APPENDIX A Wetland Data Forms (Additional Features Only)



nvestigator(s):		Section Township 5	State: Sampling Point PE
	-	Local relie	ef (concave, convex, none): CONCAVE
lope (%): < 1 / Lat: 39.03 611	-	Long: 90.3	77.264 Datum: WAD 8
oil Map Unit Name: Green bush	silt loom	2-5%	Datum: P5 44
e climatic / hydrologic conditions on the site typical	for this time of un-	art Van V	NVVI classification: 1 C/1
e Vegetation Soil or Hydrology	× + singificantly		
e Vegetation/_ Soil/_, or Hydrology/			e "Normal Circumstances" present? Yes No _
			needed, explain any answers in Remarks.)
		sampling point	locations, transects, important features,
lydrophytic Vegetation Present? Yes Yes Yes	No	Is the Sample	od Area
100	No No	within a Wetla	
emarks:	No		
culvert. NUI h	rainage etlandi	s wale.	* Ves mowed, drained
GETATION – Use scientific names of pl	ants.		
ree Stratum (Plot size; 30 /		Dominant Indicator	Dominance Test worksheet:
Absent	% Gover	Species? Status	Number of Cominant Species That Are OBL, FACW, or FAC: (A)
			Total Number of Dominant Species Across All Strata: (B)
			Percent of Dominant Species
		T112	That Are OBL, FACW, or FAC: 1007. (A/
pling/Shrub Stratum (Plot/size: 15) <u> </u>	Total Cover	Prevalence Index worksheet:
Absent			Total % Cover of: Multiply by:
			OBL species x 1 =
			FACW species x 2 =
			FAC species x 3 =
			FACU species x 4 =
b Stratum (Plot size: 5	=	Total Cover	UPL species x 5 =
Phologis Singlinger	80	TY FACE	Column Totals: (A) (B
Sulidaso consdessis	<u> </u>	N FACH	Prevalence index = B/A =
1 .0.1	10	N FAC	Hydrophytic Vegetation Indicators:
			1 - Rapid Test for Hydrophytic Vegetation
			2 - Dominance Test is >50%
			3 - Prevalence Index is ≤3.0¹
			4 - Morphological Adaptations 1/Provide supporting
			data in Remarks or on a separate sheet)
			Problematic Hydrophytic Vegetation ¹ (Explain)
			· set out
dy Vine Stratum (Plot size: 30/)	<u> (00 = T</u>	otal Cover	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Absent			Hydrophytic
			Vegetation
			Present? Yes No

~	_	
-	(1	11
•	•	-

Sampling Point: PEM

Profile Desc Depth	Matrix		Redox	Features			
(inches)	Color (maist)	- %	Color (maist)	% Type	Loc2	Texture	Remarks
0-16"	101/14/2	75	7.54R4/c	5% 5	M	51	1 Contrained
						<u> </u>	
			-				
Type: C=Cor	centration D=Den	letion RM=R	educed Matrix, MS=	Marked East Co	nine	h	020000000000000000000000000000000000000
lydric Soil In	dicators:	CHOIC CAN TO	ecocco mania, ma	-malaneu denu Gra	allis.	Location: Pl	=Pore Lining, M=Matrix.
_ Histosol (A	A1)		Sandy Cl	arrad Bartinia (O.4)			Problematic Hydric Soils ¹ :
Histic Epip				eyed Matrix (S4)			rie Redox (A16)
Black Hist			Sandy Re	• •		Dark Surfa	
	Sulfide (A4)			Matrix (S6)		Iron-Manga	nese Masses (F12)
	ayers (A5)			cky Mineral (F1)			w Dark Surface (TF12)
_ 2 cm Muck				eyed Matrix (F2)		Other (Expl	ain in Remarks)
	Below Dark Surface	/Δ11)		Matrix (F3)			
	Surface (A12)	(A11)		rk Surface (F6)		1	
	ky Mineral (S1)			Dark Surface (F7)		"Indicators of h	ydrophytic vegetation and
_	y Peat or Peat (S3		Redox De	pressions (F8)			rology must be present,
	er (if observed):	,				unless distu	rbed or problematic.
Type:	NONE						
•			-		- 1	Hadda Carp	Y
Depth (inche	es):					Hydric Soil Pres	ent? Yes 🔼 No
emantes:							,
DROLOGY	,						
DROLOGY	logy Indicators:						,
DROLOGY	logy Indicators:	e is required:	check all that apply			Carrindan to	
DROLOGY	logy Indicators: rs (minimum of one	e is required;	check all that apply				
DROLOGY Itland Hydrol mary Indicato Surface Wal	logy Indicators: rs (minimum of one ter (A1)	e is required;	Water-Stained	Leaves (B9)		Surface So	il Cracks (B6)
DROLOGY Itland Hydrol mary Indicalo Surface Wal High Water	logy Indicators: rs (minimum of one ter (A1) Table (A2)	e is required;	Water-Stained	Leaves (B9) (B13)		Surface So Drainage F	oil Cracks (B6) atterns (B10)
DROLOGY Itland Hydrol mary Indicato Surface Wat High Water Saturation (A	logy Indicators: rs (minimum of one der (A1) Table (A2) A3)	e is required;	Water-Stained Aquatic Fauna True Aquatic F	Leaves (B9) (B13) Plants (B14)		Surface So Drainage F Dry-Seaso	oil Cracks (B6) Patterns (B10) n Water Table (C2)
DROLOGY Itland Hydrol mary Indicato Surface Water High Water Saturation (/	logy Indicators: rs (minimum of one ter (A1) Table (A2) A3) e (B1)	e is required;	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf	Leaves (B9) (B13) Plants (B14) ide Odor (C1)		Surface So Drainage F Dry-Seaso Crayfish B	oil Cracks (B6) atterns (B10)
DROLOGY Itland Hydrol mary Indicato Surface Wat High Water Saturation (/ Water Marks Sediment De	iogy Indicators: rs (minimum of one ter (A1) Table (A2) A3) a (B1) eposits (B2)	e is required;	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhizo	Leaves (B9) (B13) Plants (B14) ide Odor (C1) ospheres on Living	Roots (C3	Surface So Drainage F Dry-Seaso Crayfish B	oli Cracks (56) Patterns (510) n Water Table (C2) urrows (C8)
DROLOGY Internal Hydrol Mary Indicato Surface Water High Water Saturation (A Water Marks Sediment De Drift Deposit	iogy Indicators: rs (minimum of one ter (A1) Table (A2) A3) s (B1) eposits (B2) s (B3)	e is required:	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhizo	Leaves (B9) (B13) Plants (B14) ide Odor (C1) ospheres on Living educed iron (C4)		Surface So Drainage F Dry-Seaso Crayfish Bo Saturation	oll Cracks (66) Patterns (810) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9)
DROLOGY Itland Hydrol mary Indicato Surface Water High Water Saturation (A Water Marks Sediment De Drift Deposit Algal Mat or	rs (minimum of one ter (A1) Table (A2) A3) 6 (B1) eposits (B2) s (B3) Crust (B4)	e is required;	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhizo	Leaves (B9) (B13) Plants (B14) ide Odor (C1) ospheres on Living		Surface Some Drainage For Dry-Season Crayfish Both Saturation Stunted or	oll Cracks (66) Patterns (810) In Water Table (C2) Urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1)
DROLOGY Itland Hydrol mary Indicato Surface Wat High Water ' Saturation (/ Water Marks Sediment De Drift Deposit Algal Mat or Iron Deposits	rs (minimum of one ter (A1) Table (A2) A3) s (B1) eposits (B2) s (B3) Crust (B4) s (B5)		Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhizo	Leaves (B9) (B13) Plants (B14) ide Odor (C1) ospheres on Living educed iron (C4) oduction in Tilled S		Surface Some Drainage For Dry-Season Crayfish Both Saturation Stunted or Geomorphic	oll Cracks (E6) Patterns (B10) In Water Table (C2) Patterns (C8) Patterns (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) C Position (D2)
DROLOGY Itland Hydrol mary Indicate Surface Wat High Water Saturation (/ Water Marks Sediment De Drift Deposit Algal Mat or Iron Deposits Inundation V	togy Indicators: rs (minimum of one ter (A1) Table (A2) A3) s (B1) eposits (B2) s (B3) Crust (B4) s (B5) isible on Aerial Ima	ngery (87)	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhizo Presence of Ro	Leaves (B9) (B13) Plants (B14) ide Odor (C1) papheres on Living educed iron (C4) eduction in Tilled S face (C7)		Surface Some Drainage For Dry-Season Crayfish Both Saturation Stunted or Geomorphic	oll Cracks (66) Patterns (810) In Water Table (C2) Urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1)
DROLOGY Itland Hydrol mary Indicate Surface Wat High Water Saturation (/ Water Marks Sediment De Drift Deposit Algal Mat or Iron Deposits Inundation V Sparsely Veg	rs (minimum of one ter (A1) Table (A2) A3) 6 (B1) eposits (B2) s (B3) Crust (B4) s (B5) isible on Aerial Imagetated Concave S	ngery (87)	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize Presence of Re Recent Iron Re Thin Muck Sun	Leaves (B9) (B13) Plants (B14) ide Odor (C1) ospheres on Living educed iron (C4) oduction in Tilled S face (C7) Data (D9)		Surface Some Drainage For Dry-Season Crayfish Both Saturation Stunted or Geomorphic	oll Cracks (E6) Patterns (B10) In Water Table (C2) Patterns (C8) Patterns (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) C Position (D2)
DROLOGY Itland Hydrol mary Indicate Surface Wat High Water Saturation (/ Water Marks Sediment De Drift Deposit Algal Mat or Iron Deposits Inundation V	rs (minimum of one ter (A1) Table (A2) A3) 6 (B1) eposits (B2) s (B3) Crust (B4) s (B5) isible on Aerial Imagetated Concave S	ngery (87)	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize Presence of Re Recent Iron Re Thin Muck Surf	Leaves (B9) (B13) Plants (B14) ide Odor (C1) ospheres on Living educed iron (C4) oduction in Tilled S face (C7) Data (D9)		Surface Some Drainage For Dry-Season Crayfish Both Saturation Stunted or Geomorphic	oll Cracks (B6) Patterns (B10) In Water Table (C2) Patterns (C8) Patterns (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) C Position (D2)
DROLOGY Itland Hydrol mary Indicate Surface Wat High Water Saturation (/ Water Marks Sediment De Drift Deposit Algal Mat or Iron Deposits Inundation V Sparsely Veg	ter (A1) Table (A2) A3) a (B1) eposits (B2) s (B3) Crust (B4) s (B5) isible on Aerial Imagetated Concave S	agery (B7) urface (B8)	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhizo Presence of Ro Recent Iron Re Thin Muck Sund Gauge or Well Other (Explain	Leaves (B9) (B13) Plants (B14) ide Odor (C1) espheres on Living educed fron (C4) eduction in Tilled S face (C7) Data (D9) in Remarks)		Surface Some Drainage For Dry-Season Crayfish Both Saturation Stunted or Geomorphic	oll Cracks (B6) Patterns (B10) In Water Table (C2) Patterns (C8) Patterns (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) C Position (D2)
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DROLOGY Itland Hydrol mary Indicato Surface Water High Water Saturation (/ Water Marks Sediment De Drift Deposit Algal Mat or Iron Deposits Inundation V Sparsely Veg d Observatio ace Water Preser Table Preser	togy Indicators: rs (minimum of one ter (A1) Table (A2) A3) s (B1) eposits (B2) s (B3) Crust (B4) s (B5) isible on Aerial Imagetated Concave S persons: esent? Yes eent? Yes	ngery (B7) urface (B8) No _/ No _/	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize Presence of Re Recent Iron Re Thin Muck Sun Gauge or Well Other (Explain Depth (Inches)	Leaves (B9) (B13) Plants (B14) ide Odor (C1) papheres on Living educed fron (C4) eduction in Tilled S face (C7) Data (D9) in Remarks)	ioils (C6)	Surface Son Drainage For Dry-Season Crayfish Both Saturation Stunted or Geomorphic FAC-Neutral	Patterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) al Test (D5)
DROLOGY Illand Hydrol mary Indicato Surface Water Saturation (/ Water Marks Sediment De Drift Deposit Algal Mat or Iron Deposits Inundation V Sparsely Veg d Observation ace Water Preserration Preserration	ter (A1) Table (A2) A3) a (B1) aposits (B2) s (B3) Crust (B4) s (B5) isible on Aerial Imagetated Concave S aposits? Yes ent? Yes	ngery (B7) urface (B8) No No	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhizo Presence of Ro Recent Iron Re Thin Muck Sun Gauge or Well Other (Explain Depth (Inches) Depth (inches)	Leaves (B9) (B13) Plants (B14) ide Odor (C1) papheres on Living educed fron (C4) eduction in Tilled S face (C7) Data (D9) in Remarks)	oils (C6) Wetland	Surface Son Drainage For Dry-Season Crayfish Both Saturation Stunted or Geomorphi FAC-Neutro	oll Cracks (B6) Patterns (B10) In Water Table (C2) Patterns (C8) Patterns (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) C Position (D2) In Test (D5)
DROLOGY Illand Hydrol mary Indicato Surface Water Saturation (/ Water Marks Sediment De Drift Deposit Algal Mat or Iron Deposits Inundation V Sparsely Veg d Observation ace Water Preserration Preserration	ter (A1) Table (A2) A3) a (B1) aposits (B2) s (B3) Crust (B4) s (B5) isible on Aerial Imagetated Concave S aposits? Yes ent? Yes	ngery (B7) urface (B8) No No	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize Presence of Re Recent Iron Re Thin Muck Sun Gauge or Well Other (Explain Depth (Inches)	Leaves (B9) (B13) Plants (B14) ide Odor (C1) papheres on Living educed fron (C4) eduction in Tilled S face (C7) Data (D9) in Remarks)	oils (C6) Wetland	Surface So Drainage F Dry-Seaso Crayfish Bo Saturation Stunted or Goomorphi FAC-Neutra	oll Cracks (B6) Patterns (B10) In Water Table (C2) Patterns (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) C Position (D2) In Test (D5)
DROLOGY Illand Hydrol mary Indicato Surface Water Saturation (/ Water Marks Sediment De Drift Deposit Algal Mat or Iron Deposits Inundation V Sparsely Veg d Observation ace Water Preserration Preserration	ter (A1) Table (A2) A3) a (B1) aposits (B2) s (B3) Crust (B4) s (B5) isible on Aerial Imagetated Concave S aposits? Yes ent? Yes	ngery (B7) urface (B8) No No	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhizo Presence of Ro Recent Iron Re Thin Muck Sun Gauge or Well Other (Explain Depth (Inches) Depth (inches)	Leaves (B9) (B13) Plants (B14) ide Odor (C1) papheres on Living educed fron (C4) eduction in Tilled S face (C7) Data (D9) in Remarks)	oils (C6) Wetland	Surface Son Drainage For Dry-Season Crayfish Both Saturation Stunted or Geomorphi FAC-Neutro	oll Cracks (B6) Patterns (B10) In Water Table (C2) Patterns (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) C Position (D2) In Test (D5)
DROLOGY Itland Hydrol mary Indicate Surface Water High Water Saturation (/ Water Marks Sediment De Drift Deposite Algal Mat or Iron Deposite Inundation V Sparsely Veg d Observation face Water Preservation Preservation Preservation Preservation Records	rs (minimum of one ler (A1) Table (A2) A3) (B1) eposits (B2) s (B3) Crust (B4) s (B5) isible on Aerial Imagetated Concave Sines: essent? Yes ent? Yes it? Yes fringe	ngery (B7) urface (B8) No No uge, monitoria	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhizo Presence of Ro Recent Iron Re Thin Muck Sun Gauge or Well Other (Explain Depth (inches) Depth (inches) Depth (inches)	Leaves (B9) (B13) Plants (B14) ide Odor (C1) papheres on Living educed iron (C4) eduction in Tilled S face (C7) Data (D9) in Remarks)	oils (C6) Wetland	Surface So Drainage F Dry-Seaso Crayfish Bo Saturation Stunted or Goomorphi FAC-Neutra	oll Cracks (B6) Patterns (B10) In Water Table (C2) Patterns (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) C Position (D2) In Test (D5)
DROLOGY Itland Hydrol mary Indicate Surface Water High Water Saturation (/ Water Marks Sediment De Drift Deposite Algal Mat or Iron Deposite Inundation V Sparsely Veg d Observation face Water Preservation Preservation Preservation Preservation Records	ter (A1) Table (A2) A3) a (B1) aposits (B2) s (B3) Crust (B4) s (B5) isible on Aerial Imagetated Concave S aposits? Yes ent? Yes	ngery (B7) urface (B8) No No uge, monitoria	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhizo Presence of Ro Recent Iron Re Thin Muck Sun Gauge or Well Other (Explain Depth (inches) Depth (inches) Depth (inches)	Leaves (B9) (B13) Plants (B14) ide Odor (C1) papheres on Living educed iron (C4) eduction in Tilled S face (C7) Data (D9) in Remarks)	oils (C6) Wetland	Surface So Drainage F Dry-Seaso Crayfish Bo Saturation Stunted or Goomorphi FAC-Neutra	oll Cracks (E6) Patterns (B10) In Water Table (C2) Patterns (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) C Position (D2) In Test (D5)

Reset Form Print Form

WETLAND DETERMINATION DATA FORM – Midwest Region

WIL-DFW-001

Project/Site: STL Pipeline		(City/County	/: <u>Jersey C</u>	0.	Sampling Date:	9/23/2016
Applicant/Owner: Spire					State: <u> </u>	Sampling Point:	Wetland
Investigator(s): D. Ware and R. Maggior	e	,	Section, To	wnship, Ra	nge:		
Landform (hillslope, terrace, etc.): Flat							
Slope (%): 3 Lat:							
Soil Map Unit Name: Winfield Silt Loam,						assification:	
Are climatic / hydrologic conditions on the							
Are Vegetation, Soil, or H					Normal Circumstances" p		× No
Are Vegetation, Soil, or H					eded, explain any answe		<u> </u>
SUMMARY OF FINDINGS – Att							eatures, etc.
Hadran India Vanatatian Daram 10	Yes Y No						
Hydrophytic Vegetation Present? Hydric Soil Present?	Yes X No			ne Sampled			
Wetland Hydrology Present?			with	nin a Wetlar	nd? Yes <u>X</u>	No	_
Remarks: PEM has formed in a concave depression located where the wetland has formed.	on near a residentia	Il property.	Historical	aerial image	ery as early as 2013 show	s that a pond use	ed to be
VEGETATION - Use scientific na	ames of plants.						
		Absolute		Indicator	Dominance Test work	sheet:	
Tree Stratum (Plot size: 30		% Cover			Number of Dominant Sp That Are OBL, FACW, o		<u>2</u> (A)
2 3					Total Number of Domin Species Across All Stra		<u>2</u> (B)
4 5					Percent of Dominant Sp		20 (4/5)
o	_		= Total Co	ver	That Are OBL, FACW, o	orfac:	00 (A/B)
Sapling/Shrub Stratum (Plot size:	15)				Prevalence Index wor		
1					Total % Cover of:		
2					OBL species		
3					FACW species		
4					FAC species		
5							
Herb Stratum (Plot size:5)		= Total Co	vei	Column Totals:		
1. Persicaria pennsylvanica		60	Yes	FACW		(7.7	(5)
2. Persicaria lapathifolia		35	Yes	FACW	Prevalence Index	= B/A =	
3. <u>Echinochloa crus-galli</u>		3	No	FACW	Hydrophytic Vegetation		
4. Ambrosia trifida		2	No	<u>FAC</u>	X Dominance Test is		
5	_				Prevalence Index is		
6					Morphological Ada	ptationsˈ (Provide s or on a separate	
7					Problematic Hydro	•	,
8						,	(=
9			-	·	¹ Indicators of hydric soi	l and wetland hyd	Irology must
10				·	be present, unless distu		
Woody Vine Stratum (Plot size:	30)	100	= Total Co	ver			
1.				. <u></u> _	Hydrophytic		
2.					Vegetation Present? Yes	s X No	
		0	= Total Co	ver	. 1030111	<u> </u>	
Remarks: (Include photo numbers here	or on a separate sl	heet.)			<u> </u>		
, ,		,					

WIL-DFW-001

SOIL Sampling Point: Wetland

Profile Desc	cription: (Describe t	to the depth r	needed to docur	ment the i	ndicator o	or confirm	the absence o	f indicators.)
Depth	Matrix			x Feature:				
<u>(inches)</u>	Color (moist)	<u></u> %	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks
0-14"	10YR 4/1	97	7.5YR 4/4	33	C	M	SiL	
¹ Type: C=C	oncentration, D=Depl	etion, RM=Re	duced Matrix, C	S=Covered	d or Coate	d Sand Gr	ains. ² Loca	tion: PL=Pore Lining, M=Matrix.
Hydric Soil		·						or Problematic Hydric Soils ³ :
Histosol	(A1)		Sandy	Gleyed Ma	ıtrix (S4)		Coast P	rairie Redox (A16)
Histic E _l	oipedon (A2)			Redox (S5			Iron-Mai	nganese Masses (F12)
	stic (A3)			d Matrix (S	•		Other (E	xplain in Remarks)
	en Sulfide (A4)			Mucky Mir	, ,			
	d Layers (A5)			Gleyed Ma	, ,			
	ıck (A10) d Below Dark Surface	\ (A11)	X Deplete	o Matrix (i Dark Surfa				
	ark Surface (A12)	; (A11)		ed Dark Suna			³ Indicators of	of hydrophytic vegetation and
	Mucky Mineral (S1)			Depressio				hydrology must be present,
	ıcky Peat or Peat (S3	3)		•	,			isturbed or problematic.
Restrictive	Layer (if observed):							
Type:			_					
Depth (in	ches):		_				Hydric Soil P	resent? Yes X No
Remarks:							1	
HYDROLO	GY							
Wetland Hy	drology Indicators:							
_	cators (minimum of o	ne is required;	check all that ag	oply)			Secondar	/ Indicators (minimum of two required)
X Surface	-	<u> </u>	Water-Sta		es (B9)		Surfa	ce Soil Cracks (B6)
	ater Table (A2)		Aquatic Fa		` '		·	age Patterns (B10)
Saturation			' True Aqua					eason Water Table (C2)
Water M	larks (B1)		Hydrogen	Sulfide Od	dor (C1)		Crayfi	sh Burrows (C8)
Sedime	nt Deposits (B2)		Oxidized I	Rhizosphe	res on Livi	ng Roots (ation Visible on Aerial Imagery (C9)
Drift Dep	oosits (B3)		Presence	of Reduce	d Iron (C4	.)	Stunte	ed or Stressed Plants (D1)
Algal Ma	at or Crust (B4)		Recent Iro	n Reducti	on in Tilled	d Soils (C6) <u>X</u> Geom	norphic Position (D2)
Iron Dep	oosits (B5)		Thin Muck	Surface (C7)		× FAC-I	Neutral Test (D5)
Inundati	on Visible on Aerial Ir	magery (B7)	Gauge or	Well Data	(D9)			
Sparsely	y Vegetated Concave	Surface (B8)	Other (Ex	olain in Re	marks)			
Field Obser								
Surface Wat	er Present? Ye	es_X_No_	Depth (in	ches):	1"			
Water Table	Present? Ye	es No	X Depth (in	ches):		_		
Saturation P	resent? Ye	es No	X Depth (in	ches):		Wetla	and Hydrology	Present? Yes X No
(includes cap	oillary fringe) corded Data (stream	gauga manita	ring well coriel	nhataa nr	ovious ins	nactions)	if available:	
Describe Re	corded Data (stream	gauge, monic	oring well, aerial	priotos, pr	evious iris	pections), i	ii avaliable.	
Domestes								
Remarks:								

WIL-JJP-003

Project/Site:Spi~		City/County:	Scott		Sampling Date	9-9-20
Applicant/Owner: 571 571				State: TLL		
Investigator(s): JP -TMA		Section Towns		Section 28		
Landform (hillslope, terrace, etc.): Depression						
Slope (%): <u>L 2</u> Lat: <u>39.540330</u>						
Soil Map Unit Name: Keemah 5/1+ lesm						000
Are climatic / hydrologic conditions on the site typical for thi						
Are Vegetation N Soil N or Hydrology N s						No
Are Vegetation Soil, or Hydrology r SUMMARY OF FINDINGS - Attach site map	, ,			explain any answer ons, transects,		atures, etc.
	0					
		is the Sa	mpled Area	/		
Wetland Hydrology Present? Yes N	0	within a	Wetland?	Yes	No	
- Avea sample point for Ab	4.45	24.00		1	110003	
- Area cample point 100 HD	MILLO	, PEM	WET MO	سا بلدلایل یک ۱	311002	
- Area of metland rear cul	trav	outflou	J			
VEGETATION - Use scientific names of plants.						
	Absolute	Dominant Indi	cator Domi	nance Test works	heet:	
Tree Stratum (Plot size:)	% Cover	Species? St	otue	per of Dominant Sp		
1			That	Are OBL, FACW, o	FAC	(A)
2			Total	Number of Domina	int /	
3 S C C C C C C C C C C C C C C C C C			Spec	ies Across All Strat	a:	(B)
4				ent of Dominant Sp		7
	C	= Total Cover	That	Are OBL, FACW, o	FAC:	(A/B)
Sapilno/Shrub Stratum (Plot size: 15)	7	_ 10tal C046i	Preva	alence Index work	sheet:	
1.				otal % Cover of:	Multiply	pv.
2.			OBL :	species	x1=	
3. / 1 500.7			_	V species	x2=	
4. 7 0 3 000			_	•	x3=	
5			_	species	100	_
Herb Stratum (Plot size: 5')	φ_	= Total Cover		species	x5=	
1. Sofaria Dumila	60	Y FI	4C Colum	nn Totals:	(A)	(B)
2 Setanca viridis	15	N	PL	Prevalence Index	= B/A =	
a Schedemorus arundinaceus	15	N FA	-C Hydro	phytic Vegetation	Indicators:	
4 Cypenus esculentus	10	P FA	CVI -1	- Rapid Test for Hy	drophytic Vegeta	tion
5 Echinochlac crusgalli	10		And in case of the	- Dominance Test		
6. Amaranthus rudgs	_5_	_ N _ W		- Prevalence Index		
7			- 4	 Morphological Ad data in Remarks 		
8			— p	roblematic Hydroph	· · · · · · · · · · · · · · · · · · ·	
9			-1-	, colonialio i iyaropi	., no regulation (Explain)
10.	115	= Total Cover		ators of hydric soil a		
Woody Vine Stratum (Plot size: 30 V					p. ooioinatii	
Alacant				phytic	1	
- Torsing	75	T-4-10	- Veget		No	
Remarks: (Include photo numbers here or on a separate st		= Total Cover				
	NOC.					
-nave						

