C- (C7) emarks)	ing Roots i) Wet	Secondary II Surface Sparsely Drainag Oxidized (C3) (wher Crayfish Saturati ✓ Geomor FAC-Ne Frost-He	Soil Cracks (B6) y Vegetated Concave Surface (B e Patterns (B10) d Rhizospheres on Living Roots e tilled) B Burrows (C8) on Visible on Aerial Imagery (C9 phic Position (D2) eave Hummocks (D7) (LRR F)
DROLOGY etland Hydrology imary Indicators (i Surface Water of the High Water Table Saturation (A3) Water Marks (B) Sediment Deposits (I) Algal Mat or Cri Iron Deposits (I) Inundation Visit Water-Stained of the Water-Stained of the Water Presenter Table Present turnation Present?	y Indicators: minimum of o (A1) sle (A2) sts (B2) s3) sust (B4) s5) ble on Aerial (Leaves (B9) s: ent? Y ringe)	Imagery (B7) /es N /es N	Salt Crust Aquatic In Hydrogen Dry-Seasc Oxidized F (where Presence Thin Muck Other (Exp	(B11) vertebrate Sulfide Or on Water Technicosphe not tilled) of Reduce (Surface (plain in Reduce) uches): uches): uches):	dor (C1) Fable (C2) Fres on Liv ed Iron (C- (C7) emarks)	ing Roots i) Wet	Secondary II Surface Sparsely Drainag Oxidized (C3) (wher Crayfish Saturati ✓ Geomor FAC-Ne Frost-He	Soil Cracks (B6) y Vegetated Concave Surface (Be e Patterns (B10) d Rhizospheres on Living Roots e tilled) B Burrows (C8) on Visible on Aerial Imagery (C9 phic Position (D2) eave Hummocks (D7) (LRR F)

TRANSECT 23 SITE PHOTOGRAPHS



Data Point 1
Riparian Woods (Cedar Elm/Oak)



Data Point 1 Riparian Woods (Cedar Elm/Oak)



Data Point 1 Riparian Woods (Cedar Elm/Oak)

TRANSECT 23 SITE PHOTOGRAPHS



Data Point 2
Riparian Woods (Cedar Elm/Oak)



Data Point 2
Riparian Woods (Cedar Elm/Oak)

Project/Site: 130 Environmental Park		City/Cour	nty: Lockha	rt/Caldwell	_ Sampling Date: 07/09/2013
Applicant/Owner: 130 Environmental Park, LLC					_ Sampling Point: T25-DP1
Investigator(s): Troegle, Josh & Littleton, Brand					- 10
					Slope (%): 0-1
Subregion (LRR): J - Southwestern Prairies					
Soil Map Unit Name: FEE - Fett gravelly soils, 1-					ication: None available
Are climatic / hydrologic conditions on the site typical fo					
Are Vegetation, Soil, or Hydrology					present? Yes No
Are Vegetation, Soil, or Hydrology				eeded, explain any answ	
SUMMARY OF FINDINGS – Attach site m	ap showing	sampl	ing point I	ocations, transect	s, important features, etc.
Hydrophytic Vegetation Present? Yes	_ No <u>√</u>		the Sampled	I Aroa	
Hydric Soil Present? Yes	_ No <u>√</u>	- 1	ithin a Wetlar		No <u>√</u>
Wetland Hydrology Present? Yes	_ No <u>√</u>	"	itiliii a vvetiai	163	
Remarks:		•			
VEGETATION – Use scientific names of p	lants.				
Tree Stratum (Plot size: 30'	Absolute % Cover		ant Indicator s? Status	Dominance Test wor	
1. Quercus stellata	60	Yes	FACU	Number of Dominant That Are OBL, FACW	
2. Ulmus crassifolia	25	Yes	FAC	(excluding FAC-):	2 (A)
3. Prosopis glandulosa	10	No	FACU	Total Number of Dom	inant
4				Species Across All St	^
	95	= Total (Cover	Percent of Dominant S	Snecies
Sapling/Shrub Stratum (Plot size: 15')				That Are OBL, FACW	
1. Ulmus crassifolia	5	Yes	FAC	Prevalence Index wo	arkehoet:
2. Diospyros texana	5	Yes	NI	1	Multiply by:
3					x 1 =
4				1	x 2 =
5	10				x 3 =
Herb Stratum (Plot size: 5'	10	= Total (Jover		x 4 =
1. Dichanthelium linearifolium	60	Yes	NI	UPL species	x 5 =
2. Cylindropuntia leptocaulis	5	No	NI		(A) (B)
3. Schizachyrium scoparium	5	No	FACU		
4. Carex planostachys	15	No	NI NI		ex = B/A =
5				Hydrophytic Vegetat	
6				1	Hydrophytic Vegetation
7				2 - Dominance Te	
8					Adaptations ¹ (Provide supporting
9				data in Remar	ks or on a separate sheet)
10				Problematic Hydr	rophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size: 30'	85	= Total (Cover	1 Indicators of hydric s	oil and wetland hydrology must
Noody Vine Stratum (Plot size: 50)	15	Yes	FACU		sturbed or problematic.
				Hydrophytic	
2	15	= Total (Cover	Vegetation	,
% Bare Ground in Herb Stratum 60				Present? Y	'es No <u>√</u>
Remarks:					

US Army Corps of Engineers

				bator or	Committee the	e absence of inc	
Depth Ma (inches) Color (moi	trixst) % C	olor (moist)	Features % T	vpe ¹	Loc²	Texture	Remarks
(inches) Color (inor	50, 70	olor (molocy					, (0.1.6.1.0
						2,	
¹ Type: C=Concentration, D							PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (A	pplicable to all LRR						roblematic Hydric Soils ³ :
Histosol (A1)			eyed Matrix	(S4)		1 cm Muck (
Histic Epipedon (A2)		Sandy Re					Redox (A16) (LRR F, G, H)
Black Histic (A3)			Matrix (S6)	1 (54)			e (S7) (LRR G)
Hydrogen Sulfide (A4)	I DD E\		ucky Minera				Depressions (F16) putside of MLRA 72 & 73)
Stratified Layers (A5) (-		leyed Matrix Matrix (F3)	(FZ)		Reduced Ve	,
1 cm Muck (A9) (LRR Depleted Below Dark S			mainx (F3) ark Surface ((F6)		Red Parent	` '
Thick Dark Surface (A	, ,		Dark Surface				v Dark Surface (TF12)
Sandy Mucky Mineral (•		epressions (nin in Remarks)
2.5 cm Mucky Peat or			ns Depression		6)		drophytic vegetation and
5 cm Mucky Peat or Pe			A 72 & 73 o			-	ology must be present,
	,	•					rbed or problematic.
Restrictive Layer (if prese	ent):						
Type:							
Depth (inches):					١,	lydric Soil Pres	ent? Yes No ✓
						.,	
Remarks:							
YDROLOGY							
	ators:						
Wetland Hydrology Indica						C	diantara (minimum of two mannings)
Primary Indicators (minimu	m of one required; ch						dicators (minimum of two required)
Surface Water (A1)		Salt Crust (,				oil Cracks (B6)
High Water Table (A2)		Aquatic Inve					Vegetated Concave Surface (B8)
Saturation (A3)		Hydrogen S				_	Patterns (B10)
Water Marks (B1)		Dry-Seasor	Water Tabl	e (C2)		Oxidized	Rhizospheres on Living Roots (C3)
Sediment Deposits (B2)	2)	Oxidized RI	nizospheres	on Livin	g Roots (C3) (where	tilled)
Drift Deposits (B3)		(where n	ot tilled)			Crayfish E	Burrows (C8)
Algal Mat or Crust (B4))	Presence o	Reduced Ir	on (C4)		Saturation	n Visible on Aerial Imagery (C9)
		Thin Muck	Surface (C7))		Geomorp	hic Position (D2)
Iron Deposits (B5)			ain in Rema	rks)		FAC-Neu	tral Test (D5)
	erial Imagery (B7)	Other (Expl				Frost-Hea	eve Hummocks (D7) (LRR F)
Iron Deposits (B5)		Other (Expl				1 1031-1102	ive nullillocks (D7) (LRK F)
Iron Deposits (B5) Inundation Visible on A Water-Stained Leaves		Other (Expl				1103(-1102	e Hullimocks (D7) (ERR F)
Iron Deposits (B5) Inundation Visible on A Water-Stained Leaves Field Observations:	(B9)		nes):			1 103(-1108	ve numinous (D7) (ERR F)
Iron Deposits (B5) Inundation Visible on A Water-Stained Leaves Field Observations: Surface Water Present?	(B9)	Depth (inc	nes):		1	Trost-nea	ve numinous (D7) (ERR F)
Iron Deposits (B5) Inundation Visible on A Water-Stained Leaves Field Observations: Surface Water Present? Water Table Present?	(B9) Yes No Yes No	Depth (inc	nes):		-		
Iron Deposits (B5) Inundation Visible on A Water-Stained Leaves Field Observations: Surface Water Present? Water Table Present? Saturation Present?	(B9)	Depth (inc			-		sent? Yes No _✓
Iron Deposits (B5) Inundation Visible on A Water-Stained Leaves Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	Yes No Yes No Yes No	Depth (inc	nes): nes):		Wetland	l Hydrology Pre	
Iron Deposits (B5) Inundation Visible on A Water-Stained Leaves Field Observations: Surface Water Present? Water Table Present? Saturation Present?	Yes No Yes No Yes No	Depth (inc	nes): nes):		Wetland	l Hydrology Pre	
Iron Deposits (B5) Inundation Visible on A Water-Stained Leaves Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (see Present Present)	Yes No Yes No Yes No	Depth (inc	nes): nes):		Wetland	l Hydrology Pre	
Iron Deposits (B5) Inundation Visible on A Water-Stained Leaves Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	Yes No Yes No Yes No	Depth (inc	nes): nes):		Wetland	l Hydrology Pre	
Iron Deposits (B5) Inundation Visible on A Water-Stained Leaves Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (see Present Present)	Yes No Yes No Yes No	Depth (inc	nes): nes):		Wetland	l Hydrology Pre	

TRANSECT 25 SITE PHOTOGRAPHS



Data Point 1 Post Oak Woods



Data Point 1 Post Oak Woods

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Project/Site: 130 Environmental Park		City/Cour	nty: Lockhai	rt/Caldwell	_ Sampling Date: 07/09/2013
Applicant/Owner: 130 Environmental Park, LLC					Sampling Point: T26-DP1
Investigator(s): Troegle, Josh & Littleton, Brandy					
Landform (hillslope, terrace, etc.): Depression					ve Slope (%): 0-2
Subregion (LRR): J - Southwestern Prairies					
Soil Map Unit Name: WgC - Wilson gravelly loam,					
Are climatic / hydrologic conditions on the site typical for t					
Are Vegetation, Soil, or Hydrology					present? Yes ✓ No
Are Vegetation, Soil, or Hydrology				eeded, explain any answ	
SUMMARY OF FINDINGS – Attach site ma					
Hydrophytic Vegetation Present? Yes ✓	No				
Hydric Soil Present?	No		the Sampled		No
Wetland Hydrology Present? Yes ✓	No	W	ithin a Wetlar	na? Yes <u>v</u>	NO
Remarks:				<u> </u>	
Fringe wetland around pond.					
VEGETATION – Use scientific names of pla	ents.				
	Absolute	Domina	ant Indicator	Dominance Test wor	ksheet:
Tree Stratum (Plot size: 30'			Status	Number of Dominant	
1. Ulmus crassifolia		Yes Yes	FACU FACU	That Are OBL, FACW (excluding FAC-):	, or FAC (A)
2. Prosopis glandulosa		ies	- FACU		
3				Total Number of Domi	
4	10	= Total (Cover		
Sapling/Shrub Stratum (Plot size: 15'		Total		Percent of Dominant S That Are OBL, FACW	
1. Ulmus crassifolia	2	No	FAC	Prevalence Index wo	orkehoot:
2. Sesbania drummondii	$-\frac{45}{2}$	Yes	FACU	Total % Cover of:	
3. Prosopis glandulosa	2	Yes	FACU		x 1 =
4					x 2 =
5	49	= Total (Cover	FAC species	x 3 =
Herb Stratum (Plot size: 5'					x 4 =
1. Cyperus polystachyos	60	Yes	FACW		x 5 =
2. Persicaria hydropiper	$-\frac{35}{15}$	Yes	OBL	Column Totals:	(A) (B)
3. Iva annua		No	FAC	Prevalence Inde	ex = B/A =
4				Hydrophytic Vegetat	
5				1 - Rapid Test for	Hydrophytic Vegetation
6				✓ 2 - Dominance Te	
7. 8.				3 - Prevalence In	
9.				4 - Morphological	Adaptations ¹ (Provide supporting ks or on a separate sheet)
10					ophytic Vegetation ¹ (Explain)
201	110	= Total (Cover		
Woody Vine Stratum (Plot size: 30'					oil and wetland hydrology must sturbed or problematic.
1					
2		= Total (Hydrophytic Vegetation	,
% Bare Ground in Herb Stratum 40		_ rotar (J0461	Present? Y	'es No
Remarks:					

	cription. (Describe), CO!!!!!!	m the absence of inc				
Depth	Matrix Color (moint)	%	Color (moist)	x Feature %	s Type ¹	Loc ²	Texture	Remarks			
(inches) 0-1	Color (moist) 10 YR 4/1	100	Coloi (moist)			LUC	Silty clay	Remarks			
			- VD 4/0			M/DL					
1-12	55 GY	45 5	5 YR 4/6	30	<u>C</u>	M/PL	Silty clay_				
	65 GY	25									
	Concentration, D=De					d Sand G		: PL=Pore Lining, M=Matrix.			
Hydric Soil	Indicators: (Appli	cable to all L						roblematic Hydric Soils ³ :			
Histoso	` '			Gleyed Ma			_	(A9) (LRR I, J)			
_	pipedon (A2)			Redox (S				e Redox (A16) (LRR F, G, H)			
	Histic (A3)			d Matrix (S	•			e (S7) (LRR G) Depressions (F16)			
	en Sulfide (A4)	E\	✓ Loamy		neral (F1)			outside of MLRA 72 & 73)			
_	ed Layers (A5) (L RR luck (A9) (LRR F, G,			ed Matrix (Reduced Ve				
_	ed Below Dark Surfa			Dark Surfa				Material (TF2)			
_ ·	Oark Surface (A12)	(urface (F7)		Very Shallov	w Dark Surface (TF12)			
Sandy	Mucky Mineral (S1)		Redox	Depressio	ns (F8)			ain in Remarks)			
	Mucky Peat or Peat				essions (F						
5 cm M	lucky Peat or Peat (S	63) (LRR F)	(ML	RA 72 &	73 of LRR	H)	•	rology must be present,			
							unless distu	rbed or problematic.			
	Layer (if present):										
			_								
Depth (ir	nches):						Hydric Soil Pres	ent? Yes V No No			
Remarks:											
HYDROLO	OGY										
Wetland Hy	ydrology Indicators	:		*							
Primary Ind	licators (minimum of	one required;	check all that app	ly)			Secondary Inc	dicators (minimum of two required)			
	e Water (A1)		Salt Crust				Surface S	Soil Cracks (B6)			
_	ater Table (A2)		Aquatic In	vertebrate	es (B13)		Sparsely	Vegetated Concave Surface (B8)			
✓ Saturat			Hydrogen	Sulfide O	dor (C1)		Drainage	Patterns (B10)			
Water I	Marks (B1)		Dry-Seas	on Water	Table (C2)		Oxidized	Rhizospheres on Living Roots (C3)			
Sedime	ent Deposits (B2)		Oxidized	Rhizosphe	eres on Liv	ing Roots	(C3) (where	tilled)			
	eposits (B3)		/whore								
Drift De			(wilete	not tilled)			Burrows (C8)			
_			•) ed Iron (C	1)	Crayfish I	Burrows (C8) n Visible on Aerial Imagery (C9)			
Algal M	lat or Crust (B4) eposits (B5)		•	of Reduc	ed Iron (C	1)	Crayfish I	, ,			
Algal M	lat or Crust (B4)	Imagery (B7)	Presence	of Reduci	ed Iron (C4 (C7)	1)	Crayfish I Saturation ✓ Geomorp	n Visible on Aerial Imagery (C9)			
Algal M Iron De ✓ Inunda	lat or Crust (B4) eposits (B5)		Presence	of Reduci	ed Iron (C4 (C7)	1)	Crayfish I Saturation ✓ Geomorp FAC-Neu	n Visible on Aerial Imagery (C9) hic Position (D2)			
Algal M Iron De ✓ Inunda	lat or Crust (B4) eposits (B5) tion Visible on Aerial Stained Leaves (B9)		Presence Thin Mucl) Other (Ex	of Reduc k Surface plain in Re	ed Iron (C4 (C7) emarks)	1)	Crayfish I Saturation ✓ Geomorp FAC-Neu	n Visible on Aerial Imagery (C9) hic Position (D2) tral Test (D5)			
Algal M Iron De Inundat Water-: Field Obse	lat or Crust (B4) eposits (B5) tion Visible on Aerial Stained Leaves (B9)		Presence Thin Mucl) Other (Ex	of Reduc k Surface plain in Re	ed Iron (C4 (C7) emarks)	1)	Crayfish I Saturation ✓ Geomorp FAC-Neu	n Visible on Aerial Imagery (C9) hic Position (D2) tral Test (D5)			
Algal M Iron De ✓ Inundar ─ Water Field Obse Surface Wa	dat or Crust (B4) eposits (B5) tion Visible on Aerial Stained Leaves (B9) ervations: ater Present?	Yes <u>✓</u> N	Presence Thin Mucl) Other (Ex	of Reduci k Surface plain in Re nches): 0	ed Iron (C4 (C7) emarks)	1)	Crayfish I Saturation ✓ Geomorp FAC-Neu	n Visible on Aerial Imagery (C9) hic Position (D2) tral Test (D5)			
Algal M Iron De Inunda Water-3 Field Obse Surface Water Table	lat or Crust (B4) eposits (B5) tion Visible on Aerial Stained Leaves (B9) rvations: ater Present? e Present?	Yes <mark>✓</mark> N	Presence Thin Mucl Other (Ex	of Reduce k Surface plain in Re nches):	ed Iron (C- (C7) emarks) " to 6"		Crayfish I Saturation ✓ Geomorp FAC-Neu Frost-Hea	n Visible on Aerial Imagery (C9) hic Position (D2) tral Test (D5) ave Hummocks (D7) (LRR F)			
Algal M Iron De ✓ Inundar ─ Water Field Obse Surface Wa Water Table Saturation F	lat or Crust (B4) eposits (B5) tion Visible on Aerial Stained Leaves (B9) rvations: ater Present? e Present? publications (B4)	Yes <u>✓</u> N Yes N Yes <u>✓</u> N	Presence Thin Mucl Other (Ex	of Reduce k Surface plain in Renches): 0'nches):nches):	ed Iron (C-(C7) emarks) " to 6" urface	We	Crayfish I Saturation ✓ Geomorp FAC-Neu Frost-Hea	n Visible on Aerial Imagery (C9) hic Position (D2) tral Test (D5) ave Hummocks (D7) (LRR F)			
Algal M Iron De Inundar Water- Field Obse Surface Wa Water Table Saturation F	lat or Crust (B4) eposits (B5) tion Visible on Aerial Stained Leaves (B9) rvations: ater Present? e Present?	Yes <u>✓</u> N Yes N Yes <u>✓</u> N	Presence Thin Mucl Other (Ex	of Reduce k Surface plain in Renches): 0'nches):nches):	ed Iron (C-(C7) emarks) " to 6" urface	We	Crayfish I Saturation ✓ Geomorp FAC-Neu Frost-Hea	n Visible on Aerial Imagery (C9) hic Position (D2) tral Test (D5) ave Hummocks (D7) (LRR F)			
Algal M Iron De Inundat Water-: Field Obse Surface Wa Water Table Saturation F (includes ca Describe Re	lat or Crust (B4) eposits (B5) tion Visible on Aerial Stained Leaves (B9) rvations: ater Present? e Present? publications (B4)	Yes <u>✓</u> N Yes N Yes <u>✓</u> N	Presence Thin Mucl Other (Ex	of Reduce k Surface plain in Renches): 0'nches):nches):	ed Iron (C-(C7) emarks) " to 6" urface	We	Crayfish I Saturation ✓ Geomorp FAC-Neu Frost-Hea	n Visible on Aerial Imagery (C9) hic Position (D2) tral Test (D5) ave Hummocks (D7) (LRR F)			
Algal M Iron De ✓ Inundar ─ Water Field Obse Surface Wa Water Table Saturation F	lat or Crust (B4) eposits (B5) tion Visible on Aerial Stained Leaves (B9) rvations: ater Present? e Present? publications (B4)	Yes <u>✓</u> N Yes N Yes <u>✓</u> N	Presence Thin Mucl Other (Ex	of Reduce k Surface plain in Renches): 0'nches):nches):	ed Iron (C-(C7) emarks) " to 6" urface	We	Crayfish I Saturation ✓ Geomorp FAC-Neu Frost-Hea	n Visible on Aerial Imagery (C9) hic Position (D2) tral Test (D5) ave Hummocks (D7) (LRR F)			
Algal M Iron De Inundat Water-: Field Obse Surface Wa Water Table Saturation F (includes ca Describe Re	lat or Crust (B4) eposits (B5) tion Visible on Aerial Stained Leaves (B9) rvations: ater Present? e Present? publications (B4)	Yes <u>✓</u> N Yes N Yes <u>✓</u> N	Presence Thin Mucl Other (Ex	of Reduce k Surface plain in Renches): 0'nches):nches):	ed Iron (C-(C7) emarks) " to 6" urface	We	Crayfish I Saturation ✓ Geomorp FAC-Neu Frost-Hea	n Visible on Aerial Imagery (C9) hic Position (D2) tral Test (D5) ave Hummocks (D7) (LRR F)			

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: 130 Environmental Park	
Investigator(s): Troegle, Josh & Littleton, Brandyn Landform (hillslope, terrace, etc.): Depression/Slope Local relief (concave, convex, none): Concave Slope (%): Subregion (LRR): J - Southwestern Prairies Lat: 29.95 Long: 97.67 Datum: NAI Soil Map Unit Name: WGC - Wilson gravelly loam, 1-5% slopes Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No (If no, explain in Remarks.) Are Vegetation Soil or Hydrology significantly disturbed? Are Vegetation Soil or Hydrology naturally problematic? SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features Hydrophytic Vegetation Present? Yes ✓ No Is the Sampled Area within a Wetland? Yes ✓ No Wetland Hydrology Present? Yes ✓ No Species? Slatus No Species? 1. Ulmus crassifolia	
Local relief (concave, convex, none): Concave Slope (%): Subregion (LRR): J - Southwestern Prairies Lat: 29.95 Long: -97.67 Datum: NAI	
Subregion (LRR): J - Southwestern Prairies Lat: 29.95 Long: 97.67 Datum: NAI Soil Map Unit Name: WgC - Wilson gravelly loam, 1-5% slopes NWI classification: None available Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No (If no, explain in Remarks.) Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features Hydrophytic Vegetation Present? Yes ✓ No Is the Sampled Area Hydrophytic Vegetation Present? Yes ✓ No Is the Sampled Area Wetland Hydrology Present? Yes ✓ No No Within a Wetland? Yes ✓ No Remarks: VEGETATION - Use scientific names of plants. Tree Stratum (Plot size: 30', No Absolute)_1
Soil Map Unit Name: WgC - Wilson gravelly loam, 1-5% slopes NVII classification: None available Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No (If no, explain in Remarks.) Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features Hydrophytic Vegetation Present? Yes ✓ No Is the Sampled Area within a Wetland? Yes ✓ No Wetland Hydrology Present? Yes ✓ No No Within a Wetland? Yes ✓ No No That Are OBL, FACW, or FAC (excluding FAC-): 1. Ulmus crassifolia	7-1
Are climatic / hydrologic conditions on the site typical for this time of year? Yes \(\sqrt{No} \) No (If no, explain in Remarks.) Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes \(\sqrt{No} \) No Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features Hydrophytic Vegetation Present? Yes \(\sqrt{No} \) No Is the Sampled Area within a Wetland? Yes \(\sqrt{No} \) No No Wetland Hydrology Present? Yes \(\sqrt{No} \) No Absolute	00
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No No No No No No No No No Is the Sampled Area within a Wetland? Yes No	
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features Hydrophytic Vegetation Present?	
SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features Hydrophytic Vegetation Present?	
Hydrophytic Vegetation Present?	
Hydric Soil Present? Yes √ No within a Wetland? No within a Wetland? Yes ✓ No	etc.
Hydric Soil Present? Yes √ No within a Wetland? No within a Wetland? Yes ✓ No	
Wetland Hydrology Present? Yes ✓ No	
VEGETATION - Use scientific names of plants. Dominant Indicator Species? Status Dominant Indicator Species? Status Status	
Tree Stratum (Plot size: 30') Absolute % Cover Species? Status Yes Dominant Indicator Species? Status That Are OBL, FACW, or FAC (excluding FAC-): Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): 3.	
Tree Stratum (Plot size: 30') Absolute % Cover Species? Status Yes Dominant Indicator Species? Status That Are OBL, FACW, or FAC (excluding FAC-): Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): 3.	
Tree Stratum (Plot size: 30') Absolute % Cover Species? Status Yes Dominant Indicator Species? Status That Are OBL, FACW, or FAC (excluding FAC-): Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): 3.	
Tree Stratum (Plot size: 30'	
Tree Stratum (Plot size: 30'	
1. Ulmus crassifolia 45 Yes FAC That Are OBL, FACW, or FAC (excluding FAC-): 4 2. 3. Total Number of Dominant Species Across All Strata: 4 Sapling/Shrub Stratum (Plot size: 15') 30 Yes FAC 1. Ulmus crassifolia 30 Yes FAC Percent of Dominant Species That Are OBL, FACW, or FAC: 100 100 Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species	
Total Number of Dominant Species Across All Strata: 4	
Species Across All Strata: 4	(A)
A	
Sapling/Shrub Stratum	(B)
1. Ulmus crassifolia 30 Yes FAC 2. Prevalence Index worksheet: Total % Cover of: Multiply by: Multiply by: OBL species x 1 = FACW species x 2 = FACW species x 3 = FA	
2	A/B)
3	
4	
5	
- Total Cover	
Herb Stratum (Plot size: 3) FACU species x 4 =	
1. Eleocharis acicularis 100 Yes OBL UPL species x 5 =	
1. Eleocharis activitatis	(B)
3. Rhynchospora Present	(5)
Phanopyrum gymnocarpon Present Prevalence Index = B/A =	
Hydrophytic Vegetation Indicators:	
1 - Rapid Test for Hydrophytic Vegetation	
7	
8 4 - Morphological Adaptations ¹ (Provide supp	ortina
9 data in Remarks or on a separate sheet)	July
10 Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size: 30' = Total Cover Indicators of hydric soil and wetland hydrology m	ıst
be present, unless disturbed or problematic.	
2. Hydrophytic	
= Total Cover Vegetation	
% Bare Ground in Herb Stratum 0 Present? Yes Ves No	
Remarks:	
US Army Corps of Engineers Great Plains – Versio	120

Profile Desc	ription: (Describe	to the dept	h needed to docur	nent the	indicator	or confirm	n the absence of in	dicators.)
Depth	Matrix			x Feature				
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹ _	Loc ²	Texture	Remarks
0-8	10 YR 4/1	60	5 YR 4/6	40	<u> </u>	M/PL	Clay	
8-16	10 YR 5/6	60						
	10 YR 5/1	25	10 YR 4/6	15	С	M/PL	Clay	
¹Typo: C=C	oncentration, D=Dep	oletion PM=	Reduced Matrix CS	S=Covere	ed or Coate	ad Sand G	rains ² l ocation	: PL=Pore Lining, M=Matrix.
	Indicators: (Applic					ou Sanu G		roblematic Hydric Soils ³ :
Histosol					atrix (S4)			(A9) (LRR I, J)
_	oipedon (A2)			Redox (S	, ,			e Redox (A16) (LRR F, G, H)
Black Hi			Stripped	,	-			e (S7) (LRR G)
	n Sulfide (A4)				ineral (F1)			Depressions (F16)
Stratified	Layers (A5) (LRR	F)	Loamy	Gleyed M	latrix (F2)		(LRR H	outside of MLRA 72 & 73)
1 cm Mu	ick (A9) (LRR F, G,	H)	✓ Deplete				Reduced Ve	` '
ı —	Below Dark Surface	e (A11)	_	Dark Surf	` ,			Material (TF2)
	ark Surface (A12)				urface (F7)		w Dark Surface (TF12)
	lucky Mineral (S1) Jucky Peat or Peat	(C2) /I DD C		Depressio		16)		ain in Remarks) drophytic vegetation and
	icky Peat or Peat (S				73 of LRF			rology must be present,
_ 5 011 1410	icky i cat of i cat (C	o) (L itti)	(1112		TO OI LIKE	•••,		rbed or problematic.
Restrictive I	ayer (if present):							
Type:								
Depth (inc	ches):						Hydric Soil Pres	ent? Yes ✓ No
Remarks:	,						1	
, romano.								
HYDROLO	GY							
Wetland Hyd	drology Indicators:							
Primary India	ators (minimum of	ne required	check all that appl	v)			Secondary Inc	dicators (minimum of two required)
Surface	Water (A1)		Salt Crust	(B11)			Surface S	Soil Cracks (B6)
ı —	ter Table (A2)		Aquatic In		es (B13)		Sparsely	Vegetated Concave Surface (B8)
Saturation	, ,		Hydrogen					Patterns (B10)
	arks (B1)		Dry-Seaso)		Rhizospheres on Living Roots (C3)
Sedimen	t Deposits (B2)		✓ Oxidized F	Rhizosphe	eres on Liv	ing Roots		
Drift Dep	oosits (B3)		(where i	not tilled)		Crayfish I	Burrows (C8)
Algal Ma	t or Crust (B4)		Presence	of Reduc	ed Iron (C	4)	Saturation	n Visible on Aerial Imagery (C9)
Iron Dep	osits (B5)		Thin Muck	Surface	(C7)		✓ Geomorp	hic Position (D2)
Inundatio	on Visible on Aerial	lmagery (B7) Other (Exp	olain in R	emarks)		FAC-Neu	tral Test (D5)
Water-St	tained Leaves (B9)						Frost-Hea	ave Hummocks (D7) (LRR F)
Field Observ	vations:							
Surface Wate	er Present?	'es N	lo 🗸 Depth (in	ches):		_		
Water Table			lo 🗸 Depth (in					
Saturation Pr			lo V Depth (in				land Hydrology Pre	sent? Yes ✓ No
(includes cap	illary fringe)							
Describe Red	corded Data (stream	gauge, moi	nitoring well, aerial i	photos, p	revious in	spections),	, it available:	
		100						
Remarks:								-

TRANSECT 26 SITE PHOTOGRAPHS



Data Point 1 Lacustrine Fringe Wetlands



Data Point 1 Lacustrine Fringe Wetlands



Data Point 1 Lacustrine Fringe Wetlands

TRANSECT 26 SITE PHOTOGRAPHS



Data Point 2 Emergent Wetlands



Data Point 2 Emergent Wetlands

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: 130 Environmental Park		Citv/Co	_{untv:} Lockha	rt/Caldwell	Sampling Date: 07/	11/2013
Applicant/Owner: 130 Environmental Park, LLC				State: TX		
Investigator(s): Troegle, Josh & Littleton, Brandyr					_ ouniping 1 ont	
Landform (hillslope, terrace, etc.): Floodplain					Ve Slope (ω ₄ ν. 0-4
Subregion (LRR): J - Southwestern Prairies						
Soil Map Unit Name: FeE - Fett gravelly soils, 1-12						Die
Are climatic / hydrologic conditions on the site typical for the	-				•	
Are Vegetation, Soil, or Hydrology				"Normal Circumstances"	present? Yes ✓	No
Are Vegetation, Soil, or Hydrology	naturally pro	blemati	ic? (If ne	eeded, explain any answ	ers in Remarks.)	
SUMMARY OF FINDINGS - Attach site map	showing	samp	oling point l	ocations, transect	s, important featu	res, etc.
Hydrophytic Vegetation Present? Yes ✓	No					
Hydric Soil Present? Yes ✓			is the Sampled			
Wetland Hydrology Present? Yes ✓ I		'	within a Wetlar	na? Yes <u>▼</u>	No	
Remarks:						
Adventitious roots on Salix nigra.						
VEGETATION – Use scientific names of plan	nte			···		
VEGETATION – Use scientific fiames of plan	Absolute	Domir	nant Indicator	Dominance Test wor	ksheet:	
Tree Stratum (Plot size: 30'	% Cover		es? Status	Number of Dominant S		
1				That Are OBL, FACW		
2				(excluding FAC-):	4	(A)
3				Total Number of Domi		
4				Species Across All Str	ata: <u>4</u>	(B)
Sapling/Shrub Stratum (Plot size: 15')		= Total	Cover	Percent of Dominant S	pecies	
1. Salix nigra	30	Yes	FACW	That Are OBL, FACW,	or FAC: 100	(A/B)
2. Ulmus crassifolia	10	Yes	FAC	Prevalence Index wo	rksheet:	
3. Sesbania drummondii	5	No	FACW	Total % Cover of:	Multiply by:	<u></u>
4.				1	x 1 =	
5.					x 2 =	
51	45	= Total	Cover		x 3 =	
Herb Stratum (Plot size: 5'	75	V	FACW	1	x 4 =	_
1. Eleocharis compressa	$-\frac{73}{20}$	Yes No	OBL	UPL species		
2. Persicaria hydropiper 3. Iva annua	- 20	Yes	FAC	Column Totals:	(A)	(B)
4 Xanthium strumarium	10	No	— FAC	Prevalence Inde	x = B/A =	
· · · · · · · · · · · · · · · · · · ·				Hydrophytic Vegetat	on Indicators:	
5 6				1 - Rapid Test for	Hydrophytic Vegetation	1
7				✓ 2 - Dominance Te	st is >50%	
8.				3 - Prevalence Inc	lex is ≤3.0 ¹	
9.				4 - Morphological	Adaptations ¹ (Provide s	upporting
10.					ks or on a separate shee ophytic Vegetation ¹ (Exp	,
	145	= Total	Cover	Problematic rivure	priytic vegetation (Exp	olain)
Woody Vine Stratum (Plot size: 30')				¹ Indicators of hydric so be present, unless dis	oil and wetland hydrolog	y must
1				be present, unless dis	urbed or problematic.	
2				Hydrophytic		
% Bare Ground in Herb Stratum 10		= Total	Cover	Vegetation Present? Yes	es_✓ No	
Remarks:	***					_

US Army Corps of Engineers

Depth	Matrix			x Feature			_	
(inches)	Color (moist)		Color (moist)	%	Type ¹	_Loc ²	Texture	Remarks
0-8	10 YR 2/1		'R 5/8	25	<u>C</u>	M/PL	Clay	
							-	
	oncentration, D=Dep					ed Sand G		ion: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators: (Applic	cable to all LRR	s, unless othe	rwise not	ed.)		Indicators fo	r Problematic Hydric Soils ³ :
Histosol	, ,			Gleyed Ma				ck (A9) (LRR I, J)
	oipedon (A2)			Redox (S	•			airie Redox (A16) (LRR F, G, H)
Black Hi				d Matrix (S				face (S7) (LRR G)
	n Sulfide (A4)	E \		Mucky MI Gleyed M	neral (F1)			ns Depressions (F16) H outside of MLRA 72 & 73)
_	Layers (A5) (LRR lck (A9) (LRR F, G,	•		ed Matrix (,	Vertic (F18)
_	Below Dark Surfac		✓ Redox					ent Material (TF2)
	ark Surface (A12)	50 (/ 1 . 1 /			urface (F7)		allow Dark Surface (TF12)
	lucky Mineral (S1)			Depressio	•	,		xplain in Remarks)
	flucky Peat or Peat	(S2) (LRR G, H)	_	•	essions (F	16)		hydrophytic vegetation and
5 cm Mu	cky Peat or Peat (S	3) (LRR F)	(ML	RA 72 &	73 of LRF	RH)	wetland h	nydrology must be present,
							unless di	sturbed or problematic.
	ayer (if present):							
Type: Co	bble							
· -								,
Depth (inc							Hydric Soil P	resent? Yes ✓ No
· -			-				Hydric Soil P	resent? Yes ✓ No
Depth (inc			-				Hydric Soil P	resent? Yes _ No
Depth (inc			-		Ė		Hydric Soil Pr	resent? Yes <u>√</u> No
Depth (ind Remarks:	ches): <u>8</u>		-				Hydric Soil Pr	resent? Yes _ No
Depth (inc	GY 8						Hydric Soil Pr	resent? Yes _ No
Depth (inc Remarks: YDROLO	GY drology Indicators		ook all that ann	1.0				
Depth (ind Remarks: YDROLO Wetland Hyd	GY drology Indicators:						Secondary	Indicators (minimum of two required
Depth (ind Remarks: YDROLO Wetland Hyd Primary India Surface	GY drology Indicators: eators (minimum of o		Salt Crust	(B11)	(0.40)		Secondary Surface	Indicators (minimum of two required) se Soil Cracks (B6)
Depth (incomplete Control of Cont	GY drology Indicators: eators (minimum of o		Salt Crust	(B11) vertebrate			Secondary Surfac Sparse	Indicators (minimum of two required) se Soil Cracks (B6) ely Vegetated Concave Surface (B8)
Depth (incomplete Control of the Con	GY drology Indicators: eators (minimum of of Water (A1) ter Table (A2) on (A3)		Salt Crust Aquatic In Hydrogen	(B11) vertebrate Sulfide O	dor (C1)		Secondary Surfac Sparse Draina	Indicators (minimum of two required se Soil Cracks (B6) ely Vegetated Concave Surface (B8) uge Patterns (B10)
Primary Indic Surface High Wa Saturatic Water M	GY drology Indicators: eators (minimum of of Water (A1) ter Table (A2) on (A3) arks (B1)		Salt Crust Aquatic In Hydrogen Dry-Seaso	(B11) vertebrate Sulfide O	dor (C1) Table (C2		Secondary Surfac Sparso Draina Oxidiz	Indicators (minimum of two required to soil Cracks (B6) to soll Cracks (B6) to soll Cracks (B8) to soll Cracks (B10) to soll Cracks (B10) to soll Cracks (C3) to soll
Primary Indicates Saturation Water M Sedimer	GY drology Indicators: cators (minimum of of of other (A1) ther Table (A2) on (A3) arks (B1) at Deposits (B2)		Salt Crust Aquatic In Hydrogen Dry-Seaso Oxidized I	(B11) vertebrate Sulfide O on Water	dor (C1) Table (C2 eres on Liv		Secondary Surfac Spars	Indicators (minimum of two required se Soil Cracks (B6) sely Vegetated Concave Surface (B8) see Patterns (B10) sed Rhizospheres on Living Roots (C3 sere tilled)
Primary Indic Surface High Water M Sedimer Drift Dep	GY drology Indicators: cators (minimum of of of other) Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) posits (B3)		Salt Crust Aquatic In Hydrogen Dry-Seasc Oxidized I (where	(B11) vertebrate Sulfide O on Water Rhizosphe not tilled	dor (C1) Table (C2 eres on Liv	ring Roots	Secondary Surface Sparse ✓ Draina Oxidiz (C3) (whe	Indicators (minimum of two required be Soil Cracks (B6) bely Vegetated Concave Surface (B8) use Patterns (B10) bed Rhizospheres on Living Roots (C3 are tilled) sh Burrows (C8)
Primary Indicates Water M Sedimer Drift Dep Algal Ma	GY drology Indicators: ators (minimum of		Salt Crust Aquatic In Hydrogen Dry-Seaso ✓ Oxidized I (where Presence	(B11) vertebrate Sulfide O on Water Rhizosphe not tilled	dor (C1) Table (C2 eres on Liv) ed Iron (C	ring Roots	Secondary Surface Sparse ✓ Draina Oxidiz (C3) (whe	Indicators (minimum of two required) be Soil Cracks (B6) bely Vegetated Concave Surface (B8) bely Patterns (B10) bed Rhizospheres on Living Roots (C3 bere tilled) be Burrows (C8) tion Visible on Aerial Imagery (C9)
Primary Indic Surface High Wa Saturatic Water M Sedimen Drift Dep Algal Ma Iron Dep	GY drology Indicators: ators (minimum of	one reguired; ch	Salt Crust Aquatic In Hydrogen Dry-Sease ✓ Oxidized I (where Presence Thin Mucl	(B11) vertebrate Sulfide O on Water Rhizosphe not tilled of Reduce Surface	dor (C1) Table (C2 eres on Liv) ed Iron (C (C7)	ring Roots	Secondary Surface Sparse ✓ Draina Oxidiz (C3) (whe Crayfie Satura ✓ Geom	Indicators (minimum of two required to Soil Cracks (B6) aly Vegetated Concave Surface (B8) age Patterns (B10) and Rhizospheres on Living Roots (C3 are tilled) ash Burrows (C8) attion Visible on Aerial Imagery (C9) orphic Position (D2)
Primary Indic Surface High Wa Saturatic Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatio	GY drology Indicators: eators (minimum of	one reguired; ch	Salt Crust Aquatic In Hydrogen Dry-Seaso ✓ Oxidized I (where Presence	(B11) vertebrate Sulfide O on Water Rhizosphe not tilled of Reduce Surface	dor (C1) Table (C2 eres on Liv) ed Iron (C (C7)	ring Roots	Secondary Surfac Sparse ✓ Draina Oxidiz (C3) (whe Crayfis Satura ✓ Geom FAC-N	Indicators (minimum of two required to Soil Cracks (B6) aly Vegetated Concave Surface (B8) age Patterns (B10) and Rhizospheres on Living Roots (C3 are tilled) ash Burrows (C8) attion Visible on Aerial Imagery (C9) orphic Position (D2)
Primary Indic Surface High Wa Saturatic Water M Sedimen Drift Dep Algal Ma Iron Dep Inundatic Water-St	GY drology Indicators: eators (minimum of	one reguired; ch	Salt Crust Aquatic In Hydrogen Dry-Sease ✓ Oxidized I (where Presence Thin Mucl	(B11) vertebrate Sulfide O on Water Rhizosphe not tilled of Reduce Surface	dor (C1) Table (C2 eres on Liv) ed Iron (C (C7)	ring Roots	Secondary Surfac Sparse ✓ Draina Oxidiz (C3) (whe Crayfis Satura ✓ Geom FAC-N	Indicators (minimum of two required to Soil Cracks (B6) aly Vegetated Concave Surface (B8) age Patterns (B10) and Rhizospheres on Living Roots (C3 are tilled) ash Burrows (C8) attion Visible on Aerial Imagery (C9) orphic Position (D2)
Primary Indic Surface High Wa Saturatic Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatio	GY drology Indicators: eators (minimum of	one reguired; ch	Salt Crust Aquatic In Hydrogen Dry-Seaso ✓ Oxidized I (where Presence Thin Muck ✓ Other (Ex	(B11) vertebrate Sulfide O on Water Rhizosphe not tilled of Reduce Surface plain in Re	dor (C1) Table (C2 eres on Liv) ed Iron (C (C7) emarks)	ring Roots	Secondary Surfac Sparse ✓ Draina Oxidiz (C3) (whe Crayfis Satura ✓ Geom FAC-N	Indicators (minimum of two required to Soil Cracks (B6) aly Vegetated Concave Surface (B8) age Patterns (B10) and Rhizospheres on Living Roots (C3 are tilled) ash Burrows (C8) attion Visible on Aerial Imagery (C9) orphic Position (D2)
Primary Indic Surface High Wa Saturatic Water M Sedimen Drift Dep Algal Ma Iron Dep Inundatic Water-St	GY drology Indicators: cators (minimum of	one reguired; ch	Salt Crust Aquatic In Hydrogen Dry-Seaso ✓ Oxidized I (where Presence Thin Muck ✓ Other (Ex	(B11) vertebrate Sulfide O on Water Rhizosphe not tilled of Reduce Surface plain in Re	dor (C1) Table (C2 eres on Liv) ed Iron (C (C7) emarks)	ring Roots	Secondary Surfac Sparse ✓ Draina Oxidiz (C3) (whe Crayfis Satura ✓ Geom FAC-N	Indicators (minimum of two required to Soil Cracks (B6) aly Vegetated Concave Surface (B8) age Patterns (B10) and Rhizospheres on Living Roots (C3 are tilled) ash Burrows (C8) attion Visible on Aerial Imagery (C9) orphic Position (D2)
Primary Indices Saturation Water M Sediment Drift Dep Algal Ma Iron Dep Inundation Water-Si Field Observ	GY drology Indicators: ators (minimum of of other) water (A1) ter Table (A2) on (A3) arks (B1) on (B3) arks (B3) on Crust (B4) osits (B3) on Visible on Aerial tained Leaves (B9) vations: er Present?	Imagery (B7) Yes No _	Salt Crust Aquatic In Hydrogen Dry-Sease ✓ Oxidized I (where Presence Thin Much ✓ Other (Ex ✓ Depth (in	(B11) vertebrate Sulfide O on Water Rhizosphe not tilled of Reduce Surface plain in Re	dor (C1) Table (C2 eres on Liv) ed Iron (C (C7) emarks)	ring Roots	Secondary Surface Sparse ✓ Draina Oxidiz (C3) (whe Crayfie Satura ✓ Geom FAC-N Frost-	Indicators (minimum of two required to soil Cracks (B6) aly Vegetated Concave Surface (B8) age Patterns (B10) and Rhizospheres on Living Roots (C3 are tilled) ash Burrows (C8) attion Visible on Aerial Imagery (C9) orphic Position (D2) aleutral Test (D5) Heave Hummocks (D7) (LRR F)
Primary Indication Depth (incomplete Incomplete Incompl	GY drology Indicators: ators (minimum of	one reguired; ch	Salt Crust Aquatic In Hydrogen Dry-Sease ✓ Oxidized I (where Presence Thin Much ✓ Other (Ex ✓ Depth (in	(B11) vertebrate Sulfide O on Water Rhizosphe not tilled of Reduce Surface plain in Re	dor (C1) Table (C2 eres on Liv) ed Iron (C (C7) emarks)	ring Roots	Secondary Surface Sparse ✓ Draina Oxidiz (C3) (whe Crayfie Satura ✓ Geom FAC-N Frost-	Indicators (minimum of two required to Soil Cracks (B6) aly Vegetated Concave Surface (B8) age Patterns (B10) and Rhizospheres on Living Roots (C3 are tilled) ash Burrows (C8) attion Visible on Aerial Imagery (C9) orphic Position (D2)
Primary Indices Saturation Water Surface Water-Sirield Observised Saturation Princludes cape Saturatio	GY drology Indicators: ators (minimum of	Imagery (B7) Yes No _ Yes No _ Yes No _	Salt Crust Aquatic In Hydrogen Dry-Seasc ✓ Oxidized I (where Presence Thin Muck ✓ Other (Ex ✓ Depth (in	(B11) vertebrate Sulfide O on Water Rhizosphe not tilled of Reduce Surface plain in Re uches): uches):	dor (C1) Table (C2 eres on Liv) ed Iron (C (C7) emarks)	ving Roots 4) — Wet	Secondary Surface Sparse ✓ Draina Oxidiz (C3) (whe Crayfie Satura ✓ Geom FAC-N Frost-I	Indicators (minimum of two required to Soil Cracks (B6) aly Vegetated Concave Surface (B8) age Patterns (B10) and Rhizospheres on Living Roots (C3 are tilled) ash Burrows (C8) attion Visible on Aerial Imagery (C9) orphic Position (D2) aleutral Test (D5) Heave Hummocks (D7) (LRR F)
Primary Indices Saturation Water Surface Water-Sirield Observised Saturation Princludes cape Saturatio	GY drology Indicators: ators (minimum of	Imagery (B7) Yes No _ Yes No _ Yes No _	Salt Crust Aquatic In Hydrogen Dry-Seasc ✓ Oxidized I (where Presence Thin Muck ✓ Other (Ex ✓ Depth (in	(B11) vertebrate Sulfide O on Water Rhizosphe not tilled of Reduce Surface plain in Re uches): uches):	dor (C1) Table (C2 eres on Liv) ed Iron (C (C7) emarks)	ving Roots 4) — Wet	Secondary Surface Sparse ✓ Draina Oxidiz (C3) (whe Crayfie Satura ✓ Geom FAC-N Frost-I	Indicators (minimum of two required the Soil Cracks (B6) aly Vegetated Concave Surface (B8) age Patterns (B10) and Rhizospheres on Living Roots (C3 are tilled) ash Burrows (C8) ation Visible on Aerial Imagery (C9) corphic Position (D2) aleutral Test (D5) Heave Hummocks (D7) (LRR F)
Prince Mater Mater Seduration Depth (incomplete Mater Mater Mater Mater Mater Mater Mater Seduration Depth Inundation Mater Table Seduration Princludes cap Describe Recomplete Mater Control Recomplete Mater Mater Mater Control Recomplete Recomplete Mater Control Recomplete R	GY drology Indicators: ators (minimum of	Imagery (B7) Yes No _ Yes No _ Yes No _	Salt Crust Aquatic In Hydrogen Dry-Seasc ✓ Oxidized I (where Presence Thin Muck ✓ Other (Ex ✓ Depth (in	(B11) vertebrate Sulfide O on Water Rhizosphe not tilled of Reduce Surface plain in Re uches): uches):	dor (C1) Table (C2 eres on Liv) ed Iron (C (C7) emarks)	ving Roots 4) — Wet	Secondary Surface Sparse ✓ Draina Oxidiz (C3) (whe Crayfie Satura ✓ Geom FAC-N Frost-I	Indicators (minimum of two required the Soil Cracks (B6) aly Vegetated Concave Surface (B8) age Patterns (B10) and Rhizospheres on Living Roots (C3 are tilled) ash Burrows (C8) ation Visible on Aerial Imagery (C9) corphic Position (D2) aleutral Test (D5) Heave Hummocks (D7) (LRR F)
Depth (incomercial property) Primary Indicomercial Principulation Pr	GY drology Indicators: ators (minimum of	Imagery (B7) Yes No Yes No Yes No n gauge, monito	Salt Crust Aquatic In Hydrogen Dry-Seasc ✓ Oxidized I (where Presence Thin Muck ✓ Other (Ex ✓ Depth (in	(B11) vertebrate Sulfide O on Water Rhizosphe not tilled of Reduce Surface plain in Re uches): uches):	dor (C1) Table (C2 eres on Liv) ed Iron (C (C7) emarks)	ving Roots 4) — Wet	Secondary Surface Sparse ✓ Draina Oxidiz (C3) (whe Crayfie Satura ✓ Geom FAC-N Frost-I	Indicators (minimum of two required the Soil Cracks (B6) aly Vegetated Concave Surface (B8) age Patterns (B10) and Rhizospheres on Living Roots (Capre tilled) ash Burrows (C8) ation Visible on Aerial Imagery (C9) corphic Position (D2) aleutral Test (D5) Heave Hummocks (D7) (LRR F)