SOIL

Profile Description: (Describe to the d	epth needed to document the	indicator or	confirm	the absence	of indicators.)
Depth Matrix	Redox Feature	es			
(Inches) Color (moist)	Color (moist) %	Type'	roc,	Texture	Remarks
0-4 104 R 3/3 101	2			SCL	
4-17 10 YR4/1 78	7.51R 5% 10		M		
. /	7.54R4/2 5	- (m		
	7.5 YAY16 6		DL		
					.44
	104R4/ 2		M		Manjonese Conci
Type: C=Concentration, D=Depletion, Ri Hydric Sell Indicators: Histosol (A1)	M=Reduced Majux, M5=Maske Sandy Gleyed M		5,	Indicators	PL=Pore Lining, M=Mainx. for Problematic Hydric Solis ³ : Praine Redox (A16)
Histic Epipedon (A2)	Sandy Redox (S				Surface (S7)
Black Histic (A3)	Stripped Matrix (anganese Masses (F12)
Hydrogen Sulfide (A4) Stratified Layers (A5)	Loamy Mucky Mi				Shallow Dark Surface (TF12)
Stratified Layers (A5) 2 cm Muck (A10)	Loamy Gleyed M Depleted Matrix (Other	(Explain in Remarks)
Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 5 cm Mucky Peat or Peat (S3)	Redox Dark Surfa Depleted Dark Surfa Redox Depression	ace (F6) urface (F7)		wetian	of hydrophytic vegetation and d hydrology must be present, disturbed or problematic
Restrictive Layer (If observed):					/
Type: Nowe -					./
				Hydric Soil	Present? Yes V No No
Depth (inches):		,			
Remarks: - M M L YDROLOGY		3			
Remarks:		3			
TOROLOGY Variand Hydrology Indicators: nimary Indicators (minimum of one is requ		3			
TOROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one is requ Surface Water (A1)	Water-Stained Leave			Surf	ace Soil Cracks (B6)
PROLOGY Intland Hydrology Indicators: Inmary Indicators (minimum of one is requested to the surface Water (A1) High Water Table (A2)	Water-Stained Leave)		Surf Drai	ace Soil Cracks (B6) nage Patterns (B10)
Pemarks: POPOLOGY Valland Hydrology Indicators: rimary Indicators (minimum of one is requ Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Stained Leavi Aquatic Fauna (B13) True Aquatic Plants) (B14)		Surf Drail Dry-	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2)
FOROLOGY Valland Hydrology Indicators: rimary Indicators (minimum of one is requ Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Stained Leave Aquatic Fauna (B13 True Aquatic Plants Hydrogen Suffde Ot	(B14) for (C1)	Part (C	Surf Drai Dry-	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8)
POROLOGY Valland Hydrology Indicators: nimary Indicators (minimum of one is requested Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Stained Leave Aquatic Fauna (B13) True Aquatic Plants Hydrogen Suffide Ot Oxidized Rhizosphe	(B14) for (C1) res on Living	Roots (C:	Surf Drai Dry- Cray	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) rabon Visible on Aerial Imagery (C9)
POROLOGY Valland Hydrology Indicators: rimary Indicators (minimum of one is requ Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Water-Stained Leave Aquatic Fauna (B13) True Aquatic Plants Hydrogen Suffide Or Oxidized Rhizosphal Presence of Reduce	(B14) for (C1) res on Living d Iron (C4)		Surf Dral Dry- Cray Satu Stur	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C3) rabon Visible on Aerial Imagery (C9) ted or Stressed Plants (D1)
POROLOGY Valland Hydrology Indicators: Immary Indicators (minimum of one is requested by the second of the second	Water-Stained Leave Aquatic Fauna (B13) True Aquatic Plants Hydrogen Suffide Or Oxidized Rhizosphal Presence of Reduce Recent Iron Reduction	(B14) (bor (C1) nes on Living difron (C4) on in Tilled Sc		Surf Drai Dry- Cray Satur Sturn	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burraws (C3) rabon Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2)
POROLOGY Valland Hydrology Indicators: rimary Indicators (minimum of one is requested by Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	Water-Stained Leave Aquatic Fauna (B13) True Aquatic Plants Hydrogen Suffde Or Oxidized Rhizospher Presence of Reduce Recent Iron Reduction Thin Muck Surface ((B14) for (C1) tes on Living d fron (C4) on in Tilled Sc (C7)		Surf Drai Dry- Cray Satur Sturn	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C3) rabon Visible on Aerial Imagery (C9) ted or Stressed Plants (D1)
PROLOGY Intland Hydrology Indicators: Inmary Indicators (minimum of one is requested to the second	Water-Stained Leave Aquatic Fauna (B13) True Aquatic Plants Hydrogen Suffde Or Oxidized Rhizosphal Presence of Reduce Recent Iron Reduction Thin Muck Surface (67) Gauge or Well Data	(B14) (B14) for (C1) fee on Living of Iron (C4) on in Tilled Sc (C7) (D9)		Surficients Surficient Surfici	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C3) rabon Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2)
POROLOGY Variand Hydrology Indicators: Inmary Indicators (minimum of one is requested water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface (B)	Water-Stained Leave Aquatic Fauna (B13) True Aquatic Plants Hydrogen Suffde Or Oxidized Rhizosphei Presence of Reduce Recent Iron Reduction Thin Muck Surface (67) Gauge or Well Data	(B14) (B14) for (C1) fee on Living of Iron (C4) on in Tilled Sc (C7) (D9)		Surficients Surficient Surfici	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burraws (C3) rabon Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2)
POROLOGY Valland Hydrology Indicators: Inmary Indicators (minimum of one is requested to the second of the second	Water-Stained Leave Aquatic Fauna (B13) True Aquatic Plants Hydrogen Suffice Or Oxidized Rhizosphal Presence of Reduce Recent Iron Reductic Thin Muck Surface (I) Gauge or Well Data (B8) Other (Explain in Rel	(B14) (B14) for (C1) fee on Living of Iron (C4) on in Tilled Sc (C7) (D9)		Surficients Surficient Surfici	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burraws (C3) rabon Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2)
POROLOGY Valland Hydrology Indicators: Inmary Indicators (minimum of one is requested Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Section Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface (B4) eld Observations: Urface Water Present? Yes	Water-Stained Leave Aquatic Fauna (B13) True Aquatic Plants Hydrogen Suffice Or Oxidized Rhizosphei Presence of Reduce Recent Iron Reductic Thin Muck Surface (G17) Gauge or Well Data (B8) Other (Explain in Reduce) No	(B14) (B14) for (C1) fee on Living of Iron (C4) on in Tilled Sc (C7) (D9)		Surficients Surficient Surfici	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burraws (C3) rabon Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2)
POROLOGY Value Hydrology Indicators: Inmary Indicators (minimum of one is requested Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Section Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface (B4) eld Observations: urface Water Present? Ves	Water-Stained Leave Aquatic Fauna (B13) True Aquatic Plants Hydrogen Suffice Or Oxidized Rhizosphal Presence of Reduce Recent Iron Reductic Thin Muck Surface (I) Gauge or Well Data (B8) Other (Explain in Rel	(B14) (B14) for (C1) fee on Living of Iron (C4) on in Tilled Sc (C7) (D9)	olis (C6)	Surficients Surficient Surfici	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C3) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)
POROLOGY Valland Hydrology Indicators: rimary Indicators (minimum of one is requested with the second secon	Water-Stained Leave Aquatic Fauna (B13) True Aquatic Plants Hydrogen Suffice Or Oxidized Rhizospher Presence of Reduce Recent Iron Reductic Thin Muck Surface (CO) Gauge or Well Data (B8) Other (Explain in Reduce) No Depth (Inches): No Depth (inches):	(B14) for (C1) we on Living of Iron (C4) on in Tilled Sc (C7) (D9) marks)	olis (C6)	Surf Dral Dry- Satur Sturn FAC	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C3) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)
Process YDROLOGY Natiand Hydrology Indicators: Primary Indicators (minimum of one is requested to the second of	Water-Stained Leave Aquatic Fauna (B13) True Aquatic Plants Hydrogen Suffice Or Oxidized Rhizospher Presence of Reduce Recent Iron Reductic Thin Muck Surface (CO) Gauge or Well Data (B8) Other (Explain in Reduce) No Depth (Inches): No Depth (inches):	(B14) for (C1) we on Living of Iron (C4) on in Tilled Sc (C7) (D9) marks)	olis (C6)	Surf Dral Dry- Satur Sturn FAC	nage Patterns (B10) Season Water Table (C2) fish Burrows (C3) rabon Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)
YDROLOGY Valland Hydrology Indicators: Immary Indicators (minimum of one is requested to the second of the second	Water-Stained Leave Aquatic Fauna (B13) True Aquatic Plants Hydrogen Suffice Or Oxidized Rhizospher Presence of Reduce Recent Iron Reductic Thin Muck Surface (CO) Gauge or Well Data (B8) Other (Explain in Reduce) No Depth (Inches): No Depth (inches):	(B14) for (C1) we on Living of Iron (C4) on in Tilled Sc (C7) (D9) marks)	olis (C6)	Surf Dral Dry- Satur Sturn FAC	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C3) ration Visitie on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)
Verland Hydrology Indicators: nimary Indicators (minimum of one is requested Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Section Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B4) Sparsely Vegetated Concave Surface (B4) Indicators (B5) Indicators (B5) Indicators (B5) Inundation Visible on Aerial Imagery (B4) Sparsely Vegetated Concave Surface (B4) Indicators (B5) Indicators (B5) Inundation Visible on Aerial Imagery (B4) Indicators (B5) Indicators (B5) Inundation Visible on Aerial Imagery (B4) Indicators (B	Water-Stained Leave Aquatic Fauna (B13) True Aquatic Plants Hydrogen Suffice Or Oxidized Rhizospher Presence of Reduce Recent Iron Reductic Thin Muck Surface (CO) Gauge or Well Data (B8) Other (Explain in Reduce) No Depth (Inches): No Depth (inches):	(B14) for (C1) we on Living of Iron (C4) on in Tilled Sc (C7) (D9) marks)	olis (C6)	Surf Dral Dry- Satur Sturn FAC	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C3) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)

			V - Midwest Regio	■ WIL-JJP-006A
Project/Site: Spine	Ci	ty/County: Gre	en e.	_ Sampling Date: 9-12-2
Applicant/Owner: 5pine STL			State: I'CL	
Investigator(s):	Se	ction, Township, R		3, TIZN, RIOV
Landform (hillslope, terrace, etc.) No DVC Signature				-,
Slope (%): 4 Lat: 39.518063	Lo	ng: -90.429	1856	Datum: NA 8 8
Soil Map Unit Name: Hickory Silt loam,	18 235	Derent Sto	دم NWI classi	fication: N/A
Are climatic / hydrologic conditions on the site typical for				
Are Vegetation 1. Soil N or Hydrology				present? Yes No
Are Vegetation N Soil N or Hydrology N			eeded, explain any ansv	
SUMMARY OF FINDINGS - Attach site ma			locations, transect	s important features etc
Hydrophytic Vegetation Present? Yes	No	Impinia point	iodations, transcor	a, important reactives, etc
Hydric Soll Present? Yes	No	is the Sample		
Wetland Hydrology Present? Yes	No	within a Wetta	ind? Yes	No
- Area sample point on about	Him PSS	we land	INT LINPOO	6 A
-Area along drainage of				
		ELAKE CARE	OLD WIRLE! !	1810
VEGETATION – Use scientific names of plan				
Tree Stratum (Plot size:)		ominant Indicator pecies? Status	Dominance Test wor	1000000
1			Number of Dominant: That Are OBL, FACW	,
2.			Total Number of Demi	11
3. HUSEN			Total Number of Domi Species Across All Str	
4			Remost of Deminest 6	
5			Percent of Dominant S That Are OBL, FACW,	
Sapino/Shrub Stratum (Plot size: 151/	= T	otal Cover	Prevalence Index wo	dishadi
1. Salas Alliva	60	YOUSL	Total % Cover of:	
2.	_ (6/3		7	x1=
3.			FACW species	
4.				x3=
5.			FACU species	
<u></u>	(ot) • To	otal Cover	UPL species	x 5 =
Hert Stratum (Plot size:)	110	v _	Column Totals:	(A)(B)
1. Khalanie arundinocen	-40-	FACW		
2 Persicania punciata	-20-	Y OCL	Prevalence Index	
Lobelia Significa	- 20 -	Y OGL	Hydrophytic Vegetati	ENTRY OF THE PROPERTY OF THE P
	-44-	J OOL		Hydrophytic Vegetation
5. Carex Trank	- 48	N O'SL N FACW	2 - Dominance Ter	
		N PACES		ex is 55.0 Adaptations ¹ (Provide supporting
7 3			data in Remark	s or on a separate sheet)
9			Problematic Hydro	phytic Vegetation ¹ (Explain)
9 10				
	112 = 70	otal Cover		il and wetland hydrology must
<i>Noody Vine Stratum</i> (Plot size: 30 √)	10	tai 00vai	be present, unless distr	urbad or problematic.
L () 1			Hydrophytic	/
Hosent			Vegetation	1/
	() - To	tal Cover	Present? Ye	Ho
Remarks: (Include photo numbers here or on a separate		tal Cover		

WTLWPOOGA

Depth Matrix	Redox Features	
(inches) Color (moist) %	Color (moist) % Type Loc	Texture Remarks
0-4" 25/4	757K7/6/0 CM	SiCL
*	5 VR3/4 5 6 M	
	7 (104) ()	1000
117 7 2015/	FUNIKIA S C YL	
1-17- 2.545/2	754R4/6 15 C M	SC
	7.5 VA4/6 5 C PL	
	Reduced Matrix, MS=Masked Sand Grains,	*Location: PL=Pore Lining, M=Matrix.
ydric Soil Indicators:		Indicators for Problematic Hydric Solis
_ Histosol (A1)	Sandy Gleyed Matrix (S4)	Coast Prairie Redox (A16)
_ Histic Epipedon (A2)	Sandy Redox (S5)	Dark Surface (S7)
Black Histic (A3)	Stripped Matrix (S6)	iron-Manganese Masses (F12)
_ Hydrogen Sulfide (A4) _ Stratified Layers (A5)	Loamy Mucky Mineral (F1)	Very Shallow Dark Surface (TF12)
_ 3 cm Muck (A10)	Loamy Gleyed Matrix (F2)	Other (Explain In Remarks)
_ Depleted Below Dark Surface (A11)	Depleted Matrix (F3) Redox Dark Surface (F6)	
Thick Dark Surface (A12)	Depleted Dark Surface (F7)	3 Indicators of hydrophysic constation and
_ Sandy Mucky Mineral (S1)	Redox Depressions (F8)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present,
5 cm Mucky Peat or Peat (S3)	1(000x 20p)(035)(015 (1 0)	unless disturbed or problematic.
estrictive Layer (if observed):		Cincas distance of problemede.
Type: Note:		
Depth (inches):	+	Hydric Soll Present? Yes No
Depth (inches):	+	Hydric Soll Present? Yes No
Depth (Inches):	+	Hydric Soll Present? Yes No
Depth (inches):	red: check all that apply)	
Depth (Inches):		Secondary Indicators (minimum of two requ
Depth (Inches): DROLOGY Pitand Hydrology Indicators: mary Indicators (minimum of one is required) Surface Water (A1)	Water-Stained Leaves (B9)	Secondary Indicators (minimum of two required Soil Cracks (B6)
Depth (Inches): DROLOGY Interest of the control o	Water-Stained Leaves (B9) Aquatic Fauna (B13)	Secondary Indicators (minimum of two mou Surface Soil Cracks (B6) Drainage Patterns (B10)
Depth (Inches): DROLOGY Interest of the property of the prop	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14)	Secondary Indicators (minimum of two mou Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Sesson Water Table (C2)
DROLOGY Itiand Hydrology Indicators: mary Indicators (minimum of one is required by Marker (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1)	Secondary Indicators (minimum of two mou Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Gesson Water Table (C2) Crayfish Burrows (C3)
DROLOGY Itiand Hydrology Indicators: mary Indicators (minimum of one is required by Matter (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizoepheres on Living Roots	Secondary Indicators (minimum of two mou Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Gesson Water Table (C2) Crayfish Burrows (C8) (C3) Saturation Visible on Aerial Imagery (C5)
Depth (Inches): marks DROLOGY Itland Hydrology Indicators: mary Indicators (minimum of one is required in the second of the s	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots Presence of Reduced Iron (C4)	Secondary Indicators (minimum of two recounty Surface Soil Cracks (B6) Drainage Patterns (B10) Dry Gesson Water Table (C2) Crayfish Burrows (C8) (C3) Saturation Visible on Aerial Imagery (C8) Saunted or Stressed Plants (D1)
Depth (Inches): DROLOGY Drology Indicators: mary Indicators (minimum of one is required): Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6)	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Gesson Water Table (C2) Crayfish Burrows (C8) (C3) Saturation Visible on Aerial Imagery (C8) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
DROLOGY Internal States of the second of th	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7)	Secondary Indicators (minimum of two recounty Surface Soil Cracks (B6) Drainage Patterns (B10) Dry Gesson Water Table (C2) Crayfish Burrows (C8) (C3) Saturation Visible on Aerial Imagery (C8) Saunted or Stressed Plants (D1)
DROLOGY Interest of the property of the prope	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Gauge or Well Data (D9)	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Gesson Water Table (C2) Crayfish Burrows (C8) (C3) Saturation Visible on Aerial Imagery (C8) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
DROLOGY Itland Hydrology Indicators: mary Indicators (minimum of one is required to the second seco	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Gauge or Well Data (D9)	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Gesson Water Table (C2) Crayfish Burrows (C8) (C3) Saturation Visible on Aerial Imagery (C8) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
DROLOGY Interest of the property of the prope	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks)	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Gesson Water Table (C2) Crayfish Burrows (C8) (C3) Saturation Visible on Aerial Imagery (C8) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
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Depth (Inches): Imarks DROLOGY Stand Hydrology Indicators: mary Indicators (minimum of one is required): Surface Water (A1) High Water Table (A2) Seturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B4) Id Observations: face Water Present? Ves And August Marks (B1) August Marks (B1) Sparsely Vegetated Concave Surface (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B4) Id Observations: Face Water Present? Ves And Marks (B1) Ves And Marks (B1)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks) Depth (Inches):	Secondary Indicators (minimum of two mou Surface Soil Cracks (B6) Drainage Patterns (B10) Dry Sesson Water Table (C2) Crayfish Burrows (C8) (C3) Saturation Visible on Aerial Imagery (C8) Saturated or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5)
DROLOGY Interest Present? DR	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks) Depth (Inches): Depth (inches): Depth (inches):	Secondary Indicators (minimum of two mou Surface Soil Cracks (B6) Drainage Patterns (B10) Dry Sesson Water Table (C2) Crayfish Burrows (C8) (C3) Saturation Visible on Aerial Imagery (C8) Saturated or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5)

Project/Site:Soire	City/Courts	Greene Sampling Date: 9-/2-3
Applicant/Owner:	City/County:	State: Sampling Point: Cult
nvestigator(s):	Outle Touriste	The state of the s
		Range: Section 3, TIDN, KIZW
andform (hillslope, terrace, etc.):		
llope (%): 2 Lat: 39.5/5570		130114 Datum: NA 1)83
oil Map Unit Name: Kansall 5, (+ lown	O to 2 percent s	NWI classification:
re climetic / hydrologic conditions on the site typical for	this time of year? Yes N	o (If no, explain in Remarks.)
re Vegetation $ extstyle extstyle $	significantly disturbed?	re "Normal Circumstances" present? Yes No
re Vegetation $ extstyle \mathcal{N}$, Soil $ extstyle \mathcal{N}$, or Hydrology $ extstyle \mathcal{N}$	naturally problematic? (I	f needed, explain any answers in Remarks.)
UMMARY OF FINDINGS - Attach site ma	p showing sampling poin	nt locations, transects, important features, etc
Hydrophytic Vegetation Present? Yes	No	3
Hydric Soil Present? Yes	No is the Samp	_
Netland Hydrology Present? Yes	No within a We	
Area cample point for l		
-Area boudens corn fie	old and pas	WIR
EGETATION – Use scientific names of plan	ts.	•
ree Stratum (Plot size: 30 v	Absolute Dominant Indicate	V
ee Suatum (Plot size	% Cover Species? Status	- Intuition of politicalit species
		That Are OBL, FACW, or FAC: (A)
Al court		Total Number of Dominant Species Across All Strata: (B)
1103000		Opecies Acioss All Ottata,
		Percent of Dominant Species That Are OBL, FACW, or FAC:
1.6-1	= Total Cover	
aoilng/Shrub Stratum (Plot size:)		Prevalence Index worksheet:
		Total % Cover of: Multiply by
1		OBL species x 1 = FACW species x 2 =
Absent		FAC species x3 =
		FACU species
	- Total Cover	UPL species x5
rb Stratum (Plot size:		Column Totals: (A) (B)
Echinochlan crus solli	25 Y FACI	<u> </u>
Persicania punctato	ZO Y OCL	Prevalence Index = B/A *
Trifolium repens	10 N FACU	
porsicaria persylvania	10 N FHU	
Eclipta prostrata	/_O	2 - Dominance Test is >50%
Cyperwesulenter	10 N FACU	-1
		4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
4-		Problematic Hydrophytic Vegetation ¹ (Explain)
7 - 1		-
pody Vine Stratum (Plot size:)	75 = Total Cover	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
CAT AULA SHUMMI (LIGIT SITA:		the description of the second
		- Hydrophytic /
		Vegetation
Absent	= Total Cover	Present? Yes No No

SOII

Depth Matrix	Redox Features	-	
(inches) Color (moist) %	Color (moist)%Type'	Loc Texture	Remarks
0-4" 104A44 65	751R4620 C	M SiC	*
	7.57RY/6 5 C	<u> </u>	
	7514h 10 D	M	
1"-17" 574/2 70	5 V P 3/4 70 (W	5./	
1-17 3/1/2 10	210 41 5 C	1/2	
		<u>m</u>	
	51R4/6 5 C	PC	
ype: C=Concentration, D=Depletion, Rf	M*Reduced Matrix, MS*Masked Sand Grain		n: PL=Pore Lining, M=Matrix.
•	Conduc Clayerd Matrix (C4)		
_ Histosol (A1) _ Histic Epipedon (A2)	Sandy Gleyed Matrix (S4) Sandy Redox (S5)	_	Prairie Redox (A16)
_ Black Histic (A3)	Stripped Matrix (S6)		Surface (S7) langanese Masses (F12)
Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1)	_	Shallow Dark Surface (TF12)
Stratified Layers (A5)	Loamy Gleyed Matrix (F2)		(Explain in Remarks)
_ 2 cm Muck (A10)	Depleted Matrix (F3)	_	•
Depleted Below Dark Surface (A11)	Redox Dark Surface (F6)		
_ Thick Dark Surface (A12)	Depleted Dark Surface (F7)		of hydrophytic vegetation and
_ Sandy Mucky Mineral (S1)	Redox Depressions (F8)		d hydrology must be present,
5 cm Mucky Peat or Peat (S3)		unless	disturbed or problematic
estrictive Layer (if observed):			
Type:		Hydric Soll	Present? Yes No
Depth (Inches):		Hyune Sui	Present res no
emarks:		Hyune 3011	Present res no
DROLOGY		Hyune Sui	Present? Tes NO
DROLOGY	inat: check all that apply)		
DROLOGY otland Hydrology Indicators: mary Indicators (minimum of one is requ		Seconda	ry Indicators (minimum of two requires
DROLOGY Idland Hydrology Indicators: mary Indicators (minimum of one is requ Surface Water (A1)	Water-Stained Leaves (B9)	5econda Surfi	ry indicators (minimum of two required
DROLOGY Idand Hydrology Indicators: mary Indicators (minimum of one is requested Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9) Aquatic Fauna (B13)	5econda Surfi Drain	ry indicators (minimum of two required ace Soil Cracks (B6) nage Patterns (B10)
DROLOGY Idland Hydrology Indicators: mary Indicators (minimum of one is requested Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Stained Leaves (B9)Aquatic Fauna (B13)True Aquatic Plants (B14)	5econda Surfi Drain Dry-	ry indicators (minimum of two requires ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2)
DROLOGY Idand Hydrology Indicators: mary Indicators (minimum of one is redu Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1)	Seconda Surfa Drai Dry- Cray	ry Indicators (minimum of two required ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8)
DROLOGY Idand Hydrology Indicators: mary Indicators (minimum of one is requ Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living	Seconda Surfi Drain Dry- Cray Roots (C3) Satu	ry Indicators (minimum of two required ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imegery (C9)
DROLOGY Idand Hydrology Indicators: mary Indicators (minimum of one is requested by the second surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living (Presence of Reduced Iron (C4))	Seconda Suffi Drai Dry- Cray Roots (C3) Satu Stun	ry Indicators (minimum of two required ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imegery (C9) ted or Stressed Plants (D1)
DROLOGY Intend Hydrology Indicators: mary Indicators (minimum of one is requested Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living (Presence of Reduced Iron (C4) Recent Iron Reduction In Tilled Sc	Seconda Surfa Drai Dry- Cray Roots (C3) Satu Stun Geoi	ry Indicators (minimum of two required ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imegary (C9) ted or Stressed Plants (D1) morphic Position (D2)
DROLOGY Itland Hydrology Indicators: mary Indicators (minimum of one is requested 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)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living In Presence of Reduced Iron (C4) Recent Iron Reduction In Tilled Science (C7)	Seconda Surfa Drai Dry- Cray Roots (C3) Satu Stun Geoi	ry Indicators (minimum of two required ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imegery (C9) ted or Stressed Plants (D1)
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DROLOGY Idland Hydrology Indicators: mary Indicators (minimum of one is requested Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface (Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living In Presence of Reduced Iron (C4) Recent Iron Reduction In Tilled Science (C7) Gauge or Well Data (D9)	Seconda Surfa Drai Dry- Cray Roots (C3) Satu Stun Geoi	ry Indicators (minimum of two required ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imegary (C9) ted or Stressed Plants (D1) morphic Position (D2)
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DROLOGY Itland Hydrology Indicators: mary Indicators (minimum of one is reduced by the second by t	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living (Presence of Reduced Iron (C4) Recent Iron Reduction In Tilled Scantific (C7) Gauge or Well Data (D9) B8) Other (Explain in Remarks)	Seconda Surfa Drai Dry- Cray Roots (C3) Satu Stun Geoi	ry Indicators (minimum of two required ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imegary (C9) ted or Stressed Plants (D1) morphic Position (D2)
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DROLOGY Itland Hydrology Indicators: mary Indicators (minimum of one is reduced by the second by t	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living (Presence of Reduced Iron (C4) Recent Iron Reduction In Tilled Scantin Muck Surface (C7) Gauge or Well Data (D9) B8) Other (Explain in Remarks) Depth (inches): Depth (inches):	Seconda Surfi Drain Dry- Cray Stun Stun Stun FAC	ry Indicators (minimum of two requires ace Soil Cracks (B6) mage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imegery (C9) ted or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)
DROLOGY International Hydrology Indicators: mary Indicators (minimum of one is requested Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface (Id Observations: face Water Present? Ves Ver Table Present? Ves Water Table Present Present? Ves Water Table Present	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living (Presence of Reduced Iron (C4) Recent Iron Reduction In Tilled So Thin Muck Surface (C7) Gauge or Well Data (D9) B8) Other (Explain in Remarks) No Depth (inches): No Depth (inches):	Seconda Surfi Drain Dry- Cray Stun Stun Stun FAC	ry Indicators (minimum of two requires ace Soil Cracks (B6) mage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imegery (C9) ted or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)
DROLOGY Itland Hydrology Indicators: mary Indicators (minimum of one is reduced in the surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface (Id Observations: face Water Present? Ves Ves Unration Present? Ves Ves Ves Ves Ves Ves Ves Ve	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living (Presence of Reduced Iron (C4) Recent Iron Reduction In Tilled So Thin Muck Surface (C7) Gauge or Well Data (D9) B8) Other (Explain in Remarks) No Depth (inches): No Depth (inches):	Seconda Surfi Drain Dry- Cray Stun Stun Stun FAC	ry Indicators (minimum of two requires ace Soil Cracks (B6) mage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imegery (C9) ted or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)

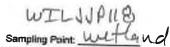
WIL-JJP-011

nvestigator(s):	9.025022 H (cam (o-18) he site typical for this time of y Hydrology N naturally p	Long:	Range: 3,7//// ief (concave, convex, none, 3/55 (NWI classifi (if ne, explain in fe "Normal Circumstances")	Datum: NADS Cation: NADS Cat
Hydrophytic Vegetation Present?	Yes _X No	in the Samula		•
tydric Soit Present? Vetland Hydrology Present?	Yes X No No	is the Sample within a Wett		No
Remarks: Area sample for a Area localed u EGETATION - Use scientific n	sittain draw	Suffing we	Hard with	2,1911
ee Stratum (Plot size: 30) v	Absolute	Dominant Indicator Species? Status	Dominance Test works Number of Dominant Sp That Are OBL, FACW, o	ecies 1
Absent			Total Number of Domina Species Across All Strata	nt 2
A		= Tolal Cover	Percent of Dominant Spe That Are OBL, FACW, or	FAC: 100 (A/B
pling/Shrub Stratum (Plot size:	7 ~)		Prevalence index works Total % Cover of:	Multiply by:
Absent			FACW species FAC species	x 2 =
b Stratum (Plot size:		= Total Cover	FACU species	x 4 = _ x 5 =
Setomia pumila	millorum 60	Yes FALW Yos FAC	Column Totals: Prevalence index =	(A) (B)
Rumex (rispis		NO OBL No FAC	Hydrophytic Vegetation 1 - Rapid Test for Hyd	rophytic Vegetation
Schoolonors arend		No FACU	2 - Dominance Test is 3 - Prevalence Index is	s ≤3.0¹
			 4 - Morphological Adaj data in Remarks or Problematic Hydrophyl 	ptations ¹ (Provide supporting on a separate sheet) tic Vegetation ¹ (Explain)
dy Vine Stratum (Plot size:	110	-	¹ Indicators of hydric soil an be present, unless disturbe	d wetland hydrology must
			Hydrophytic Vegetation	

SOIL

Profile Description: (Describe to the Depth Matrix	Redox Features	
(inches) Color (moist) %	Color (moist) % Type Loc	Texture Ramarka
1-7 2.5 y 3/2 85	7.54R4/610 (M-F	L SiCL
	7515/2 C D M	
2-17 104R 5/2	754046 5 6 1.0	Cidi
1010 42	7.57 A.16 5 C M.P	L SiCL
	104K44 5 C M	
	10/R2/1 2 C M	Maniguese rome
Type: C=Concentration, D=Depletion, R	M=Reduced Matrix, MS=Masked Sand Grains.	*Location: PL=Pore Lining, M=Matrix.
lydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :
_ Histosol (A1)	Sandy Gleyed Matrix (S4)	Coast Prairie Redox (A16)
Histic Epipedon (A2)	Sandy Redox (S5)	Dark Surface (S7)
Black Histic (A3)	Stripped Matrix (S6)	Iron-Manganese Masses (F12)
Hydrogen Sulfide (A4) Stratified Layers (A5)	Loamy Mucky Mineral (F1)	Very Shallow Dark Surface (TF12)
_ 2 cm Muck (A10)	Loamy Gleyed Matrix (F2)	Other (Explain In Remarks)
Depleted Below Dark Surface (A11)	Depleted Matnx (F3) Redox Dark Surface (F6)	
_ Thick Dark Surface (A12)	Redox Dark Surface (F6) Depleted Dark Surface (F7)	3Indicators of the Control
_ Sandy Mucky Mineral (S1)	Redox Depressions (F8)	³ Indicators of hydrophytic vegetation and
_ 5 cm Mucky Peat or Peat (S3)		wetland hydrology must be present, unless disturbed or problematic.
estrictive Layer (if observed):		Timeso distarbed or problematic.
Type:		
Depth (inches):		Hydric Soil Present? Yes X No
marka:		NO
DROLOGY		NO
DROLOGY		NO
DROLOGY Itland Hydrology Indicators: mery Indicators (minimum of one is requi		
DROLOGY Idand Hydrology Indicators: mary Indicators (minimum of one is requi	Water-Stained Leaves (B9)	Secondary Indicators (minimum of two required Surface Soil Cracks (B6)
DROLOGY Idand Hydrology Indicators: mery Indicators (minimum of one is requi Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9) Aquatic Fauna (B13)	Secondary Indicators (minimum of two required Surface Soil Cracks (B6)
DROLOGY Idand Hydrology Indicators: mery Indicators (minimum of one is requi Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14)	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10)
DROLOGY Idand Hydrology Indicators: mery Indicators (minimum of one is requi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1)	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
DROLOGY Idand Hydrology Indicators: mery Indicators (minimum of one is requi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) X Oxidized Rhizosphares on Living Roots (C)	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
DROLOGY Idand Hydrology Indicators: mery Indicators (minimum of one is requi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) X Oxidized Rhizosphares on Living Roots (C) Presence of Reduced Iron (C4)	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aeriat Imagery (C9) Stunted or Stressed Plants (D1)
DROLOGY Idand Hydrology Indicators: mery Indicators (minimum of one is requi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizosphares on Living Roots (C1) Presence of Reduced Iron (C4) Recent Iron Reduction In Tilled Solls (C6)	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aeriat Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Positlon (D2)
DROLOGY Itland Hydrology Indicators: mery Indicators (minimum of one is requised) 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)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizosphares on Living Roots (C1) Presence of Reduced Iron (C4) Recent Iron Reduction In Tilled Solls (C6) Thin Muck Surface (C7)	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aeriat Imagery (C9) Stunted or Stressed Plants (D1)
DROLOGY Itland Hydrology Indicators: mery Indicators (minimum of one is requi 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 Aeriel Imagery (B7)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizosphares on Living Roots (C1) Presence of Reduced Iron (C4) Recent Iron Reduction In Tilled Solls (C6) Thin Muck Surface (C7) Gauge or Well Data (D9)	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aeriat Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Positlon (D2)
DROLOGY Itland Hydrology Indicators: mery Indicators (minimum of one is requi 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 Aeriel Imagery (B7 Sparsely Vegetated Concave Surface (B	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizosphares on Living Roots (C1) Presence of Reduced Iron (C4) Recent Iron Reduction In Tilled Solls (C6) Thin Muck Surface (C7) Gauge or Well Data (D9)	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aeriat Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Positlon (D2)
DROLOGY Idand Hydrology Indicators: mery Indicators (minimum of one is requi 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 Aeriel Imagery (B7 Sparsely Vegetated Concave Surface (B1)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizosphares on Living Roots (C1) Presence of Reduced Iron (C4) Recent Iron Reduction In Tilled Solls (C6) Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks)	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aeriat Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Positlon (D2)
DROLOGY Idand Hydrology Indicators: mery Indicators (minimum of one is requi 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 Aeriel Imagery (B7 Sparsely Vegetated Concave Surface (B1)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizosphares on Living Roots (C1) Presence of Reduced Iron (C4) Recent Iron Reduction In Tilled Solls (C6) Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks)	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aeriat Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Positlon (D2)
DROLOGY Idand Hydrology Indicators: mery Indicators (minimum of one is requisive 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 Aeriel Imagery (B7 Sparsely Vegetated Concave Surface (B1 Deposits (B5) Inundation Visible on Aeriel Imagery (B7 Sparsely Vegetated Concave Surface (B1 Deposits (B5) Inundation Visible on Aeriel Imagery (B7 Sparsely Vegetated Concave Surface (B1 Deposits (B5) Inundation Visible on Aeriel Imagery (B7 Sparsely Vegetated Concave Surface (B1 Deposits (B5) Inundation Visible on Aeriel Imagery (B7 Sparsely Vegetated Concave Surface (B1 Deposits (B5) Inundation Visible on Aeriel Imagery (B7 Sparsely Vegetated Concave Surface (B1 Deposits (B5) Inundation Visible On Aeriel Imagery (B7 Sparsely Vegetated Concave Surface (B1 Deposits (B5) Inundation Visible On Aeriel Imagery (B7 Sparsely Vegetated Concave Surface (B1 Deposits (B5) Inundation Visible On Aeriel Imagery (B7 Sparsely Vegetated Concave Surface (B1 Deposits (B5) Inundation Visible On Aeriel Imagery (B7 Sparsely Vegetated Concave Surface (B1 Deposits (B5) Inundation Visible On Aeriel Imagery (B7 Sparsely Vegetated Concave Surface (B1 Deposits (B5) Inundation Visible On Aeriel Imagery (B7 Sparsely Vegetated Concave Surface (B1 Deposits (B5) Inundation Visible On Aeriel Imagery (B7 Sparsely Vegetated Concave Surface (B1 Deposits (B5) Inundation Visible On Aeriel Imagery (B7 Sparsely Vegetated Concave Surface (B1 Deposits (B5) Inundation Visible On Aeriel Imagery (B7 Sparsely Vegetated Concave Surface (B1 Deposits (B5) Inundation Visible On Aeriel Imagery (B7 Sparsely Vegetated Concave Surface (B1 Deposits (B5) Inundation Visible On Aeriel Imagery (B7 Sparsely Vegetated Concave Surface (B1 Deposits (B5) Inundation Visible On Aeriel Imagery (B7 Sparsely Vegetated Concave Surface (B1 Deposits (B5) Inundation Visible On Aeriel Imagery (B7 Deposits (B5) Inundation Visible On Aeriel Imagery (B7 Deposits (B5) In	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizosphares on Living Roots (C1) Presence of Reduced Iron (C4) Recent Iron Reduction In Tilled Solls (C6) Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks) Depth (Inches): Depth (inches):	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aeriat Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5)
DROLOGY Itland Hydrology Indicators: mery Indicators (minimum of one is requi 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 Aeriel Imagery (B7 Sparsely Vegetated Concave Surface (B I Observations: ace Water Present? Yes N Partion Present? Yes N Fration Present? Yes N Fration Present? Yes N	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizosphares on Living Roots (C1) Presence of Reduced Iron (C4) Recent Iron Reduction In Tilled Solls (C6) Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks) Depth (Inches): Depth (Inches): Wetlan	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aeriat Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Positlon (D2) FAC-Neutral Test (D5)
DROLOGY Itland Hydrology Indicators: mery Indicators (minimum of one is requi 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 Aeriel Imagery (B7 Sparsely Vegetated Concave Surface (B I Observations: ace Water Present? Yes N Partion Present? Yes N Fration Present? Yes N Fration Present? Yes N	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizosphares on Living Roots (C1) Presence of Reduced Iron (C4) Recent Iron Reduction In Tilled Solls (C6) Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks) Depth (Inches): Depth (inches):	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aeriat Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Positlon (D2) FAC-Neutral Test (D5)
DROLOGY Idand Hydrology Indicators: mery Indicators (minimum of one is requised) 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 Aeriel Imagery (B7 Sparsely Vegetated Concave Surface (B4 d Observations: ace Water Present? Yes North Company (B7 ration Present? Yes North Company (B7) sentence (B1)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizosphares on Living Roots (C1) Presence of Reduced Iron (C4) Recent Iron Reduction In Tilled Solls (C6) Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks) Depth (Inches): Depth (Inches): Wetlan	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aeriat Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Positlon (D2) FAC-Neutral Test (D5)
DROLOGY Idand Hydrology Indicators: mery Indicators (minimum of one is requisive 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 Aeriel Imagery (B7) Sparsely Vegetated Concave Surface (B1) In Observations: ace Water Present? Yes North of the present of the p	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizosphares on Living Roots (C1) Presence of Reduced Iron (C4) Recent Iron Reduction In Tilled Solls (C6) Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks) Depth (Inches): Depth (Inches): Depth (Inches): Wetlan	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aeriat Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Positlon (D2) FAC-Neutral Test (D5) d Hydrology Present? Yes No
DROLOGY Idand Hydrology Indicators: mery Indicators (minimum of one is requisive 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 Aeriel Imagery (B7) Sparsely Vegetated Concave Surface (B1) In Observations: ace Water Present? Yes North of the present of the p	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizosphares on Living Roots (C1) Presence of Reduced Iron (C4) Recent Iron Reduction In Tilled Solls (C6) Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks) Depth (Inches): Depth (Inches): Wetlan	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aeriat Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Positlon (D2) FAC-Neutral Test (D5) d Hydrology Present? Yes No

1923-200 NOTE N		
Project/Site: STL Pipeline	City/County:	co. Sampling Date: Z-21-20
Applicant/Owner: Spire		State: <u>TL</u> Sampling Point: <u>wetta</u>
Investigator(s): 11P-W1W	Section, Township,	Range: 14 / 12 / 9N
Landform (hillslope, terrace, etc.): Depression	on plain Local re	lief (cancave, convex, none):
Slope (%): <u>LZ</u> Lat: <u>39</u> , 228369		103585 Datum: NAD 8.3
Soil Map Unit Name: Begy Long Silty cky		0-)/ NWI classification: //UNR
Are climatic / hydrologic conditions on the site typical for the		(If no evaluin in Remarks)
Are Vegetation N. Soil N, or Hydrology N	significantly disturbed?	re "Normal Circumstances" present? Yes No
Are Vegetation Soil V, or Hydrology V	naturally emblematic? (If	f needed, explain any answers in Remarks.)
		t locations, transects, important features, etc.
	No	•
	ls the Sampl	. /
	within a Wet	tland? Yes No
		metland WILNPILS
- Area possible agricultu		ditch,
VEGETATION – Use scientific names of plants		
Tree Stratum (Plot size: 30')	Absolute Dominant Indicator % Cover Species? Status	======================================
1/	70 GOVEL ODECIES! CIAIUS	The Are ODI FACIAL SPECIES
2.		
3. Hosen		Total Number of Dominant Species Across All Strata: (B)
4		
5		Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size: 15')	= Total Cover	Prevalence index worksheet:
1		Total % Cover of: Multiply by:
2		OBL species x 1 =
3.		FACW species x 2 =
4. 17 8 30001		FAC species x 3 =
5		FACU species x 4 =
Herb Stratum (Plot size: 5)	= Total Cover	UPL species x 5 =
1. Persicania maculosa	10 Y FACIL	Column Totals: (A) (B)
2 Rumex altissima	5 Y FAIW	Prevalence Index = B/A =
3. Panicum dicholomiflora	5 Y FALW	Hydrophytic Vegetation Indicators:
4. Xanthium Spinneum	Z N FACU	1 - Rapid Test for Hydrophytic Vegetation
5		2 - Dominance Test is >50%
6		3 - Prevalence Index is ≤3.0¹
7		4 - Morphological Adaptations (Provide supporting
8		data in Remarks or on a separate sheet) — Problematic Hydrophytic Vegetation¹ (Explain)
9		Problematic Hydrophytic Vegetation (Explain)
	77	¹ Indicators of hydric soil and wetland hydrology must
Noody Vine Stratum (Plot size: 30)	Total Cover	be present, unless disturbed or problematic.
		Hydrophytic
Hosen	~	Vegetation
	= Total Cover	Present? Yes No
Remarks: (Include photo numbers here or on a separate sh	eet.)	
- None		1
M. T. Commercial Comme		



Profile Description: (Describe to the di Depth Matrix	Redox Features		
(inches) Color (moist) %	Color (moist) % Type Loc	Texture	Remarks
0-17 25/3/2 90	10 /R 3/4 10 CM-P	LSCL	
	+		
Type: C=Concentration, D=Depletion, Rt.	#=Reduced Matrix, MS=Masked Sand Grains.	³ Location: PL=	Pore Lining, M=Matrix.
lydric Soil Indicators:		Indicators for P	roblematic Hydric Soils :
_ Histosol (A1)	Sandy Gleyed Matrix (S4)	Coast Prairie	Redox (A16)
_ Histic Epipedon (A2)	Sandy Redox (S5)	Dark Surface	
_ Black Histic (A3)	Stripped Matrix (S6)	Iron-Mangan	ese Masses (F12)
_ Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1)		Dark Surface (TF12)
_ Stratified Layers (A5)	Loamy Gleyed Matrix (F2)		n in Remarks)
_ 2 cm Muck (A10) _ Depleted Below Dark Surface (A11)	Depleted Matrix (F3)		
_ Depleted Below Dark Surface (A11) _ Thick Dark Surface (A12)	Redox Dark Surface (F6)	1.	
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	Indicators of hyd	rophytic vegetation and
_ 5 cm Mucky Peat or Peat (53)	Redox Depressions (F8)	wetland hydro	logy must be present,
estrictive Layer (if observed):		unless disturt	ped or problematic.
Type: Now			
	_	Hydric Soil Preser	nt? YesNo
Depth (inches):			
Depth (inches):			
marks: - N Me			y +
DROLOGY			<i>*</i>
DROLOGY	ed: check all that apply)		+
DROLOGY Itland Hydrology Indicators: mary Indicators (minimum of one is require			ators (minimum of two require
DROLOGY Indicators (minimum of one is required) Surface Water (A1)	Water-Stained Leaves (B9)	Surface Soil	ators (minimum of two require Cracks (86)
DROLOGY Itland Hydrology Indicators: mary Indicators (minimum of one is required) Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9) Aquatic Fauna (B13)	Surface Soil Urainage Pa	ators (minimum of two require Cracks (86) ttems (810)
DROLOGY Itland Hydrology Indicators: mary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14)	Surface-Soil Orainage Pa Dry-Season	ators (minimum of two require Cracks (86) Items (810) Water Table (C2)
DROLOGY Itland Hydrology Indicators: Mary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1)	Surface Soil Orainage Pa Dry-Season Crayfish Bur	ators (minimum of two require Cracks (86) Items (810) Water Table (C2) rows (C6)
DROLOGY Idand Hydrology Indicators: mary Indicators (minimum of one is required in the second in t	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Flants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (III)	Surface-Soil Orainage Pa Dry-Season Crayfish Bur C3) Saturation V	ators (minimum of two require Cracks (86) Items (810) Water Table (C2) rows (C8) sible on Aerial Imagery (C9)
DROLOGY Idand Hydrology Indicators: mary Indicators (minimum of one is required by the surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (C2) Presence of Reduced Iron (C4)	Surface-Soil Orainage Pa Dry-Season Crayfish Bur C3) Saturation V Sturtled or S	ators (minimum of two require Cracks (86) Items (810) Water Table (C2) rows (C8) sible on Aerial Imagery (C9) tressed Plants (D1)
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DROLOGY Itland Hydrology Indicators: mary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (Bild Observations: Since Water Present? Yes Noter Table Present? Yes Note Table Present? Ye	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Flants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (C1) Presence of Reduced Iron (C4) Recent Iron Reduction in Taled Solts (C6) Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks) Depth (inches): Depth (inches): Wettar	Surface-Soil Dry-Season Crayfish Bur Saturation V Stunted or S Sturnerphic FAC-Neutral	ators (minimum of two require Cracks (86) Items (810) Water Table (C2) rows (C8) sible on Aerial Imagery (C9) tressed Plants (D1) Position (D2) Test (D5)

WETLAND DETERMINATION DATA FORM - Midwest Region City/County: Greene Co, Sampling Date: Z-21-201 Project/Site: Applicant/Owner: Investigator(s): Section, Township, Range: 14/12/19N Landform (hillslope, terrace, etc.): De pression on plain Local relief (concave, convex, none): __(on race) Soil Map Unit Name: Beauconp sitty Chy lan, cool mesic 0-24, NWI classification: None Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.) , or Hydrology _ significantly disturbed? Are "Normal Circumstances" present? Yes Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes > is the Sampled Area Hydric Soil Present? No Wetland Hydrology Present? within a Wetland? Remarks: - Area sample Doint - Area mapped, NWI VEGETATION - Use scientific names of plants. Absolute Dominant Indicator Dominance Test worksheet: Tree Stratum (Plot size: % Cover Species? Status Number of Dominant Species That Are OBL, FACW, or FAC: **Total Number of Dominant** Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: = Total Cover Sapling/Shrub Stratum (Plot size: Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species ____ x1 = ___ FACW species FAC species FACU species _____ x 4 = ____ = Total Cover _ x5 = ____ Column Totals: ____ (A) _____ (B) Prevalence Index = B/A = __ **Hydrophytic Vegetation Indicators:** 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 6. 3 - Prevalence Index is ≤3.01 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) ¹Indicators of hydric soil and wetland hydrology must = Total Cover be present, unless disturbed or problematic. Hydrophytic Vegetation Present? = Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

WILLYPIL9 Sampling Point Wetland

Depth Matrix	lepth needed to document the indicator or confi	m the abadiles of molestors.)
(inches) Color (moist) %	Redox Features Color (mgist) % Type Loc	Texture Remarks
0-4 10YR 3/2 9B	104R3/4 Z C M	Texture Remarks
4-17 2574/2 80	LUDUL C	
411 21172 00	1 110	- SL
	+57R3/4 5 C M-PL	t ——
	7.54R4/6 5 C M-PL	
	*	
_		
Time CaCanasa II - C. C		
fydric Soil Indicators:	M=Reduced Matrix, MS=Masked Sand Grains.	*Location: PL=Pore Lining, M=Matrix.
Histosol (A1)	County Olevand Market, 40 A	Indicators for Problematic Hydric Soils:
Histic Epipedon (A2)	Sandy Gleyed Matrix (S4) Sandy Redox (S5)	Coest Praine Redox (A16)
Black Histic (A3)	Sandy Redox (SS) Stripped Matrix (S6)	Dark Surface (S7)
Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1)	Iron-Manganese Masses (F12) Very Shallow Dark Surface (TF12)
_ Stratified Layers (A5)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
_ 2 cm Muck (A10)	Depleted Matrix (F3)	Onlor (Explain in Remarks)
_ Depleted Below Dark Surfece (A11)	Redox Dark Surface (F6)	
_ Thick Dark Surface (A12)	Depleted Dark Surface (F7)	³ Indicators of hydrophytic vegetation and
_ Sandy Mucky Mineral (S1)	Redox Depressions (F8)	wetland hydrology must be present,
_ 5 cm Mucky Peat or Peat (S3) strictive Layer (if observed):		unless disturbed or problematic.
Type: PM		
TYDE: P-171-4		
		Hirdrig Sail Programs Van 1 / At
Depth (Inches):		Hydric Soil Present? Yes V No
Depth (Inches):		Hydric Soil Present? Yes V No
Depth (Inches):		Hydric Soil Present? Yes V No
Depth (Inches): emarks; DROLOGY etland Hydrology Indicators;	ired: check all that apply)	
Depth (Inches): emarks; DROLOGY etland Hydrology Indicators: mary Indicators (minimum of one is requi		Secondary Indicators (minimum of two required
Depth (Inches): DROLOGY atland Hydrology Indicators: mary Indicators (minimum of one is requi	Water-Stained Leaves (B9)	Secondary Indicators (minimum of two required Surface Soil Cracks (86)
Depth (Inches): DROLOGY Interest indicators: Mary Indicators (minimum of one is requi Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9) Aquatic Fauna (B13)	Secondary Indicators (minimum of two required Surface Soil Cracks (86) Drainage Patterns (810)
Depth (Inches):	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14)	Secondary Indicators (minimum of two required Surface Soil Cracks (86) Drainage Patterns (810) Dry-Season Water Table (C2)
Depth (Inches): DROLOGY Interest indicators: Mary Indicators (minimum of one is requi Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Suffide Odor (C1)	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C6)
DROLOGY etland Hydrology Indicators: mary Indicators (minimum of one is requi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Merks (B1)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Suffide Odor (C1) Osidized Rhizospheres on Living Roots (C)	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C6) Saturation Visible on Aerial Imagery (C9)
Depth (Inches): DROLOGY Internation (Minimum of one is required): Surface Water (A1) High Water Table (A2) Saturation (A3) Water Merks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Suffide Odor (C1) Oxidized Rhizospheres on Living Roots (C) Presence of Reduced Iron (C4)	Secondary Indicators (minimum of two required Surface Soil Cracks (86) Drainage Patterns (810) Dry-Season Water Table (C2) Crayfish Burrows (C6) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)
Depth (Inches): DROLOGY Internation (Minimum of one is required): Surface Water (A1) High Water Table (A2) Saturation (A3) Water Merks (B1) Sediment Deposits (B2)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Suffide Odor (C1) Osidized Rhizospheres on Living Roots (C) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solls (C6)	Secondary Indicators (minimum of two required Surface Soil Cracks (86) Drainage Patterns (810) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
DROLOGY Internation (Minimum of one is required) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Merks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Osidized Rhizospheres on Living Roots (C) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solls (C6) Thin Muck Surface (C7)	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C6) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)
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Depth (Inches): DROLOGY Internation (Minimum of one is required) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Merks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aeriel Imagery (B7 Sparsely Vegetated Concave Surface (B8)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Suffide Odor (C1) Osidized Rhizospheres on Living Roots (C) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solls (C6) Thin Muck Surface (C7) Gauge or Well Deta (D9)	Secondary Indicators (minimum of two required Surface Soil Cracks (86) Drainage Patterns (810) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
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DROLOGY etland Hydrology Indicators: mary Indicators (minimum of one is requi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Merks (B1) Sediment Deposits (B2) Dait Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aeriel Imagery (B7 Sparsely Vegetated Concave Surface (Bid Observations: face Water Present? Yes Notes Table Present? Yes Notes Ta	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Suffide Odor (C1) Ositized Rhizospheres on Living Roots (C) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Gauge or Well Deta (D9) Other (Explain in Remarks)	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C6) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5)
DROLOGY etland Hydrology Indicators: mary Indicators (minimum of one is requi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Merks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aeriel Imagery (B7 Sparsely Vegetated Concave Surface (B1 Indicators (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aeriel Imagery (B7 Sparsely Vegetated Concave Surface (B1 Indicators (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aeriel Imagery (B7 Sparsely Vegetated Concave Surface (B1 Indicators (B3) Inundation Visible on Aeriel Imagery (B7 Sparsely Vegetated Concave Surface (B1 Indicators (B3) Inundation Visible on Aeriel Imagery (B7 Sparsely Vegetated Concave Surface (B1 Indicators (B4) Inundation Visible on Aeriel Imagery (B7 Sparsely Vegetated Concave Surface (B1 Indicators (B4) Inundation Visible on Aeriel Imagery (B7 Sparsely Vegetated Concave Surface (B1 Indicators (B4) Inundation Visible on Aeriel Imagery (B7 Sparsely Vegetated Concave Surface (B1 Indicators (B4) Inundation Visible on Aeriel Imagery (B7 Sparsely Vegetated Concave Surface (B1 Inundation Visible on Aeriel Imagery (B7 Sparsely Vegetated Concave Surface (B1 Inundation Visible on Aeriel Imagery (B7 Sparsely Vegetated Concave Surface (B1 Inundation Visible on Aeriel Imagery (B7 Sparsely Vegetated Concave Surface (B1 Inundation Visible on Aeriel Imagery (B7 Sparsely Vegetated Concave Surface (B1 Inundation Visible on Aeriel Imagery (B7 Sparsely Vegetated Concave Surface (B1 Inundation Visible on Aeriel Imagery (B7 Sparsely Vegetated Concave Surface (B1 Inundation Visible on Aeriel Imagery (B7 Sparsely Vegetated Concave Surface (B1 Inundation Visible on Aeriel Imagery (B7 Sparsely Vegetated Concave Surface (B1 Inundation Visible on Aeriel Imagery (B7 Sparsely Vegetated Concave Surface (B1 Inundation Visible On Aeriel Imagery (B7 Sparsely Vegetated Concave Surface (B1 Inundation Visible On Aeriel Imagery (B7 Sparsely Vegetated Concave Su	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Suffide Odor (C1) Ositized Rhizospheres on Living Roots (C) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Gauge or Well Deta (D9) Other (Explain in Remarks)	Secondary Indicators (minimum of two required Surface Soil Cracks (86) Drainage Patterns (810) Dry-Season Water Table (C2) Crayfish Burrows (C6) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5)
DROLOGY atland Hydrology Indicators: mary Indicators (minimum of one is required in the second of Data (stream gauge, more described Recorded Data (stream gauge)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Suffide Odor (C1) Osidized Rhizospheres on Living Roots (C) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solls (C6) Thin Muck Surface (C7) Gauge or Well Deta (D9) Other (Explain in Remarks) Depth (inches): Depth (inches): Wetlan	Secondary Indicators (minimum of two required Surface Soil Cracks (86) Drainage Patterns (810) Dry-Season Water Table (C2) Crayfish Burrows (C6) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5)
Depth (Inches):	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Suffide Odor (C1) Osidized Rhizospheres on Living Roots (C) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solls (C6) Thin Muck Surface (C7) Gauge or Well Deta (D9) Other (Explain in Remarks) Depth (inches): Depth (inches): Wetlan	Secondary Indicators (minimum of two required Surface Soil Gracks (86) Drainage Patterns (810) Dry-Season Water Table (C2) Crayfish Burrows (C6) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5)