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: 130 Environmental F	Park		City/Cour	nty: Lockha	rt/Caldwell	_ Sampling Date: 07/11/2013
Applicant/Owner: 130 Environmen	tal Park, LLC				State: TX	Sampling Point: T27-DP2
Investigator(s): Troegle, Josh & Li	ttleton, Brandy					
Landform (hillslope, terrace, etc.): Flo	odplain		Local reli	ief (concave,	convex, none): Conca	slope (%): 0-1
Subregion (LRR): J - Southwester						
Soil Map Unit Name: FeE - Fett gra						fication: None available
Are climatic / hydrologic conditions on			ar? Yes			
Are Vegetation, Soil, or						" present? Yes ✓ No
Are Vegetation, Soil, or					eeded, explain any ansv	
SUMMARY OF FINDINGS - A						
Hydrophytic Vegetation Present?	Yes <u>√</u>	No		the Sampled	l Aron	
Hydric Soil Present?	Yes <u>√</u>	No	- 1	the Sampled ithin a Wetlar		No
Wetland Hydrology Present?	Yes <u>✓</u>	No			165	
Remarks:						
VEGETATION – Use scientific	names of pl	ants.				
30'	,	Absolute		nt Indicator	Dominance Test wo	rksheet:
Tree Stratum (Plot size: 30' 1. Ulmus crassifolia)	<u>% Cover</u> 30	Species Yes	Status FAC	Number of Dominant	
					That Are OBL, FACW (excluding FAC=):	3 (A)
2					Total Number of Dom	
4.					Species Across All St	^
7.			= Total C	Cover	Percent of Dominant	
Sapling/Shrub Stratum (Plot size: 1	5')				That Are OBL, FACW	/, or FAC: 100 (A/B)
1. Ulmus crassifolia			Yes	FAC	Prevalence Index we	orkshoot.
2					Total % Cover of	
3						x 1 =
4			-		1	x 2 =
5		30	= Total C	`over	FAC species	x 3 =
Herb Stratum (Plot size: 5')	-	- rotar c	00461	FACU species	x 4 =
1. Eleocharis compressa		95	Yes	FACW	UPL species	x 5 =
2. Iva annua			No	FAC	Column Totals:	(A)(B)
3					Prevalence Inde	ex = B/A =
4					Hydrophytic Vegeta	
5						Hydrophytic Vegetation
6					✓ 2 - Dominance To	
7					3 - Prevalence In	
8					4 - Morphologica	Adaptations ¹ (Provide supporting
9						ks or on a separate sheet)
			= Total C	Cover	Problematic Hydi	ophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size: 30'						oil and wetland hydrology must sturbed or problematic.
2					Hydrophytic	
% Bare Ground in Herb Stratum 20			= Total C	Cover	Vegetation Present?	′es <u>√</u> No
Remarks:					,	
					-	

Sampling Point: T27-DP2

Depth Matrix Redox Features Inches Color (moist) % Color (moist) % Type¹ Loc²	Clay
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Or Gord Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Mucky Mineral (F1) Loamy Mucky Mineral (F1) Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Pedox Dark Surface (F6) Depleted Dark Surface (F6)	Brains. 2 Location: PL=Pore Lining, M=Mate Indicators for Problematic Hydric Soils 1 cm Muck (A9) (LRR I, J) Coast Prairie Redox (A16) (LRR F, G, Dark Surface (S7) (LRR G) High Plains Depressions (F16) (LRR H outside of MLRA 72 & 73 Reduced Vertic (F18) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
ydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) (LRR F) I cm Muck (A9) (LRR F, G, H) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Stratified Layer (if present): Type: Claypan Depth (inches): 10 Emarks: **TOROLOGY** Histosol (A1) Sandy Gleyed Matrix (S4) Stripped Matrix (S6) Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Fedox Dark Surface (F6) Depleted Dark Surface (F6) High Plains Depressions (F16) (MLRA 72 & 73 of LRR H) MLRA 72 & 73 of LRR H) MLRA 72 & 73 of LRR H	Indicators for Problematic Hydric Soils 1 cm Muck (A9) (LRR I, J) Coast Prairie Redox (A16) (LRR F, G, Dark Surface (S7) (LRR G) High Plains Depressions (F16)
Histosol (A1) Histosol (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) (LRR F) Depleted Below Dark Surface (A11) Sandy Mucky Mineral (S1) Common Mucky Mineral (S2) (LRR G, H) Bestrictive Layer (if present): Type: Claypan Depth (inches): 10 DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Sandy Gleyed Matrix (S4) Sandy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Pepleted Matrix (F2) Depleted Matrix (F3) Pepleted Matrix (F3) Pepleted Matrix (F2) Depleted Matrix (F3) Pepleted Matrix (F3) Pepleted Matrix (F3) Pepleted Matrix (F2) Depleted Matrix (F3) Pepleted Matrix (F2) Pepleted Matrix (F3) Indicators for Problematic Hydric Soils 1 cm Muck (A9) (LRR I, J) Coast Prairie Redox (A16) (LRR F, G, Dark Surface (S7) (LRR G) High Plains Depressions (F16)	
Histosol (A1) Histosol (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) (LRR F) Depleted Below Dark Surface (A11) Sandy Mucky Mineral (S1) Care Mucky Peat or Peat (S2) (LRR G, H) Destrictive Layer (if present): Type: Claypan Depth (inches): 10 DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Sandy Gleyed Matrix (S4) Sandy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Pepleted Matrix (F3) Medox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) High Plains Depressions (F16) (MLRA 72 & 73 of LRR H) Depth (inches): 10 Sandy Redox (S5) Sandy Redox (S5) Sardy Redox (S5) Stripped Matrix (S4) Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (S6) Loamy Mucky Mineral (F1) Medox Dark Surface (F6) Depleted Matrix (F2) Pepleted Matrix (F2) Medox Dark Surface (F6) Medox Depressions (F16) (MLRA 72 & 73 of LRR H)	Indicators for Problematic Hydric Soils 1 cm Muck (A9) (LRR I, J) Coast Prairie Redox (A16) (LRR F, G, Dark Surface (S7) (LRR G) High Plains Depressions (F16)
Histosol (A1) Histosol (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) (LRR F) Depleted Below Dark Surface (A11) Sandy Mucky Mineral (S1) Common Mucky Mineral (S2) (LRR G, H) Bestrictive Layer (if present): Type: Claypan Depth (inches): 10 DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Sandy Gleyed Matrix (S4) Sandy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Pepleted Matrix (F2) Depleted Matrix (F3) Pepleted Matrix (F3) Pepleted Matrix (F2) Depleted Matrix (F3) Pepleted Matrix (F3) Pepleted Matrix (F3) Pepleted Matrix (F2) Depleted Matrix (F3) Pepleted Matrix (F2) Pepleted Matrix (F3) Indicators for Problematic Hydric Soils 1 cm Muck (A9) (LRR I, J) Coast Prairie Redox (A16) (LRR F, G, Dark Surface (S7) (LRR G) High Plains Depressions (F16)	
Histosol (A1) Histosol (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) (LRR F) Depleted Below Dark Surface (A11) Sandy Mucky Mineral (S1) Common Mucky Mineral (S2) (LRR G, H) Bestrictive Layer (if present): Type: Claypan Depth (inches): 10 DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Sandy Gleyed Matrix (S4) Sandy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Pepleted Matrix (F2) Depleted Matrix (F3) Pepleted Matrix (F3) Pepleted Matrix (F2) Depleted Matrix (F3) Pepleted Matrix (F3) Pepleted Matrix (F3) Pepleted Matrix (F2) Depleted Matrix (F3) Pepleted Matrix (F2) Pepleted Matrix (F3) Indicators for Problematic Hydric Soils 1 cm Muck (A9) (LRR I, J) Coast Prairie Redox (A16) (LRR F, G, Dark Surface (S7) (LRR G) High Plains Depressions (F16)	
Histosol (A1) Histosol (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) (LRR F) Depleted Below Dark Surface (A11) Sandy Mucky Mineral (S1) Care Mucky Peat or Peat (S2) (LRR G, H) Destrictive Layer (if present): Type: Claypan Depth (inches): 10 DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Sandy Gleyed Matrix (S4) Sandy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Pepleted Matrix (F3) Medox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) High Plains Depressions (F16) (MLRA 72 & 73 of LRR H) Depth (inches): 10 Sandy Redox (S5) Sandy Redox (S5) Sardy Redox (S5) Stripped Matrix (S4) Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (S6) Loamy Mucky Mineral (F1) Medox Dark Surface (F6) Depleted Matrix (F2) Pepleted Matrix (F2) Medox Dark Surface (F6) Medox Depressions (F16) (MLRA 72 & 73 of LRR H)	Indicators for Problematic Hydric Soils 1 cm Muck (A9) (LRR I, J) Coast Prairie Redox (A16) (LRR F, G, Dark Surface (S7) (LRR G) High Plains Depressions (F16)
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Histosol (A1) Histosol (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) (LRR F) Depleted Below Dark Surface (A11) Sandy Mucky Mineral (S1) Common Mucky Mineral (S2) (LRR G, H) Bestrictive Layer (if present): Type: Claypan Depth (inches): 10 DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Sandy Gleyed Matrix (S4) Sandy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Pepleted Matrix (F2) Depleted Matrix (F3) Pepleted Matrix (F3) Pepleted Matrix (F2) Depleted Matrix (F3) Pepleted Matrix (F3) Pepleted Matrix (F3) Pepleted Matrix (F2) Depleted Matrix (F3) Pepleted Matrix (F2) Pepleted Matrix (F3) Indicators for Problematic Hydric Soils 1 cm Muck (A9) (LRR I, J) Coast Prairie Redox (A16) (LRR F, G, Dark Surface (S7) (LRR G) High Plains Depressions (F16)	
Histosol (A1) Histosol (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) (LRR F) Depleted Below Dark Surface (A11) Sandy Mucky Mineral (S1) Care Mucky Peat or Peat (S2) (LRR G, H) Destrictive Layer (if present): Type: Claypan Depth (inches): 10 DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Sandy Gleyed Matrix (S4) Sandy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Pepleted Matrix (F3) Medox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) High Plains Depressions (F16) (MLRA 72 & 73 of LRR H) Depth (inches): 10 Sandy Redox (S5) Sandy Redox (S5) Sardy Redox (S5) Stripped Matrix (S4) Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (S6) Loamy Mucky Mineral (F1) Medox Dark Surface (F6) Depleted Matrix (F2) Pepleted Matrix (F2) Medox Dark Surface (F6) Medox Depressions (F16) (MLRA 72 & 73 of LRR H)	Indicators for Problematic Hydric Soils 1 cm Muck (A9) (LRR I, J) Coast Prairie Redox (A16) (LRR F, G, Dark Surface (S7) (LRR G) High Plains Depressions (F16)
Histosol (A1) Histosol (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) (LRR F) Depleted Below Dark Surface (A11) Sandy Mucky Mineral (S1) Common Mucky Mineral (S2) (LRR G, H) Bestrictive Layer (if present): Type: Claypan Depth (inches): 10 DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Sandy Gleyed Matrix (S4) Sandy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Pepleted Matrix (F2) Depleted Matrix (F3) Pepleted Matrix (F3) Pepleted Matrix (F2) Depleted Matrix (F3) Pepleted Matrix (F3) Pepleted Matrix (F3) Pepleted Matrix (F2) Depleted Matrix (F3) Pepleted Matrix (F2) Pepleted Matrix (F3) Indicators for Problematic Hydric Soils 1 cm Muck (A9) (LRR I, J) Coast Prairie Redox (A16) (LRR F, G, Dark Surface (S7) (LRR G) High Plains Depressions (F16)	
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Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) (LRR F) 1 cm Muck (A9) (LRR F, G, H) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 2.5 cm Mucky Peat or Peat (S2) (LRR F) Depth (inches): Type: Claypan Depth (inches): DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Pepleted Matrix (F3) Depleted Matrix (F3) Fedox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) High Plains Depressions (F16) (MLRA 72 & 73 of LRR H)	Coast Prairie Redox (A16) (LRR F, G, Dark Surface (S7) (LRR G) High Plains Depressions (F16) (LRR H outside of MLRA 72 & 73 Reduced Vertic (F18) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Black Histic (A3)	Dark Surface (S7) (LRR G) High Plains Depressions (F16)
Hydrogen Sulfide (A4) Stratified Layers (A5) (LRR F) 1 cm Muck (A9) (LRR F, G, H) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) Type: Claypan Depth (inches): 10 PROLOGY etland Hydrology Indicators: imary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) PROLOGY (F6) Redox Dark Surface (F7) Redox Depressions (F8) High Plains Depressions (F16) (MLRA 72 & 73 of LRR H)	High Plains Depressions (F16) (LRR H outside of MLRA 72 & 73 Reduced Vertic (F18) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Stratified Layers (A5) (LRR F) 1 cm Muck (A9) (LRR F, G, H) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) Type: Claypan Depth (inches): 10 PROLOGY etland Hydrology Indicators: imary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Salt Crust (B11) Aquatic Invertebrates (B13)	(LRR H outside of MLRA 72 & 73 Reduced Vertic (F18) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
	Reduced Vertic (F18) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) 5 cm Mucky Peat or Peat (S3) (LRR F) Estrictive Layer (if present): Type: Claypan Depth (inches): 10 Emarks: DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Plains Depressions (F16) (MLRA 72 & 73 of LRR H)	Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Some Mucky Peat or Peat (S2) (LRR G, H) Some Mucky Peat or Peat (S3) (LRR F) Estrictive Layer (if present): Type: Claypan Depth (inches): 10 Emarks: Depth (inches): Surface (A12) Surface Water (A1) High Plains Depressions (F16) (MLRA 72 & 73 of LRR H) Depth (inches): Salt Crust (B11) Aquatic Invertebrates (B13)	Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Sandy Mucky Mineral (S1) Redox Depressions (F8) 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) High Plains Depressions (F16) 5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) Pestrictive Layer (if present): Type: Claypan Depth (inches): 10 Pert	Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
2.5 cm Mucky Peat or Peat (S2) (LRR G, H) High Plains Depressions (F16) 5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) estrictive Layer (if present): Type: Claypan Depth (inches): 10 emarks: DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one required; check all that apply) Surface Water (A1) Salt Crust (B11) High Water Table (A2) Aquatic Invertebrates (B13)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) estrictive Layer (if present):	wetland hydrology must be present, unless disturbed or problematic.
estrictive Layer (if present): Type: Claypan Depth (inches): 10 emarks: DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Aquatic Invertebrates (B13)	unless disturbed or problematic.
Type: Claypan Depth (inches): 10 emarks: DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one required; check all that apply) _ Surface Water (A1) Salt Crust (B11) _ High Water Table (A2) Aquatic Invertebrates (B13)	
Type: Claypan Depth (inches): 10 emarks: DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one required; check all that apply) _ Surface Water (A1) Salt Crust (B11) _ High Water Table (A2) Aquatic Invertebrates (B13)	Hudrig Soil Brocont? Vos √ No
Depth (inches): 10 emarks: **TOROLOGY** Tetland Hydrology Indicators: **imary Indicators (minimum of one required; check all that apply) _ Surface Water (A1) Salt Crust (B11) _ High Water Table (A2) Aquatic Invertebrates (B13)	Hydric Soil Procent? Vos V
POROLOGY Setland Hydrology Indicators: Simary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Aquatic Invertebrates (B13)	
/DROLOGY /etland Hydrology Indicators: nimary Indicators (minimum of one required; check all that apply) Surface Water (A1) Salt Crust (B11) High Water Table (A2) Aquatic Invertebrates (B13)	Trydric contricación. Tea No
/etland Hydrology Indicators: nmary Indicators (minimum of one required; check all that apply) Surface Water (A1) Salt Crust (B11) High Water Table (A2) Aquatic Invertebrates (B13)	
/etland Hydrology Indicators: nmary Indicators (minimum of one required; check all that apply) Surface Water (A1) Salt Crust (B11) High Water Table (A2) Aquatic Invertebrates (B13)	
/etland Hydrology Indicators: nmary Indicators (minimum of one required; check all that apply) Surface Water (A1) Salt Crust (B11) High Water Table (A2) Aquatic Invertebrates (B13)	
Surface Water (A1) Salt Crust (B11) High Water Table (A2) Aquatic Invertebrates (B13)	
Surface Water (A1) Salt Crust (B11) High Water Table (A2) Aquatic Invertebrates (B13)	
Surface Water (A1) Salt Crust (B11) Aquatic Invertebrates (B13)	Secondary Indicators (minimum of two r
High Water Table (A2) Aquatic Invertebrates (B13)	Surface Soil Cracks (B6)
	Sparsely Vegetated Concave Surfa
	✓ Drainage Patterns (B10)
	Oxidized Rhizospheres on Living R
_ Drift Deposits (B3) (where not tilled)	Crayfish Burrows (C8)
_ Algal Mat or Crust (B4) Presence of Reduced Iron (C4)	Saturation Visible on Aerial Imagery
_ Iron Deposits (B5) Thin Muck Surface (C7)	✓ Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	FAC-Neutral Test (D5)
_ Water-Stained Leaves (B9)	Frost-Heave Hummocks (D7) (LRF
eld Observations:	
urface Water Present? Yes No Depth (inches):	
ater Table Present? Yes No Depth (inches):	
aturation Present? Yes No Depth (inches): We	tland Hydrology Present? Yes ✓ No
ncludes capillary fringe)	
escribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
emarks:	
ater marks on trees.	

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: 130 Environmental Park		City/County: Lockha	rt/Caldwell	Sampling Date: 07/11/2013
Applicant/Owner: 130 Environmental Park, LLC				Sampling Point: T27-DP3
Investigator(s): Troegle, Josh & Littleton, Brandyr				
Landform (hillslope, terrace, etc.): Floodplain			-	ve Slone (%): 0-1
Subregion (LRR): J - Southwestern Prairies				
Soil Map Unit Name: FeE - Fett gravelly soils, 1-12				ication: None available
Are climatic / hydrologic conditions on the site typical for the Are Vegetation, Soil, or Hydrology				remarks.) present? Yes <u>√</u> No
Are Vegetation, Soil, or Hydrology	naturally pro		eeded, explain any answ	
SUMMARY OF FINDINGS – Attach site map				
Hydrophytic Vegetation Present? Yes ✓	No			
	No	Is the Sampled		
Wetland Hydrology Present? Yes ✓	No	within a Wetlan	na? Yes <u>*</u>	No
Remarks:	-			
Water marks on base of trees.				
VEGETATION III III III III III III III III III				
VEGETATION – Use scientific names of pla				
Tree Stratum (Plot size: 30'	Absolute % Cover	Dominant Indicator Species? Status	Dominance Test wor	
1. Ulmus crassifolia	60	Yes FAC	Number of Dominant S That Are OBL, FACW,	Species or FAC
2			(excluding FAC-):	<u>2</u> (A)
3			Total Number of Domi	nant
4.			Species Across All Str	0
	60	= Total Cover	Percent of Dominant S	`nasias
Sapling/Shrub Stratum (Plot size: 15')			That Are OBL, FACW,	
1. Fraxinus pennsylvanica	_ 5	Yes	Prevalence Index wo	-1-1
2				
3			Total % Cover of:	Multiply by: x 1 =
4				x1= x2=
5				x3=
Herb Stratum (Plot size: 5')	5	= Total Cover		x 4 =
				x 5 =
1				(A) (B)
3				
4				x = B/A =
5			Hydrophytic Vegetati	
6				Hydrophytic Vegetation
7			✓ 2 - Dominance Te	
8			3 - Prevalence Inc	
9			4 - Morphological	Adaptations ¹ (Provide supporting s or on a separate sheet)
10				ophytic Vegetation¹ (Explain)
201		= Total Cover		
Woody Vine Stratum (Plot size: 30'			'Indicators of hydric so be present, unless dist	oil and wetland hydrology must
1				and of problematic.
2			Hydrophytic	
% Bare Ground in Herb Stratum 98		= Total Cover	Vegetation Present? Yes	es No
% Bare Ground in Herb Stratum 98 Remarks:				

US Army Corps of Engineers

Profile Desc	cription: (Describ	e to the depth	needed to docur	nent the	indicator	or confirm	n the absence of ir	ndicators.)
Depth	Matrix			x Feature				
(inches)	Color (moist)		Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks
0-10	10 YR 3/1	80 5	YR 4/6	20	<u>C</u>	M/PL	Clay	
¹Type: C=C	oncentration, D=D	epletion, RM=R	teduced Matrix, CS	S=Covere	d or Coate	ed Sand G	brains. ² Location	n: PL=Pore Lining, M=Matrix.
	Indicators: (App							Problematic Hydric Soils ³ :
Histosol	(A1)		Sandy (Gleyed Ma	atrix (S4)		1 cm Muck	(A9) (LRR I, J)
Histic E	pipedon (A2)			Redox (S			Coast Prair	ie Redox (A16) (LRR F, G, H)
	istic (A3)			d Matrix (S				ce (S7) (LRR G)
	en Sulfide (A4)				neral (F1)			Depressions (F16)
_	d Layers (A5) (LRF			Gleyed M				outside of MLRA 72 & 73)
_	uck (A9) (LRR F, G d Below Dark Surfa		✓ Redox I	d Matrix (Reduced V	ertic (F18) t Material (TF2)
	ark Surface (A12)	ace (ATT)			urface (F7)		ow Dark Surface (TF12)
_	Mucky Mineral (S1)	•		Depressio	•	,		lain in Remarks)
	Mucky Peat or Pea				essions (F	16)	3Indicators of h	ydrophytic vegetation and
5 cm Mu	ucky Peat or Peat	(S3) (LRR F)	(ML	RA 72 &	73 of LRF	RH)		drology must be present,
							unless dist	urbed or problematic.
Restrictive	Layer (if present)	:						
Type:							-	
Depth (in	ches):						Hydric Soil Pres	sent? Yes ✓ No
Remarks:								
No hydric s	oil indicators obs	served.						
HYDROLO	GY	. 11						
	drology Indicator	s:						
	cators (minimum o		check all that appl	v)			Secondary Ir	ndicators (minimum of two required)
	Water (A1)	7 0110 1044.104.	Salt Crust					Soil Cracks (B6)
_	ater Table (A2)		Aquatic In	. ,	es (B13)			Vegetated Concave Surface (B8)
Saturation			Hydrogen					e Patterns (B10)
I	farks (B1)		Dry-Seaso		. ,)		Rhizospheres on Living Roots (C3)
_	nt Deposits (B2)		Oxidized F			·		e tilled)
1 	posits (B3)			not tilled		Ü		Burrows (C8)
	at or Crust (B4)		Presence		•	4)		on Visible on Aerial Imagery (C9)
	posits (B5)		Thin Muck	Surface	(C7)	,		phic Position (D2)
	on Visible on Aeria	al Imagery (B7)	Other (Ex	plain in Re	emarks)		FAC-Ne	utral Test (D5)
│ Water-S	Stained Leaves (B9)					Frost-He	eave Hummocks (D7) (LRR F)
Field Obser	vations:	<u>-</u>						
Surface Wat	er Present?	Yes No	Depth (in	ches):		_ =		
Water Table		Yes N				i		
Saturation P		Yes N	4				land Hydrology Pro	esent? Yes 🗸 No
(includes car	pillary fringe)							
Describe Re	corded Data (stream	am gauge, mon	itoring well, aerial	photos, p	revious in	spections)	, if available:	
Remarks:								

TRANSECT 27 SITE PHOTOGRAPHS



Data Point 1 Emergent Wetland



Data Point 1 Emergent Wetland



Data Point 1 Emergent Wetland

TRANSECT 27 SITE PHOTOGRAPHS



Data Point 2 Emergent Wetland



Data Point 2 Emergent Wetland



Data Point 3
Forested Wetland

TRANSECT 27 SITE PHOTOGRAPHS



Data Point 3
Forested Wetland



Data Point 3
Forested Wetland

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Dry Creek - 1



Dry Creek - 2



ES-1

Page 1 of 6



ES-2



ES-5



ES-7

Page 2 of 6



ES-9



ES-9A



ES-9B

Page 3 of 6



ES-9C



ES-9E



ESD-3

Page 4 of 6



ESD-4 (Upstream)



ESD-4A



ESD-4B

Page 5 of 6



IS-1



IS-1 (Confluence with OW-1)

APPENDIX C SUMMARY OF MAPPED WATER FEATURES

Table C.1 - Summary of Mapped Water Features

Feature ID	Map ID	Cowardin Code ⁽¹⁾	HGM Code	Area (acres)	Length (feet)	Water Type ⁽²⁾	Latitude	Longitude	Water of United States
				Stream	Feature	es			
Dry Creek	3.2, 3.4	R4SB5	Riverine	1.72	6,264	RPW	29.9677	-97.6496	Yes
ES-1	3.5	R6	Riverine	0.07	567	NRPW	29.9537	-97.6630	Yes
ES-2	3.5, 3.6	R6	Riverine	0.45	3,452	NRPW	29.9576	-97.6649	Yes
ES-2A	3.6	R6	Riverine	0.01	116	NRPW	29.9553	-97.6575	Yes
ES-3	3.3	R6	Riverine	0.11	1,393	NRPW	29.9610	-97.6648	Yes
ES-4	3.3	R6	Riverine	0.09	1,245	NRPW	29.9621	-97.6622	Yes
ES-5	3.3	R6	Riverine	0.41	3,258	NRPW	29.9655	-97.6658	Yes
ES-5A	3.3	R6	Riverine	0.06	532	NRPW	29.9650	-97.6662	Yes
ES-5B	3.3	R6	Riverine	0.01	135	NRPW	29.9645	-97.6637	Yes
ES-6	3.3	R6	Riverine	0.08	959	NRPW	29.9681	-97.6606	Yes
ES-7	3.1	R6	Riverine	0.23	1,414	NRPW	29.9719	-97.6660	Yes
ES-7A	3.1	R6	Riverine	0.02	226	NRPW	29.9720	-97.6663	Yes
ES-8	3.1	R6	Riverine	0.06	432	NRPW	29.9773	-97.6650	Yes
ES-9	3.5	R6	Riverine	0.41	2,453	NRPW	29.9544	-97.6698	Yes
ES-9A	3.5	R6	Riverine	0.04	306	NRPW	29.9551	-97.6706	Yes
ES-9B	3.5	R6	Riverine	0.08	605	NRPW	29.9536	-97.6725	Yes
ES-9C	3.5	R6	Riverine	0.01	96	NRPW	29.9538	-97.6713	Yes
ES-9D	3.5	R6	Riverine	0.01	78	NRPW	29.9535	-97.6725	Yes
ES-9E	3.5	R6	Riverine	0.02	187	NRPW	29.9533	-97.6724	Yes
ES-9F	3.5	R6	Riverine	0.02	148	NRPW	29.9531	-97.6726	Yes
ESD-1	3.4	R6	Riverine	0.35	1,878	NRPW	29.9627	-97.6493	Yes
ESD-2	3.4	R6	Riverine	0.14	1,065	NRPW	29.9633	-97.6519	Yes
ESD-2A	3.4	R6	Riverine	0.01	89	NRPW	29.9631	-97.6522	Yes
ESD-3	3.4	R6	Riverine	0.04	419	NRPW	29.9668	-97.6510	Yes
ESD-4	3.2	R6	Riverine	0.50	3,912	NRPW	29.9730	-97.6522	Yes
ESD-4A	3.2	R6	Riverine	0.03	252	NRPW	29.9733	-97.6541	Yes
ESD-4B	3.2	R6	Riverine	0.19	1,638	NRPW	29.9727	-97.6551	Yes
ESD-4C	3.2	R6	Riverine	0.01	115	NRPW	29.9729	-97.6555	Yes
ESD-4D	3.2	R6	Riverine	0.03	280	NRPW	29.9716	-97.6543	Yes
ES-10	3.3	R6	Riverine	0.01	105	NRPW	29.9639	-97.6596	Yes
ES-11	3.3	R6	Riverine	0.01	117	NRPW	29.9634	-97.6587	Yes
ES-12	3.3	R6	Riverine	0.02	127	NRPW	29.9620	-97.6590	Yes
IS-1	3.1, 3.3, 3.6	R4SB5	Riverine	2.22	10,017	RPW	29.9696	-97.6623	Yes
				Open Wa	iter Feat	ures			
OW-1	3.4, 3.6	POW	Depressional	20.32	-	Impoundment	29.9590	-97.6541	Yes
OW-2	3.4	POW	Depressional	0.42	-	Impoundment	29.9613	-97.6549	Yes

Feature ID	Map ID	Cowardin Code ⁽¹⁾	HGM Code	Area (acres)	Length (feet)	Water Type ⁽²⁾	Latitude	Longitude	Water of United States
OW-3	3.4	POW	Depressional	0.28	-	Impoundment	29.9600	-97.6503	Yes
OW-4	3.2	POW	Depressional	0.28	-	Isolated	29.9746	-97.6543	No
OW-5	3.3	POW	Depressional	0.17	-	Isolated	29.9675	-97.6598	No
OW-6	3.3	POW	Depressional	0.22		Impoundment	29.9606	-97.6639	Yes
OW-7	3.5	POW	Depressional	0.15	-	Impoundment	29.9534	-97.6715	Yes
OW-8	3.4	POW	Depressional	0.18	-	Isolated	29.9686	-97.6572	No
				Wetlan	d Featu	es			
EW-1	3.6	PEM1	Lacustrine Fringe	0.04	-	RPWWD	29.9576	-97.6558	Yes
EW-2	3.4	PEM1	Lacustrine Fringe	0.62	-	RPWWD	29.9594	-97.6553	Yes
EW-3	3.4	PEM1	Lacustrine Fringe	0.18	-	RPWWN	29.9613	-97.6549	Yes
EW-4	3.4	PEM1	Lacustrine Fringe	1.71	-	RPWWD	29.9609	-97.6541	Yes
EW-5	3.4	PEM1	Lacustrine Fringe	1.63	-	RPWWD	29.9602	-97.6528	Yes
EW-6	3.4	PEM1	Lacustrine Fringe	0.38	-	RPWWD	29.9609	-97.6524	Yes
EW-7	3.4	PEM1	Lacustrine Fringe	2.10		RPWWD	29.9616	-97.6522	Yes
EW-8	3.4	PEM1	Lacustrine Fringe	1.18	-	RPWWD	29.9608	-97.6514	Yes
EW-9	3.4	PEM1	Lacustrine Fringe	0.21	-	RPWWD	29.9601	-97.6512	Yes
EW-10	3.4	PEM1	Lacustrine Fringe	0.11	-	RPWWD	29.9593	-97.6529	Yes
EW-11	3.4	PEM1	Lacustrine Fringe	0.37	-	RPWWD	29.9586	-97.6528	Yes
EW-12	3.6	PEM1	Lacustrine Fringe	0.04	-	RPWWD	29.9580	-97.6530	Yes
EW-13	3.6	PEM1	Lacustrine Fringe	0.37	-	RPWWD	29.9576	-97.6538	Yes
EW-14	3.4	PEM1	Lacustrine Fringe	0.06	-	RPWWN	29.9601	-97.6502	Yes
EW-15	3.4	RP2EM	Riverine	0.17	-	RPWWD	29.9629	-97.6521	Yes
EW-16	3.4	PEM1	Riverine	0.11	-	RPWWN	29.9655	-97.6500	Yes
EW-17	3.4	PEM1	Riverine	0.23	-	RPWWN	29.9665	-97.6496	Yes
EW-18	3.4	PEM1	Riverine	0.13	-	RPWWN	29.9684	-97.6485	Yes
EW-19	3.4	PEM1	Depressional	0.11	-	Isolated	29.9659	-97.6555	No
EW-20	3.2	PEM1	Lacustrine Fringe	0.24	-	Isolated	29.9746	-97.6543	No
EW-21	3.2	PEM1	Depressional	0.07	-	Isolated	29.9785	-97.6565	No
EW-22	3.2	PEM1	Depressional	0.02	-	Isolated	29.9790	-97.6564	No
EW-23	3.1	PEM1	Depressional	0.03	-	Isolated	29.9756	-97.6605	No
EW-24	3.1	PEM1	Depressional	0.09	-	Isolated	29.9751	-97.6607	No
EW-25	3.1	PEM1	Depressional	0.04	-	Isolated	29.9756	-97.6611	No
EW-26	3.1	PEM1	Depressional	0.08	-	Isolated	29.9753	-97.6612	No
EW-27	3.1	PEM1	Depressional	0.03	-	Isolated	29.9754	-97.6616	No
EW-28	3.1	PEM1	Depressional	0.02	-	Isolated	29.9741	-97.6608	No
EW-29	3.1	PEM1	Depressional	0.02	-	Isolated	29.9742	-97.6607	No
EW-30	3.1	PEM1	Depressional	0.02	-	Isolated	29.9742	-97.6604	No
EW-31	3.1	PEM1	Depressional	0.02	-	Isolated	29.9745	-97.6603	No
EW-32	3.1	PEM1	Depressional	0.04	-	Isolated	29.9744	-97.6597	No
EW-33	3.1	PEM1	Depressional	0.05	-	Isolated	29.9716	-97.6589	No

Feature ID	Map ID	Cowardin Code ⁽¹⁾	HGM Code	Area (acres)	Length (feet)	Water Type ⁽²⁾	Latitude	Longitude	Water of United States
EW-34	3.3	PEM1	Lacustrine Fringe	0.08	-	Isolated	29.9676	-97.6598	No
EW-35	3.3	PEM1	Depressional	0.03	-	Isolated	29.9675	-97.6596	No
EW-36	3.3	PEM1	Depressional	0.01	-	RPWWN	29.9670	-97.6607	Yes
EW-37	3.3	RP2EM	Riverine	0.14	-	RPWWD	29.9671	-97.6614	Yes
EW-38	3.1	RP2EM	Riverine	0.21	-	RPWWD	29.9721	-97.6645	Yes
EW-39	3.3	RP2EM	Riverine	0.13	-	RPWWD	29.9646	-97.6642	Yes
EW-40	3.3	PEM1	Lacustrine Fringe	0.16	-	RPWWD	29.9606	-97.6641	Yes
EW-41	3.6	PEM1	Depressional	0.03	-	RPWWN	29.9578	-97.6585	Yes
EW-42	3.6	PEM1	Depressional	0.26	-	RPWWN	29.9573	-97.6586	Yes
EW-43	3.5	PEM1	Depressional	0.07	-	RPWWN	29.9531	-97.6673	Yes
EW-44	3.5	PEM1	Depressional	0.33	-	RPWWN	29.9527	-97.6669	Yes
EW-45	3.5	RP2EM	Riverine	0.16	-	RPWWD	29.9537	-97.6710	Yes
EW-46	3.5	PEM1	Lacustrine Fringe	0.16	-	RPWWD	29.9534	-97.6715	Yes
FW-1	3.4	PFO1	Lacustrine Fringe	0.40	-	RPWWD	29.9601	-97.6519	Yes
FW-2	3.4	PFO1	Lacustrine Fringe	0.16	-	RPWWD	29.9607	-97.6520	Yes
FW-3	3.4	PFO1	Lacustrine Fringe	0.13	-	RPWWD	29.9606	-97.6515	Yes
FW-4	3.4	PFO1	Lacustrine Fringe	0.07	-	RPWWD	29.9609	-97.6516	Yes
FW-5	3.4	PFO1	Lacustrine Fringe	0.10	-	RPWWD	29.9612	-97.6522	Yes
FW-6	3.2	RP1F06	Riverine	0.15	-	RPWWN	29.9701	-97.6493	Yes
FW-7	3.2	RP1F06	Riverine	0.03	-	RPWWN	29.9706	-97.6478	Yes
FW-8	3.5	PFO1	Depressional	0.20	-	RPWWN	29.9530	-97.6672	Yes
SSW-1	3.6	PSS1	Lacustrine Fringe	0.01	-	RPWWD	29.9573	-97.6554	Yes
SSW-2	3.6	PSS1	Lacustrine Fringe	0.22	-	RPWWD	29.9578	-97.6536	Yes
SSW-3	3.4	PSS1	Lacustrine Fringe	0.16	-	RPWWD	29.9586	-97.6526	Yes
SSW-4	3.4	PSS1	Lacustrine Fringe	0.55	-	RPWWD	29.9604	-97.6531	Yes

NOTES:

Latitude and Longitude are WGS 84, Decimal Degrees.

Cowardin Code⁽¹⁾

PEM1 - Persistent, Emergent, Palustrine

PFO1 - Broad-Leaved Deciduous, Forested, Palustrine

POW - Open Water, Palustrine

PSS1 - Broad-Leaved Deciduous, Scrub-Shrub, Palustrine

R4SB5 - Mud, Streambed, Intermittent, Riverine

R6 - Ephemeral Streambed

RP1FO6 - Deciduous, Forested, Lotic, Riparian

RP2EM - Emergent, Lotic, Riparian

Water Type(2)

NRPW - Non-relatively permanent water

RPW - Relatively permanent water

RPWWD - Wetlands directly abutting relatively permanent water

RPWWN - Wetlands adjacent to but not directly abutting relatively

APPENDIX IID.2

SUMMARY OF WETLANDS DETERMINATION AND IDENTIFICATION FOR 130 ENVIRONMENTAL PARK FACILITY BOUNDARY AREA

Technically Complete October 28, 2014

Appendix IID.2 – Summary of Wetlands Determination and Identification for 130 Environmental Park Facility Boundary Area

30 TAC §330.61(m)(2) requires that an application "include a wetlands determination under applicable federal, state, and local laws", and 30 TAC §330.61(m)(3) requires that an application "identify wetlands located within the facility boundary." The federal definition of "Wetlands", in USACE rules at 33 CFR §328.3(b), is "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas." The state definition of "wetlands", set out at 30 TAC §307.3(a)(81) (as referenced at 30 TAC §330.3 (178)) is consistent with the federal definition; there are no other state requirements for wetlands determinations. There are no applicable local definitions or requirements for wetlands determinations. described in Sections 2.0 and 3.0 of the waters of the U.S. and wetlands report included as Appendix IID.1, wetlands at and near the site were determined and identified in accordance with federal requirements using methods consistent with the USACE guidelines for wetland delineations per the "1987 Corps of Engineers Wetlands Delineation Manual" and the "Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (Version 2.0)". Appendix IID.1 ("Waters of the United States Delineation Report and Wetlands Determination and Identification") provides the results of investigation to delineate waters of the United States (areas subject to U.S. Army Corps of Engineers jurisdiction under Section 404 of the federal Clean Water Act, including "jurisdictional wetlands") and to provide a wetlands identification and determination for the 1,229 acre tract that includes the 520 acre proposed facility boundary area for the 130 Environmental Park. A table summarizing the results of the investigation is included as Appendix C to Appendix IID.1.

Table IID.2-1 and Figure IID.2-1 in this appendix summarize information regarding those wetlands that are located within the proposed facility boundary. As shown, there are approximately 1.46 acres of wetlands located within the facility boundary, 0.49 acre of which are jurisdictional wetlands; and there are approximately 0.68 acre of wetlands within the area proposed for the new municipal solid waste landfill unit (landfill footprint), none of which is jurisdictional wetlands. As required by 30 TAC §330.61(m)(2) and §330.553(a), Appendix IID-3 addresses, for these 0.68 acre wetlands areas, each of the wetlands demonstrations identified in 30 TAC §330.553 (b)(1) - (5).