Project/Site: 57L		C	ity/County: Gr	cene (
Calle				7-1	Sampling Date: 2/2///
Investigator(s):/ WTV				Range: 11/124/ 9	Sampling Point: PEM
Landform (hillslope, terrace, etc.):	1000 plain		1 1		•
Slope (%): Lat: 39,	233096	Le	Local re	elief (concave, convex, none):	CONCAVE
Soil Map Unit Name: Lauson 5	ilt lean coal	ma Ca	0-1:/ el	104831	Datum:
Are climatic / hydrologic conditions on	the site tunical for this time	-163/2	- 310g	MWI clessifica	ition: W/A
Are Vegetation, Soil, o	r Hydrology A sign	He or year			\ \ \ \ \
Are Vegetation, Soil, oil	Hydrology V sign	incanuy dis		re "Normal Circumstances" pr	
				f needed, explain any answers	ı in Remarks.)
SUMMARY OF FINDINGS – A Hydrophytic Vegetetion Present?		owing sa	ampling poin	t locations, transects,	important features, etc
Hydric Soil Present?			Is the Sampi	ed Area	
Wetland Hydrology Present?			within a Wet	land? Yes X	No
Remarks:		Field	4 .		
PEM wetland associa	red with a	field.	drain		
/EGETATION - Use scientific r	names of plants.				
		solute Do	ominant Indicator	Dominance Test worksh	not
Tree Stratum (Plot size: 307) Ab	Cover Sr	ecies? Status	- Number of Dominant Spec	
7				That Are OBL, FACW, or I	FAC: (A)
2. ====================================		—-		Total Number of Dominant	7
3.				Species Across All Strata:	(B)
1.				Percent of Dominant Spec	les
	an /	<u>О</u> = то	ntal Cover	That Are OBL, FACW, or F	AC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:	3'()	- 10	rial Cover	Prevalence Index worksh	eet:
Absent		<u> </u>		Total % Cover of:	Multiply by:
		———		OBL species	_ x1=
•				FACW species	_ x 2 =
				FAC species	_ x 3 =
~ .		ラーT		FACU species	
erb Stratum (Plot size:		= 10	tal Cover		_ x5=
The state of the s	cinea !	5	1 OBL	Column Totals:	_ (A) (B)
	nlatus	2 X	OBL	Prevalence Index = B	/A =
Brassica SP.	5	* -	* *	Hydrophytic Vegetation In	dicators:
				1 - Rapid Test for Hydro	
	-			2 - Dominance Test is >	
		——		3 - Prevalence Index is:	
				4 - Morphological Adapt data in Remarks or o	ations¹ (Provide supporting
		- 1		Problematic Hydrophytic	
					Soldion (Explain)
^	1,	= Tota	Cover	Indicators of hydric soil and	wetland hydrology must
pody Vine Stratum (Plot size: 30			. 00461	be present, unless disturbed	or problematic.
Absent				Hydrophytic	
	Bar et	-		Manufatti A	No
marks: (Include photo numbers here o	r on a congrete sheet	= Tota	Cover	Present? Yes	No
Species not ide		Youd	Fenns	level have	6000
		1000	0 ***		7.07
omitted from	calculation.	5-			-

Sampling Point: Lettand

Profile Description: (Describe to t Depth Matrix		Redox Feature				
(inches) Color (moist)	% Color (mois)		Type	Loc2	Texture	Remarks
0-4" 2.5/3/2	80 2.5Y41	1 20	0	M	SCL	
4-17" 2.5 y 4/1 C	10 7.5 YR	1/4 5	(M	SCL	
•	184R 3/4	5	C	M		
					-	
	_					
Type: C=Concentration, D=Depletio	n, RM=Reduced Matrix	x, MS=Masked	Sand Gr	ains.	² Location: F	L=Pore Lining, M=Matrix.
lydric Soil Indicators:						Problematic Hydric Soils ³ :
Histosol (A1)	San	ndy Gleyed Ma	ıtrix (S4)		Coast Pra	irle Redox (A16)
Histic Epipedon (A2)	San	ndy Redox (S5)		Dark Surfa	ace (S7)
Black Histic (A3)		pped Matrix (S	,		Iron-Mang	janese Masses (F12)
_ Hydrogen Sulfide (A4)		my Mucky Min			Very Shall	low Dark Surface (TF12)
_ Stratified Layers (A5)		my Gleyed Ma			Other (Ex	plain in Remarks)
_ 2 cm Muck (A10)	-0	Noted Matrix (F	•			
_ Depleted Below Dark Surface (A1		lox Dark Surfa				, ,
_ Thick Dark Surface (A12)		leted Dark Sui				hydrophytic vegetation and
_ Sandy Mucky Mineral (S1)	Red	lox Depression	ıs (F8)			drology must be present,
_ 5 cm Mucky Peat or Peat (S3) estrictive Layer (if observed):					unless dist	turbed or problematic.
Type:						
					Hydric Soll Pre	sent? Yes X No
Depth (inches):emarks:					Trydic doll File	
emarks:					Trydic Soll F16	
					Trydic Soil File	
DROLOGY etland Hydrology Indicators:	required: check all that	t apply)		1		
DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one is			s (B9)		Secondary in	dicators (minimum of two requires
DROLOGY atland Hydrology Indicators: imary Indicators (minimum of one is _ Surface Water (A1)	Water-S	Stained Leaves	s (B9)		Secondary In	udicators (minimum of two required Soil Cracks (B6)
DROLOGY Itland Hydrology Indicators: mary Indicators (minimum of one is Surface Water (A1) High Water Table (A2)	Water-S Aquatic	Stained Leaves Fauna (B13)			Secondary in Surface Drainage	dicators (minimum of two requires Soil Cracks (B6) Pattems (B10)
DROLOGY Illand Hydrology Indicators: Imary Indicators (minimum of one is Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-S Aquatic True Aq	Stained Leaves Fauna (B13) quatic Plants (E	314)		5econdary in Surface Drainage Dry-Seas	ndicators (minimum of two required Soil Cracks (B6) Patterns (B10) Son Water Table (C2)
DROLOGY Illand Hydrology Indicators: mary Indicators (minimum of one is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-S Aquatic True Aq Hydroge	Stained Leaves Fauna (B13) quatic Plants (E en Sulfide Odd	314) or (C1)	g Poots (f	Secondary in Surface : Drainage Dry-Seas Crayfish	odicators (minimum of two required Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8)
DROLOGY Illand Hydrology Indicators: mary Indicators (minimum of one is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-S Aquatic True Aq Hydroge Oxidized	Stained Leaves Fauna (B13) quatic Plants (B en Sulfide Odo d Rhizosphere	314) or (C1) es on Livin		Secondary in Surface : Drainage Dry-Seas Crayfish 3) Saturatio	odicators (minimum of two requires Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9)
DROLOGY Illand Hydrology Indicators: mary Indicators (minimum of one is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Water-S Aquatic True Aq Hydroge Oxidized Presence	Stained Leaves Fauna (B13) quatic Plants (E en Sulfide Odo d Rhizosphere ce of Reduced	314) or (C1) es on Livin Iron (C4)		Secondary in Surface : Drainage Dry-Seat Crayfish 3) Saturatio	dicators (minimum of two requires Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1)
DROLOGY Itland Hydrology Indicators: mary Indicators (minimum of one is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	Water-S Aquatic True Aq Hydroge Oxidized Presence Recent	Stained Leaves Fauna (B13) quatic Plants (Ben Sulfide Odo d Rhizosphere ce of Reduced Iron Reductlor	314) or (C1) os on Livin Iron (C4) o In Tilled		Secondary in Surface Drainage Crayfish Saturatio Stunted of	adicators (minimum of two requires Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1)
emarks: DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one is 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)	Water-S Aquatic True Aq Oxidized Presence Recent i Thin Mu	Stained Leaves Fauna (B13) quatic Plants (Ben Sulfide Odo d Rhizosphere ce of Reduced Iron Reductior ick Surface (C	314) or (C1) es on Livin Iron (C4) o In Tilled 7)		Secondary in Surface Drainage Crayfish Saturatio Stunted of	dicators (minimum of two requires Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1)
DROLOGY etland Hydrology Indicators: mary Indicators (minimum of one is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagel	Water-S Aquatic True Aq Hydroge Oxidized Presend Recent Thin Mu Gauge C	Stained Leaves Fauna (B13) quatic Plants (Een Sulfide Odo d Rhizosphere ce of Reduced Iron Reduction ick Surface (Cor Well Data (Data)	314) or (C1) os on Livin fron (C4) of In Tilled 7)		Secondary in Surface Drainage Crayfish Saturatio Stunted of	odicators (minimum of two requires Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1)
DROLOGY Itland Hydrology Indicators: mary Indicators (minimum of one is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagel Sparsely Vegetated Concave Surfa	Water-S Aquatic True Aq Hydroge Oxidized Presend Recent Thin Mu Gauge C	Stained Leaves Fauna (B13) quatic Plants (Ben Sulfide Odo d Rhizosphere ce of Reduced Iron Reductior ick Surface (C	314) or (C1) os on Livin fron (C4) of In Tilled 7)		Secondary in Surface Drainage Crayfish Saturatio Stunted of	odicators (minimum of two requires Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1)
DROLOGY Illand Hydrology Indicators: Imary Indicators (minimum of one is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imager Sparsely Vegetated Concave Surfall Observations:	Water-S Aquatic True Aq Hydroge Oxidized Presenc Recent Thin Mu ry (B7) Gauge of	Stained Leaves: Fauna (B13) quatic Plants (Ben Sulfide Odo d Rhizosphere ce of Reduced Iron Reduction ack Surface (City) or Well Data (Explain in Rem	314) or (C1) os on Livin fron (C4) of In Tilled 7)		Secondary in Surface Drainage Crayfish Saturatio Stunted of	odicators (minimum of two required Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1)
DROLOGY Illand Hydrology Indicators: mary Indicators (minimum of one is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagel Sparsely Vegetated Concave Surfalit Observations: face Water Present? Yes	Water-S Aquatic True Aq Hydroge Oxidized Presence Recent I Thin Mu ry (B7) Gauge of ace (B8) Depth (Stained Leaves Fauna (B13) quatic Plants (Een Sulfide Odo d Rhizosphere ce of Reduced Iron Reduction ick Surface (Cor Well Data (Eexplain in Rem (inches):	314) or (C1) os on Livin fron (C4) of In Tilled 7)		Secondary in Surface Drainage Crayfish Saturatio Stunted of	odicators (minimum of two required Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1)
DROLOGY Illand Hydrology Indicators: Imary Indicators (minimum of one is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagel Sparsely Vegetated Concave Surfations: face Water Present? Yes Interpretations: Yes Interpretations: Interpretation Interpretation Interpretation Interpretation Interpretatio	Water-Sc Aquatic True Aq Hydroge Oxidized Presence Recent Thin Mu ty (B7) Gauge co ace (B8) Other (E No Depth (Depth (Stained Leaves: Fauna (B13) quatic Plants (Een Sulfide Odo d Rhizosphere ce of Reduced Iron Reduction ick Surface (Cor Well Data (Explain in Rem (inches):	314) or (C1) os on Livin fron (C4) of In Tilled 7)	Soils (C6)	Secondary In Surface Drainage Dry-Seas Crayfish Saturatio Stunted of Geomorp	dicators (minimum of two requires Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) ohic Position (D2) stral Test (D5)
emarks: DROLOGY Indicators (minimum of one is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagel Sparsely Vegetated Concave Surface Water Present? Table Present? Table Present? Test Table Present?	Water-S Aquatic True Aq Oxidized Presence Recent i Thin Mu ry (B7) Gauge co ace (B8) Other (E No Depth (No Depth (Stained Leaves Fauna (B13) quatic Plants (Een Sulfide Odo d Rhizosphere ce of Reduced Iron Reduction ick Surface (Coor Well Data (Eexplain in Rem (inches):	B14) or (C1) es on Livin fron (C4) in In Tilled 7) D9) earks)	Soils (C6)	Secondary In Surface Drainage Dry-Seas Crayfish Saturatio Stunted of Geomorp FAC-Neu	idicators (minimum of two required Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1)
DROLOGY Itland Hydrology Indicators: imary Indicators (minimum of one is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagel Sparsely Vegetated Concave Surfation Visible on Aerial Imagel Sparsely Vegetated Concave Surfation Visible Present? Table Present? Yes uration Present? Yes uration Present? Yes	Water-S Aquatic True Aq Oxidized Presence Recent i Thin Mu ry (B7) Gauge co ace (B8) Other (E No Depth (No Depth (Stained Leaves Fauna (B13) quatic Plants (Een Sulfide Odo d Rhizosphere ce of Reduced Iron Reduction ick Surface (Coor Well Data (Eexplain in Rem (inches):	B14) or (C1) es on Livin fron (C4) in In Tilled 7) D9) earks)	Soils (C6)	Secondary In Surface Drainage Dry-Seas Crayfish Stunted of Geomorp FAC-Neu d Hydrology Pre-	adicators (minimum of two requires Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Shic Position (D2) stral Test (D5) sent? Yes No
emarks: DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagel Sparsely Vegetated Concave Surface Water Present? Yes uration Present? Yes uration Present? Yes uration Present? Yes uration Present?	Water-S Aquatic True Aq Oxidized Presence Recent i Thin Mu ry (B7) Gauge co ace (B8) Other (E No Depth (No Depth (Stained Leaves Fauna (B13) quatic Plants (Een Sulfide Odo d Rhizosphere ce of Reduced Iron Reduction ick Surface (Coor Well Data (Eexplain in Rem (inches):	B14) or (C1) es on Livin fron (C4) in In Tilled 7) D9) earks)	Soils (C6)	Secondary In Surface Drainage Dry-Seas Crayfish Stunted of Geomorp FAC-Neu d Hydrology Pre-	dicators (minimum of two requires Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) othic Position (D2) stral Test (D5)
DROLOGY cliand Hydrology Indicators: Imary Indicators (minimum of one is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imager Sparsely Vegetated Concave Surface Water Present? Iter Table Present? Yes Inter Table Present? Yes Inter Table Recorded Data (stream gauge	Water-S Aquatic True Aq Oxidized Presence Recent i Thin Mu ry (B7) Gauge co ace (B8) Other (E No Depth (No Depth (Stained Leaves Fauna (B13) quatic Plants (Een Sulfide Odo d Rhizosphere ce of Reduced Iron Reduction ick Surface (Coor Well Data (Eexplain in Rem (inches):	B14) or (C1) es on Livin fron (C4) in In Tilled 7) D9) earks)	Soils (C6)	Secondary In Surface Drainage Dry-Seas Crayfish Stunted of Geomorp FAC-Neu d Hydrology Pre-	adicators (minimum of two requires Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Shic Position (D2) stral Test (D5) sent? Yes No

WIL-JJP-121

Project/Site: STC		0	
Applicant/Owner: Spire	·	_ City/County:	reene Co Sampling Date: 2/21
TVO / 1 71/			State: Sampling Point: PEM
		Section, Township	o, Range: 14/12v/ 9N
Landform (hillslope, terrece, etc.): Depression Slope (%): Lat: _3 9. 232343)	Local re	elief (concave, convex, none):
Soil Map Unit Name: Lawson Silt loam.	-	_ Long:90,	406868 Datum: NAD83
		1esic, 0-2%	NWI clessification: V/A
Are climatic / hydrologic conditions on the site typical for	this time of	vear? Yes 🗡 N	lo (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology	_ significantl	ly disturbed?	Are "Normel Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology			If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site ma	p showin	g sampling poir	nt locations, transects, important features, e
Hydrophytic Vegetation Present? Yes	No		Vi Control of the Con
	No		
Wetland Hydrology Present? Yes X	No	within a We	tland? Yes No No
Depressional PEM situate	1 00	the frie	ge of an agricultural
field and tree line		(* * * * * * * * * * * * * * * * * * *	Je an africalizat
EGETATION - Use scientific names of plant			
		Dominant Indian	
Tree Stratum (Plot size: 30'/)	% Cover	Dominant Indicato Species? Statue	- Annual Control of the Control of t
Absent	ton.		Number of Dominant Species That Are OBL, FACW, or FAC: (A)
	-5.5	((*/	Total Number of Dominant
-			Species Across All Strata: (B)
	-		
		- T-1-10	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
apling/Shrub Stratum (Plot size: 15/		= Total Cover	Prevalence Index worksheet:
Absent	No.		Total % Cover of: Multiply by:
·			OBL species x 1 =
			FACW species x 2 =
			FAC species x 3 =
e-1		Total Cover	FACU species x 4 =
erb Stratum (Plot size:)		= Total Cover	UPL species x 5 =
Lycopus americanus	10	Y 08L	Column Totals: (A) (B)
Symphyotichum lanceoletum	10	Y FACI	Prevalence Index = B/A =
Symphyotichum lanceolatum	10	Y FAC	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)
			Problematic Hydrophytic Vegetation¹ (Explain)
	-		(mapetiti)
ody Vine Stratum (Plot size: 30'/	30 _	Tolal Cover	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
7 (3 5 7)			Hydrophytic
	0	Total Cover	Vegetation Present? Yes No.

SOIL

Profile Description: (Describ							0.0000000000000000000000000000000000000
Depth Matrix (inches) Color (moist)	%	Calas (major)	ox Feature				**************************************
0-4" 107R 4/3	85	2.57 4/1	%	Type'	Logi	Texture	Remarks
1011/13	03			_0_			
		7.54R 3/4	- 5				
		107R3/4	5		M		
4-17 104R 5/2	70	104R3/4	10	C	M	CL	
		7.548314	10	C	MIPL		
		2,5484/1		D	-1/1-		
		OD IN ITT	10		4		
Type: C=Concentration, D=Dep	oletion, RM=	Reduced Matrix, Ma	S=Masked	Sand Gr	ains.	² Location:	PL=Pore Lining, M=Matrix.
lydric Soil Indicators:				4		Indicators fo	r Problematic Hydric Solls
_ Histosol (A1)		Sandy (Gleyed Ma	trix (S4)			airie Redox (A16)
_ Histic Epipedon (A2)		Sandy F	Redox (S5))		Dark Sur	face (S7)
_ Black Histic (A3)			f Metrix (S	,			ganese Masses (F12)
_ Hydrogen Sulfide (A4)			Mucky Min				llow Dark Surface (TF12)
_ Stratified Layers (A5) _ 2 cm Muck (A10)			Sleyed Ma			Other (Ex	(plain in Remarks)
Depleted Below Dark Surfac	e (A11)		d Matrix (F)ark Surfac				
_ Thick Dark Surface (A12)	• (111)		Dark Sur	. ,		3Indicators of	hydrophytic vegetation and
_ Sandy Mucky Mineret (S1)			epression				ydrology must be present,
5 cm Mucky Peat or Peet (S	3)		•	- ()			sturbed or problematic.
estrictive Layer (if observed):							
Type: None		_					V
						Hydric Soil Pr	esent? Yes NoNo
Depth (Inches):emarks;				ė ,		nyuric soil Pr	
emarks:		_				nyuric soil Pr	165 <u>/</u> NU
DROLOGY						nyuric soil Pr	
DROLOGY otland Hydrology Indicators:	të is require	d; check all that app	ivi				
DROLOGY otland Hydrology Indicators; mary Indicators (minimum of or	ne is require	V		k (B9)		_ Secondary li	ndicators (minimum of two require
DROLOGY otland Hydrology Indicators; mary Indicators (minimum of or	e is require	Water-Stain	ed Leaves	s (B9)		Secondary I	ndicators (minimum of two require Soil Cracks (86)
DROLOGY otland Hydrology Indicators; mary Indicators (minimum of or	ne is require	Water-Stain Aquatic Fau	ed Leaves na (B13)	_		Secondary II	ndicators (minimum of two required Soil Cracks (86) e Patterns (810)
DROLOGY Intland Hydrology Indicators: mary Indicators (minimum of or Surface Water (A1) High Water Table (A2)	të is require	Water-Stain Aquatic Fau True Aquatic	ed Leaves na (B13) c Plants (B	314)		Secondary II Surface Drainag Dry-Sea	ndicators (minimum of two required Soil Cracks (86) e Patterns (810) son Water Table (C2)
DROLOGY orland Hydrology Indicators: mary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3)	të is require	Water-Stain Aquatic Fau True Aquatic Hydrogen 8	ed Leaves na (B13) c Plants (B ulfide Odo	314) r (C1)	g Roots (C	Secondary II Surface Drainag Dry-Sea	ndicators (minimum of two required Soil Cracks (86) e Patterns (810) ison Water Table (C2)
DROLOGY Intland Hydrology Indicators: Mary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Merks (B1)	ne is require	Water-Stain Aquatic Fau True Aquatic Hydrogen S Oxidized Rh	ed Leaves na (B13) c Plants (B uffide Odo leosphere	314) r (C1) s on Livin	g Roots (C	Secondary II Surface Drainag Dry-Sea Crayfish Saturation	ndicators (minimum of two required Soil Cracks (86) e Patterns (810) ison Water Table (C2) Burrows (C8) on Visible on Aeriel Imagery (C9)
DROLOGY Island Hydrology Indicators: mary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Merks (B1) Sediment Deposits (B2)	ne is require	Water-Stain Aquatic Fau True Aquatic Hydrogen 8	ed Leaves na (B13) c Plants (B ulfide Odo izosphere Reduced	314) (C1) on Livin Iron (C4)		Secondary I Surface Drainag Dry-Sea Crayfish Saturatio Stunted	ndicators (minimum of two required Soil Cracks (86) e Patterns (810) ison Water Table (C2) Burrows (C8) on Visible on Aeriel Imagery (C9) or Stressed Plants (D1)
DROLOGY Indicators: Mary Ind	e is require	Water-Stain Aquatic Fau True Aquatic Hydrogen S Oxidized Rh Presence of Recent Iron	ed Leaves na (B13) c Plants (B ulfide Odo izosphere Reduced Reduction	314) (C1) on Livin Iron (C4) in Tilled		Secondary II Surface Drainag Dry-Sea Crayfish Saturate Stunted Geomor	ndicators (minimum of two requires Soil Cracks (86) e Patterns (810) eson Water Table (C2) Burrows (C8) on Visible on Aeriel Imagery (C9) or Stressed Plants (D1) phic Position (D2)
DROLOGY Indicators: Indicators: Indicators (Indicators: Indicators: Indicators		Water-Stain Aquatic Fau True Aquatic Hydrogen S Oxidized Rh Presence of	ed Leaves na (B13) c Plants (B ulfide Odo izosphere Reduced Reduction iurface (C7	314) r (C1) s on Livin fron (C4) in Tilled :		Secondary II Surface Drainag Dry-Sea Crayfish Saturate Stunted Geomor	ndicators (minimum of two required Soil Cracks (86) e Patterns (810) ison Water Table (C2) Burrows (C8) on Visible on Aeriel Imagery (C9) or Stressed Plants (D1)
DROLOGY Indicators: Indicators: Imary Indicators: Indicators	negery (B7)	Water-Stain Aquatic Fau True Aquatic Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S Gauge or W	ed Leaves na (B13) c Plants (B ulfide Odo izosphere Reduced Reduction curface (C7 ell Data (D	314) (C1) on Livin fron (C4) in Tilled (7)		Secondary II Surface Drainag Dry-Sea Crayfish Saturate Stunted Geomor	ndicators (minimum of two required Soil Cracks (86) e Patterns (810) eson Water Table (C2) Burrows (C6) on Visible on Aeriel Imagery (C9) or Stressed Plants (D1) phic Position (D2)
DROLOGY otland Hydrology Indicators: mary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Merks (B1) Sediment Deposits (B2) Drift Deposits (B3) Argal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Im Sparsely Vegetated Concave	negery (B7)	Water-Stain Aquatic Fau True Aquatic Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S Gauge or W	ed Leaves na (B13) c Plants (B ulfide Odo izosphere Reduced Reduction curface (C7 ell Data (D	314) (C1) on Livin fron (C4) in Tilled (7)		Secondary II Surface Drainag Dry-Sea Crayfish Saturate Stunted Geomor	ndicators (minimum of two required Soil Cracks (86) e Patterns (810) ison Water Table (C2) Burrows (C6) on Visible on Aeriel Imagery (C9) or Stressed Plants (D1)
DROLOGY Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Merks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Im Sparsely Vegetated Concave in Observations:	negery (B7)	Water-Stain Aquatic Fau True Aquatic Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S Gauge or W Other (Expla	ed Leaves na (B13) c Plants (B ulfide Odo izosphere Reduced Reduction urface (C7 ell Data (D in in Reme	314) (C1) on Livin fron (C4) in Tilled (7)		Secondary II Surface Drainag Dry-Sea Crayfish Saturate Stunted Geomor	ndicators (minimum of two required Soil Cracks (86) e Patterns (810) ison Water Table (C2) Burrows (C6) on Visible on Aeriel Imagery (C9) or Stressed Plants (D1)
DROLOGY Interpolation (Maintenance of Control of Contr	negery (B7) Surface (B8	Water-Stain Aquatic Fau True Aquatic Hydragen S Oxidized Rh Presence of Recent Iron Thin Muck S Gauge or W Other (Expla	ed Leaves na (B13) c Plants (B uffide Odo izosphere Reduced Reduction turface (C7 ell Data (D in in Reme	314) (C1) on Livin fron (C4) in Tilled (7)		Secondary II Surface Drainag Dry-Sea Crayfish Saturate Stunted Geomor	ndicators (minimum of two required Soil Cracks (86) e Patterns (810) ison Water Table (C2) Burrows (C6) on Visible on Aeriel Imagery (C9) or Stressed Plants (D1)
DROLOGY otland Hydrology Indicators: imery Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Merks (B1) Sediment Deposits (B2) Drift Deposits (B3) Argal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Im Sparsely Vegetated Concave : Ind Observations: face Water Present? Yes uration Present? Yes	iegery (B7) Surface (B8	Water-Stain Aquatic Fau True Aquatic Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S Gauge or W Other (Expla	ed Leaves na (B13) c Plants (B uffide Odo izosphere Reduced Reduction turface (C7 ell Data (D in in Reme es):	314) (C1) on Livin fron (C4) in Tilled (7)	Soils (C6)	Secondary II Surface Drainag Dry-Sea Crayfish Saturate Stunted Geomor	ndicators (minimum of two required Soil Cracks (86) e Patterns (810) ison Water Table (C2) Burrows (C8) on Visible on Aeriel Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)
DROLOGY orland Hydrology Indicators: imary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Merks (B1) Sediment Deposits (B2) Drift Deposits (B3) Argal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Im Sparsely Vegetated Concave in the Concave in	negery (B7) Surface (B8 s No s No	Water-Stain Aquatic Fau True Aquatic Hydragen S Oxidized Rh Presence of Recent Iron Thin Muck S Gauge or W Other (Expla	ed Leaves na (B13) c Plants (B unde Odo izosphere Reduced Reduction turface (C7 ell Data (D in in Reme es): es):	314) (C1) on Livin fron (C4) in Tilled (7) (99) erks)	Soils (C6)	Secondary II Surface Drainag Dry-Sea Crayfish Stunted Geomory FAC-Nea	ndicators (minimum of two required Soil Cracks (86) e Patterns (810) ison Water Table (C2) Burrows (C8) on Visible on Aeriel Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)
DROLOGY otland Hydrology Indicators: imary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Merks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Im Sparsely Vegetated Concave in the Concave in	negery (B7) Surface (B8 s No s No	Water-Stain Aquatic Fau True Aquatic Hydragen S Oxidized Rh Presence of Recent Iron Thin Muck S Gauge or W Other (Expla	ed Leaves na (B13) c Plants (B unde Odo izosphere Reduced Reduction turface (C7 ell Data (D in in Reme es): es):	314) (C1) on Livin fron (C4) in Tilled (7) (99) erks)	Soils (C6)	Secondary II Surface Drainag Dry-Sea Crayfish Stunted Geomory FAC-Nea	ndicators (minimum of two required Soil Cracks (86) e Patterns (810) ison Water Table (C2) Burrows (C8) on Visible on Aeriel Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)
DROLOGY otland Hydrology Indicators: imary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Merks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Im Sparsely Vegetated Concave in the Concave in	negery (B7) Surface (B8 s No s No	Water-Stain Aquatic Fau True Aquatic Hydragen S Oxidized Rh Presence of Recent Iron Thin Muck S Gauge or W Other (Expla	ed Leaves na (B13) c Plants (B unde Odo izosphere Reduced Reduction turface (C7 ell Data (D in in Reme es): es):	314) (C1) on Livin fron (C4) in Tilled (7) (99) erks)	Soils (C6)	Secondary II Surface Drainag Dry-Sea Crayfish Stunted Geomory FAC-Nea	ndicators (minimum of two required Soil Cracks (86) e Patterns (810) ison Water Table (C2) Burrows (C8) on Visible on Aeriel Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)