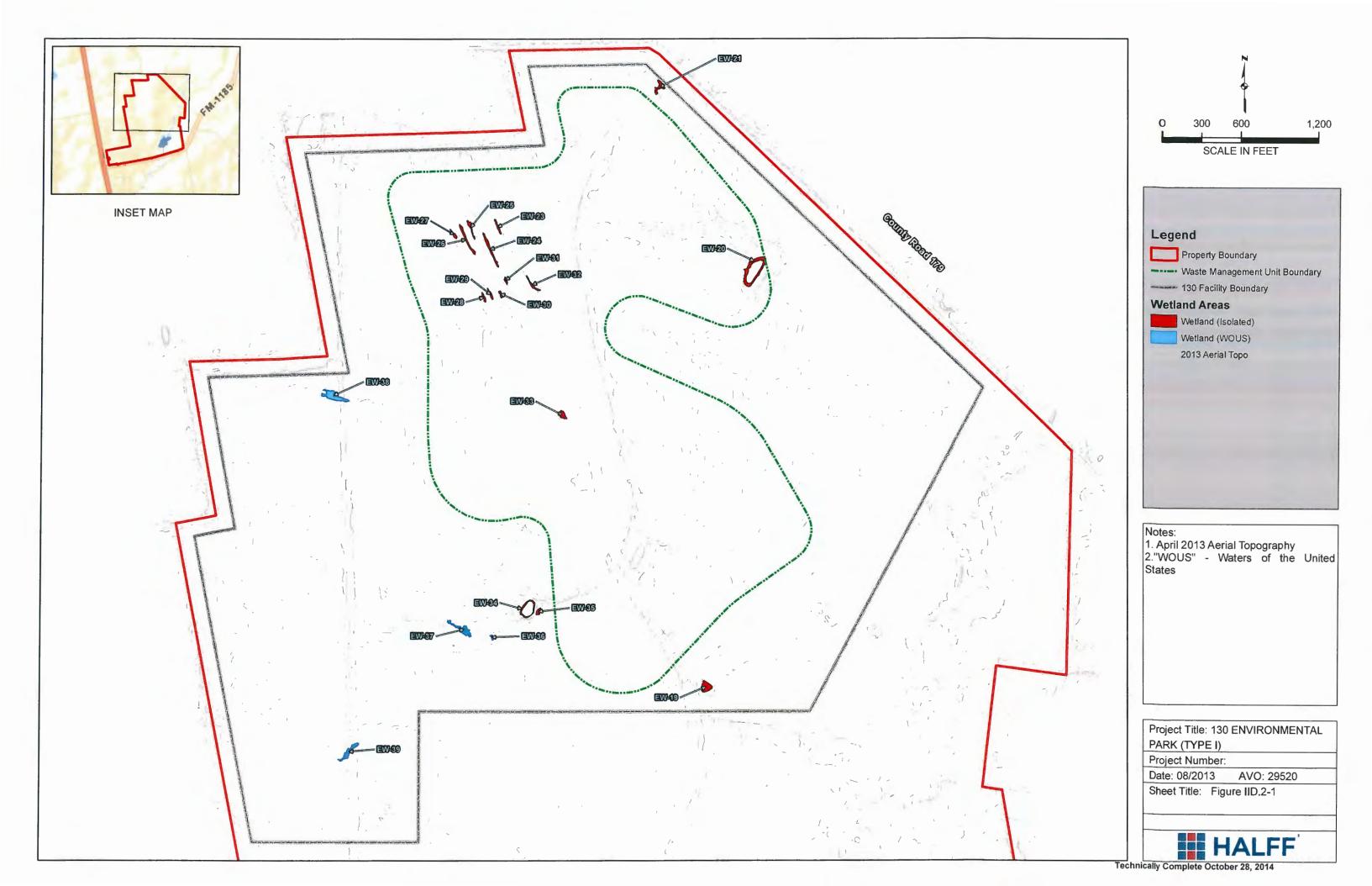
Table IID-2.1 - Wetlands Determination and Identification for 130 **Environmental Park Facility Boundary Area**

Wetlands Feature ID	Area (acres)	Within WM Unit Boundary	Section 404 Wetland ¹	Wetlands Within WM Unit Boundary (acres)
EW-19	0.11	No	No	NA
EW-20	0.24	Yes	No	0.24
EW-21	0.07	No	No	NA
EW-23	0.03	Yes	No	0.03
EW-24	0.09	Yes	No	0.09
EW-25	0.04	Yes	No	0.04
EW-26	0.08	Yes	No	0.08
EW-27	0.03	Yes	No	0.03
EW-28	0.02	Yes	No	0.02
EW-29	0.02	Yes	No	0.02
EW-30	0.02	Yes	No	0.02
EW-31	0.02	Yes	No	0.02
EW-32	0.04	Yes	No	0.04
EW-33	0.05	Yes	No	0.05
EW-34	0.08	No	No	NA
EW-35	0.03	No	No	NA
EW-36	0.01	No	Yes	NA
EW-37	0.14	No	Yes	NA
EW-38	0.21	No	Yes	NA
EW-39	0.13	No	Yes	NA
TOTALS	1.46		0.49 ³	0.68

Notes:

^{1 -} Meets the definition of water of the United States under Section 404 of the Clean Water Act

^{2 -} NA = not applicable
3 - No Section 404 wetlands within the Waste Management Unit Boundary



APPENDIX IID.3 WETLANDS DEMONSTRATIONS

Technically Complete October 28, 2014

APPENDIX IID.3 – WETLANDS DEMONSTRATIONS

30 TAC §330.553(a) provides that "Municipal solid waste storage or processing facilities shall not be located in wetlands unless the owner or operator makes each of the demonstrations identified in subsection (b)(1) - (5) of this section."

Table IID.2-1 and Figure IID.2-1 in Appendix IID.2 summarize information regarding wetlands located within the proposed facility boundary. As shown, there is approximately 0.68 acre of wetlands within the area proposed for the new municipal solid waste landfill unit (landfill footprint), none of which is jurisdictional wetlands. These wetlands areas make up less than 0.4% of the 208-acre landfill unit area, are located in interior portions of the footprint area, and will be completely removed and filled as part of the landfill development and construction process prior to the deposition of waste.

Because the landfill unit will be located in wetlands, as required by 30 TAC §330.61(m)(2) and §330.553(a), this appendix addresses, for these 0.68 acre wetlands areas, each of the wetlands demonstrations identified in 30 TAC §330.553 (b)(1) - (5).

(b)(1) Where applicable under Clean Water Act, §404 or applicable state wetlands laws, the presumption that a practicable alternative to the proposed landfill or recovery operation is available that does not involve wetlands shall be clearly rebutted.

The requirement to rebut the presumption that a practicable alternative is available that does not involve wetlands is made applicable under Clean Water Act Section 404 by way of the Section 404(b)(1) guidelines as set out in 40 CFR §230.10(a); it is not applicable under any Texas state law. Under the Section 404(b)(1) guidelines, the rebuttal requirement applies to wetlands only if they are subject to jurisdiction under Section 404 ("jurisdictional wetlands"). Because none of the 0.68 acre of wetlands areas within which the landfill unit will be located is jurisdictional wetlands, this requirement does not apply and no demonstration is required.

(b)(2) The construction and operation of the municipal solid waste landfill unit...shall not: (A) cause or contribute to violations of any applicable state water quality standard;

Because the wetlands within which the landfill unit is proposed to be located will be completely removed and filled as part of the landfill development and construction process prior to the deposition of waste in that area, the location of a small area of the landfill unit in current wetlands areas will not cause or contribute to violations of any applicable state water quality standard. In addition, there will be no discharges from the landfill unit other than permitted discharges of storm water that has not come in contact with solid waste in the landfill unit. As described in Part II, Appendix IIH, 130 Environmental Park, LLC will obtain Texas Pollutant Discharge Elimination System (TPDES) permit coverage for the 130 Environmental Park in accordance with 30 TAC §330.61(k)(3), and the facility will be operated in compliance with applicable TPDES standards and prohibitions. Therefore the construction and operation of the municipal solid waste landfill unit will not cause or contribute to violation of any applicable state water quality standard.

(B) violate any applicable toxic effluent standard or prohibition under the Clean Water Act, §307;

Toxic effluent standards and prohibitions have been promulgated by U.S. EPA under Clean Water Act §307 for various point sources and categories of discharges. There will be no discharges from the landfill unit other than permitted discharges of storm water that has not come in contact with solid waste in the landfill unit. As described in Part II, Appendix IIG, 130 Environmental Park, LLC will obtain Texas Pollutant Discharge Elimination System (TPDES) permit coverage for the 130 Environmental Park in accordance with 30 TAC §330.61(k)(3), and the facility will be operated in compliance with applicable TPDES standards and prohibitions. Therefore the construction and operation of the municipal solid waste landfill unit will not violate any applicable toxic effluent standard or prohibition under the Clean Water Act, §307.

(C) jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of a critical habitat, protected under the Endangered Species Act of 1973;

A discussion of endangered and threatened species and the bases for the conclusion that construction and operation of the landfill unit will not jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of a critical habitat is referenced in Part II, Appendix IIE.

(D) violate any requirement under the Marine Protection, Research, and Sanctuaries Act of 1972 for the protection of a marine sanctuary.

The Marine Protection, Research, and Sanctuaries Act of 1972 limits ocean dumping of waste and provides for the designation and protection of national marine sanctuaries. The landfill unit at 130 Environmental Park is located well over 100 miles from the nearest ocean (Gulf of Mexico) and well over 200 miles from the nearest national marine sanctuary (Flower Garden Banks offshore in the Gulf of Mexico). Because the construction and operation of the landfill unit will not result in any ocean dumping of waste and will not result in any adverse impacts to any marine sanctuary, the facility will not violate any requirement under the Marine Protection, Research, and Sanctuaries Act of 1972.

- (b)(3) The municipal solid waste landfill unit...shall not cause or contribute to significant degradation of wetlands. The owner/operator shall demonstrate the integrity of the landfill unit and its ability to protect ecological resources by addressing the following factors:
- (A) erosion, stability, and migration potential of native wetland soils, muds, and deposits used to support the landfill unit;

There is approximately 0.68 acre of wetlands within the area proposed for the new municipal solid waste landfill unit (landfill footprint). These wetlands areas make up less than 0.4% of the 208 acre landfill unit area, are located in interior portions of the footprint area, and will be completely removed and filled as part of the landfill development and construction process prior to the deposition of waste. As a result, the entire landfill will essentially be in upland areas. No native wetland soils, muds, and deposits will be used to support the landfill unit.

(B) erosion, stability, and migration potential of dredged and fill materials used to support the landfill unit;

There is approximately 0.68 acre of wetlands within the area proposed for the new municipal solid waste landfill unit (landfill footprint). These wetlands areas make up less than 0.4% of the 208 acre landfill unit area, are located in interior portions of the footprint area, and will be completely removed and filled as part of the landfill development and construction process prior to the deposition of waste. As a result, the landfill will be entirely in upland areas. No dredged and fill materials will be used to support the landfill unit.

(C) the volume and chemical nature of the waste managed in the landfill unit;

The landfill will be a Type I municipal solid waste disposal unit, with a disposal capacity of approximately 40 million cubic yards of waste. The major classifications of solid waste to be accepted at 130 Environmental Park include municipal solid waste, special waste, and Class 2 and 3 industrial wastes as defined by 30 TAC §330.3. Additional discussion regarding the types of waste accepted at the landfill is provided in Part II, Section 2.1.

(D) impacts on fish, wildlife, and other aquatic resources and their habitat from release of the solid waste;

The landfill unit at 130 Environmental Park has been designed and will be constructed and operated to limit the potential for the release of solid waste from the unit. Daily cover, consisting of soil or an approved alternate daily cover material will be applied to the working face of the landfill. Intermediate cover will be applied to areas that will not receive additional waste for significant periods, and a final cover system will be installed on completed portions of the landfill. Construction activities at the landfill unit will be conducted in compliance with TPDES General Permit Number TXR150000, Storm Water Discharges Associated with Construction Activities, and a Storm Water Pollution Prevention Plan. (See Part II, Appendix IIG.) Accordingly, the potential for release of solid waste is considered highly unlikely. It is also unlikely that there will be any impacts on fish, wildlife, and other aquatic resources and their habitat from release of solid waste.

(E) the potential effects of catastrophic release of waste to the wetland and the resulting impacts on the environment;

There is approximately 0.68 acre of wetlands within the area proposed for the new municipal solid waste landfill unit (landfill footprint). These wetlands areas make up less than 0.4% of the 208 acre landfill unit area, are located in interior portions of the footprint area, and will be completely removed and filled as part of the landfill development and construction process prior to the deposition of waste. As a result, operation of the landfill will occur entirely in upland areas and the landfill unit will not be in a wetland area into which a catastrophic release of waste could occur.

(F) any additional factors, as necessary, to demonstrate that ecological resources in the wetland are sufficiently protected.

Because the wetlands within which the landfill unit is proposed to be located will be completely removed and filled as part of the landfill development and construction process prior to the deposition of waste in that area, no wetland will be present at that location of the landfill unit and it is not necessary to address any additional factors.

(b)(4) To the extent required under Clean Water Act, §404 or applicable state wetlands laws, steps have been taken to attempt to achieve no net loss of wetlands (as defined by acreage and function) by first avoiding impacts to wetlands to the maximum extent practicable as required by paragraph (1) of this subsection, then minimizing unavoidable impacts to the maximum extent practicable, and finally offsetting remaining unavoidable wetland impacts through all appropriate and practicable compensatory mitigation actions (e.g., restoration of existing degraded wetlands or creation of man-made wetlands).

The requirement to avoid, minimize, and/or mitigate impacts to wetlands is made applicable under Clean Water Act Section 404 by way of the Section 404(b)(1) guidelines as set out in 40 CFR §230.10(d) and by way of USACE's permitting requirements at 33 CFR §325.1(c)(7); it is not applicable under any Texas state law. Under the Section 404(b)(1) guidelines and USACE's rules, to avoid, minimize and/or mitigate requirement applies to wetlands only if they are subject to jurisdiction under Section 404 ("jurisdictional wetlands"). Because none of the 0.68 acre of wetlands areas within which the landfill unit will be located is jurisdictional wetlands, this requirement does not apply and no demonstration is required.

(b)(5) Sufficient information shall be made available to the executive director to make a reasonable determination with respect to these demonstrations.

The foregoing information, together with other materials in the application as referenced above, provide sufficient information for the executive director to make a reasonable determination with respect to these demonstrations.

130 ENVIRONMENTAL PARK

APPENDIX IIE ENDANGERED OR THREATENED SPECIES DOCUMENTATION

Technically Complete October 28, 2014



August 30, 2013 AVO 29520

Mr. Adam Zerrenner
U.S. Fish and Wildlife Service
10711 Burnet Road, Suite 200
Austin TX 78758





Re: Threatened and endangered species assessment for the proposed 130 Environmental Park in Caldwell County, Texas

Dear Mr. Zerrenner:

130 Environmental Park, LLC intends to permit, register and operate a new municipal solid waste facility in northern Caldwell County, Texas. The 130 Environmental Park will include a Type I municipal solid waste landfill and a Type V municipal solid waste transfer station. The site entrance will be located about one-quarter mile north of the intersection of US Highway 183 (US 183) and Farm-to-Market Road 1185 (FM 1185), on the east side of SH 130. The proposed facility is intended to provide waste disposal for the City of Lockhart, Caldwell County, and the surrounding areas.

The USGS Quadrangle Map for "Lockhart North, Texas" shows multiple stream channel segments and on-channel ponds on the property. All are part of the Dry Creek tributary system which flows into Plum Creek approximately five miles south of the property; all are part of the larger San Marcos River tributary system. Site investigations showed that streams on the property are consistent with what is mapped on the USGS map; numerous smaller tributaries not shown on the USGS map were also identified.

Attached is the Texas Parks and Wildlife Department (TPWD) Wildlife Habitat Assessment Program Questionnaire for Threatened and Endangered Species that was submitted to TPWD, with a preliminary site assessment included for listed species.

If you have any questions or require any additional information, please do not hesitate to call at (214) 346-6367.

Sincerely,

HALFF ASSOCIATES, INC.

Russell Marusak

Environmental Scientist

Date: 115EPTEMBER 2018

Consultation #: 02 ETALOG - ZO13 - TA -0285

Approved by LECCON FRE TS ISENT

Adem Zetterbox, Field Supervisor U.S. FISH & WILDLIFE OF RVICE, AUSTIN, TEXAS

Mr. Kenneth Welch, P.E. - Biggs and Mathews Environmental

Mr. Ernest Kaufmann - 130 Environmental Park, LLC

C:



November 11, 2013

Life's better outside."

Russell Marusak Halff Associates, Inc. 1201 North Bowser Road Richardson, TX 75081-2275

Commissioners

T. Dan Friedkin Chairman Houston

Ralph H. Duggins Vice-Chairman Fort Worth

Antonio Falcon, M.D. Rio Grande City

Dan Allen Hughes, Jr. Beeville

> Bill Jones Austin

James H. Lee Houston

Margaret Martin Boerne

S. Reed Morian Houston

> Dick Scott Wimberley

Lee M. Bass Chairman-Emeritus Fort Worth

Carter P. Smith Executive Director RE: 130 Environmental Park, LLC

Municipal solid waste facility, Caldwell County.

Dear Mr. Marusak:

Under section 12.0011 of the Texas Parks and Wildlife Code, Texas Parks and Wildlife Department (TPWD) is charged with "providing recommendations that will protect fish and wildlife resources to local, state, and federal agencies that approve, permit, license, or construct developmental projects" and "providing information on fish and wildlife resources to any local, state, and federal agencies or private organizations that make decisions affecting those resources."

Please be aware that a written response to a TPWD recommendation or informational comment received by a state governmental agency may be required by state law. For further guidance, see the Texas Parks and Wildlife Code, Section 12.0011, which can be found online at http://www.statutes.legis.state.tx.us/Docs/PW/htm/PW.12.htm#12.0011. For tracking purposes, please refer to TPWD project number ERCS-7960 in any return correspondence regarding this project.

130 Environmental Park, LLC intends to permit, register and operate a new municipal solid waste facility in northern Caldwell County, Texas. The facility will include a Type I municipal solid waste landfill and a Type V municipal solid waste transfer station. The site entrance will be located about one-quarter mile north of the intersection of US 183 and FM 1185, on the east side of SH 130. The proposed facility is intended to provide waste disposal for the City of Lockhart, Caldwell County, and the surrounding areas.

The proposed project will be located on an approximately 520 acre tract within a 1,229 acre tract of land. A gatehouse and scales will be constructed at the facility boundary. Additional facilities will include an office, maintenance area, citizen convenience center, reusable materials staging area, and truck wheel wash. The landfill footprint will cover approximately 212 acres and is intended to provide about 50 years of site life.

Vegetation Impacts

After review of aerial imagery it appears that woody vegetation would be impacted by the proposed project.

4200 SMITH SCHOOL ROAD AUSTIN, TEXAS 78744-3291 512.389.4800 www.tpwd.state.tx.us

To manage and conserve the natural and cultural resources of Texas and to provide hunting, fishing and outdoor recreation opportunities for the use and enjoyment of present and future generations.

Mr. Russell Marusak November 11, 2013 Page 2 of 4

Recommendation: TPWD recommends that clearing of mature, native trees be avoided. Loss of vegetation should be minimized by using site planning and construction techniques designed to avoid and preserve existing trees, shrubs, grasses, and forbs. For impacts that are unavoidable, TPWD recommends transplanting the existing trees or replacing them at a ratio of 3 saplings for every tree lost. Whether transplanted or replaced, a survival of 85% should be achieved. TPWD recommends that native plant and forage species that are beneficial to wildlife endemic to the area be used in mitigation and landscaped areas.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) provides for a year round closed season for nongame birds and prohibits the taking of migratory bird nests and eggs, except as permitted by the U.S. Fish and Wildlife Service.

Recommendation: Construction activities such as, but not limited to, tree felling as well as vegetation clearing, trampling, or maintenance should occur outside the April 1- July 15 migratory bird nesting season of each year the project is authorized and lasting for the life of the project. To comply with the MTBA, the proposed site should be surveyed for migratory bird nest sites prior to construction or future maintenance activities. Since raptors nest in late winter and early spring, all construction activities as identified above should be excluded from a minimum zone of 100 meters around any raptor nest during the period of February 1- July 15.

Please contact the U.S. Fish and Wildlife Service (USFWS) Migratory Bird Office at (505) 248-6879 for further information.

Parks and Wildlife Code

Texas has listed additional animal species not protected by the Endangered Species Act as "State-Threatened" (ST). Any take (incidental or otherwise) of ST animals is prohibited. However, state law only protects the species, and not its habitat. The ST species may only be handled/relocated by permitted individuals authorized by TPWD. There are penalties and restitution values associated with unauthorized take of state-listed species.

Determining the actual presence of a species in a given area depends on many variables including daily and seasonal activity cycles, environmental activity cues, preferred habitat, transiency and population density (both wildlife and human). The absence of a species can be demonstrated only with great difficulty and then only with repeated negative observations, taking into account all the variable factors contributing to the lack of detectable presence.

The Texas Natural Diversity Database (TXNDD) is intended to assist users in avoiding harm to rare species or significant ecological features. Given the small proportion of public versus private land in Texas, the TXNDD does not include a representative

Mr. Russell Marusak November 11, 2013 Page 3 of 4

inventory of rare resources in the state. Absence of information in the database does not imply that a species is absent from that area. Although it is based on the best data available to TPWD regarding rare species, the data from the TXNDD do not provide a definitive statement as to the presences, absence or condition of special species, natural communities, or other significant features within your project area. These data are not inclusive and cannot be used as presence/absence data. They represent species that could potentially be in your project area. This information cannot be substituted for onthe-ground surveys. The TXNDD is updated continuously based on new, updated and questions regarding a record. please undigitized records; for TexasNatural.DiversityDatabase@tpwd.texas.gov.

According to the TXNDD no known occurrences of threatened or endangered species have been recorded near (within 1.5 miles) of the proposed project.

TPWD County Lists

The TPWD county lists for rare species may be obtained from the following link: http://www.tpwd.state.tx.us/landwater/land/maps/gis/ris/endangered_species/. These lists provide information regarding rare species that have potential to occur within each county. Rare species could potentially be impacted if suitable habitat is present at or near the project site.

Recommendation: TPWD recommends using the county lists of rare species, the portions of the proposed project with potential to support rare species should be field surveyed to determine the extent and quality of the suspect habitat and potential impacts.

Recommendation: If rare species or their habitat would be impacted by the proposed project, TPWD recommends that the applicant should coordinate with TPWD and the USFWS, as appropriate, to determine avoidance, minimization, and mitigation strategies.

Recommendation: TPWD recommends that construction crews should be informed of the rare species that have potential to occur in the project county and should avoid disturbance to sensitive species if encountered during construction. Only personnel with a TPWD scientific collection permit are allowed to handle and move state listed species. For further information on the required permit please contact Chris Maldonado at (512) 389-4647.

Comment: Further consultation with TPWD would be warranted upon detection of a Texas listed rare, threatened, or endangered species within or near the proposed project at any time prior to or during construction.

Mr. Russell Marusak November 11, 2013 Page 4 of 4

Revegetation

Recommendation: TPWD recommends that 130 Environmental Park, LLC reseed disturbed soils with a mixture of grasses and forbs native to Caldwell County. To enhance native grasses available to wildlife in the project area TPWD recommends that Bermuda grass be avoided to the extent possible in reseeding efforts, though TPWD understands that slopes may require certain grasses to control erosion. As an introduced species that can be extremely invasive, its use in federally funded projects may be inconsistent with Executive Order 13112 on Invasive Species.

For assistance in determining the best native seed mix for the project area, please contact our staff. Runoff control measures should be maintained until native plants have been reestablished on disturbed areas.

TPWD appreciates the efforts of 130 Environmental Park, LLC to coordinate with TPWD on the impacts to fish and wildlife resources and looks forward to continued cooperative efforts. Please contact TPWD staff, Amy Turner, Ph.D., Wildlife Habitat Assessment Biologist, at (361) 576-0022 if you have any questions or need additional assistance.

Sincerely,

Amy Turner, Ph.D.

Wildlife Habitat Assessment Program

Wildlife Division

AJT:ERS-7960



August 30, 2013 AVO 29520

Dr. Amy Tumer
Texas Parks and Wildlife Department
Wildlife Division
4200 Smith School Road
Austin, TX 78744-3291

Re:

Threatened and endangered species assessment for the proposed 130 Environmental

Park in Caldwell County, Texas

Dear Dr. Turner:

130 Environmental Park, LLC intends to permit, register and operate a new municipal solid waste facility in northern Caldwell County, Texas. The 130 Environmental Park will include a Type I municipal solid waste landfill and a Type V municipal solid waste transfer station. The site entrance will be located about one-quarter mile north of the intersection of US Highway 183 (US 183) and Farm-to-Market Road 1185 (FM 1185), on the east side of SH 130. The proposed facility is intended to provide waste disposal for the City of Lockhart, Caldwell County, and the surrounding areas.

The USGS Quadrangle Map for "Lockhart North, Texas" shows multiple stream channel segments and on-channel ponds on the property. All are part of the Dry Creek tributary system which flows into Plum Creek approximately five miles south of the property; all are part of the larger San Marcos River tributary system. Site investigations showed that streams on the property are consistent with what is mapped on the USGS map; numerous smaller tributaries not shown on the USGS map were also identified.

Attached is the Texas Parks and Wildlife Department Wildlife Habitat Assessment Program Questionnaire for Threatened and Endangered Species, with a preliminary site assessment included.

If you have any questions or require any additional information, please do not hesitate to call at (214) 346-6367.

Sincerely,

HALFF ASSOCIATES, INC.

Russell Marusak

Environmental Scientist

C: Mr. Kenneth Welch, P.E. – Biggs and Mathews Environmental

Mr. Ernest Kaufmann – 130 Environmental Park, LLC



August 30, 2013 AVO 29520

Mr. Adam Zerrenner
U.S. Fish and Wildlife Service
10711 Burnet Road, Suite 200
Austin TX 78758

Re:

Threatened and endangered species assessment for the proposed 130 Environmental Park

in Caldwell County, Texas

Dear Mr. Zerrenner:

130 Environmental Park, LLC intends to permit, register and operate a new municipal solid waste facility in northern Caldwell County, Texas. The 130 Environmental Park will include a Type I municipal solid waste landfill and a Type V municipal solid waste transfer station. The site entrance will be located about one-quarter mile north of the intersection of US Highway 183 (US 183) and Farm-to-Market Road 1185 (FM 1185), on the east side of SH 130. The proposed facility is intended to provide waste disposal for the City of Lockhart, Caldwell County, and the surrounding areas.

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If you have any questions or require any additional information, please do not hesitate to call at (214) 346-6367.

Sincerely,

HALFF ASSOCIATES, INC.

Russell Marusak

Environmental Scientist

C: Mr. Kenneth Welch, P.E. – Biggs and Mathews Environmental

Mr. Ernest Kaufmann – 130 Environmental Park, LLC

WILDLIFE HABITAT ASSESSMENT PROGRAM QUESTIONNAIRE FOR THREATENED AND ENDANGERED SPECIES

AS ATTACHED TO LETTERS DATED AUGUST 30, 2013 TO:
TEXAS PARKS AND WILDLIFE DEPARTMENT
AND
U.S. FISH AND WILDLIFE SERVICE



WILDLIFE HABITAT ASSESSMENT PROGRAM Review Requests

(Including Threatened and Endangered Species)

Name: Russell Marusak	Date: August 30, 2013
Your Company: Halff Associates, Inc.	Phone: 214.346.6367
Your Company Address: 1201 North Bowser Road	Fax: <u>214.739.0095</u>
City, State, Zip: Richardson, TX 75081	Email: rmarusak@halff.com
Project Title, Number 130 Environmental Park, Caldwell County, and Site Location: Texas	County(ies): Caldwell

1) Scope of the Project:

(a) What regulations will this review help you to comply with? Or, if not regulatory, why is the review being requested? Who is the project sponsor?

130 Environmental Park (Project) will be permitted in accordance with 30 Texas Administrative Code (TAC) Chapter 330 Municipal Solid Waste Management Regulations. The Texas Commission on Environmental Quality (TCEQ) is the agency responsible for permitting and regulating municipal solid waste facilities.

The TCEQ requires an applicant to address protection of endangered and threatened species and document coordination with the applicable state and federal agencies regarding the Endangered Species Act in accordance with the following regulations:

- 30 TAC §330.61 (n)(1) and §330.551(a) The owner or operator shall consider the impact of a solid
 waste disposal facility upon endangered or threatened species. The facility and the operation of the
 facility shall not result in the destruction or adverse modification of the critical habitat of endangered
 or threatened species, or cause or contribute to the taking of any endangered or threatened species.
- 30 TAC §330.61(n)(2) For landfill applications, the owner or operator shall submit Endangered Species Act compliance demonstrations as required under state and federal laws and determine whether the facility is in the range of endangered or threatened species. If the facility is located in the range of endangered or threatened species, the owner or operator shall have a biological assessment prepared by a qualified biologist in accordance with standard procedures of the United States Fish and Wildlife Service and the Texas Parks and Wildlife Department to determine the effect of the facility on the endangered or threatened species. Where a previous biological assessment has been made for another project in the general vicinity, a copy of that assessment may be submitted for evaluation. The United States Fish and Wildlife Service and the Texas Parks and Wildlife Department shall be contacted for locations and specific data relating to endangered and threatened species in Texas.
- 30 TAC §330.157 A facility and the operation of the facility must not result in the destruction or
 adverse modification of the critical habitat of endangered or threatened species, or cause or
 contribute to the taking of any endangered or threatened species. Facilities must be operated in
 conformance with any endangered or threatened species protection plan required by the commission.
 The site operating plan should contain criteria for the protection of any identified endangered species.
- (b) What and where is the project site? What activities will be conducted at the site? (Especially activity types, extent boundaries, length & width, waterways vegetation disturbance, and total acreage of site and acreage of the site that will be disturbed.)

130 Environmental Park, LLC intends to permit, register and operate a new municipal solid waste facility in northern Caldwell County east of State Highway 130 (SH130) (Figure 1 and Figure 2). The site entrance will



WILDLIFE HABITAT ASSESSMENT PROGRAM Review Requests (Continued)

(Including Threatened and Endangered Species)

be located about one-quarter mile north of the intersection of US Highway 183 (US 183) and Farm-to-Market Road 1185 (FM 1185), on the east side of SH 130.

130 Environmental Park, LLC will locate the proposed 130 Environmental Park, consisting of a permit boundary of approximately 519.746 (approximately 520) acres within a 1,229 acre tract of land. The 130 Environmental Park will include a Type I municipal solid waste landfill facility and a Type V municipal solid waste transfer station. Refer to **Drawing I** – General Site Plan (Biggs and Mathews, 2013) for the property boundary and permit boundary. The overall property consists of gently undulating grasslands with limited forest cover. The property generally slopes to the south. The major topographic feature of the property is the Soil Conservation Service Site 21 Reservoir on Dry Creek; Dry Creek traverses the property in a northeast to southwest direction (**Figure 3**), entering Plum Creek approximately five miles south of the property. Plum Creek flows in a southeast direction, entering the San Marcos River about 23 miles downstream from the property. The permit boundary is located in the northern portion of the property, northwest of Dry Creek. Portions of the permit boundary along Dry Creek and unnamed tributaries are located within the limits of the 100-year floodplain, however, the entirety of the landfill footprint, processing and/or storage units, and entrance facilities will be located outside of the 100-year floodplain.

The landfill facility will be accessed from northbound US 183 through an entrance road. A gatehouse and scales will be provided within the facility boundary. Additional facilities will include an office, maintenance area, citizen convenience center, reusable materials staging area, and truck wheel wash. The landfill footprint will cover approximately 212 acres and is intended to provide about 50 years of site life. The landfill and attendant facilities would be strategically located on the property to minimize the disturbance to upland woodlands, riparian corridors, creeks, and wetlands identified on the property.

- (c) If this request is for a site investigation or risk assessment, why is the site being investigated? If applicable, what containment pathways are being evaluated?

 Not applicable.
- (d) Schedule of activities Approximately when (which calendar month, how many years) will the project be active on the site?

A schedule for construction of the proposed facilities has yet to be determined.

2) Vegetation: Species, dominant plants, structure and composition, vegetation layers, height of layers, natural vegetation community types.

According to the Level Three Ecoregions of Texas, the site is located where the Texas Blackland Prairies transition to the East Central Texas Plains. The Texas Parks and Wildlife Department (TPWD) Texas Ecological Systems Classification identifies numerous vegetation types within the property boundary including: Blackland Prairie, Disturbance or Tame Grassland; Central Texas, Floodplain Deciduous Shrubland; Central Texas, Floodplain Hardwood Forest; Central Texas, Floodplain Herbaceous Vegetation; Central Texas, Riparian Deciduous Shrubland; Central Texas, Riparian Hardwood Forest; Native Invasive, Deciduous Woodland; Native Invasive, Mesquite Shrubland; Open Water; Post Oak Savanna, Post Oak Motte and Woodland; and Post Oak Savanna, Savanna Grassland (Figure 4). Site investigations confirmed that existing site conditions are generally consistent with the TPWD Ecological Classifications.

These different classifications can be grouped into four general classifications for purposes of describing dominant vegetation: post oak-cedar elm woodlands; mesquite thicket; grassland pasture; and pond/wetlands. Maintained utility rights-of-way and interior roads depict a transition between woodland and grassland types, with layer development dependent on the most recent maintenance cycle.

The woodland communities are dominated by post oak (Quercus stellata) and cedar elm (Ulmus crassifolia). exas persimmon (Diospyros texana) is common within this community type; agarita (Mahonia trifoliolata),



WILDLIFE HABITAT ASSESSMENT PROGRAM Review Requests (Continued)

(Including Threatened and Endangered Species)

slimleaf panicgrass (*Dichanthelium linearifolium*), and prickly pear cactus species (*Opuntia* sp.) are also common in the understory. Prickly pear specimens can get quite large and occupy a large volume of the understory layer. Mesquite thickets are dominated almost exclusively by mesquite (*Prosopis glandulosa*) in the tree and shrub layer. Prickly pear and Texas wintergrass (*Nassella leucotricha*) are common understory species. The levee and emergency spillway of the large impoundment comprise the majority of the grassland communities; edge habitats associated with utility corridors and interior access roads may also be included in this type. Ponds are scattered across the property, with the largest centrally located near the southern property boundary. Wetland communities identified are mostly associated with the emergent fringes of these impoundments; smaller features associated with old meanders of Dry Creek, as well as upland terrace depressions were also identified.

3) Other Natural Resources/Physical Features:

(a) Soils, geology, watercourses, aquifers, flood zones, etc.

According to the Natural Resource Conservation Service Soil Data Mart, the following soils are mapped within the property boundary. A map (**Figure 5**) of the soils is attached.

Soil Id	Soil Series	Topography	Available Water Capacity	Drainage Class	Flooded	Ponded
BuB	Burleson Clay	1-3% slopes	Moderate	Moderately Well Drained	No	No
CfB	Crocket fine sandy loam	1-3% slopes	Moderate	Moderately Well Drained	No	No
CrC2	Crockett soils	2-5% slopes, eroded	Moderate	Moderately Well Drained	No	No
CrD3	Crockett soils	3-8% slopes, eroded	Moderate	Moderately Well Drained	No	No
DAM	Dams					
FeE	Fett gravelly soils	1-12% slopes	Low	Somewhat Poorly Drained	No	No
HeC2	Heiden clay	3-5% slopes, eroded	Moderate	Well Drained	No	No
HmB	Heiden-Wilson complex	1-3% slopes	Moderate	Well Drained/ Moderately Well Drained	No	No
HoC2	Houston Black clay	3-5% slopes, eroded	Moderate	Moderately Well Drained	No	No
МаА	Mabank loam	0-1% slopes	Moderate	Moderately Well Drained	No	No
МаВ	Mabank loam	1-3% slopes	Moderate	Moderately Well Drained	No	No
Ts	Tinn soils, frequently flooded	0-1 % slopes	High	Moderately Well Drained	Yes	No
w	Water					
WgC	Wilson gravelly loam	1-5% slopes	Moderate	Moderately Well Drained	No	No



WILDLIFE HABITAT ASSESSMENT PROGRAM Review Requests (Continued)

(Including Threatened and Endangered Species)

The majority of the study area is mapped as Fett gravelly soils and Wilson gravelly loam (soil map symbols FeE and WgC). The Tinn soil unit (map symbol Ts) is associated with the floodplains of the larger drainages across the property, and typically floods more than once a year. None of the listed soils are considered hydric soils according to the USDA Soil Data Mart. However, the database shows that Tinn Soils, frequently flooded unit and the Mabank loam 0-1% slopes unit contain unnamed minor components located in depressions that may meet hydric criteria, based on ponding and/or flooding.

Dry Creek is the primary drainage that with a network of smaller tributaries, traversing the eastern half of the property. Another substantial tributary of Dry Creek crosses the property in a north to south manner; this tributary and its network of smaller tributaries drain the western half of the property. Both of these tributaries are impounded by a substantial impoundment structure. USGS maps show a riser elevation of 500 feet above mean sea level (amsl) which maintains a pond size of approximately 27 acres. The emergency spillway elevation at 517 feet amsl suggests an impoundment area over 380 acres, an area which extends beyond the northeast property boundary. Two other headwater tributaries are located in the southwestern corner of the property. In addition to the array of tributaries on the property, several smaller man-made ponds are scattered about the property to provide water for livestock.

According to the Flood Insurance Rate Map (FIRM) published by the National Flood Insurance Program, Dry Creek is mapped with a wide floodplain across the length of the study area. The western tributary of Dry Creek has a narrower floodplain, while the remaining tributaries have an even narrower floodplain consistent with their stream courses observed on aerial photography. The overbank areas of Dry Creek and its tributaries are located within the 1% chance annual flood hazard zone with base elevations determined (Zone AE). The remainder of the study area is mapped as determined to be outside of the 0.2% annual chance flood. A map (**Figure 6**) showing the limits of the floodplain on recent aerial photography is attached.

(b) Habitat, animals, animal assemblages, other sensitive features, etc.

A site investigation was conducted in June and July 2013. Cattle are a minor presence on the property, consisting of a small herd that concentrates in the southern portion of the site. Interior access roads and utility corridors provide different edge habitats, and whitetail deer, turkey, and feral hogs were seen on several days at various times of the day during the site investigation. A number of stock ponds are scattered about the site, including one substantial impoundment feature on the southern portion of the site. Black-bellied whistling ducks were observed in late June at some of the smaller ponds. Different heron and egret species, as well as occasional roseate spoonbills, were observed daily at the larger impoundment.

4) Existing Site Development: Extent of pavement, gravel, shell, or other cover; buildings, landscaped, xeriscaped, drainage system, etc.

With the exception of ranch access roads, the site is vegetated and utilized as pasture. In many instances, less traveled access roads were fully vegetated. The only other buildings included occasional barn or corral structures used for the cattle operation.

5) Historic Use/Function of Site: Pasture, forest, urban, row crops, rangeland, wetland, etc. If the request is for a risk assessment, when was, or for how long, has the site been active, inactive? Are cultural resources present on the site or will the project cross or impact state or federal lands, local parklands?

The property has been historically used as pasture and ranchland dating back at least to the late 1930s. No waste disposal activities have occurred on the site and no permitting or construction permit approvals have been received or applied for.



WILDLIFE HABITAT ASSESSMENT PROGRAM Review Requests (Continued)

(Including Threatened and Endangered Species)

	(including fill eatened and Lindangered Species)
6)	Has a threatened and endangered species survey or assessment, wetland delineation, or other biological assessment already been performed? (In general, TPWD recommends an on-site habitat assessment be performed.) ⊠Yes □No (a) If yes, provide surveyor name, qualifications, methods or protocols acreages surveyed, level of effort, weather conditions, time of day, and dates the survey was performed.
	Prior to conducting the field investigation, the most current species lists from the U.S. Fish and Wildlife Service (USFWS) and TPWD were obtained. Also, a waters of the United States and wetland delineation was conducted over several days in June and July 2013 to delineate the present-day extent of waters of the United States (including Section 404 jurisdictional wetlands) and non-jurisdictional wetlands, on the property. Site conditions were clear, dry, and temperate. To intersect potential wetland areas, transects were established perpendicular to the hydrological gradients of the Dry Creek tributary system, which represents the major drainage in the property. Transects were generally aligned from west to east, with north to south transects included for secondary tributanes. Multiple wetland data points were recorded, documenting vegetation, hydrology, and soil characteristics along each transect. The collection of wetland data points was consistent with the USACE guidelines for wetland delineations per the "1987 Corps of Engineers Wetlands Delineation Manual," in addition to the "Final Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Great Plains Region", and also allowed for the identification of non-jurisdictional wetlands. Although the site inspection was specific to procedures for wetland delineations, these procedures allowed for a thorough reconnaissance of the property, allowing observations for consecutive days over several weeks. The collection and classification of vegetation and hydraulic conditions on the site allowed for an assessment of federal- and state-listed threatened and endangered species and their habitat, as well as potential for occurrence on the property. Results of this preliminary assessment are attached as an internal memorandum to the landfill engineer.
	The majority of the site investigation was conducted by Mr. Danny Griffith, Mr. Brandyn Littleton, Mr. Josh Troegle, and Mr. Brian Boe of Halff Associates, Inc. (Halff). Mr. Russell Marusak provided planning and coordination oversight of the investigation team, and conducted field reviews during the delineation process. Together, the investigation team has extensive experience all over the state in conducting wetland delineations and general habitat assessments. As the team leader, Mr. Marusak is an Environmental Scientist and an ISA Certified Arborist who has extensive experience in endangered species coordination, primarily associated with Department of the Army Section 404 permits. Mr. Marusak has coordinated with Mr. Omar Bocanegra, a Staff Biologist with the USFWS Branch Office in Arlington, Texas on numerous endangered species issues in the Dallas-Fort Worth area, most notably those involving the interior least tern. He has also worked with Ms. Edith Erfling in the Houston Clear Lake Office on matters involving the bald eagle.
	(b) If yes, please provide results and copy of survey/assessment report.
	Please see attached report summarizing the results of a listed species review and assessment of existing site conditions.
7)	Could current on-site or adjacent habitat support rare species? ⊠Yes ☐No Specifically, explain why or why not.
	In the vicinity of the site, State-listed rare species, or species of concern include the Arctic peregrine falcon, Henslow's sparrow, mountain plover, western burrowing owl, cave myotis bat, plains spotted skunk, Guadalupe bass, Guadalupe darter, squawfoot (a mollusk), spot-tailed earless lizard, and three plant species. It should be noted that none of these species was observed during the site investigation. The current habitat could support the spotted plains skunk and spot-tailed earless lizard given the general habitat requirements for these species. Given the association with post oak communities and the proximity of the site to Carizo Sand outcrops to the east, there is limited potential for the green beebalm and sandhill woolywhite to occur on site. The listed bird species generally required more open grassland habitats than what is currently found on



WILDLIFE HABITAT ASSESSMENT PROGRAM Review Requests (Continued)

(Including Threatened and Endangered Species)

the site, and it is unlikely they would occur on the property. They aquatic species have flowing stream requirements which are not found on the property.

8) Provide a description of potential negative direct and indirect impacts from proposed project activities or former and current site activities, such as types or habitat and acreage to be degraded or lost, temporarily and permanently. Also, describe cumulative effects that could be anticipated from the project on the natural environment.

The landfill and transfer station would be located on the northern portion of the property, with the landfill to be centrally located between the two large tributary systems that cross the property. This location will minimize the disturbance to riparian corridors, creeks, and wetlands identified on the property. Furthermore, the landfill will be located in vegetation types identified as "native invasive" communities by a TPWD classification system, thereby minimizing impacts to post oak woodland communities along the western portion of the property, and the floodplain communities on the eastern portion of the property.

Impacts to post oak woodland communities would occur with the placement of an interior access road and attendant facilities; the alignment will focus on the minimization of impacts to multiple ephemeral streams that will be crossed by the road. Drainage design and controls for the access road and facilities will prevent a significant alteration of natural drainage patterns.

9) Provide a description of planned beneficial mitigation and enhancement or restoration efforts. Be sure to note the avoidance, minimization, and compensatory mitigation measures planned to address the threat of negative impacts (e.g. which erosion control measures will be used, what will site restoration activities encompass, etc.).

Because the landfill and transfer station facilities will not be located in wetlands areas subject to mitigation requirements under Section 404 of the Clean Water Act, the project has limited potential to impact waters of the United States as regulated under Section 404 of the Clean Water Act (including wetlands). If access road stream crossings require Section 404 permitting, consistent with goals of the Section 404 program, mitigation will first focus on avoiding and minimizing impacts to aquatic resources to the extent practicable. Final design will focus on avoiding and minimizing impacts to streams and other potential waters of the United States on the site. If compensatory mitigation is required, mitigation could focus on the preservation of undisturbed habitats or creation of additional areas on other portions of the property. Over the life of the project, general landscaping maintenance requirements would be implemented for overall aesthetics and to ensure soil and grade stabilization. A Species Protection Plan, describing measures that will be taken to avoid, minimize, and mitigate potential impacts to listed species, is attached to the Threatened and Endangered Species Review for the project.

10) Include copies of coordination with other agencies relevant to impacts or enhancements of natural resources for the project & contact name.

A Texas Natural Diversity Database (TXNDD) search conducted in July 2013 identified several plant and animal species which have historically occurred in adjacent USGS quadrangles to that which includes the study area. The TXNDD was searched for Element Occurrence Records (EORs) to determine if any reported sightings of species have occurred within the study area. No EORs were recorded for the USGS quadrangle which contains the study area.

11) Clearly delineate exact location of site and its boundaries using an applicable USGS quad (most preferable) as the base layer or best map available. The topographic map citation should include the USGS quad name. The map must contain identifiable features and scale that allows us to find your



WILDLIFE HABITAT ASSESSMENT PROGRAM Review Requests (Continued)

(Including Threatened and Endangered Species)

site and accurately pinpoint your site boundaries. When using internet maps, provide both a location map (zoomed out for highway reference) and a layout map (zoomed in for site features, boundaries, and neighboring street reference).

See attached maps.

- 12) Originals or color-copy photographs of site and surrounding area with captions or narratives.

 Representative photos of different vegetation communities identified and classified during the wetland delineation study have been provided. Additional photographs may be made available upon request.
- 13) Aerial photographs with pertinent features labeled. Aerials should show the year photograph was taken.

See attached imagery (Figures 7, 8, and 9).