WIL-JJP-122

Applicant/Owner: Spire		_ Only/County:	State: T1	Sampling Date: 2/2
nvestigator(s): リアノレフル	/	_ Section, Township, Ra		Sampling Point: Letta
andform (hillslope, terrace, etc.):			7	
Slope (%):OLat: 39, 3		Long: Local relief	4 17 00	: Conegre
Soil Map Unit Name: Green bush			1701	Datum: NADE3
		Sy. Slupes	NWI classif	cation:
re climatic / hydrologic conditions on the	e site typical for this time of y	rear? Yes No	(If no, explain in I	Remarks.)
re Vegetation, Soil, or H	lydrologysignificantl	y disturbed? Are "I	Normal Circumstances"	present? Yes No
re Vegetation, Soil, or H			eded, explain any answe	ers in Remerks.)
UMMARY OF FINDINGS - Att	ach site map showin	g sampling point lo	cations, transects	, important features.
hydrophytic Vegetation Present?	Yes No		34	
dydric Soil Present?	Yes No	is the Sampled	~/	*
Netland Hydrology Present?	Yes No	within a Wetland	1? Yes	No
PEM situated in	an agricul	toral drains	ise shale	
EGETATION – Use scientific na	mes of plants			
ree Stratum (Plot size: 30'/	Absolute		Dominance Test works	Phone:
ree Stratum (Plot size:) <u>% Cover</u>	Consiss? Curt	Number of Dominant Sp	
Absent			That Are OBL, FACW, o	r FAC: (A)
			Total Number of Domina	ent #
			Species Across All Strat	a: / (B)
		——— I	ercent of Dominant Sp	ecies /
	0	= Total Cover	hat Are OBL, FACW, o	FAC: 100% (A/E
pling/Shrub Stratum (Plot size: 15	<u>/</u>	- Total Cover	revalence Index work	sheet:
Absent			Total % Cover of:	
				x1=
			ACW species	x 2 =
				x 3 =
21.		F	ACU species	x 4 =
rb Stratum (Plot size: 5	_)			x 5 =
Panieum dichotomif		Y FACY C	olumn Totals:	(A) (B)
Amaranthus taberco	nlatus 10	NOBL	Prevalence Index =	B/A =
		H	drophytic Vegetation	
			Rapid Test for Hyd	
			2 - Dominance Test is	
)-	_	3 - Prevalence Index	
			4 - Morphological Ada	ptations1 (Provide supporting
				on a separate sheet)
			, гтовівшайс Нуагорћу	tic Vegetation ¹ (Explain)
dy Vine Stratum (Plot size: 30)	110 =	Tolal Cover be	dicators of hydric soil an present, unless disturbe	d wetland hydrology must d or problematic.
Absent		Hy	drophytic	
1		Ve	getation Yes	No
		Total Cover		

WIL- JJP-122

Sampling Point: Wetland

Profile Description: (Depth	Matrix			ox Feature		30,11111	meseriot	o. moreatoraly
The state of the s	(moist)	- %	Color (moist)	%	Type	Loc	Texture	Remarks
0-6" 1041	23/5	95	104R 3/4	<u></u>	-	10	SC	Nemal A.S.
G-17" LOVE	2/	90	104R 3/4			10/01		
D 14 10 14	12	10	TOAKSIA	10		MIPE	SL	
		_			=	=		
Type: C=Concentration	n, D=Deple	tion, RM=	Reduced Matrix, M	6=Masked	Sand Gra	ins.	² Location: Indicators f	PL=Pore Lining, M=Matrix, or Problematic Hydric Soils ³ :
Histosol (A1)			Sandy (Gleyed Mal	trix (S4)			rairie Redox (A16)
Histic Epipedon (A2)			Redox (S5)				rface (S7)
Black Histic (A3)			Stripped	d Matrix (St	6)		Iron-Mai	nganese Masses (F12)
_ Hydrogen Sulfide (A				Mucky Mine	, ,			allow Dark Surface (TF12)
_ Stratified Layers (A	5)			Gleyed Mat				xplain in Remarks)
_ 2 cm Muck (A10)				d Matrix (F				
_ Depleted Below Dar		A11)		Dark Surfac			_	
Thick Dark SurfaceSandy Mucky Minera				d Dark Sur			Indicators o	f hydrophytic vegetation and
_ 5 cm Mucky Peat or			Kedox L	epressions	s (F8)			nydrology must be present,
ostrictive Layer (if ob							unless di	sturbed or problematic.
Type:						- 1		
							Hydric Soii Pi	resent? Yes No
Depth (inches):							TIYUTIC GOTTE	legetift teg T MO T
emarks;					÷ .			
					+			
DROLOGY	cators:				Ť .			
DROLOGY		is required	i' check all that age	uliv)	Ť		Carradan	
DROLOGY Itland Hydrology Indi mary Indicators (minim		is required			(50)			
DROLOGY Itland Hydrology Indi mary Indicators (minim Surface Water (A1)	um of one	is required	Water-Stain	ed Leaves	(B9)		Surface	Soil Cracks (B6)
DROLOGY Itland Hydrology Indi mary Indicators (minim . Surface Water (A1) . High Water Table (A2	um of one	is required	Water-Stain Aquatic Fau	ed Leaves ina (B13)	,		Surface Drainaç	e Soil Cracks (B6) ge Patterns (B10)
DROLOGY Itland Hydrology Indi mary Indicators (minim Surface Water (A1) High Water Table (A2 Saturation (A3)	um of one	is required	Water-Stain Aquatic Fau True Aquati	ed Leaves ina (B13) c Plants (B	14)		Surface Drainag Dry-Se	e Soil Cracks (B6) ge Pattems (B10) ason Water Table (C2)
DROLOGY atland Hydrology Indi imary Indicators (minim _ Surface Water (A1) _ High Water Table (A2 _ Saturation (A3) _ Water Marks (B1)	um of one	is required	Water-Stain Aquatic Fau True Aquati Hydrogen S	ied Leaves ina (B13) c Plants (B ulfide Odor	14) r (C1)		Surface Drainag Dry-Se	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8)
DROLOGY atland Hydrology Indi mary Indicators (minim Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B	um of one	is required	Water-Stain Aquatic Fau True Aquati Hydrogen S Oxidized Rh	ed Leaves ina (B13) c Plants (B ulfide Odor úzospheres	114) r (C1) s on Living	Roots (C	Surface Drainag Dry-See Crayfisl 3) Saturat	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) in Burrows (C8) ion Visible on Aenal Imagery (C9)
DROLOGY Itland Hydrology Indi mary Indicators (minim Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3)	um of one	is required	Water-Stain Aquatic Fau True Aquati Hydrogen S Oxidized Rh	ed Leaves ina (B13) c Plants (B ulfide Odor izospheres	(14) r (C1) s on Living lron (C4)		Surface Drainag Dry-See Crayfisi B) Saturati Sturied	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aenal Imagery (C9) or Stressed Plants (D1)
DROLOGY Itland Hydrology Indi mary Indicators (minim Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4)	um of one	is required	Water-Stain Aquatic Fau True Aquati Hydrogen S Oxidized Rh Fresence of	ed Leaves ina (B13) c Plants (B ulfide Odor izospheres Reduced I Reduction	i14) r (C1) s on Living fron (C4) in Tilled S		Surface Drainag Dry-Sec Crayfisl Saturat Stunted	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aenal Imagery (C8) or Stressed Plants (D1) riphic Position (D2)
DROLOGY Itland Hydrology Indi mary Indicators (minim Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4 Iron Deposits (B5)	um of one (1)		Water-Stain Aquatic Fau True Aquati Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck 5	ed Leaves ina (B13) c Plants (B ulfide Odor sizospheres Reduced I Reduction iuriace (C7	i14) r (C1) s on Living fron (C4) in Tilled S		Surface Drainag Dry-Sec Crayfisl Saturat Stunted	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aenal Imagery (C9) or Stressed Plants (D1)
DROLOGY Itland Hydrology Indi mary Indicators (minim Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4 Iron Deposits (B5) Inundation Visible on A	um of one i	ery (B7)	Water-Stain Aquatic Fau True Aquati Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck 5	ed Leaves ina (B13) c Plants (B ulfide Odor izospheres Reduced I Reduction iurface (C7 ell Data (Di	in (C1) s on Living fron (C4) in Tilled S)		Surface Drainag Dry-Sec Crayfisl Saturat Stunted	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aenal Imagery (C9) or Stressed Plants (D1) riphic Position (D2)
DROLOGY Itland Hydrology Indi mary Indicators (minim Surface Water (A1) HIgh Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4 Iron Deposits (B5) Inundation Visible on Sparsely Vegetated C	um of one i	ery (B7)	Water-Stain Aquatic Fau True Aquati Hydrogen S Oxidized Rh Fresence of Recent Iron Thin Muck S Gauge or W	ed Leaves ina (B13) c Plants (B ulfide Odor izospheres Reduced I Reduction iurface (C7 ell Data (Di	in (C1) s on Living fron (C4) in Tilled S)		Surface Drainag Dry-Sec Crayfisl Saturat Stunted	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aenal Imagery (C9) or Stressed Plants (D1) riphic Position (D2)
DROLOGY Itland Hydrology India mary Indicators (minim Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4 Iron Deposits (B5) Inundation Visible on Sparsely Vegetated C	um of one 2) 4) Aerial Imagoncave Su	ery (B7) rface (B8)	Water-Stain Aquatic Fau True Aquati Hydrogen S Oxidized Rh Presence of Fecent Iron Thin Muck 5 Gauge or W Other (Expla	ed Leaves ina (B13) c Plants (B ulfide Odor izospheres Reduced I Reduction iurface (C7 ell Data (Di in in Rema	in (C1) s on Living fron (C4) in Tilled S)		Surface Drainag Dry-Sec Crayfisl Saturat Stunted	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aenal Imagery (C9) or Stressed Plants (D1) riphic Position (D2)
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VII - TIP - 123

WETLAND DETERMINATION DATA FORM - Midwest Region Project/Site: Greene Co. Sampling Date: 2/2 Applicant/Owner: Spice Investigator(s): JJP / WTL/ Section, Township, Range: 23/124/9N Landform (hillslope, terrece, etc.): Flood plain / Depression Local relief (concave, convex, none): Concave Lat: 39.210005 Long: -90.4000 15 Datum: Soil Map Unit Name: Fay ette silt loam, staciated, 10-18%. Sture NWI classification: PEM 1Fh No _____ (If no, explein in Remarks.) Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No ___ Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explein any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Hydric Soil Present? is the Sampled Area Wetland Hydrology Present? within a Wetland? Remarks: NWI wetland: VEGETATION - Use scientific names of plants. Tree Stratum (Plot size: 30') Absolute Dominant Indicator **Dominance Test worksheet:** % Cover Species? Status Number of Dominant Species 1. Salix nisce That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: Prevalence Index worksheet: Total % Cover of: OBL species FACW species _____ x 2 = __ FAC species FACU species _ = Total Cover UPL species Herb Stratum (Plot size: Column Totals: __ 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 Adaptations (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) 301 Indicators of hydric soil and wetland hydrology must

= Total Cover

_ = Total Cover

Woody Vine Stratum (Plot size:

Remarks: (Include photo numbers here or on e separate sheet.)

be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?

WIL-JJP-123
Sampling Point: Vetland

SOIL

Profile Description: (Describe to the Depth Matrix	Red	ox Feature	4			
(inches) Color (moist) %		_%_	Type*	Lec	Texture	Remerks
0-6" 10484/2 100	-	+	-	-	JCL.	
6-17" 10484/1 90	10YR3/4	10		M/PL	SCL	
				11/15		
	_					
	-		_	=		
Type: C=Concentration, D=Depletion, I	MaReduced Matrix M	S=Market	Sand Gr	aine	N acation: D	L=Pare Lining, M=Matrix.
lydric Soil Indicators:	an readous mank, in	a maneu	Obila Oli	diria.	Indicators for	Problematic Hydric Soils ³ :
Hislosol (A1)	Sandy (Gleyed Ma	Iriv (SA)			rie Redox (A16)
Hislic Epipedon (A2)		Redox (S5)			Coast Fran	• •
Black Histic (A3)		Matrix (S				anese Masses (F12)
Hydrogen Sulfide (A4)		Mucky Min	•			ow Dark Surface (TF12)
Stratified Layers (A5)		Gleved Ma	, ,			
2 cm Muck (A10)		d Matrix (F	7,11		Other (Exp	lain in Remarks)
Depleted Below Dark Surface (A11)		Dark Surfac				2
Thick Dark Surface (A11)		d Dark Surac			31-41	ander to die and die
Thick Dark Surface (A12) Sandy Mucky Mineral (S1)						ydrophytic vegetation and
	Redox L	epression	s (F8)			drology must be present,
_ 5 cm Mucky Peat or Peat (S3) estrictive Layer (if observed):					unless dist	urbed or problamatic.
Type:						
					Hydric Soil Pres	cent? Ves No
Depth (Inches):emarks:			4 .			
emarks:			<i>i</i> -			
emarks: DROLOGY			<i>i</i>			
emarks: 'DROLOGY etland Hydrology Indicators:	uired: check all that app	olv)	<i>i</i> .			
emarks: DROLOGY atland Hydrology Indicators: imany Indicators (minimum of one is req	,		t (B9)		Secondary In	dicators (minimum of two requires
DROLOGY adiand Hydrology Indicators: imany Indicators (minimum of one is req	Water-Stair	ed Leaves	s (B9)		Secondary In	Sicators (minimum of two required Soil Cracks (B6)
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DROLOGY edland Hydrology Indicators: imary Indicators (minimum of one is req Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Stair Aquatic Fau True Aquati	ied Leaves ina (B13) c Plants (B	314)		Secondary In Surface S Drainage Dry-Seas	dicators (minimum of two required foil Cracks (B6) Patterns (B10) on Water Table (C2)
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DROLOGY atland Hydrology Indicators: imany Indicators (minimum of one is req Surface Water (A1) High Water Table (A2) Saturation (A3) Waler Marks (B1) Sediment Deposits (B2)	Water-Stair Aquatlc Fau True Aquati Hydrogen S Oxidized Ri	ned Leaves una (B13) c Plants (E sulfide Odo nizosphere	314) r (C1) s on Livln		Secondary In Surface S Drainage Dry-Seas Crayfish I	Cathrs (minimum of two required Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aenal Imagery (C9)
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PROLOGY Internal Hydrology Indicators: Imany Indicators (minimum of one is req Burface Water (A1) High Water Table (A2) Saturation (A3) Waler Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (I Sparsely Vagetated Concave Surface Indicators: Inface Water Present? Inf	Water-Stair Aquatic Fau True Aquati Hydrogen S Oxidized Ri Presence of Recent Iron Thin Muck S B7) Gauge or W (B8) Othar (Expla	ina (B13) c Plants (E iulfide Odo nizosphere f Reduced Reduction Surface (C) fell Data (D ain in Remi	R14) r (C1) s on Livin iron (C4) in Tilled r r r RFACE	Soils (C6)	Secondary In Surface S Drainage Dry-Seas Crayfish I S Saturation Stunded of FAC-Neur	dicators (minimum of two required foil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Planis (D1) onic Position (D2) or at Test (D5)
PROLOGY Settand Hydrology Indicators: Imany Indicators (minimum of one is reg Surface Water (A1) High Water Table (A2) Saturation (A3) Waler Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (I Sparsely Vagetated Concave Surface and Observations: Iface Water Present? Interest Yes In	Water-Stair Aquatic Fau True Aquati Hydrogen S Oxidized Ri Presence of Recent Iron Thin Muck S B7) Gauge or W (B8) Othar (Explain No Depth (Inch No Depth (inch no Depth (inch	ina (B13) c Plants (E iulfide Odo nizosphere f Reduced Reduction Surface (C7 fell Data (D ain in Remanes):	R14) r (C1) s on Livin iron (C4) in Tilled r r r RFACE	Soils (C6)	Secondary In Surface S Drainage Dry-Seas Crayfish I S Saturation Stunded of FAC-Neur	dicators (minimum of two required foil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Planis (D1) onic Position (D2) or at Test (D5)
DROLOGY etland Hydrology Indicators: imany Indicators (minimum of one is reg Surface Water (A1) High Water Table (A2) Saturation (A3) Waler Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (I Sparsely Vagetated Concave Surface Indicators: Inface Water Present? Inter Table Present	Water-Stair Aquatic Fau True Aquati Hydrogen S Oxidized Ri Presence of Recent Iron Thin Muck S B7) Gauge or W (B8) Othar (Expla	ina (B13) c Plants (E iulfide Odo nizosphere f Reduced Reduction Surface (C7 fell Data (D ain in Remanes):	R14) r (C1) s on Livin iron (C4) in Tilled r r r RFACE	Soils (C6)	Secondary In Surface S Drainage Dry-Seas Crayfish I S Saturation Stunded of FAC-Neur	dicators (minimum of two requires foil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Planis (D1) onic Position (D2) or at Test (D5)

WIL-TIP-124 PEM

Project/Site:STC		City/Cou	nter Gre	ane	Co.	- x lswf.
Applicant/Owner: Spice		_ 0.171000	my.	Cric		- The state of the
Investigator(s): TT/ VTV		Cootles	Taurahia		State: 112 W	Sampling Point: We Tland
Landform (hillslope, terrace, etc.): Bottom land	deples				-	
Slope (%):O Lat: _ 39, 209 468	o c pres		_ Local reli	ief (conca	ive, convex, none)	CONCALL
Soil Map Unit Name: Greenbash 5:17	10 1	_ Long:	-10.3	1952	2	Datum:
	lacim,	5-10%				eation: PEM1Fh
Are climatic / hydrologic conditions on the site typical for	this time of y	ear? Yes_			(If no, explain in R	
Are Vegetation, Soil, or Hydrology	significantly	y disturbed	? An	e "Norma	l Circumstances" p	resent? Yes No
Are Vegetation, Soil, or Hydrology SUMMARY OF FINDINGS - Attach site mass			(If	needed, e	explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS - Attach site maj	p sitowing	y sampii	ng point	locatio	ns, transects	, important features, etc.
1	No	ls 1	he Sample	ad Aron	=_	
Motland Underland	No		hin a Wetla		Voe X	No
Remarks:	SYS-2				169_/_	NO
PEM wetland situated in a	buttur	m land	depiess	ien.	Assible	old rend.
Napped NWI.						
VEGETATION - Use scientific names of plants	3.					
Tree Stratum (Plot size: 30'/	Absolute	Dominan	Indicator	Domin	ance Test works	heet.
1. Salix Oldes	% Cover	Species?			er of Dominant Spe	
2 Acer Cubina	5	_/_	OBC	That A	re OBL, FACW, or	FAC: (A)
3			FAC	Total N	lumber of Domina	nt 5
4			-	Specie	s Across All Strata	(B)
5				Percen	t of Dominant Spe	cies I /// ·
150	77.	= Total Cov		That Ar	re OBL, FACW, or	FAC: (A/B)
Sapling/Shrub Stratum (Plot size: 1500)		, ciai co	101	Prevale	ence Index works	heet:
1. Sambucus nigra 2. Rubus alleghaniensis		-	FAC	Tot	tal % Cover of:	Multiply by:
2. Rubus allegheniensis	-	_ <i>N</i>	TACY			x1=
3						x 2 =
5.						x 3 =
<i>C</i> 1		T-1-10				× 4 =
Herb Stratum (Plot size:		Tolal Cov	er	UPL spe		x5=
1. Phalaris standingaca	100	<u> </u>	FACL	Column	Totals:	(A) (B)
2				Pre	evelence Index =	B/A =
3					hytic Vegetation I	
·						rophytic Vegetation
					Dominence Test is	
1					Prevalence Index is	
3				4 - N	iorphological Adap ata in Remarks or	otations ¹ (Provide supporting on a separate sheet)
)		1				ic Vegetation ¹ (Explain)
0						e ogomion (Explain)
3:11	100	Total Cover		Indicator	s of hydric soil and	wetland hydrology must
Voody Vine Stratum (Plot size: 30')			-	be preser	nt, unless disturbe	d or problemetic.
+hazen+				Hydrophy		
·				Vegetation	on `	X
emarks: (Include photo numbers here or on a separate sh	=1	Total Cover		- resent?	Yes —	No
	cor.)					
						·