WILDLIFE HABITAT ASSESSMENT PROGRAM Review Requests (Continued)

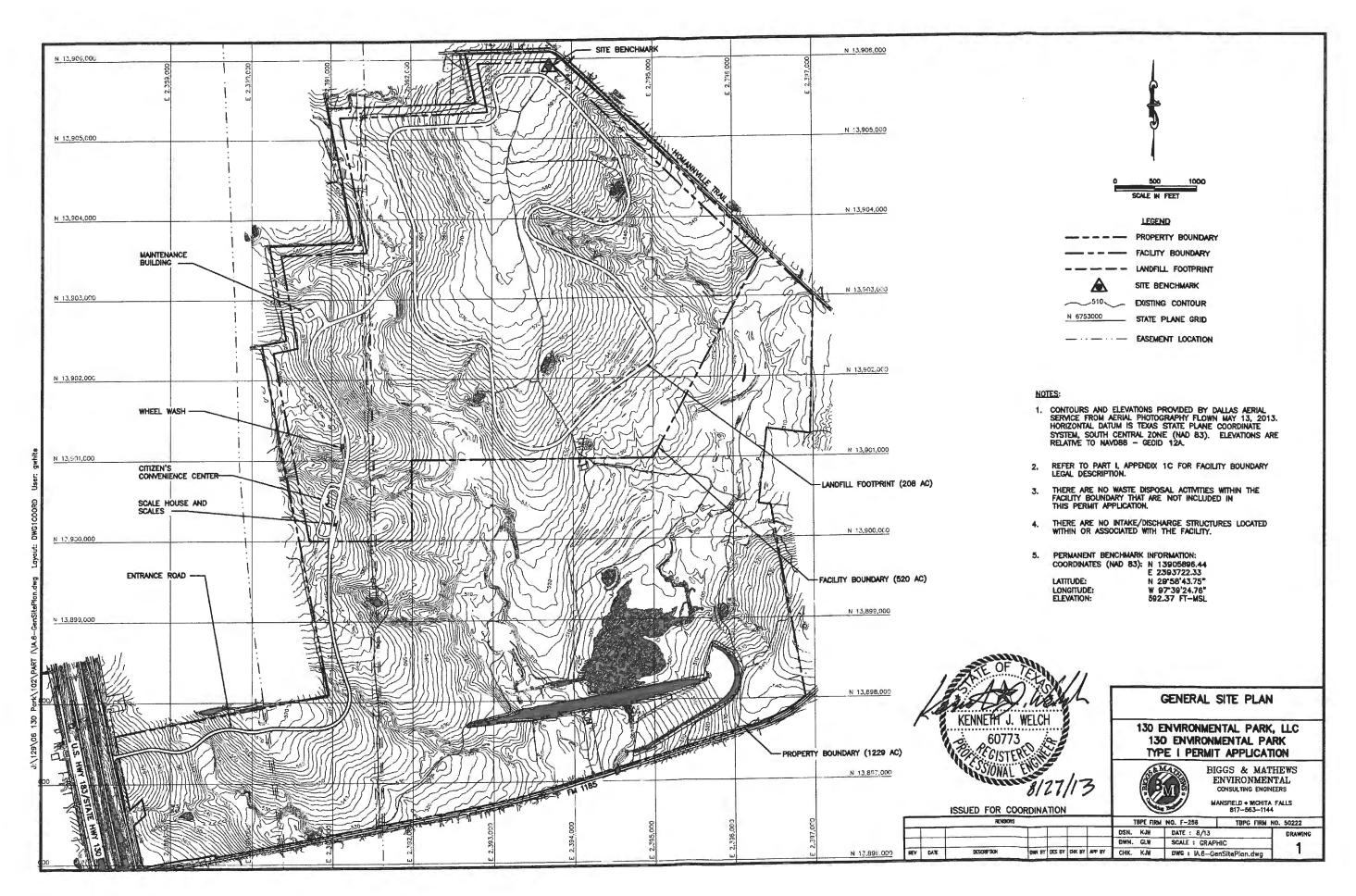
(Including Threatened and Endangered Species)

Send completed form to:

Texas Parks and Wildlife Department
Wildlife Division
Wildlife Habitat Assessment Program
4200 Smith School Road
Austin, Texas 78744-3291
(512) 389-4571 (Phone) (512) 389-4599 (Fax)

Texas Parks and Wildlife Department maintains the information collected through this form. With few exceptions, you are entitled to be informed about the information we collect. Under Section 552.021 and 552.023 of the Texas Government Code, you are also entitled to receive and review the information. Under Section 559.004, you are also entitled to have this information corrected.

Drawing I – General Site Plan (Biggs and Mathews, 2013)



Threatened and Endangered Species Review (Halff, 2013)

THREATENED AND ENDANGERED SPECIES REVIEW

For:

130 Environmental Park



AVO 29520

August 2013



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1.0 PURPOSE

Halff Associates (Halff) has been retained to provide to 130 Environmental Park, LLC a threatened and endangered species assessment for the proposed 130 Environmental Park in Caldwell County, Texas. The study area consists of approximately 1,229 acres and is located on the east side of State Highway (SH) 130/US 183 north of the City of Lockhart, Texas, extending from the intersection of US 183 and FM 1185 east to Homannville Trail. **Figure 1** shows the general project location with respect to larger metropolitan areas. **Figure 2** shows the location within Caldwell County and in relation to the City of Lockhart.

130 Environmental Park, LLC intends to permit and operate a new municipal solid waste facility in northern Caldwell County. The 130 Environmental Park will include a Type I municipal solid waste landfill facility and a Type V municipal solid waste transfer station. The purpose of this assessment is to evaluate and document the potential effects on federally- and state-listed species as a result of the proposed project, in support of Texas Commission on Environmental Quality (TCEQ) applications for the proposed project, pursuant to TCEQ rules at 30 TAC 330.61 (n)(1) and (2), 330.157, and 330.551.

2.0 THREATENED AND ENDANGERED SPECIES REGULATION

2.1 Endangered Species Act

The U.S. Fish and Wildlife Service (USFWS) has authority under the Endangered Species Act (ESA) to list and monitor the status of species whose populations are considered imperiled. The federal process identifies potential candidates based upon the species' biological vulnerability. The vulnerability decision is based upon many factors affecting the species within its range and is linked to the best scientific data available to the USFWS at the time. Species listed as threatened or endangered by the USFWS are provided full protection under the ESA including a prohibition of indirect take such as destruction of known critical habitat (i.e., areas formally designated by USFWS in the Federal Register). Candidate species are those the USFWS has enough information to warrant proposing them for listing but is precluded from doing so by higher listing priorities. Candidate species are not specifically protected by the ESA, and are not included in this biological evaluation, unless listed as a state protected species.

Biological assessments include one of three recommended determinations of effect on federally-listed endangered, and threatened species and their habitat: "no effect," "may affect, not likely to adversely affect," or "may affect, likely to adversely affect." These three possible determinations, in accordance with guidance offered by the USFWS for the purpose of Biological Assessments and Evaluations, are described below.

- No effect A "no effect" determination means that there are absolutely no effects from the proposed action, positive or negative, to listed species. A "no effect" determination does not include effects that are insignificant (small in size), discountable (extremely unlikely to occur), or beneficial.
- 2. May affect, not likely to adversely affect A "may affect, not likely to adversely affect" determination may be reached for a proposed action where all effects are beneficial, insignificant, or discountable. Beneficial effects have contemporaneous positive effects without any adverse effects to the species or habitat. Insignificant effects relate to the size of the effects and should not reach the scale where take occurs. Discountable effects are those that are extremely unlikely to occur.
- 3. May affect, likely to adversely affect A "may affect, likely to adversely affect" determination means that all adverse effects cannot be avoided. A combination of beneficial and adverse effects is still "likely to adversely affect" even if the net effect is neutral or positive.

2.2 Texas Parks and Wildlife Code

Texas endangered species legislation in 1973 and subsequent amendments have established a state regulatory program for the management and protection of endangered species (i.e., species in danger of extinction) and threatened species (i.e., likely to become endangered within the foreseeable future). Chapters 67 and 68 of the Texas Parks and Wildlife Code authorize the Texas Parks and Wildlife Department (TPWD) to formulate lists of threatened and endangered fish and wildlife species and to regulate the taking or possession of the species. Under this statutory authority, the TPWD regulates the taking, possession, transport, export, processing, selling or offering for sale, or shipping of threatened or endangered species of fish and wildlife.

3.0 METHODS

For this biological assessment, the study area was determined by identifying the maximum area in which the proposed project may result in direct and indirect impacts in and around the project area. Both construction and operation phases of the project were considered. The study area was determined to extend to the limits of the property as shown on 2013 aerial photography (**Appendix A, Figure 3**). Although property boundaries are arbitrary to natural processes, the 1229-acre property boundary is considered to encompass more than any potential effects boundary (i.e. over-inclusive).

This assessment includes a review of current species lists from TPWD and USFWS for Caldwell County, Texas, and a search request from the Texas Natural Diversity Database (TXNDD). The TXNDD is a record of occurrences (sorted per USGS quadrangle) for rare plant and animal resources that is based upon the best available information to TPWD. The TXNDD data is to support determinations of potential species occurrence for the study area, and provide specific information where available. An absence in the TXNDD data is not equated to absence of a species in the study area. Halff personnel spent hundreds of man-hours investigating the study area in June and July 2013. This investigation included a pedestrian survey of the proposed project area and a windshield survey of publicly accessible areas in the vicinity of the project area.

Based on information gathered from the literature review and field reconnaissance, this assessment will first identify potential for occurrence within the study area for each species. For species that may occur within the study area, the conclusion of this assessment will include one of three recommended determinations of effect on federally-listed endangered or threatened species and their habitat: "no effect," "may affect, but not likely to adversely affect," or "may affect, likely to adversely affect." Because state-listed species are regulated in a different manner, the presence of potential habitat and potential impacts to state-listed species are addressed as to whether the project would result in the take of a state-listed species.

4.0 LISTED THREATENED AND ENDANGERED SPECIES

Table 1 lists species that are considered endangered or threatened by the USFWS and/or TPWD and whose geographic range may include any portion of Caldwell County. The estimate of the potential for a species to occur within the study area is based on analysis of habitat observed during field visits to the study area, the known habitat preferences for each species, and other factors as noted. There is no USFWS-designated critical habitat within the study area for any of the federally-protected species in **Table 1**. A discussion of each species' habitat, potential for occurrence within the study area and, for species that may occur within the study area, a determination of effect from the proposed project follows Table 1.

A TXNDD search conducted in July 2013 identified several species which have historically occurred in adjacent USGS quadrangles to that which includes the study area. The TXNDD was searched for Element Occurrence Records (EORs) to determine if any reported sightings of species have occurred within the study area. No EORs were recorded for the USGS quadrangle which contains the study area.

Table 1 - Endangered, Threatened, or Rare Wildlife Potentially in the Study Area

Common Name	Scientific Name	Listing	Listing Status ¹		
Common Hamo		Federal	State	Occur within Study Area?	
	BIRDS				
American peregrine falcon	Falco peregrinus anatum	DL	T	urlikely	
Bald eagle	Haliaeetus leucocephalus	DM	T	unlikely	
Whooping crane	Grus americana	E	E	unlikely	
Wood stork	Mycteria americana		T	possible ²	
	FISHES				
Blue sucker	Cycleptus elongatus		T	none	
	MAMMALS				
Red wolf	Canis rufus	E	E	very unlikely	
	MOLLUSKS				
False spike mussel	Quadrula mitchelli		7	urlikely	
Golden orb	Quadrula aurea	С	T	possible	
Texas fatmucket	Lampsilis bracteata	С	T	none	
Texas pimpleback	Quadrula petrina	С	Ţ	possible	
	FREPTILES	27.0			
Cagle's map turtle	Graptemys caglei		T	none	
Texas horned lizard	Phrynosoma cornutum		Ť	possible	
Timber/canebrake rattlesnake	Crotalus horridus		T	possible	

Sources: USFWS, 2013 and TPWD, 2012.

^{1.} USFWS listing codes: C = Candidate; DL = Delisted; DM = Delisted species that has recovered and is being monitored during the first five years of delisted status; E = Endangered (i.e., in danger of extinction); T = Threatened (i.e., severely depleted population that may become endangered); blank = no federal status. TPWD listing codes: E = Endangered; T = Threatened

^{2.} Assumed to be a transient species, potentially migrating through the study area and using suitable habitat for stopovers.

4.1 Federal Listings

4.1.1 Peregrine Falcon

4.1.1.1 Habitat Description

The peregrine falcon (*Falco peregrinus*) nests on cliffs and in cliff-like areas near wetlands and water bodies. The American subspecies (*Falco peregrinus anatum*) breeds throughout the western United States, Canada, and Mexico, and in the Trans-Pecos region of Texas. This subspecies is not easily distinguished at a distance from the Arctic subspecies (*Falco peregrinus tundrius*), which breeds within the tundra regions of Alaska, Canada, and Greenland. Both subspecies migrate through Texas, and can be found seasonally along the Texas Gulf Coast. Species decline has been attributed to human disturbance, habitat loss, illegal shooting/collecting, and, most notably, past use of the pesticide dichloro-diphenyl-trichloroethane (DDT). The Arctic subspecies is no longer listed in Texas; however, because the subspecies are difficult to distinguish from one another, references are generally made at the species level.

4.1.1.2 Potential for Occurrence

Preferred habitat for these subspecies is absent within the study area, and there exists no potential for the area to be used for stopover during migration. It is unlikely that the peregrine falcon, including both subspecies, would occur on the site.

4.1.2 Bald Eagle

4.1.2.1 Habitat Description

In Texas, preferred bald eagle winter nesting habitat is along river systems or within 1-2 miles of large bodies of water. In Texas, bald eagle nesting typically occurs from October to July. Past threats to the species included reproductive failure due to pesticides, unrestricted taking by humans, and loss of habitat. Habitat loss continues to be a current threat to populations.

4.1.2.2 Potential for Occurrence

Bald eagles sightings are occurring more frequently, and may include a variety of aquatic habitats. Halff has observed nest sites and individuals near major reservoirs as well as nest

sites near a major stream in the absence of large open water body (i.e. lake or pond). It is reasonable to conclude that a bald eagle could use the large impoundment in the southern portion of the study area. However, the bald eagle is a commonly known species, and any presence in the area would be notable from frequently used interior access roads. No known sightings of the bald eagle have been reported on the site. Although the large pond may provide suitable habitat, it is unlikely that the bald eagle would occur in the study area.

4.1.3 Whooping Crane

4.1.3.1 Habitat Description

Preferred whooping crane habitat includes freshwater marshes, tidal flats, barrier islands, and wet prairies. Historically, the whooping crane occurred throughout most of North America. It was almost extirpated during the twentieth century due to habitat destruction and human disturbances. Whooping crane populations increased from a low of 18 in 1938-1939 to approximately 300 in 1990. Whooping cranes breed in the wetlands of Wood Buffalo National Park, Northwest Territory, Canada, and winter in the coastal wetlands of the Aransas National Wildlife Refuge in Aransas, Calhoun, and Refugio Counties, Texas,. Consistent with a USFWS publication addressing whooping cranes and transmission lines, the migration route may be described as a generally straight corridor extending north to south from West Central Canada to the Texas Gulf Coast. This north to south corridor is approximately 220 miles wide west to east, and the study area lies on the eastern edge of migration corridor. The main flight corridor, within which 85 percent of migrating whooping crane sightings has been made throughout its length from Canada to the Texas Gulf Coast includes the study area.

4.1.3.2 Potential for Occurrence

Whooping crane stopover sites have been known to include the shallow upstream flats of major reservoirs in the central Texas portion of their migration route. These types of habitats generally provide broad open inundated flats that provide suitable foraging opportunities. The large impoundment in the southern portion of the study area may contain some shallow aquatic habitats on the upstream end where Dry Creek, the primary drainage, enters the pond. However, these areas are relatively small and densely vegetated with emergent and floating aquatic species. The density of sightings in Texas is more diffuse compared to the central United States, with only a few sightings in the central Texas region. Sighting reports are much more common near the coast where the birds have reached the terminus of their migration.

Preferred habitat for this species is absent within the study area, and there exists no potential for the area to be used for stopover during migration. There are no records of observations of whooping cranes within the study area, and it is unlikely the whooping crane would use the impoundment of Dry Creek as a stopover site.

4.1.4 Red Wolf

4.1.4.1 Habitat Description

The red wolf was historically found throughout much of the eastern half of Texas. Typical habitat included woodlands and grasslands where suitable cover and den sites could be found.

4.1.4.2 Potential for Occurrence

Although suitable habitat may exist based on the description, it is thought to be extirpated throughout its range and it is very unlikely that the red wolf would occur in the study area.

4.1.5 Golden Orb

4.1.5.1 Habitat Description

Golden orb is known to occur in the San Antonio, Guadalupe, Colorado, Brazos, Nueces, and Frio River systems. Habitat includes sand and gravel in riverine settings; specimens have also been collected in mud at the bases of inundated trees on impoundments of larger stream systems.

4.1.5.2 Potential for Occurrence

It is reasonable to conclude that the Golden orb could be found in the large impoundment in the southern portion of the study area.

4.1.6 Texas Fatmucket

4.1.6.1 Habitat Description

Texas fatmucket is known to occur in the San Antonio, Guadalupe, and Colorado River systems, with habitat limited to streams and rivers of sand, mud, and gravel substrates. This species is considered intolerant of impoundment.

4.1.6.2 Potential for Occurrence

Given the reported intolerance to impoundment, it is unlikely that the large impoundment in the southern portion of the study area could be classified as suitable habitat. In the absence of perennial flowing streams, it is reasonable to conclude that the Texas fatmucket does not occur in the study area.

4.1.7 Texas Pimpleback

4.1.7.1 Habitat Description

Texas pimpleback is known to occur in the Guadalupe and Colorado River systems, including reports from the Llano, San Saba, and Pedernales Rivers. Habitat includes mud and gravel at slow flow rates, and may also extend to impoundments of larger streams.

4.1.7.2 Potential for Occurrence

It is reasonable to conclude that the Texas pimpleback could be found in the large impoundment in the southern portion of the study area.

4.2 State Listings

4.2.1 Wood stork

4.2.1.1 Habitat Description

The preferred habitat of the wood stork consists of low-lying wetland areas that may be seasonably flooded and/or drying. This stork forages in swamps, prairie ponds, wet meadows, flooded pastures or fields, ditches, and other shallow standing water, including coastal areas. This stork usually roosts communally in tall snags, sometimes in association with other wading birds (such as herons). Only seasonally drying wetlands (mostly in drying ponds) concentrate enough fish to provide the food that a pair of these big birds requires during the breeding season. The wood stork is not a federally-listed endangered species in Texas, but is listed by the USFWS in Alabama, Georgia, Florida, and South Carolina. The wood stork is a state-listed threatened species by TPWD.

4.2.1.2 Potential for Occurrence

Preferred habitat for this species would be limited to the larger impoundment found on the property. In addition to providing foraging habitat, the east side of the pond contains several

large snags that would be suitable for roosting or perching. No wood storks were observed during the field investigations; however, numerous other heron and egret species were observed perching in the snags, and wading in the shoreline wetland fringe. It is reasonable to conclude that the wood stork could use the large impoundment as a stopover site. The bird's potential use of the study area for migratory stopovers should be considered incidental relative to the large area regarded as their migration corridor and the common frequency of stock ponds within this migration corridor.

4.2.2 Blue Sucker

4.2.2.1 Habitat Description

The blue sucker is a large river fish that needs fast-moving water to survive. River substrates generally consist of exposed bedrock, in combination with hard clay, sand, and gravel. Adults winter in deep pools and move upstream to spawn on riffles. Impoundments to major streams are considered the biggest threat to the species.

4.2.2.2 Potential for Occurrence

In the absence of any perennial flowing streams on the property, it can be concluded that the blue sucker would not occur in the study area.

4.2.3 False Spike Mussel

4.2.3.1 Habitat Description

The false spike mussel inhabits substrates of cobble and mud, with water lilies present. This species is known to inhabit the Rio Grande, Brazos, Colorado, and Guadalupe (historic) river basins. The false spike mussel is possibly extirpated in Texas.

4.2.3.2 Potential for Occurrence

Although potential habitat may exist in the pond substrates, the species is potentially extirpated in Texas, and it is unlikely the species would occur in the study area.

4.2.4 Cagle's Map Turtle

4.2.4.1 Habitat Description

Known to some as the "green" map turtle to differentiate it from the similar Texas map turtle, Cagle's map turtle is endemic to the Guadalupe River—but can also be found in associated creeks and tributaries. Habitats are characterized with swift to moderate flow with gravel or cobble bottom, connected by deeper pools with a slower rate and silt or mud bottom. Riffle sequences are important prey habitats. TXNDD records indicate that the turtles were observed in the San Marcos River, a perennial flowing stream, approximately 15 miles southwest of the study area.

4.2.4.2 Potential for Occurrence

In the absence of any perennial flowing streams, it can be concluded that the Cagle's map turtle would not occur in the study area.

4.2.5 Texas Horned Lizard

4.2.5.1 Habitat Description

The historical range of the Texas horned lizard included the entire state in areas of flat, open terrain with scattered vegetation and sandy or loamy soils. Over the last several decades, declines have been linked to loss of habitat, over-collection by the pet trade, and the accidental introduction of the imported fire ant. Despite low numbers in east and central Texas, the Texas horned lizard is still locally common in portions of the Rio Grande Plains of south Texas, the Rolling and High Plains of northwest Texas and the Trans Pecos of far west Texas. According to TPWD habitat requirements, the Texas homed lizard can be found "in arid and semiarid habitats in open areas with sparse plant cover." Other habitat descriptions are similar and described as arid and semiarid open country with sparse plant growth, bunch grass, cactus, juniper, acacia, and mesquite. The ground may be of sand, loam, hardpan, or rock. TPWD Staff Herpetologists have suggested that dense herbaceous vegetation may be suitable habitat provided that there is no canopy (i.e. bunch grasses). As one moves further west in the state, Texas horned lizards may be more common as habitats change to Ashe juniper/mesquite cover types. These cover types are usually on rockier soils which are conducive to sparse plant growth in the herbaceous layer.

4.2.5.2 Potential for Occurrence

Almost all of the study area is heavily vegetated with either oak/elm woodlands, mesquite woodlands, or grassland/pasture land. Grassland areas are dominated by dense cover species such as Texas wintergrass and threeawn which would provide significant ground cover compared to clump species. However, forested areas had rockier soils with less cover in the herbaceous layer. Red ants, a food source for the Texas horned lizard, were observed along interior access roads and other locations in the study area. Generally easy to identify where present, no individuals Texas horned lizards were identified during the site investigation. However, the study area is certainly within the historical range of the Texas horned lizard, and it is reasonable to conclude the Texas horned lizard could occur in the study area.

4.2.6 Timber Rattlesnake

4.2.6.1 Habitat Description

The timber/canebrake rattlesnake is a shy animal that prefers to live in areas with ample cover and available refuge. Preferred habitat is forested areas with dense ground cover. The distribution of the timber/canebrake rattlesnake stretches from the East Coast westward into Texas, and as far north as New England. In the southern portions of its range, this species prefers to make its den in moist lowland forests, or hilly woodlands near rivers, streams, and lakes.