WIL- JJP-124

SOIL

Sampling Point: PEM

Profile Description: (Describe to Depth Metrix		Redox Feat				
(inches) Color (moist)	% Color	(moist) %	Type	Log2	Texture	Remarks
0-17 10484/1	75 7.54	184/6 la	C	MIPL	SICL	- CHILINIE
	5 YR 3	3/11 16			3102	
	3/1/3	13		MIPL		
		4 1				
Type: C=Concentration, D=Deplet	ion, RM=Reduced	Matrix, MS=Mask	ed Sand Gr	ains.		L=Pore Lining, M=Matrix.
lydric Soil Indicators:					Indicators for	Problematic Hydric Solls
_ Histosol (A1)	_	Sandy Gleyed I	Matrix (S4)		Coast Pra	irie Redox (A16)
_ Histic Epipedon (A2)	_	_ Sandy Redox (S	S5)		Dark Surfa	ace (S7)
Black Histic (A3)	_	Stripped Matrix	(S6)		Iron-Mang	anese Masses (F12)
_ Hydrogen Sulfide (A4)	_	_ Loamy Mucky N	fineral (F1)			ow Dark Surface (TF12)
_ Stratified Layers (A5)		Loamy Gleyed I	Matrix (F2)			olain in Remarks)
_ 2 cm Muck (A10)	\overline{X}	Depleted Matrix				
_ Depleted Below Dark Surface (A	A11)	Redox Dark Sur	face (F6)			
_ Thick Dark Surface (A12)	<u> </u>	Depleted Dark 9	Surface (F7))	alndicators of	nydrophytic vegetation and
_ Sandy Mucky Mineral (S1)	- <u> </u>	Redox Depressi	ons (F8)			drology must be present.
_ 5 cm Mucky Peat or Peat (S3)			` '		,	urbed or problematic.
estrictive Layer (if observed):						problemate.
Type: None						
					Hydric Soil Pre	sent? Yes 🔽 No
Depth (inches):						/_
emarks:			£			
			£			
DROLOGY			E			
DROLOGY etland Hydrology Indicators:						
DROLOGY etland Hydrology Indicators:	s required; check s	all that apply)			Secondary In	dicators (minimum of two requires
DROLOGY etland Hydrology Indicators:		all that apply) Vater-Stained Leav	ves (B9)			
DROLOGY etland Hydrology Indicators; mary Indicators (minimum of one is	w	/ater-Stained Leav			Surface	Soil Cracks (B6)
DROLOGY Indicators: Mary Indicators (minimum of one in the surface Water (A1) High Water Table (A2)	W	Vater-Stained Leav quatic Fauna (B13	3)		Surface : Drainage	Soil Cracks (B6) Patterns (B10)
DROLOGY Indicators: Mary Indicators (minimum of one in the surface Water (A1) High Water Table (A2) Saturation (A3)	W Ad To	Vater-Stained Leav quatic Fauna (B13 rue Aquatic Plants	3) (B14)		Surface: Drainage Dry-Seas	Soil Cracks (B6) Patterns (B10) son Water Table (C2)
DROLOGY Indicators: mary Indicators (minimum of one in the second of t	W Ti Ji	Vater-Stained Leav quatic Fauna (B13 rue Aquatic Plants ydrogen Sulfide O	(B14) (dcr (C1)	ng Poots (C	Surface: Drainage Dry-Seas Crayfish	Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrowa (C8)
DROLOGY Indicators: Indicators: mary Indicators (minimum of one in the surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	W A Ti H	Vater-Stained Leav quatic Fauna (B13 rue Aquatic Plants ydrogen Sulfide O zidizati Rhiznaphe	3) (B14) dor (C1) eres on Livir		Surface :	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9)
DROLOGY atland Hydrology Indicators: mary Indicators (minimum of one is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	W A Ti H Pi	Vater-Stained Leav quatic Fauna (B13 rue Aquatic Plants ydrogen Sulfide O zidizati Rhiznaphe resence of Reduce	B) (B14) Idor (C1) Ires on Livir Id Iron (C4)		Surface: Drainage Dry-Sease Crayfish Saturatio	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1)
DROLOGY Indicators: mary Indicators: Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	W Ai Ti H Pi Ri	Vater-Stained Leav quatic Fauna (B13 rue Aquatic Plants ydrogen Sulfide O sidizati Rhiznaphe resence of Reduci ecent Iron Reduci	B) (B14) dor (C1) eres on Livir ed Iron (C4) ion in Tilled		Surface: Drainage Dry-Sease Crayfish Saturatio Geomory	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Inic Position (D2)
DROLOGY Indicators: mary Indicators: 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)	W A T; O P; R; T;	Vater-Stained Leav quatic Fauna (B13 rue Aquatic Plants ydrogen Sulfide O zidizad Rhiznaphe resence of Reduci ecent Iron Reduci hin Muck Surface	(B14) dor (C1) eres on Livir ed fron (C4) fron in Tilled (C7)		Surface: Drainage Dry-Sease Crayfish Saturatio Geomory	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1)
DROLOGY etland Hydrology Indicators: mary Indicators (minimum of one is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	W A T; O P; R; T;	Vater-Stained Leav quatic Fauna (B13 rue Aquatic Plants ydrogen Sulfide O sidizati Rhiznaphe resence of Reduci ecent Iron Reduci	(B14) dor (C1) eres on Livir ed fron (C4) fron in Tilled (C7)		Surface: Drainage Dry-Sease Crayfish Saturatio Geomory	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Inic Position (D2)
DROLOGY etland Hydrology Indicators: mary Indicators (minimum of one is 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)	W A Ti H R Ti Ti ery (B7) G	Vater-Stained Leav quatic Fauna (B13 rue Aquatic Plants ydrogen Sulfide O zidizad Rhiznaphe resence of Reduci ecent Iron Reduci hin Muck Surface	(B14) dor (C1) tres on Livir dor lron (C4) don in Tilled (C7) (D9)		Surface: Drainage Dry-Sease Crayfish Saturatio Geomory	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Inic Position (D2)
DROLOGY etland Hydrology Indicators; imary Indicators (minimum of one is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imag Sparsely Vegetated Concave Sur	W A Ti H R Ti Ti ery (B7) G	Vater-Stained Leav quatic Fauna (B13 rue Aquatic Plants ydrogen Sulfide O widized Rhizosphe resence of Reduct ecent from Reduct hin Muck Surface auge or Well Data	(B14) dor (C1) tres on Livir dor lron (C4) don in Tilled (C7) (D9)		Surface: Drainage Dry-Sease Crayfish Saturatio Geomory	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Inic Position (D2)
DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Sparsely Vegetated Concave Sur Id Observations:	W A Ti H O Pi Fi F	Vater-Stained Leav quatic Fauna (B13 rue Aquatic Plants ydrogen Sulfide O sidized Rhiznepheresence of Reduci- ecent from Reduci- ecent from Reduci- hin Muck Surface auge or Well Data ther (Explain in Re	(B14) dor (C1) tres on Livir dor lron (C4) don in Tilled (C7) (D9)		Surface: Drainage Dry-Sease Crayfish Saturatio Geomory	Patterns (B10) son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) or Stressed Plants (D1) thic Position (D2)
DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imag Sparsely Vegetated Concave Sur Id Observations: face Water Present? Yes		Vater-Stained Leav quatic Fauna (B13 rue Aquatic Plants ydrogen Sulfide O sidized Rhiznapheresence of Reduci ecent fron Reduci ecent fron Reduci ecent fron Reduci hin Muck Surface auge or Well Data ther (Explain in Re	(C7) (D9) cmarks)		Surface: Drainage Dry-Sease Crayfish Saturatio Geomory	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Inic Position (D2)
Elland Hydrology Indicators: imary Indicators (minimum of one is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Sparsely Vegetated Concave Sure Indicator Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Sparsely Vegetated Concave Sure Indicator Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Sparsely Vegetated Concave Sure Indicator Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Sparsely Vegetated Concave Sure Indicators: Irace Water Present? Yes		Vater-Stained Leave quatic Fauna (B13 rue Aquatic Plants ydrogen Sulfide O edizati Rhiznaphe resence of Reduce ocent fron Reduce ocent fron Reduce hin Muck Surface auge or Well Data ther (Explain in Red Depth (Inches):	(C7) (D9) cmarks)	Soils (C6)	Surface : Drainage Dry-Sease Crayfish 3) Saturatio Stunted of Geomorp FAC-Neur	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) or Stressed Plants (D1) thic Position (D2) trail Test (D5)
DROLOGY etland Hydrology Indicators; imary Indicators (minimum of one is _ Surface Water (A1) _ High Water Table (A2) _ Saturation (A3) _ Water Marks (B1) _ Sediment Deposits (B2) _ Drift Deposits (B3) _ Algal Mat or Crust (B4) _ Iron Deposits (B5) _ Inundation Visible on Aerial Image _ Sparsely Vegetated Concave Sure (Id Observations: _ face Water Present? Yes ster Table Present? Yes ster Table Present? Yes ster Table Present? Yes ster Table Concave (Id Observations)		Vater-Stained Leave quatic Fauna (B13 rue Aquatic Plants ydrogen Suffice O widized Rhizmaphe resence of Reduci- ecent from Reduci- ecent from Reduci- hin Muck Surface auge or Well Data ther (Explain in Red Depth (Inches):	(C7) (D9) emarks)	Soils (C6)	Surface : Drainage Dry-Sease Crayfish 3) Saturatio Stunded (Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) or Stressed Plants (D1) thic Position (D2) trail Test (D5)
DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Sparsely Vegetated Concave Sur Id Observations: face Water Present? ter Table Present? Yes uration Present?		Vater-Stained Leave quatic Fauna (B13 rue Aquatic Plants ydrogen Suffice O widized Rhizmaphe resence of Reduci- ecent from Reduci- ecent from Reduci- hin Muck Surface auge or Well Data ther (Explain in Red Depth (Inches):	(C7) (D9) emarks)	Soils (C6)	Surface : Drainage Dry-Sease Crayfish 3) Saturatio Stunded (Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) or Stressed Plants (D1) thic Position (D2) trail Test (D5)
DROLOGY etland Hydrology Indicators; imary Indicators (minimum of one is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Sparsely Vegetated Concave Sur Id Observations: face Water Present? ter Table Present?	ery (B7) Go	Vater-Stained Leaver quatic Fauna (B13 rue Aquatic Plants ydrogen Suffice Outdined Refucie of Reduction Muck Surface auge or Well Data ther (Explain in Refuel) (Inches):	(C7) (D9) emarks)	Soils (C6)	Surface : Drainage Dry-Sease Crayfish 3) Saturatio Stunded (Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) or Stressed Plants (D1) thic Position (D2) trail Test (D5)
DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Sparsely Vegetated Concave Sur Id Observations: face Water Present? Yes ter Table Present? Yes uration Present? Ye		Vater-Stained Leaver quatic Fauna (B13 rue Aquatic Plants ydrogen Suffice Outdined Refucie of Reduction Muck Surface auge or Well Data ther (Explain in Refuel) (Inches):	(C7) (D9) emarks)	Soils (C6)	Surface : Drainage Dry-Sease Crayfish 3) Saturatio Stunded (Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) or Stressed Plants (D1) thic Position (D2) trail Test (D5)

WIL-JJP-124

gion PSS

Project/Site: STL	
Applicant/Owner: Spice	City/County: Greene Co. Sampling Date: 2/2
Investigator(s): JP / WTW	State: TL Sampling Point: PSS
	Section, Township, Range: 3 / 12 W / 9 W
Landform (hillslope, terrace, etc.): Ootlook Land / Slope (%): O Lat: 39, 209 198	
	Long: - 10. 319039 Datum: NAD83
Soil Map Unit Name: Green bush si	f lunm, 5-10%. Slupes, ercord NWI classification: N/A
Are climatic / hydrologic conditions on the site typical	or this time of year? Yes No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology	
	naturally problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site n	ap showing sampling point locations, transects, important features,
Hydrophytic Vegetation Present? YesX	No
Hydric Soil Present? Yes	No Is the Sampled Area
Wetland Hydrology Present? Yes Remarks:	No within a Wetland? Yes No
	lomland
yes strain to the	
ECETATION Hannel (12	
EGETATION - Use scientific names of pla	
Free Stratum (Plot size: 301/	Absolute Dominant Indicator % Cover Species? Status Number of Persistent Species
Absent	Number of Dominant Species
	Species Across All Strata:
· · · · · · · · · · · · · · · · · · · 	
	Percent of Dominant Species That Are OBL, FACW, or FAC:
Sapling/Shrub Stratum (Plot size: 15 /	= Total Cover Prevalence Index worksheet:
SAM DACAS MELA	35 / FAC Total % Cover of: Multiply by:
Lunicera Manackii	
	FACW species x 2 =
	FAC species x 3 =
225	FACU species x 4 =
erb Stratum (Plot size:)	<u> </u>
urtica divica	O Y . FACW Column Totals: (A) (B
Leersia Virginica	10 Y FACW Prevalence Index = B/A =
Phalaris arundinacea	10 Y FACL Hydrophytic Vegetation Indicators:
Solidaço sigentea	FACW 1 - Rapid Test for Hydrophytic Vegetation
beyon considerse	
	3 - Prevalence Index is ≤3.01
	4 - Morphological Adaptations¹ (Provide supportin data in Remarks or on a separate sheet)
	50 = Total Cover Indicators of hydric soil and wetland hydrology must
ody Vine Stratum (Plot size: 30'/)	be present, unless disturbed or problematic.
	Hydrophytic
	Vegetation
t to the second	= Total Cover Present? Yes No

WIL-JJP-124

SOIL

Sampling Point: PSS

Profile Descripti Depth	Matrix			x Feature	5			
(inches) (Color (majst)	_%_	Color (moist)	_%_	Type	Loc	Texture	Remarks
0-17" 1	0484/1	75	7.54846	10	C	MIPL	5;CL	
			5483/4	15	C	MIPL		
		_		-				
					_			
			4					
Type: C=Cancen	itration, D=Deple	etion, RM=	Reduced Matrix, Ma	S=Masked	Sand Gra	ains.	² Location: Pi	.=Pore Lining, M=Matrix.
dydric Soil Indica	ators:						Indicators for	Problematic Hydric Spils :
Histosol (A1)			Sandy C	Sleyed Ma	trix (S4)		Coast Prai	rie Redox (A16)
Hislic Epipedo				Redox (S5)			Dark Surfa	ce (S7)
Black Histic (A	•			Matrix (S				anese Masses (F12)
Hydrogen Sulf				Jucky Min				ow Dark Surface (TF12)
Stratified Laye				Sleyed Ma			Other (Exp	lain in Remarks)
2 cm Muck (A:	10) w Dark Surface	(Δ11)		Matrix (F ark Surfac				
Thick Dark Sui		(411)		i Dark Sunac	, ,		3Indiantara of h	sandarana hasabba sa mara da di sana sa sa
_ Sandy Mucky I				epression				ydrophytic vegetation and frology must be present,
	eat or Peat (S3)			оргосоло	J (1 J)			urbed or problematic.
estrictive Layer	(If observed):							
Type:	105							
Depth (inches):	-						Hydric Soil Pres	ent? Yes No
emarks:			_					7-10-
emarks:								7- 10-
emarks:					,			7
emarks: 'DROLOGY etland Hydrolog;	y Indicators:	is require	d: check all that ann	lv)				7-
emarks: 'DROLOGY etland Hydrology imary Indicators in	y Indicators: minimum of one	is require	d: check all that ann		k (B9)		Secondary Inc.	ficators (minimum of two require
PROLOGY Total Hydrology	y Indicators: minimum of one (A1)	is require	Water-Stain	ed Leaves	s (B9)		Secondary Inc Surface S	ficators (minimum of two require
OROLOGY otland Hydrology imary Indicators if Surface Water (High Water Tab	y Indicators: minimum of one (A1) ole (A2)	is require	Water-Stain Aquatic Fau	ed Leaves na (B13)			Secondary Inc Surface S Drainage	ficators (minimum of two require foil Cracks (B6) Patterns (B10)
DROLOGY [etland Hydrology imary Indicators ii _ Surface Water (_ High Water Tab _ Saturation (A3)	y Indicators: minimum of one (A1) ole (A2)	is require	Water-Stain Aquatic Fau True Aquatic	ed Leaves na (B13) p Plants (B	114)		Secondary Inc Surface S Drainage Dry-Seas	ficators (minimum of two require foil Cracks (B6) Patterns (B10) on Water Table (C2)
OROLOGY otland Hydrology imary Indicators if Surface Water (High Water Tab	y Indicators: minimum of one (A1) ole (A2)	is require	Water-Stain Aquatic Fau True Aquatic Hydrogen S	ed Leaves na (B13) c Plants (B uffide Odo	114) r (C1)	a Roots (C	Secondary Inc. Surface S Drainage Dry-Seas	Scalors (minimum of two require oil Cracks (B6) Patterns (B10) on Water Table (C2) Surrows (C8)
'DROLOGY etland Hydrology imary Indicators () Surface Water () High Water Tab Saturation (A3) Water Marks (B	y Indicators: minimum of one (A1) ble (A2) (1) sits (B2)	is require	Water-Stain Aquatic Fau True Aquati Hydrogen S Oxidized Rh	ed Leaves na (B13) c Plants (B utfide Odo izoaphere	114) r (C1) s on Livin	g Roots (C	Secondary Inc. Surface S Drainage Dry-Sease Crayfish E 3) Saturation	Siculors (minimum of two requires coil Cracks (B6) Patterns (B10) on Water Table (C2) Surrows (C8)
DROLOGY etland Hydrology imary Indicators () Surface Water (High Water Tab Saturation (A3) Water Marks (B Sediment Depos	y Indicators: minimum of one (A1) ble (A2) (1) sits (B2)	is require	Water-Stain Aquatic Fau True Aquati Hydrogen S Oxidized Rh Presence of	ed Leaves na (B13) a Plants (B uffide Odo izouphere Reduced	114) r (C1) s on Livin Iron (C4)		Secondary Inc. Surface S Drainage Dry-Sease Crayfish E 3) Saturation Stunted o	ficators (minimum of two requires coil Cracks (B6) Patterns (B10) on Water Table (C2) Surrows (C8) I Visible on Aerial Imagery (C9) I Stressed Plants (D1)
**DROLOGY **Torontomary Indicators () **Surface Water () **High Water Tab **Saturation (A3) **Water Marks (B) **Sediment Deposits (B)	y Indicators: minimum of one (A1) ole (A2) (1) sits (B2) (33) ust (B4)	is require	Water-Stain Aquatic Fau True Aquati Hydrogen S Oxidized Rh Presence of Recent Iron	ed Leaves na (B13) c Plants (B uffide Odo izosphere Reduced Reduction	i14) r (C1) s on Livin iron (C4) in Tilled		Secondary Inc. Surface S Drainage Dry-Sease Crayfish E 3) Saturation Stunted o	ficators (minimum of two requires coil Cracks (B6) Patterns (B10) on Water Table (C2) surrows (C8) I Visible on Aerial Imagery (C9) I Stressed Plants (D1) nic Posilion (D2)
PROLOGY Color of the state of	y Indicators: minimum of one (A1) ole (A2) (1) sits (B2) (33) ust (B4)		Water-Stain Aquatic Fau True Aquati Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S	ed Leaves na (B13) o Plants (B ulfide Odo izosphere Reduced Reduction iurface (Ci	i14) r (C1) s on Livin iron (C4) in Tilled (Secondary Inc. Surface S Drainage Dry-Sease Crayfish E 3) Saturation Stunted o	ficators (minimum of two requires coil Cracks (B6) Patterns (B10) on Water Table (C2) Surrows (C8) I Visible on Aerial Imagery (C9) I Stressed Plants (D1)
PROLOGY Color of the state of	y Indicators: minimum of one (A1) ole (A2) :1) sits (B2) 33) ust (B4) :5)	gery (B7)	Water-Stain Aquatic Fau True Aquatic Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S Gauge or W	ed Leaves na (B13) c Plants (B ulfide Odo izosphere Reduced Reduction turface (Ci ell Data (D	i14) r (C1) s on Livin Iron (C4) In Tilled (7)		Secondary Inc. Surface S Drainage Dry-Sease Crayfish E 3) Saturation Stunted o	ficators (minimum of two requires coil Cracks (B6) Patterns (B10) on Water Table (C2) surrows (C8) I Visible on Aerial Imagery (C9) I Stressed Plants (D1) nic Posilion (D2)
emarks: 'DROLOGY etland Hydrology imary Indicators ii Surface Water (High Water Tab Saturation (A3) Water Marks (B Sediment Deposits (E Algal Mat or Cru. Iron Deposits (B Inundation Visib	y Indicators: minimum of one (A1) ole (A2) sits (B2) 33) ust (B4) 35) ole on Aerial Ima ated Concave St	gery (B7)	Water-Stain Aquatic Fau True Aquatic Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S Gauge or W	ed Leaves na (B13) c Plants (B ulfide Odo izosphere Reduced Reduction turface (Ci ell Data (D	i14) r (C1) s on Livin Iron (C4) In Tilled (7)		Secondary Inc. Surface S Drainage Dry-Sease Crayfish E 3) Saturation Stunted o	ficators (minimum of two requires coil Cracks (B6) Patterns (B10) on Water Table (C2) surrows (C8) I Visible on Aerial Imagery (C9) I Stressed Plants (D1) nic Posilion (D2)
DROLOGY etland Hydrology imary Indicators in Surface Water (High Water Tab Saturation (A3) Water Marks (B Sediment Deposits (E Algal Mat or Cru Iron Deposits (B Inundation Visib Sparsely Vegeta	y Indicators: minimum of one (A1) ole (A2) sits (B2) 33) ust (B4) 35) ole on Aerial Ima ated Concave Su	gery (B7)	Water-Stain Aquatic Fau True Aquatic Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S Gauge or W Other (Expla	ed Leaves na (B13) a Plants (B uffide Odo izosphera Reduced Reduction burface (C) ell Data (D in in Rema	i14) r (C1) s on Livin Iron (C4) In Tilled (7)		Secondary Inc. Surface S Drainage Dry-Sease Crayfish E 3) Saturation Stunted o	ficators (minimum of two requires coil Cracks (B6) Patterns (B10) on Water Table (C2) surrows (C8) I Visible on Aerial Imagery (C9) I Stressed Plants (D1) nic Posilion (D2)
PROLOGY Toronto Surface Water (High Water Tab Saturation (A3) Water Marks (B Sediment Deposits (B Algal Mat or Cru Iron Deposits (B Inundation Visib Sparsely Vegeta	y Indicators: minimum of one (A1) ole (A2) (1) sits (B2) (33) ust (B4) ole on Aerial Ima ated Concave So	gery (B7) urface (B8	Water-Stain Aquatic Fau True Aquatic Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S Gauge or W Other (Expla	ed Leaves na (B13) c Plants (B ulfide Odo izosphere Reduced Reduction iurface (C) ell Data (D iin in Rema	i14) r (C1) s on Livin Iron (C4) In Tilled (7)		Secondary Inc. Surface S Drainage Dry-Sease Crayfish E 3) Saturation Stunted o	ficators (minimum of two requires coil Cracks (B6) Patterns (B10) on Water Table (C2) surrows (C8) I Visible on Aerial Imagery (C9) I Stressed Plants (D1) nic Posilion (D2)
PROLOGY College of the process of t	y Indicators: minimum of one (A1) ble (A2) (1) sits (B2) (33) ust (B4) (35) ble on Aerial Imalated Concave Solution (arter) (2) (3) (4) (5) (6) (7) (7) (7) (8) (8) (8) (9) (9) (9) (9) (9) (9) (9) (9) (9) (9	gery (B7) urface (B8	Water-Stain Aquatic Fau True Aquatic Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S Gauge or W Other (Expla	ed Leaves na (B13) a Plants (B uffide Odo izosphere: Reduced Reduction turface (Ci ell Data (D in in Remai	i14) r (C1) s on Livin Iron (C4) In Tilled (7)	Soils (C6)	Secondary Inc. Surface S Drainage Dry-Sease Crayfish E 3) Saturation Stunted o	cators (minimum of two requires oil Cracks (B6) Patterns (B10) on Water Table (C2) Surrows (C3) of Visible on Aerial Imagery (C9) of Stressed Plants (D1) nic Position (D2) ral Test (D5)
emarks: "DROLOGY etland Hydrology imary Indicators () Surface Water () High Water Tab Saturation (A3) Water Marks (B Sediment Deposits (B Algal Mat or Cru Iron Deposits (B Inundation Visib Sparsely Vegeta Ind Observations rface Water Present turation Present?	y Indicators: minimum of one (A1) ble (A2) (1) sits (B2) 33) ust (B4) (35) ble on Aerial Imalated Concave Scient? Yes (Yes)	gery (B7) urface (B8 No No	Water-Stain Aquatic Fau True Aquatic Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S Gauge or W Other (Expla	ed Leaves na (B13) c Plants (B unide Odo izosphere Reduced Reduction iurface (Ci ed Data (D iin in Rema	il 14) r (C1) s on Livin iron (C4) in Tilled 5 7) in arks)	Solls (C6) Wetland	Secondary Inc Surface S Drainage Dry-Sease Crayfish E Saturation Stunted or Geomorph FAC-Neut	ficulors (minimum of two require foil Cracks (B6) Patterns (B10) on Water Table (C2) Surrows (C8) of Visible on Aerial Imagery (C9) or Stressed Plants (D1) onic Position (D2) oral Test (D5)
emarks: 'DROLOGY etland Hydrology imary Indicators (I Surface Water (A3) Water Marks (B Sediment Deposits (E Algal Mat or Cru Iron Deposits (B Inundation Visib Sparsely Vegeta and Observations face Water Present turation Present?	y Indicators: minimum of one (A1) ble (A2) (1) sits (B2) 33) ust (B4) (35) ble on Aerial Imalated Concave Scient? Yes (Yes)	gery (B7) urface (B8 No No	Water-Stain Aquatic Fau True Aquatic Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S Gauge or W Other (Expla	ed Leaves na (B13) c Plants (B unide Odo izosphere Reduced Reduction iurface (Ci ed Data (D iin in Rema	il 14) r (C1) s on Livin iron (C4) in Tilled 5 7) in arks)	Solls (C6) Wetland	Secondary Inc Surface S Drainage Dry-Sease Crayfish E Saturation Stunted or Geomorph FAC-Neut	cators (minimum of two requires oil Cracks (B6) Patterns (B10) on Water Table (C2) Surrows (C8) of Visible on Aerial Imagery (C9) of Stressed Plants (D1) oil C Position (D2) oral Test (D5)
emarks: 'DROLOGY etland Hydrology imary Indicators (I) Surface Water (A3) Water Marks (B) Sediment Deposits (E) Algal Mat or Cru Iron Deposits (E) Inundation Visib Sparsely Vegeta Ind Observations rface Water Present turation Present? Indicators (I) Indicator	y Indicators: minimum of one (A1) ble (A2) (1) sits (B2) 33) ust (B4) (35) ble on Aerial Imalated Concave Scient? Yes (Yes)	gery (B7) urface (B8 No No No	Water-Stain Aquatic Fau True Aquatic Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S Gauge or W Other (Expla Depth (Inch Depth (inch Depth (inch	ed Leaves na (B13) c Plants (B unide Odo izosphere Reduced Reduction iurface (Ci ed Data (D iin in Rema	il 14) r (C1) s on Livin iron (C4) in Tilled 5 7) in arks)	Solls (C6) Wetland	Secondary Inc Surface S Drainage Dry-Sease Crayfish E Saturation Stunted or Geomorph FAC-Neut	ficulors (minimum of two require foil Cracks (B6) Patterns (B10) on Water Table (C2) Surrows (C8) of Visible on Aerial Imagery (C9) or Stressed Plants (D1) onic Position (D2) oral Test (D5)

WIL-JJP-125

Project/Site:	City/County:	rune Co. Sampling Date: 2/24/
Applicant/Owner: 5011-		State: Sampling Point: Vertice
vestigator(s):	Section, Townshi	p, Range: 13/124/91
endform (hillstope, terrace, etc.): Depression		relief (concave, convex, none):
ope (%): D Lat 39, 207900). 397278 Datum: NAD83
oil Map Unit Name: Green bush 51/1 lon	m 5-10% Chapes	Crosed NWI classification: PUBGh
e climatic / hydrologic conditions on the site typical for		NVI classification: FVI Gh
e Vegetation A Soil A exhibitation A	unis time of year? Yes	No (If no, explain in Remarks.)
Westerline V Sall V and the day	_ significantly disturbed?	Are "Normal Circumstances" present? Yes No
e Vegetation Sail, or Hydrology UMMARY OF FINDINGS ~ Attach site ma		(If needed, explain any anawers in Remarks.) / int locations, transects, important features, e
hydrophytic Vegetation Present? Yes		introcations, transects, important reatures, e
lydric Soil Present? Yes		
Vetland Hydrology Present? Yes	No within a W	etland? Yes No
lomarks: Napped NWI		-
PEM situated in a depress	ion,	
GETATION – Use scientific names of plant		
ee-Stratum (Plot size: 30'/	Absolute Dominant Indica % Cover Species? State	
Alsent	State State	That Are One sacret
		That Are OBL, FACW, or FAC:(A)
		Total Number of Dominant Species Across All Strata; (B)
		Percent of Dominant Species That Are OBL, FACW, or FAC: 100 1/1, (A/E
pling/Shrub Stratum (Plot size:)	= Total Cover	2000/1000 000000000000000000000000000000
Absent		Prevalence Index worksheet:
		OBL species x 1 =
		FAC species x 2 =
		FAC species x 3 = FACU species x 4 =
5-1		UPL species x 5 =
o Stratum (Plot size:)	C 1	Column Totals: (A)
Pholaris arondinacea	80 y FACE	<u> </u>
Persignation Sp. #	304 4	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 Adaptations (Provide supporting data in Remarks or on a separate sheet)
		Problematic Hydrophytic Vegetation¹ (Explain)
		- I Service (Explain)
ody Vine Stratum (Plot size: 3017)	(00 = Total Cover	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Absort	O.DMF	
		- Hydrophytic Vegetation
+		- Ogotation
+	= Total Cover	Vegetation Present? Yes No

SOIL

Profile Description: (Describe to the de	Redo	ox Feature				
(inches) Color (moist) %	Color (mpist)	%	Type ¹	Loc2	<u>Texture</u>	Remarks
0-17 2.544/1 80	54R 1/6	10	<u>_</u>	M	Sich	
	7,5464/6	- 5	C	M		
		- (-)		<u>- 1</u>		
	54R 3/4	7		M		
						, , , , , , , , , , , , , , , , , , ,
Type: C=Concentration, D=Depletion, RN	/I=Reduced Matrix, M	S=Masked	d Sand G	ains.		L=Pore Lining, M=Matrix.
lydric Soil Indicators:					Indicators for	Problematic Hydric Soils ³ :
Histosol (A1)	Sandy	Gleyed Ma	atrix (S4)		Coast Pra	rie Redox (A16)
Histic Epipedon (A2)	Sandy	Redox (S5	5)		Dark Surfa	•
Black Histic (A3)		d Matrix (S	-			anese Masses (F12)
Hydrogen Sulfide (A4)		Mucky Mir				ow Dark Surface (TF12)
Stratified Layers (A5)	Part of the Control of the Control	Gleyed Ma			Other (Ex	olain in Remarks)
2 cm Muck (A10)		ed Matrix (I				
Depleted Below Dark Surface (A11)	_	Dark Surfa	, ,		31	
Thick Dark Surface (A12)		ed Dark Su	•)		nydrophytic vegetation and drology must be present,
Sandy Mucky Mineral (S1) 5 cm Mucky Peat or Peat (S3)	Redox	Depression	118 (178)		•	arology must be present, turbed or problematic
5 cm Mucky Peat or Peat (S3) Restrictive Layer (if observed):					uniess dis	arace or problematic
1.644						X
туро					Hydric Soil Pre	sent? Yes No
Depth (Inches):		+-				
Remarks:		+				
YDROLOGY		+				
YDROLOGY Vetland Hydrology Indicators:		andu)			Canadamil	teliantees teninimum of two sacrifes.
Remarks: YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one is requ			(50)			
YDROLOGY Vetland Hydrology Indicators: Irimary Indicators (minimum of one is requ Surface Water (A1)	Water-Sta	ined Leave			Surface	Soil Cracks (B6)
YDROLOGY Vetland Hydrology Indicators: Irimary Indicators (minimum of one is requ Surface Water (A1) High Water Table (A2)	Water-Sta Aquatic Fa	ined Leave auna (B13))		Surface Drainag	Soil Cracks (B6) e Patterns (B10)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one is requestional section (A1) High Water Table (A2) Saturation (A3)	Water-Sta Aquatic Fa True Aqua	ined Leave auna (B13) atic Plants) (B14)		Surface Drainag Dry-Sea	Soil Cracks (B6) e Patterns (B10) son Water Table (C2)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one is requested by the second seco	Water-Sta Aquatic Fa True Aqua Hydrogen	ined Leave auna (B13) atic Plants Suffide Oc) (B14) dor (C1)		Surface Drainag Dry-Sea Crayfish	Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8)
YDROLOGY Vetland Hydrology Indicators: Verimary Indicators (minimum of one is requested by the second of the sec	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F	ined Leave auna (B13) atic Plants Suffide Oc Rhizospher) (B14) dor (C1) resion Liv		Surface Drainag Dry-Sea Crayfish (C3) Saturation	Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C6) on Visible on Aerial Imagery (C9)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one is requested by the second of the second	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F	ined Leave auna (B13) atic Plants Suffice Oc Rhizcapher of Reduce) (B14) dor (C1) res on Liv d Iron (C4	1)	Surface Drainag Dry-Sea Crayfish (C3) Seturati	Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C6) on Visible on Aerial Imagery (C9) or Stressed Plants (D1)
YDROLOGY Vetland Hydrology Indicators: Inimary Indicators (minimum of one is requested by the second of the seco	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro	ined Leave auna (B13) atic Plants Suffide Oc Rhizonpher of Reduce on Reduction) (B14) dor (C1) res on Liv d Iron (C4 on In Tille	1)	Surface Drainag Dry-Sea Crayfish (C3) Seturati Stunted 5) Geomor	Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one is requested by the second of the second	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck	ined Leave auna (B13) atic Plants Suffice Oc Rhizcopher of Reduce on Reduction Surface (6) (B14) dor (C1) res on Liv d Iron (C4 on In Tille C7)	1)	Surface Drainag Dry-Sea Crayfish (C3) Seturati Stunted 5) Geomor	Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C6) on Visible on Aerial Imagery (C9) or Stressed Plants (D1)
YDROLOGY Vetland Hydrology Indicators: Irimary Indicators (minimum of one is requested by the second of the seco	Water-Sta Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 37) Gauge or	ined Leave auna (B13) atic Plants Suffide Oc Rhizonpher of Reduce on Reduction & Surface (Well Data) (B14) dor (C1) res on Liv d Iron (C4 on In Tille C7) (D9)	1)	Surface Drainag Dry-Sea Crayfish (C3) Seturati Stunted 5) Geomor	Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
YDROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one is requestriated by Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B	Water-Sta Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 37) Gauge or	ined Leave auna (B13) atic Plants Suffide Oc Rhizonpher of Reduce on Reduction & Surface (Well Data) (B14) dor (C1) res on Liv d Iron (C4 on In Tille C7) (D9)	1)	Surface Drainag Dry-Sea Crayfish (C3) Seturati Stunted 5) Geomor	Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one is requested by the second seco	Water-Sta Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 37) Gauge or	ined Leave auna (B13) atic Plants Suffide Oc Rhizonpher of Reduce on Reduction & Surface (Well Data) (B14) dor (C1) res on Liv d Iron (C4 on In Tille C7) (D9)	1)	Surface Drainag Dry-Sea Crayfish (C3) Seturati Stunted 5) Geomor	Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one is requested by the second of the second	Water-Sta Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 37) Gauge or	ined Leave auna (B13) atic Plants Suffide Oc Rhizonpher of Reduce on Reduction Surface (G Well Data plain in Red) (B14) dor (C1) res on Liv d Iron (C4 on In Tille C7) (D9)	1)	Surface Drainag Dry-Sea Crayfish (C3) Seturati Stunted 5) Geomor	e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one is requested in the second	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 37) Gauge or (88) Other (Exp	ined Leave auna (B13) atic Plants Sufide Oc Rhizcapher of Reduce on Reduction Surface (G Well Data blain in Res) (B14) dor (C1) res on Liv d Iron (C4 on In Tille C7) (D9)	t) d Soils (Ce	Surface Drainag Dry-Sea Crayfish (C3) Saturati Stunted 3) Geomor FAC-Ne	Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C5) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one is requested in the second	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 37) Gauge or (88) Other (Exp	ined Leave auna (B13) atic Plants Suffide Oc Rhzcapher of Reduce on Reductio s Surface (G Well Data plain in Ref ches):) (B14) dor (C1) res on Liv d Iron (C4 on In Tille C7) (D9)	t) d Soils (Ce	Surface Drainag Dry-Sea Crayfish (C3) Seturati Stunted 5) Geomor	Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C5) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)
YDROLOGY Vetland Hydrology Indicators: Irimary Indicators (minimum of one is requested to the second of the seco	Water-Sta Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 37) Gauge or ((B8) Other (Exp No Depth (inc	ained Leave auna (B13) atic Plants Sufide Oc Rhizospher of Reduce on Reductio Surface (G Well Data blain in Rer ches): ches):) (B14) (B14) dor (C1) res on Liv d Iron (C4 on in Tille C7) (D9) marks)	t) d Soils (C6	Surface Drainag Dry-Sea Crayfish (C3) Seturate Stunted 3) Geomor FAC-Ne	Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C5) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one is requested by the second of the seco	Water-Sta Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 37) Gauge or ((B8) Other (Exp No Depth (inc	ained Leave auna (B13) atic Plants Sufide Oc Rhizospher of Reduce on Reductio Surface (G Well Data blain in Rer ches): ches):) (B14) (B14) dor (C1) res on Liv d Iron (C4 on in Tille C7) (D9) marks)	t) d Soils (C6	Surface Drainag Dry-Sea Crayfish (C3) Seturate Stunted 3) Geomor FAC-Ne	Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C6) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)
YDROLOGY Vetland Hydrology Indicators: Inimary Indicators (minimum of one is requested with the second of the se	Water-Sta Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 37) Gauge or ((B8) Other (Exp No Depth (inc	ained Leave auna (B13) atic Plants Sufide Oc Rhizospher of Reduce on Reductio Surface (G Well Data blain in Rer ches): ches):) (B14) (B14) dor (C1) res on Liv d Iron (C4 on in Tille C7) (D9) marks)	t) d Soils (C6	Surface Drainag Dry-Sea Crayfish (C3) Seturate Stunted 3) Geomor FAC-Ne	Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C5) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one is requested to the property of th	Water-Sta Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 37) Gauge or ((B8) Other (Exp No Depth (inc	ained Leave auna (B13) atic Plants Sufide Oc Rhizospher of Reduce on Reductio Surface (G Well Data blain in Rer ches): ches):) (B14) (B14) dor (C1) res on Liv d Iron (C4 on in Tille C7) (D9) marks)	t) d Soils (C6	Surface Drainag Dry-Sea Crayfish (C3) Seturate Stunted 3) Geomor FAC-Ne	Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C6) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)

Project/Site: STL PIPELINE	c	ty/County:	077 CO.	Sampling Date: 9/9/20
Applicant/Owner: SPIRE STL			State:/	Sampling Point LUFTLA
nvestigator(s):	S	ection, Township, R	enge: Section 28, T	I3N, R12W
andform (hillslope, terrace, etc.): PLAIN			f (concave, convex, none):	
Slope (%):5	Lo	ng: -90.431184	10497	Datum: NAD83
iol Map Unit Name: Elco silty clay loam, 10 to 18			La La	none
re climatic / hydrologic conditions on the site typical for	this time of year	Yes Y No		
re Vegetation , Soil , or Hydrology , Nor Vegetation , Soil , or Hydrology , Nor Hydrology , N	significantly dis naturally probl	sturbed? Are ematic? (If n	"Normal Circumstances" peeded, explain any answe	resent? Yes X No
Hydrophytic Vegetation Present? Hydric Soll Present? Wetland Hydrology Present? Yes Yes Yes	No No	Is the Sample within a Wetla	d Area	No
Remarks NEW CROPLAND	NE; A	G DKAIN	AGE FOR	ADJACENT
EGETATION - Use scientific names of plan	nts.			Tanah I
<u>Tree Stratum</u> (Plot size: <u>5 ′ × 30 ′</u>) 1		cominant Indicator Species? Status	Dominance Test work Number of Dominant S That Are OBL, FACW, of	pecies
3			Total Number of Domini Species Across All Stra	ant
- N		_=	Percent of Dominant Sp That Are OBL, FACW, of	ecies
		Total Cover	That Are OSL, PACVI, C	or FAC: (A/B)
Septing/Shrub Stratum (Plot size: 5 x 15')			Prevalence Index work	sheet:
LONICERA MAACKII		Y UPL	Total % Cover of:	Multiply by:
			OBL species 20	
			FACW species	
			FAC species 2	x3=
	10 =1	Catal Carra	FACU species 3	_ x4= 12
terb Stratum (Plot size:5)		otal Cover	Column Totals: /24	2-0
PHALARIS ARUNDINALEA	_ 90	Y FACW	Column Totals	(A) _258 (B)
LEERSIA ORYZOIDES	10	N OBL	Prevalence Index	=B/A = 2.15
LOBELIA SIPHILITICA	10	N OBL	Hydrophytic Vegetatio	n Indicators:
APIOS AMERICANA	5	N FACH	1 - Rapid Test for H	ydrophytic Vegetation
COMMELINA COMMUNIS	3	N FACU	2 - Dominance Test	
AMBROSIA TRIFIDA	2	N FAC	✓ 3 - Prevalence Inde	
			4 - Morphological Ad	daptations' (Provide supporting
				or on a separate sheet)
			Problemade Hydrop	hytic Vegetation ¹ (Explain)
0	110 -1	otal Cover	Indicators of hydric soil to present, unless distur	and welland hydrology must bed or problematic.
,			thirteent de	
Now			Hydrophytic Vegetation	.02
N-				10
- 10	= 7	otal Cover	Present? Yes	No

*Type: C=Concentration, D=Depte Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Surface (A12) Sendy Mucky Mineral (S1) 5 cm Mucky Pent or Pent (S3) Restrictive Layer (if observed): Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Cruet (B4)	CYR 5/2	S=Masked Sand Grain S=Masked Sand Grain Gleyed Matrix (S4) Redox (S5) d Matrix (S6) Mucky Mineral (F1) Gleyed Matrix (F2) ed Matrix (F3) Dark Surface (F6) ed Dark Surface (F7)	M .5 PL/M 5 PL/M 5 M	DIFFUSE DIFFUSE Location: PL=Pore Lining, M=Matrix, dicators for Problematic Hydric Soils ² : Coast Prairie Redox (A18) Dark Surface (S7) Iron-Manganese Messes (F12) Very Shallow Dark Surface (TF12) Other (Explain in Remarks)
"Type: C=Concentration, D=Depte Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Surface Thick Dark Surface (A12) Sendy Mucky Mineral (S1) 5 cm Mucky Peat or Peat (S3) Restrictive Layer (if observed): Type: Depth (inches): Remarks: HYD(2.(C) YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Cruet (B4)	5 YR 4/6 70 5 YR 4/6 20 5 YR 4/6 20 YR 5/2 I OYR 5/2 Sandy 6 Stripped Loamy 1 Loamy 1 X Deplete Redox 1	S=Masked Sand Grain S=Masked Sand Grain Gleyed Matrix (S4) Redox (S5) d Matrix (S6) Mucky Mineral (F1) Gleyed Matrix (F2) ed Matrix (F3) Dark Surface (F6) ed Dark Surface (F7)	PL/M 5:	DIFFUSE CCL DIFFUSE Location: PL=Pore Lining, M=Matrix. Sicetors for Problematic Hydric Soits ³ : Coast Prairie Redox (A18) Dark Surface (S7) Iron-Manganese Masses (F12) Very Shallow Dark Surface (TF12)
Type: C=Concentration, D=Deple Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Surface (A12) Sandy Mucky Mineral (S1) 5 cm Mucky Peat or Peat (S3) Restrictive Layer (If observed): Type: Depth (inches): Remarks: HYO(2 (C YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	Sandy (Sandy (Sandy (Sandy (Sandy	S=Masked Sand Grain S=Masked Sand Grain Gleyed Matrix (S4) Redox (S5) d Matrix (S6) Mucky Mineral (F1) Gleyed Matrix (F2) ed Matrix (F3) Dark Surface (F6) ed Dark Surface (F7)	DL/M 5.	Location: PL=Pore Lining, M=Matrix. dicators for Problematic Hydric Soils ¹ : Coast Prairie Redox (A16) Dark Surface (S7) Iron-Manganese Messes (F12) Very Shallow Dark Surface (TF12)
Type: C=Concentration, D=Deple Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Surface (A12) Sandy Mucky Mineral (S1) 5 cm Mucky Peat or Peat (S3) Restrictive Layer (If observed): Type: Depth (inches): Remarks: HYO(2 (C YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	CYR 5/2	S=Masked Sand Grain Gleyed Matrix (S4) Redox (S5) d Matrix (S8) Mucky Mineral (F1) Gleyed Matrix (F2) and Matrix (F3) Dark Surface (F6) and Dark Surface (F7)	M	Location: PL=Pore Lining, M=Matrix. Sicetors for Problematic Hydric Soils*: Coast Prairie Redox (A16) Dark Surface (S7) Iron-Manganese Masses (F12) Very Shallow Dark Surface (TF12)
Type: C=Concentration, D=Deple Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Surface (A12) Sandy Mucky Mineral (S1) 5 cm Mucky Peat or Peat (S3) Restrictive Layer (If observed): Type: Depth (inches): Remarks: HYO(2 (C YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	CYR 5/2	S=Masked Sand Grain Gleyed Matrix (S4) Redox (S5) d Matrix (S8) Mucky Mineral (F1) Gleyed Matrix (F2) and Matrix (F3) Dark Surface (F6) and Dark Surface (F7)	M	Location: PL=Pore Lining, M=Matrix. Sicetors for Problematic Hydric Soits*: Coast Prairie Redox (A16) Dark Surface (S7) Iron-Manganese Masses (F12) Very Shallow Dark Surface (TF12)
Hydric Soil Indicators: Histosol (A1) Histosol (A1) Histosol (A1) Histosol (A2) Black Histol (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Surface (A12) Sandy Mucky Mineral (S1) 5 cm Mucky Peat or Peat (S3) Restrictive Layer (If observed): Type: Depth (inches): Remarks: HYDROLOGY Vetland Hydrology Indicators: Inmary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	Sandy (Sandy F Stripped Loamy (Loamy (Redox (Redox (Gleyed Matrix (S4) Redox (S5) d Matrix (S8) Mucky Minerel (F1) Gleyed Matrix (F2) d Metrix (F3) Dark Surface (F8) d Dark Surface (F7)		dicators for Problematic Hydric Solis ¹ : Coast Prairie Redox (A16) Dark Surface (S7) Iron-Manganese Masses (F12) Very Shallow Dark Surface (TF12)
Type:		Depressions (F8)	³In	ndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Depth (inches):emarks: P(YO/2.(C) (DROLOGY Tettand Hydrology indicators: rimary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Cruet (B4)				unuse distribute of problemate.
VDROLOGY Vetland Hydrology Indicators: Inmary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)			Hvd	Iric Soil Present? Yes X No
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marke (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)				
Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Cruet (B4)				
Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Cruet (B4)				
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Cruet (B4)	ne is required; check all that ap	oply)	\$	Secondary Indicators (minimum of two required
Iron Deposits (B5) Inundation Visible on Aerial Ima Sparsely Vegetated Concave S Teld Observations:	Aquatic Fa True Aquat Hydrogen : Coxidized R Presence of Recent Iron Thin Muck magery (B7) Gauge or V	ined Leaves (B9) suns (B13) stic Plants (B14) Sutfide Odor (C1) thizospheres on Living of Reduced Iron (C4) in Reduction in Tilled 3 Surface (C7) Well Data (D9) stain in Remarks)		Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5)
	s No X Depth (inc	ches):		
	s No _X Depth (inc			
	es X No Depth (inc	thes): 0 - 16		able: Yes X No
temarks: AT NHD S	gauge, monitoring well, aerial p			

		City/County	- 6/2		Sampling Date: 9/10/20
opticant/Owner: SPIRE STL				State: _/L_	Sampling Point: WETLAN
vestigator(s): JJP / TMA		Section, To	wnship, Re	Section 4, T	13N, R12W
andform (hillslope, terrace, etc.): HILLSLOP	E*		Local relief	(concave, convex, none)	CONVEX
ope (%): <u>3</u> Let: <u>39.5209191599</u>		Long: -90	.430315	4308	Datum: NAD83
Hickory silt loam, 18 to 35	percent s	lopes		NWI classifi	cation: R4SBC
e climatic / hydrologic conditions on the site typical for the	is time of ye	ar? Yes	C No	(If no, explain in F	
re Vegetation _ P Soll _ P or Hydrology _ P					present? Yes_X No
re Vegetation M, Soil M, or Hydrology M				eeded, explain any answe	
UMMARY OF FINDINGS - Attach site map					The second second
	do	Junpan	8 Point	oodions, nunseou	, important reatures, etc
Hydric Soil Present? Yes X	No	is th	e Sampled		,
Wetland Hydrology Present? YesXN	No	with	in a Wetla	nd? Yes	No
	ZADE.	4010	e	AN AREA .	THAT BRICKLY
EGETATION - Use scientific names of plants	Absolute	Dominant	Indicator	Dominance Test work	sheet:
Tree Stratum (Plot size: 30)		Species?		Number of Dominant S	
				That Are OBL, FACW,	
				Total Number of Domin	ant o
1000	_	_		Species Across All Stra	ta: (B)
100				Percent of Dominant S	pecies
		- Total Con		That Are OBL, FACW,	or FAC: (A/B)
Sapling/Shrub Stratum (Plot size:(5)		= Total Cov	or	Prevalence Index wor	ksheet:
LONICERA MAACKII	25	7	UPL	Total % Cover of:	Multiply by:
ACER NEGUNDO	5	-14	FAC	OBL species	x1= 15
				FACW species	
				FAC species5	x3=
	-			FACU species	x4= 20
lerb Stratum (Piot size: 5)	20	= Total Cov	H	UPL species 2	221
IMPATIENS DAPENSIS	60	Y	FACW	Column Totals: 12	8 (A) 33 (B)
PERSICARIA PUNCTATA	10	12	OBL	Prevalence Index	-B/A = 2.59
PERSICARIA PENSYLVANICA	10	N	FACW	Hydrophytic Vegetatio	n Indicators:
COMMELINA COMMUNIS	5	N	FACU	1 - Rapid Test for H	lydrophytic Vegetation
LEERSIA VIRGINICA	5		FACW	✓ 2 - Dominance Test	ls >50%
CAREX FRANKII	5	N	BL	3 - Prevalence Inde	x is \$3.0°
PILEA PUMILA	_3_	N	FACW	4 - Morphological A	daptations1 (Provide supporting
				And the second of the second o	or on a separate sheet)
				Problematic Hydrop	hytic Vegetation ¹ (Explain)
oody Vine Stratum (Plot size: 30')	98	Total Cove	ır	¹ Indicators of hydric soil be present, unless distu	and wetland hydrology must rbed or problematic.
.6				Hydrophytic	
1127				Manatallan	
704					
HOPE		Total Cove	,	NO TREES	_X_ No

Sampling Point WETLAND

Depth Matrix	Redox Features	
(inches) Color (moist) %	Color (moist) % Type Loc2	1100000
0-3 10 YR 3/1 100		SiL
3-12 10 YR 4/1 70	7.5 YR 4/4 15 C PL/1	M 5:CL
	104R 5/1 15 D M	
	1078 -71 -77 -27 -17	
	I=Reduced Matrix, MS=Masked Sand Grains.	³ Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Gleyed Matrix (S4)	Coast Prairie Redox (A16)
Histic Epipedon (A2)	Sandy Redox (S5)	Dark Surface (S7)
Black Histic (A3)	Stripped Matrix (S6)	Iron-Manganese Masses (F12)
Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1)	Very Shallow Dark Surface (TF12)
Stratified Layers (A5) 2 cm Muck (A10)	Loarny Gleyed Matrix (F2) Depleted Matrix (F3)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Redox Dark Surface (F6)	
_ Thick Dark Surface (A12)	Depleted Dark Surface (F7)	3Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Redox Depressions (F8)	wetland hydrology must be present,
5 cm Mucky Peat or Peat (S3)		unless disturbed or problematic.
Restrictive Layer (if observed):		
Туре:		
Depth (inches):		Hydric Soil Present? Yes X No
temarks:		
HYDRIC YDROLOGY		
YDROLOGY Wetland Hydrology Indicators:	ired; check all that apply)	Secondary Indicators (minimum of two required
YDROLOGY Wetland Hydrology Indicators:	ired; check all that apply) Water-Stained Leaves (B9)	Secondary Indicators (minimum of two required
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required.)		Surface Soil Cracks (B6)
YDROLOGY Vettand Hydrology Indicators: Primary Indicators (minimum of one is requ	Water-Stained Leaves (B9)	
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9) Aquatic Fauna (B13)	Surface Soil Cracks (B6) Orainage Patterns (B10)
YDROLOGY Vettand Hydrology Indicators: Primary Indicators (minimum of one is required by the control of the c	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
Primary Indicators: Primary Indicators (minimum of one is required) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Creyfish Burrows (C8)
Primary Indicators: Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sutfide Odor (C1) X Oxidized Rhizospheres on Living Roots	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)
Primary Indicators (minimum of one is requested Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sutfide Odor (C1) Oxidized Rhizospheres on Living Roots Presence of Reduced Iron (C4)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)
Print Process YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required by the print Primary Indicators (Minimum of one is required by the print Prin	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solls (C	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) a (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) C6) Geomorphic Position (D2)
Permarks: A YOR IC YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required by the second of the	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) X Oxidized Rhizospheres on Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solls (C) Thin Muck Surface (C7) Gauge or Well Data (D9)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) a (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) C6) Geomorphic Position (D2)
POR IC YDROLOGY Vettand Hydrology Indicators: Inimary Indicators (minimum of one is required) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface (B)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) X Oxidized Rhizospheres on Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solls (C) Thin Muck Surface (C7) Gauge or Well Data (D9)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) a (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) C6) Geomorphic Position (D2)
Property Pro	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) X Oxidized Rhizospheres on Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solls (C) Thin Muck Surface (C7) Gauge or Well Data (D9)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) a (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) C6) Geomorphic Position (D2)
Primary Indicators: Primary Indicators (minimum of one is required) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface (B1) Teld Observations:	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sutfide Odor (C1) Oxidized Rhizospheres on Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solls (C Thin Muck Surface (C7) 7) Gauge or Well Data (D9) B8) Other (Explain in Remarks) No Depth (inches):	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) a (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) C6) Geomorphic Position (D2)
Primary Indicators: Primary Indicators (minimum of one is required) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface (B4) Field Observations: Surface Water Present? Vater Table Present? Yes	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sutfide Odor (C1) Oxidized Rhizospheres on Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solls (C Thin Muck Surface (C7) 7) Gauge or Well Data (D9) B8) Other (Explain in Remarks) No Depth (inches): No Depth (inches):	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) a (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) C6) Geomorphic Position (D2)
Property Property Property Property Property Indicators (minimum of one is requested Property Indicators (minimum of one is requested Property Indicators (minimum of one is requested Property Property Indicators (minimum of one is requested Property Property (All) Surface Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (Based Observations: Surface Water Present? Ves Saturation Present	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sutfide Odor (C1) X Oxidized Rhizospheres on Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solls (C Thin Muck Surface (C7) Gauge or Well Data (D9) B8) Other (Explain in Remarks) No X Depth (inches): No Depth (inches): Well	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) a (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) C6) Second Plants (D2) FAC-Neutral Test (D5)
Property Pro	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sutfide Odor (C1) Oxidized Rhizospheres on Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solls (C Thin Muck Surface (C7) 7) Gauge or Well Data (D9) B8) Other (Explain in Remarks) No Depth (inches): No Depth (inches):	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) a (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) C6) Second Plants (D2) FAC-Neutral Test (D5)
Property Pro	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solls (C Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks) No Depth (inches): No Depth (inches): Well Controlled (inches):	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Creyfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) C6)
Property Pro	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sutfide Odor (C1) X Oxidized Rhizospheres on Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solls (C Thin Muck Surface (C7) Gauge or Well Data (D9) B8) Other (Explain in Remarks) No X Depth (inches): No Depth (inches): Well	Drainage Patterns (B10) Dry-Season Water Table (C2) Creyfish Burrows (C8) a (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) C6) Geomorphic Position (D2) FAC-Neutral Test (D5) tland Hydrology Present? Yes No