4.2.6.2 Potential for Occurrence

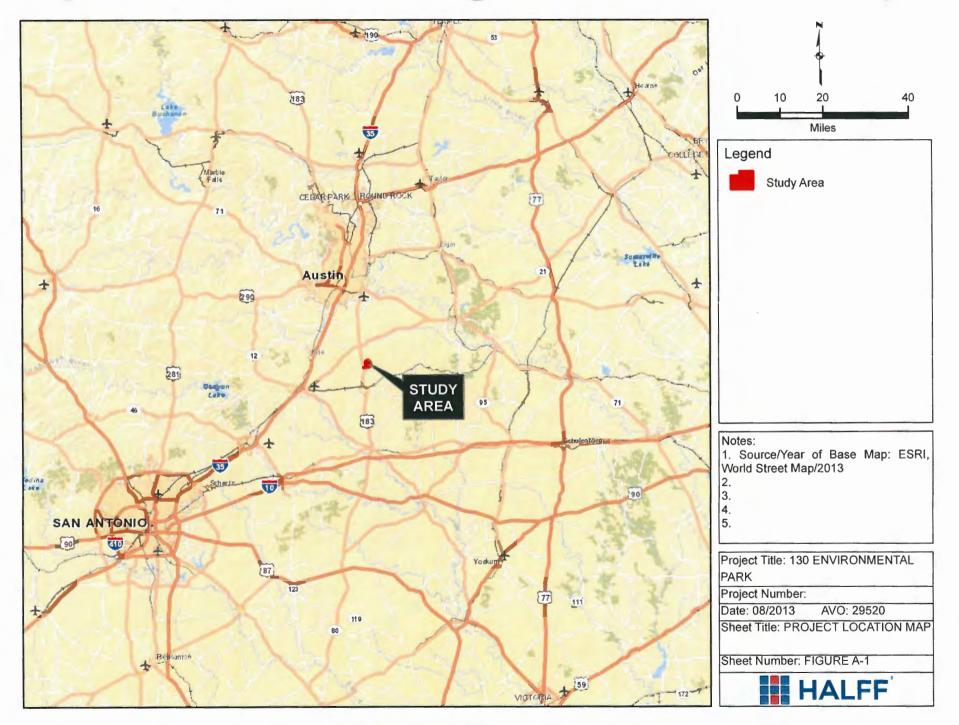
The study area represents the western edge of its range, and includes area that may be considered suitable habitat. Populations tend to be higher in eastern Texas where greater concentrations of wetlands and humid forests are found. Given the somewhat general habitat requirements for the timber rattlesnake, it is reasonable to conclude that the species may occur in the study area. The oak/elm forests in the study area occur in both upland and riparian habitats which meet some habitat descriptions. Given the shallow soils and presence of large cobble in several of the streams, rock outcropping and rock fissures necessary for dens could also be present.

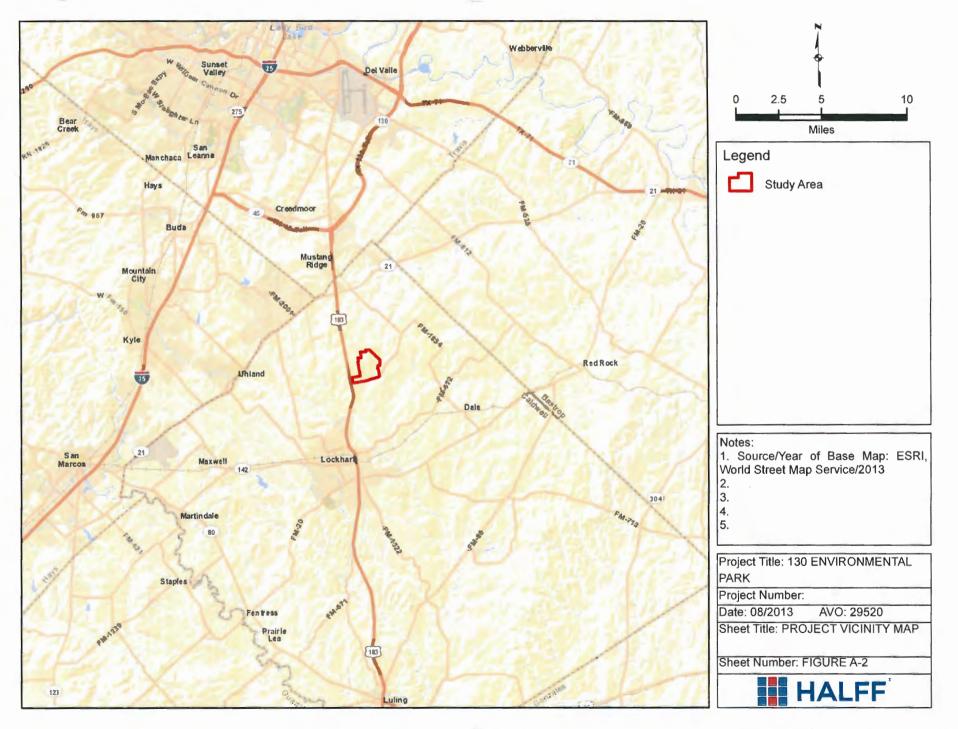
5.0 CONCLUSIONS

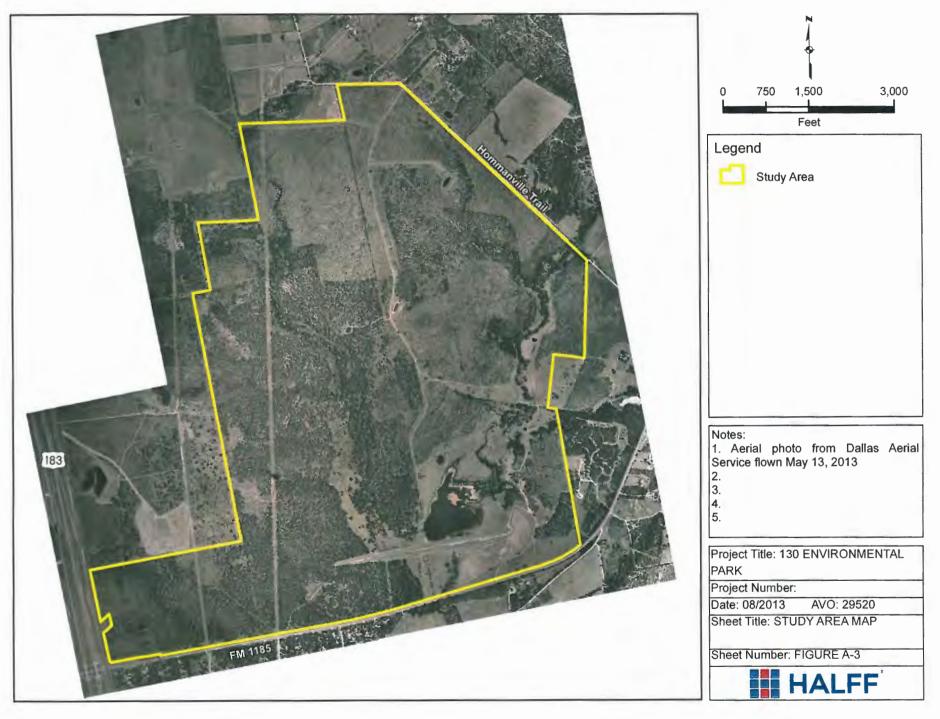
As shown on in **Table 1** of this memorandum, Halff has identified five threatened or endangered species that have the potential to occur within the study area: the wood stork, the golden orb, the Texas pimpleback, the Texas horned lizard, and the timber rattlesnake. Because none of these is a federal-listed threatened or endangered species, no critical habitat has been designated for any of them. There will be "no effect" to any federally-listed threatened or endangered species. Those portions of the study area that may provide suitable habitat for the state-listed wood stork, golden orb, and Texas pimpleback are limited to aquatic habitats associated with the large impoundment in the southern portion of the study area, away from areas that will be impacted by the proposed facility. Construction and operation of the project will not result in destruction or adverse modification of habitat (including critical habitat) for these species, and will not cause or contribute to the taking of these species.

A small area of oak/elm woods that may provide suitable habitat for the timber rattlesnake will be cleared during construction of the access road and attendant facilities; an additional larger area within some portion of the landfill footprint will also be cleared. Similarly, this habitat type may also provide habitat for the Texas horned lizard. Clearing will be done in accordance with the attached species protection plan for both species to be included in Appendix IVC to the Site Operating Plans for the landfill and transfer station. As a result, Halff has concluded that 130 Environmental Park and its operation will not result in the destruction or adverse modification of these species' habitat, or cause or contribute to the taking of these species.

APPENDIX A FIGURES







APPENDIX B SPECIES PROTECTION PLAN

SPECIES PROTECTION PLAN

For:

130 Environmental Park



AVO 29520

August 2013

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1.0 INTRODUCTION

130 Environmental Park, LLC plans to develop a new municipal solid waste facility, including a Type I municipal solid waste landfill and a Type V municipal solid waste transfer station, within a facility boundary area of 520 acres located on a tract of land totaling approximately 1,229 acres in Caldwell County (the study area). The location of the study area is on the east side of State Highway (SH) 130/US 183 north of the City of Lockhart, Texas, extending from the intersection of US 183 and FM 1185 east to Homannville Trail. Figure 1 shows the general project location with respect to larger metropolitan areas. Figure 2 shows the location within Caldwell County and in relation to the City of Lockhart. The facility will be accessed from northbound US 183 through an entrance road. A gatehouse and scales will be provided within the facility boundary. The landfill footprint will cover approximately 208 acres located within the facility boundary area.

The facility will be permitted/registered in accordance with 30 TAC Chapter 330 Municipal Solid Waste Management Regulations. The Texas Commission on Environmental Quality (TCEQ) is the agency responsible for permitting and regulating municipal solid waste facilities. The TCEQ requires an applicant to address endangered and threatened species. Halff Associates, Inc. (Halff) has identified five threatened or endangered species that have the potential to occur within the study area: the wood stork, the golden orb mussel, the Texas pimpleback mussel, the Texas horned lizard, and the timber rattlesnake. All are state-listed threatened species; no critical habitat has been designated for any of these species. Those portions of the study area that may provide suitable habitat for the wood stork, golden orb, and Texas pimpleback are located away from areas that will be impacted by construction and operation of the facility. Within the study area, the forested areas near permanent water sources may provide suitable habitat for the Texas horned lizard and timber rattlesnake.

2.0 PRESENCE OF POTENTIALLY SUITABLE HABITAT

2.1 Wood Stork

The potential for occurrence of the wood stork within the study area is conditional on the basis that this species migrates and its migratory range may happen to overlap water features in the study area (the south central pond/wetland complex shown on **Figure 3**) that may be suitable as a temporary stopover site. Because no critical habitat has been designated for this species,

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because of the incidental chance for occurrence, and because the suitable habitat occurs in an area that will not be impacted by the proposed facility, the project will not result in the destruction or adverse modification of critical habitat of or cause or contribute to takings of this species.

2.2 Golden Orb and Texas Pimpleback

The golden orb and Texas pimpleback are mussel species whose range includes the Guadalupe River tributary system. Recorded observations are known to include impoundments of larger stream systems, and it is reasonable to conclude that these species could be found in the south central pond. Because no critical habitat has been designated for these species, and because the suitable habitat occurs in areas that will not be impacted by the proposed facilities, the project will not result in the destruction or adverse modification of critical habitat of, or cause or contribute to takings of, these mussels.

2.3 Timber Rattlesnake

The study area represents the western edge of the timber rattlesnake's range, and includes conditions that may be suitable for this snake. Timber rattlesnakes are found in upland woods, rocky ridges, and moist lowland forests or thickets near permanent water sources such as rivers, lakes, ponds, streams and swamps where tree stumps, logs and branches provide refuge. Within the study area, the areas that may provide suitable habitat for the timber rattlesnake are the forested areas in close proximity to stream corridors. A conservative (overly-inclusive) depiction of these areas is shown on **Figure 3**.

2.4 Texas Horned Lizard

The historical range of the Texas horned lizard included the entire state in areas of flat, open terrain with scattered vegetation and sandy or loamy soils. Grassland areas in the study area are dominated by dense cover species such as Texas wintergrass and threeawn which would provide significant ground cover compared to clump species. However, forested areas along the western portion of the study area have rockier soils with less cover in the herbaceous layer and would be considered the more suitable habitat for this species within the study area. A conservative (overly-inclusive) depiction of these areas is shown on **Figure 3**.

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3.0 AVOIDANCE, MINIMIZATION, AND MITIGATION

No wood stork, Texas horned lizard, or timber rattlesnake was observed by Halff personnel during the hundreds of man-hours spent investigating the study area in June and July 2013; because the potentially suitable habitat for the mussel species within the study area (the large impoundment in the southern portion) is away from area that would be impacted by the project, surveys to determine the presence of the mussel species were not conducted. Suitable habitat within the study area for these species is depicted on **Figure 3**. Facility construction and operation activities will occur away from areas that include potentially suitable habitat for the wood stork and the two mussel species. A linear forested area (less than 14.8 acres) along the western edge of the study area will be cleared during construction of the entrance road; this area includes habitat that is potentially suitable for both the Texas horned lizard and timber rattlesnake. Additional forested areas (totaling 118.0 acres) will be cleared as part of the landfill development; this area has limited potential to include the timber rattlesnake. Each of these areas depicted in **Figure 3**; not depicted on the figure is perimeter fencing which will be placed along the edge of the facility boundary.

The avoidance, minimization, and mitigation measures to be implemented pursuant to this species protection plan include:

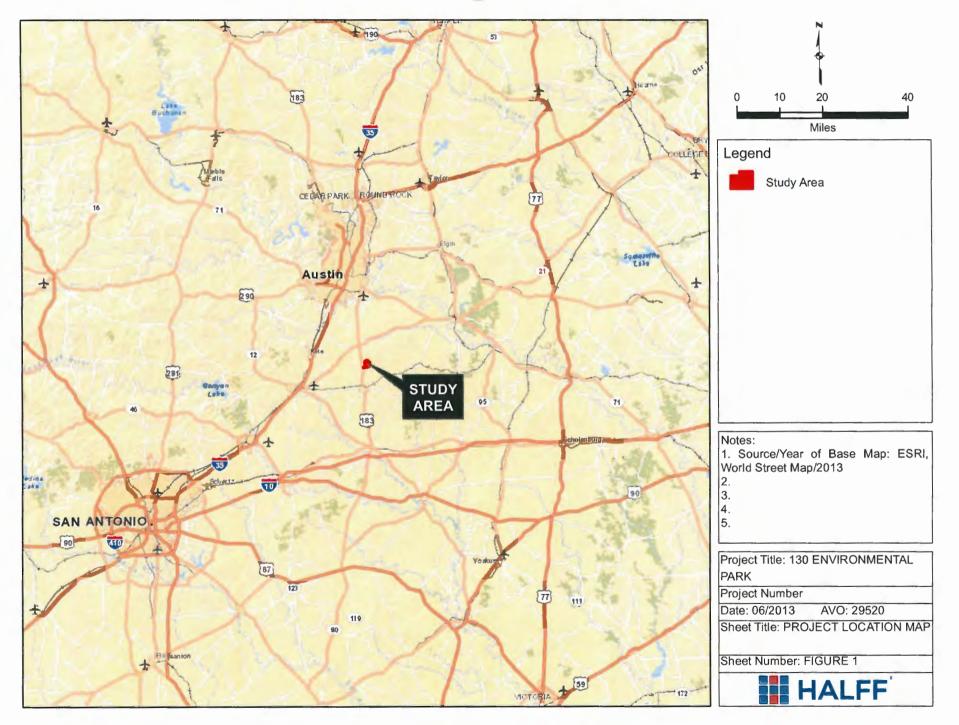
- Clearing of the forested areas shown on Figure 3, and the clearing for the perimeter fencing, will not occur between September and May to avoid the hibernation periods for the Texas horned lizard and timber rattlesnake.
- 2. Immediately prior to clearing to facilitate construction of the access road, landfill area, transfer station, and perimeter fencing, a survey of the area will be conducted by a biologist with a Texas Parks & Wildlife Department (TPWD) scientific collection permit. If a Texas horned lizard or timber rattlesnake is observed during this survey, the specimen(s) will be relocated by the biologist to suitable habitat in the forested riparian corridor area in the western part of the study area.
- 3. During the clearing operations, a biologist with a TPWD scientific collection permit will conduct surveys around construction equipment prior to start-up of the equipment and in the area where clearing or fencing will occur in advance of operations. If a Texas

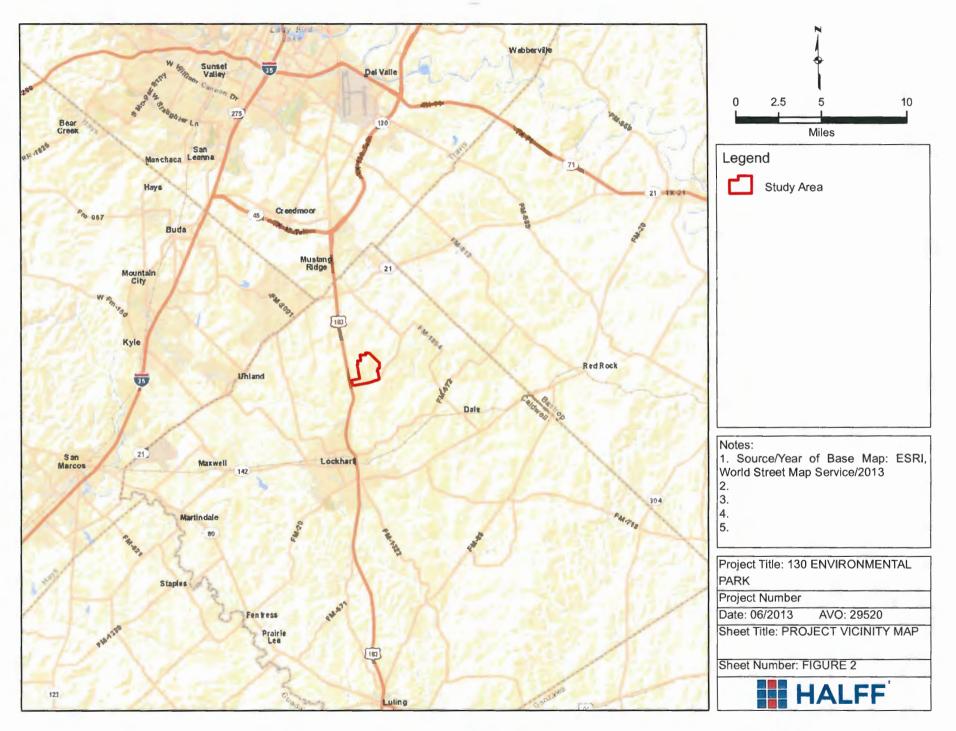
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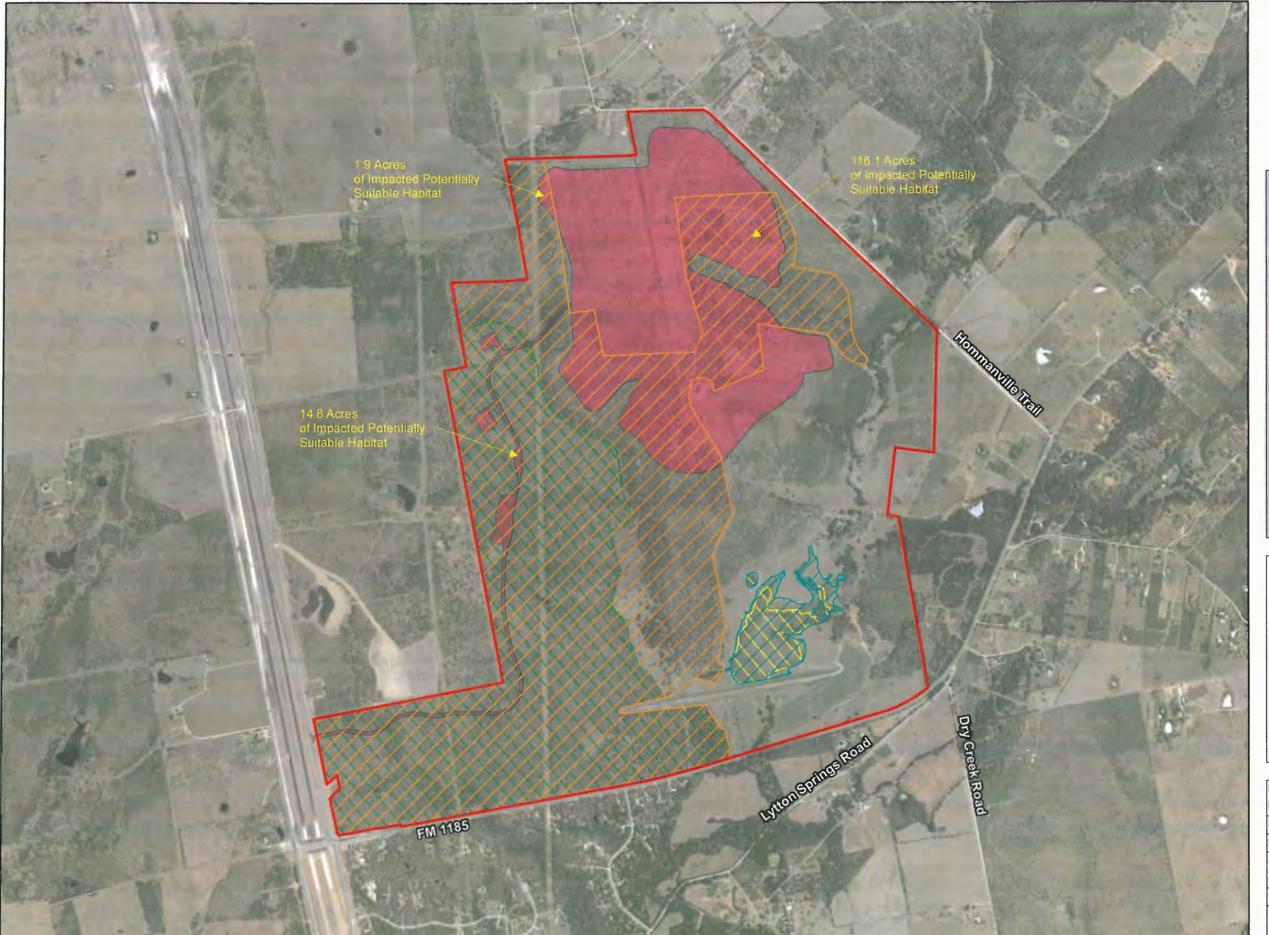
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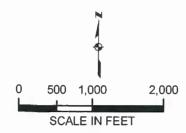
horned lizard or timber rattlesnake is observed during these surveys, work will be stopped and the specimen(s) will be relocated by the biologist to suitable habitat in the forested riparian corridor area in the western part of the study area.

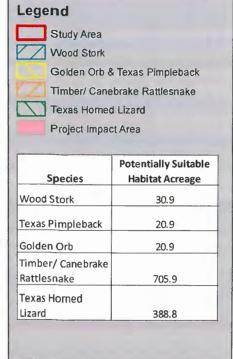
- 4. Although unexpected, a limited potential exists that the Texas horned lizard or timber rattlesnake may be encountered in marginal habitat in other parts of the site. If specimens are observed during construction in any such area, work will be stopped and a biologist with a TPWD scientific collection permit will be contacted to determine and implement any appropriate actions, including pre-construction surveys and/or the possible relocation (by a biologist with a TPWD scientific collection permit) of specimens to suitable habitat in the forested riparian corridor area in the western part of the study area.
- 5. Employees and construction crews working on the site will receive pocket identification cards with color photographs and species information for the wood stork, Texas homed lizard, and timber rattlesnake. These will allow for identification of the species and provide instructions on how to respond to a sighting: avoid disturbance of the animal and notify the facility general manager of the sighting location and species. Signage will also be posted at the Gate House with similar information. Following a reported sighting of any of these species, the facility general manager will contact a biologist with a TPWD scientific collection permit to determine and implement any appropriate action, including the possible relocation (by a biologist with a TPWD scientific collection permit) of a Texas homed lizard or timber rattlesnake to suitable habitat in the forested riparian corridor area in the western part of the study area.











Notes:

1. Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Project Title: 130 ENVIRONMENTAL
PARK
Project Number:
Date: 08/2013 AVO: 29520
Sheet Title: POTENTIALLY SUITABLE
HABITAT MAP
Sheet Number: FIGURE 3