WMO-JJP-004

Project/Site:STL	city/County: 51.	Charles Sampling Date: 10-15-2
Applicant/Owner: 5 Direct		State: MO Sampling Point: Wellan
nvestigator(s): JJP-TMA	Section Township D	lange: Section 1888 Feel breat
resignion(s).	*	
		ef (concave, convex, none):
lope (%): Lat: 3 8.881774	Long: <u>-90.240</u>	
oil Map Unit Name: Sanstesse n Sly Clay	0-21. Slepes. Occepione	NWI classification: 1//
e 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
e Vegetation N Soil N ar Hydrology N	_ naturally problematic? (If n	needed, explain any answers in Remarks.)
JMMARY OF FINDINGS - Attach site ma		locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes	No	
lydric Soil Present? Yes	No Is the Sample	d Area /
Vetland Hydrology Present? Yes	No within a Wetla	ind? Yes No
Area sample point for	PEM/isolated	metland wmoss 1004
EGETATION – Use scientific names of plant		
ree Stratum (Plot size: 301)	Absolute Dominant Indicator % Cover Species? Status	Dominance Test worksheet:
		Number of Dominant Species That Are OBL, FACW, or FAC: (A)
		Total Number of Dominant Species Across All Strata: (B)
_ 105em		
		Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
151	= Total Cover	
epiling/Shrub Stratum (Plot size: 15)		Prevalence Index worksheet:
		Total % Cover of: Multiply by:
	· · · · · · · · · · · · · · · · · · ·	OBL species x 1 =
HUSENT		FACW species x2 =
11030101		FAC species #3 =
	<u></u>	FACU species x4 =
rb Stratum (Plot size: 5 r)	= Total Cover	UPL species x5=
Panicum dichatomi florum	ZO Y FACW	Column Totals: (A) (B)
Ammannia coccinea	20 Y OBL	Prevalence Index = B/A =
Yauthium strumanium	10 N FAC	Hydrophytic Vegetation Indicators:
RUMER CUISPUS	G N FAL	/I - Rapid Test for Hydrophytic Vegetation
schinochlog crusgalli	5 A FACW	2 - Dominance Test is >50%
0		3 - Prevalence Index is ≤3.01
		4 - Morphological Adaptations' (Provide supporting
		data in Remarks or on a separate sheet)
		Problematic Hydrophytic Vegetation¹ (Explain)
		1
ody Vine Stratum (Plot size: 30'r)	O = Total Cover	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
		Hydrophytic /
A \		Vegetation
Alasant	= Total Cover	Present? Yes No

SOIL

Depth	Matrix			K Feature:	5			
(inches)	Color (moist)	-%-	Color (moist)	_%_	Type	Loc	Texture	Remarks
0-8	104 R3/1	98	104336	2		m	Sic	
3-17	104 R3/1	85	104 R36	15		m	_	
		=		=	=	=		
ydric Soll In _ Histosol (, _ Histic Epi _ Black Hist _ Hydrogen	A1) pedon (A2) tic (A3) Sulfide (A4)	ietion, RM=	Sandy R Stripped Loamy M	leyed Mat edox (S5) Matrix (S6 lucky Mine	trix (S4) (6) eral (F1)	sins.	Indicators for Coast Pra Dark Surf Iron-Mang Very Shal	ganese Masses (F12) low Dark Surface (TF12)
_ 2 cm Muc _ Depleted _ Thick Dark _ Sandy Mu _ 5 cm Muck	Below Dark Surface k Surface (A12) icky Mineral (S1) ky Peat or Pea1 (S3		Depleted Redox D Depleted	ileyed Mai Matrix (F. ark Surfac Dark Surf epression:	3) ce (F6) face (F7)		³ Indicators of wetlend hy	plain in Remarks) hydrophytic vegetation and /drology must be present, turbed or problematic.
	yer (if observed):							
-11130100	es):		_				Hydric Soil Pre	esant? Yas <u>V</u> No
Depth (inch	es):						Hydric Soil Pre	esant? Yas V No
Depth (inch emarks: N DROLOG etland Hydra	Y glogy indicators:							
Depth (inchemarks: DROLOG Iland Hydro imary Indicate Surface Wo High Water Saturation Water Mark Sediment D Drift Depoal Algal Mat o Iron Deposi Inundation Sparsely Ve	Y Illingy indicators: Ors (minimum of on ater (A1) Table (A2) (A3) (A3) (A5 (B1) Deposits (B2) ilts (B3) The Crust (B4) its (B5) Visible on Aerial Imagetatad Concave S	, agary (87)	d: check all that and Water-Stain Aquatic Fau True Aquatic Hydrogen Si Oxidized Rh Presence of Recent Iron Thin Muck S Gauge or W.	ed Leaves na (B13) c Plants (B ulfide Odo izosphere: Reduced Reduction urface (C7 ell Data (D	B14) or (C1) or (C1) or Livin s on Livin lron (C4) or In Tillad		Secondary II Surface Drainag Dry-Sea Crayfish Saturatio Stunted Geomor	
Depth (inchemarks: DROLOG Illand Hydro imary Indicate Surface We High Water Saturation Water Mark Sediment D Drift Depoal Algal Mat o Iron Deposi Inundation Sparsely Ve	y Integration of the second o	agary (B7) Surface (B8	Water-Stain Aquatlc Fau Aquatlc Fau True Aquatlc Hydrogen Si Oxidized Rh Presence of Recent Iron Thin Muck S Gauge or Wo	ed Leaves na (B13) c Plants (B ulfide Odo izosphere: Reduced Reduction urface (C7 ell Data (D in in Rema	B14) or (C1) or (C1) or Livin s on Livin lron (C4) or In Tillad		Secondary II Surface Drainag Dry-Sea Crayfish Saturatio Stunted Geomor	ndicators (minimum of two require Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
Depth (inch emarks: DROLOG Illand Hydro imary Indicate Surface We High Water Saturation Water Mark Sediment D Drift Depoal Algal Mat o Iron Deposi Inundation Sparsely Ve Indicate Water Face Water Capilla	y Infogy Indicators: Ors (minimum of one ater (A1) Table (A2) (A3) (A3) (A5 (B1) Deposits (B2) Its (B3) Toust (B4) Its (B5) Visible on Aerial Impegetated Concave Sions: Present? Present? Yes ant? Yes ant? Yes ary fringe)	agary (B7) Surface (B8 No No	Water-Stain Aquatic Fau Aquatic Fau True Aquatic Hydrogen Si Oxidized Rh Presence of Recent Iron Thin Muck S Gauge or Wo Othar (Expla	ed Leaves na (B13) c Plants (B ulfide Odo izosphere: Reduced Reduction urface (C7 ell Data (D in in Remains):	314) or (C1) s on Livin lron (C4) ol n Tillad 7) 09) arka)	Soils (C6)	Secondary I Surface Drainag Dry-Sea Crayfish Saturatic Stunted Geomor FAC-Ne	ndicators (minimum of two require Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)
Depth (inch emarks: DROLOG Illand Hydra imary Indicate Surface Water Saturation Water Mark Sediment D Drift Depoal Algal Mat o Iron Deposi Inundation Sparsely Ve id Observat rface Water F ater Table Prese cludes capilla	y Infogy Indicators: Ors (minimum of one ater (A1) Table (A2) (A3) (A3) (A5 (B1) Deposits (B2) Its (B3) Toust (B4) Its (B5) Visible on Aerial Impegetated Concave Sions: Present? Present? Yes ant? Yes ant? Yes ary fringe)	agary (B7) Surface (B8 No No	Water-Stain Aquatic Fau Aquatic Fau True Aquatic Hydrogen Si Oxidized Rh Presence of Recent Iron Thin Muck S Gauge or W Othar (Expla	ed Leaves na (B13) c Plants (B ulfide Odo izosphere: Reduced Reduction urface (C7 ell Data (D in in Remains):	314) or (C1) s on Livin lron (C4) ol n Tillad 7) 09) arka)	Soils (C6)	Secondary I Surface Drainag Dry-Sea Crayfish Saturatic Stunted Geomor FAC-Ne	ndicators (minimum of two require Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)
Depth (inchemarks: DROLOG Itand Hydro Imary Indicate Surface We High Water Saturation Water Mark Sediment D Drift Depoal Algal Mat o Iron Deposi Inundation Sparsely Ve Ind Observat Iface Water For Table Preservation Preser	y Infogy Indicators: Ors (minimum of one ater (A1) Table (A2) (A3) (A3) (A5 (B1) Deposits (B2) Its (B3) Toust (B4) Its (B5) Visible on Aerial Impegetated Concave Sions: Present? Present? Yes ant? Yes ant? Yes ary fringe)	agary (B7) Surface (B8 No No	Water-Stain Aquatic Fau Aquatic Fau True Aquatic Hydrogen Si Oxidized Rh Presence of Recent Iron Thin Muck S Gauge or Wo Othar (Expla	ed Leaves na (B13) c Plants (B ulfide Odo izosphere: Reduced Reduction urface (C7 ell Data (D in in Remains):	314) or (C1) s on Livin lron (C4) ol n Tillad 7) 09) arka)	Soils (C6)	Secondary I Surface Drainag Dry-Sea Crayfish Saturatic Stunted Geomor FAC-Ne	ndicators (minimum of two require Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)

pplicant/Owner: prestigator(s): andform (hillslope, terrace, etc.): lope (%): Lat: 38.126360 bil Map Unit Name: 61656 s. 114 clay lower re climatic / hydrologic conditions on the site typical for vegetation	or this time of yea significantly d	Local relief cong: -90.369 Stenes Fare V r? Ye No isturbed? Are olematic? (If no	State: M() Sampling Point: Which was ange: Section 182 And Sec
lydrophytic Vegetation Present? Yes	/No	I- 45 - 0 1	4.4
ydric Soil Present? Yes	/ No	Is the Sampled within a Wetla	
Vetland Hydrology Present? Yes	No		
And somple pour for	Madi	acoust we	Hand WMW 11008
AMER & Sommision @	de	arrie Deal	I have a los of 12 100
		10. 1100	MOODER OF ALLE
GETATION - Use scientific names of pla			
se Stratum (Plot size:		Duminant Indicator Species? Status	Dominance Test worksheet:
to order.		Otatus Otatus	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
			That Are Obl. PACY, of PAC. (A)
11 1			Total Number of Dominant
1-1 65 CM			Species Across All Strata: (B)
			Percent of Dominant Species / 80 /
		Total Cover	That Are OBL, FACW, or FAC: (A/B)
pling/Shrub Stratum (Plot size:)	Total Cuvel	Pravalence Index worksheet:
	<u> </u>		Total % Cover of: Multiply by:
			OBL species x1 =
Ala			FACW species = 2 =
HUSENU			FAC species x3 =
			FACU species x4 =
	0=	Total Cover	UPL species # 5 =
rb Stratum (Plot size)	20	+ TALL	Column Totals: (A) (B)
Thinochloa muchalli	_ 30	FACO	
America cocrine	30	Y OBL	Prevalence Index = B/A =
Setanta Pumila	- +0-	N TAC	Hydrophytic Vegetation Indicators:
Sagittania lut; Folia	$- \rightarrow -$	N OISL	1 - Rapid Test for Hydrophytic Vegetation
			✓ 2 - Dominance Test is >50%
			3 - Prevalence Index is ≤3.0' 4 - Morphological Adaptations¹ (Provide supporting
			data in Remarks or on a separate sheet)
			Problematic Hydrophytic Vegetation ¹ (Explain)
ody Vine Stratum (Plot size:	75=	Total Cover	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
yar - iro Sugium (Fiot Size.			
			Hydrophytic
Margarit			Veretation /
Alosent		Total Cover	Vegetation Present? Yes No No

Co-st- D		Tompany to an a top part of the top part of th
Depth Matrix	ppth needed to document the indicator or confirm Redox Features	n the absence of indicators.)
O-4 IOYR3/2	Color (moist) % Type Loc OL MA	C Remarks
4.12" 25141.	754846 5 0 01-10	SCL SI
1-11 2.21 11	10×10 4/10 15 C 100	
	N 4/A	
	15 10 10	
¹Type: C=Concentration, D=Depletion, RA	M=Reduced Matrix, MS=Masked Sand Grains.	² Location: PL=Fore Lining, M=Matrix.
Hydric Soil Indicators:		Indicators for Problematic Hydric Soils
Histosol (A1)	Sandy Gleyed Matrix (S4)	Coast Prairie Redox (A16)
Histic Epipedon (A2)	Sandy Redox (S5)	Dark Surface (S7)
Black Histic (A3)	Stripped Matrix (S6)	Iron-Manganese Masses (F12)
Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1)	Very Shallow Dark Surface (TF12)
Stratified Layers (A5)	/Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
2 cm Muck (A10)	Depleted Matrix (F3)	
Depleted Below Dark Surface (A11)	Redox Dark Surface (F6)	
Thick Dark Surface (A12)	Depleted Dark Surface (F7)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Redox Depressions (F8)	wetland hydrology must be present,
5 cm Mucky Peat or Peat (S3)		unless disturbed or problematic
Restrictive Layer (if observed):		
Туре: Р ОУР		./
Depth (Inches):		Hydric Soil Present? Yes V No
Remarks:		
pone		

HYDROLOGY

Primary Indicators (minimum of one is a Surface Water (A1) High Water-Table (A2) Saturation (A3)	wired: check all that apply) Secondary Indicators (minimum of two required) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Secondary Indicators (minimum of two required) Surface Soil Cracks (B6) Dralnage Patterns (B10) Dry-Season Water Table (C2)
Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imager Sparsely Vegetated Concave Surfa	
Field Observations:	Cos Chai (Explain in Netterics)
Surface Water Present? Yes	No Depth (inches):
Water Table Present? Yes	No Depth (inches):
Saturation Present? Yes (includes capillary fringe)	No Depth (inches): Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge	nonitoring well, serial photos, previous inspections), if available:
Rémarks: — NJW	4

1300 990		C. L. L. L. C. L.
Project/Site: Live 880	City/County:	St. Louis Co Sampling Date Z-17-20
Applicant/Owner: Spivo		State: NO Sampling Point: W-0 + Gu d
Investigator(s): JJP-WJW	Di Section, Towns	thip, Range: 14 / /2W / 9 M
Landform (hillslope, terrace, etc.): Buttennta and -		
A		218065 Datum: NAD 83
Soil Map Unit Name:MEA +100 3.77 /11500	5-9% Stepes,	ended NWI classification: None
Are climatic / hydrologic conditions on the site typical for this		No (If no, explain in Remarks.)
Are Vegetation N . Soil N , or Hydrology N s	gnificantly disturbed?	Are 'Normal Circumstances" present? Yes No
Are Vegetation $ extstyle extsty$	aturally problematic?	(If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map	showing sampling p	oint locations, transects, important features, etc.
		ampled Area Wetland? Yes No
		7.6 1 1.0000
- Area of wetland within		
VEGETATION – Use scientific names of plants.		
Tree Stratum (Plot size: _ 3 0 v)	Absolute Dominant Ind	
1.	% Cover Species? S	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2		
3.		Total Number of Dominant Species Across All Strata: (B)
4. 17 OSEM		
5.		Percent of Dominant Species That Are OBL, FACW, or FAC 00% (A/B)
Sapling Shrub Stratum (Plot size: \5 V)	= Total Cover	Prevalence Index worksheet:
saping sand stratum (Plot size: (5 V)		Total % Cover of:Multiply by:
2		OBL species x 1 =
3.		FACW species x 2 =
4 A OSEMI		FAC species x 3 =
5		FACU species x 4 =
	Total Cover	UPL species x 5 =
1. Echiwochlus (Vus~sall)	30) Y E	Column Totals: (A) (B)
2 Ranunculus Scelevatus	20 4 1	Prevalence Index = B/A =
3. Pon travalis	20 Y FA	Hydrophytic Vegetation Indicators:
		1 - Rapid Test for Hydrophytic Vegetation
5. Ammania corrinea	5 N 01	2 - Dominance Test is >50%
6.		3 - Prevalence Index is ≤3.0 ¹
7		4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
8		Problematic Hydrophytic Vegetation (Explain)
9		
10.	a = -	1 Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size: 30'√)	= Total Cover	be present, unless disturbed or problematic.
1. Maccount		Hydrophytic Vegetation
2. 10 2000	Total Caver	Present? Yes No
Remarks: (Include photo numbers here or on a separate si	= Total Cover	
- NML	,	
FSU		

Depth Matrix (inches) Color (moist) %	Redox Features Color (moist)%Type¹Lo	c ² Texture Remarks
* * * * * * * * * * * * * * * * * * *		
0-3 2.5-731 95	1018314 5 C W	-
3-17 7.574/1 85	7.51R314 10 C M/	PL SiL
	7.54R4/10 5 C W	
Type: C=Concentration, D=Depletion, RI	M=Reduced Matrix, MS=Masked Sand Grains.	² Location: PL=Pore Lining, M=Matrix.
lydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Gleyed Matrix (S4)	Coast Prairie Redox (A16)
Histic Epipedon (A2)	Sandy Redox (S5)	Dark Surface (S7)
Black Histic (A3)	Stripped Matrix (S6)	Iron-Manganese Masses (F12)
Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1)	Very Shallow Dark Surface (TF12)
Stratified Layers (A5)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
2 cm Muck (A10)	Depleted Matrix (F3)	
Depleted Below Dark Surface (A11)	Redox Dark Surface (F6)	3
Thick Dark Surface (A12)	Depleted Dark Surface (F7)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Redox Depressions (F8)	wetland hydrology must be present,
5 cm Mucky Peat or Peat (S3) Restrictive Layer (if observed):		unless disturbed or problematic
Type: Nowe		
		Hydric Soil Present? Yes No
Darth (inchas):		
Depth (inches):Remarks:		
Remarks:		
YDROLOGY		
YDROLOGY Vetland Hydrology Indicators:	uired: check all that apply)	Secondary Indicators (minimum of two requires
Primary Indicators: (minimum of one is required)		Secondary Indicators (minimum of two requirer
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one is required) Surface Water (A1)	Water-Stained Leaves (B9)	Surface Soil Cracks (B6)
YDROLOGY Vetland Hydrology Indicators: Frimary Indicators (minimum of one is requested by the control of the co	Water-Stained Leaves (B9) Aquatic Fauna (B13)	<pre>Surface Soil Cracks (B6) Drainage Patterns (B10)</pre>
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one is required by Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14)	Surface Soil Cracks (B6)Drainage Patterns (B10)Dry-Season Water Table (C2)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one is required by the second of the second	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1)	 Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one is required by Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Ro	 Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one is required by the second of the secon	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Ro	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one is required by Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mail or Crust (B4)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Ro Presence of Reduced Iron (C4) Flecent Iron Reduction in Tilled Soils	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) ots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) (C6) Geomorphic Position (D2)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one is required by the second of the secon	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Ro Presence of Reduced Iron (C4) Flecent Iron Reduction in Tilled Soils Thin Muck Surface (C7)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one is required by Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (I	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Thin Muck Surface (C7) Gauge or Well Data (D9)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) ots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) (C6) Geomorphic Position (D2)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one is required by Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mai or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (I	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Thin Muck Surface (C7) Gauge or Well Data (D9)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) ots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) (C6) Geomer phic Position (D2)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one is required by the second of the secon	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Ro Presence of Reduced Iron (C4) Flecent Iron Reduction in Tilled Soils Thin Muck Surface (C7) Gauge or Well Data (D9) (B8) Other (Explain in Remarks)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) ots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) (C6) Geomer phic Position (D2)
Proposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (I Sparsely Vegetated Concave Surface Water Present?	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Thin Muck Surface (C7) Gauge or Well Data (D9) (B8) Other (Explain in Remarks)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) ots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) (C6) Geomer phic Position (D2)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one is required by the second of the secon	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Thin Muck Surface (C7) Gauge or Well Data (D9) (B8) Other (Explain in Remarks) No Depth (inches):	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) (C6) Geomorphic Position (D2) FAC-Neutral Test (D5)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one is required) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mail or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (I Sparsely Vegetated Concave Surface iield Observations: Surface Water Present? Ves Vater Table Present? Yes	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Thin Muck Surface (C7) Gauge or Well Data (D9) (B8) Other (Explain in Remarks) No Depth (inches):	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) ots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) (C6) Geomer phic Position (D2)
Proposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (I Sparsely Vegetated Concave Surface Water Present? Surface Water Present? Attention (Passers of the Aerial Imagery (I Sparsely Vegetated Concave Surface Water Table Present? Attention Present? Attention Present? Attention Present? Attention Present? Acturation P	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Thin Muck Surface (C7) Gauge or Well Data (D9) (B8) Other (Explain in Remarks) No Depth (inches):	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) sots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5) Wetland Hydrology Present? Yes No
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one is required by the second of the secon	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils The Much Surface (C7) Gauge or Well Data (D9) (B8) Other (Explain in Remarks) No Depth (inches): No Depth (inches):	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) sots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5) Wetland Hydrology Present? Yes No
Proposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (I Sparsely Vegetated Concave Surface Water Present? Surface Water Present? Attention (Passers of the Aerial Imagery (I Sparsely Vegetated Concave Surface Water Table Present? Attention Present? Attention Present? Attention Present? Attention Present? Acturation P	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils The Much Surface (C7) Gauge or Well Data (D9) (B8) Other (Explain in Remarks) No Depth (inches): No Depth (inches):	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) sots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5) Wetland Hydrology Present? Yes No

VMO-JJP-12-0 PEM

Project/Site: Live 880	City	County: S#	Louis 10	Sampling Date: 2-/	8,-20
Applicant/Owner:				Sampling Point: wet	
Investigator(s):	Can	lion Tayunahin Da	inge: 1907	Sampling Folia00 = 1	
Landform (hillslope, terrace, etc.):				63 me 6	
			(concave, convex, none):		>
Slope (%): Lat: 3 \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		- 90 J	F. 1	Datum: MANO	
The state of the s	loam, 0-2%		NWI classification		
Are climatic / hydrologic conditions on the site typi				and the second	
Are Vegetation, Soil, or Hydrology	significantly dist	nbed? Are	'Normal Circumstances" p	resent? Yes No	
Are Vegetation, Soil, or Hydrology	naturally problem	natic? (If no	eeded, explain any answer	s in Remarks.)	
SUMMARY OF FINDINGS - Attach sit	e map showing sa	mpling point l	ocations, transects,	important features	, etc.
Hydrophytic Vegetation Present? Yes	× No				
Hydric Soil Present? Yes	No	Is the Sampled	×		
Wetland Hydrology Present? Yes	No	within a Wetla	nd? Yes	No	
-Area countle point f -Area possible old a	en PEMAdi Landom pa		etland numer	11 120 - of PEM/AFO.	*.j&
VEGETATION – Use scientific names of	plants,				
Tree Stratum (Plot size: 30 V)		minant Indicator Status	Dominance Test works		
1	_H_56050_ 386	Otatus Otatus	Number of Dominant Sp That Are OBL, FACW, o		(A)
2.				1	` '
3			Total Number of Domina Species Across All Strat		(B)
4 170 2000			Percent of Dominant Sp	acies I	
5.			That Are OBL, FACW, o		(A/B)
Sapling/Shrub Stratum (Plot size: 15 V	= To	otal Cover	Prevalence Index work	sheet.	-
1			Total % Cover of:		
2				x 1 =	
3. \\				x 2 =	
4 A O Sens			FAC species	x 3 =	
5			FACU species	x 4 =	
Ę.,	= To	lal Cover	UPL species	x 5 =	
Herb Stratum (Plot size:)	. 09	/ E6.64.	Column Totals:	(A)	(B)
1 Phalanis arundinac	ea 71	FACUL	Prevalence Index	- D/A -	
2. Boehmeria cylindric	VIIIN S V	FACU	Hydrophytic Vegetation		_
A PICYMON FAMILIAN	10111 -	Linco	1 Panid Tost for Us	udanahi tin Manatalian	
5			2 - Dominance Test	is >50%	
6.			3 - Prevalence Index	k is ≤3.0¹	
7			4 - Morphological Ad	daptations1 (Provide suppo	orting
8				or on a separate sheet)	
9			Problematic Hydropi	hytic Vegetation¹ (Explain)	
10.			Neglector of Europe 19		.
Woody Vine Stratum (Plot size: <u>こん</u>	_)	tal Cover	be present, unless distur	and wetland hydrology mu bed or problematic.	st
1. 11.00.1			Hydrophytic		
2. HOSEM	O = To	1-10-	Vegetation Present? Yes	X No	
Domarka: (Include abate aumbers bere as as a		tal Cover			
Remarks: (Include photo numbers here or on a se	sparate sneet)				
" LICK!					

SOIL

(2)	A.A.	01	11	17	P. A	PEM
Samp						

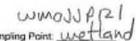
rofile Description: (Describe to the de	epth needed to document the indicator or confirm	the absence of marcators.)
Depth <u>Matrix</u>	Redox Features	Touture
inches) Color (moist) %	Color (moist) % Type Loc²	Texture Remarks
0-4 101847 70	1018414 2 C M	SiCL_
1-1+ 10 YR4/1 85	104 R5/1 5 1) M	SiLL
- 11	10VR4/11 5 (M	
	10115-19	
	*:	
voe: C=Concentration, D=Depletion, RM	M=Reduced Matrix, MS=Masked Sand Grains.	⁷ Location: PL=Pore Lining, M=Matrix.
ydric Soil Indicators:	The state of the s	Indicators for Problematic Hydric Soils ¹ :
_ Histosol (A1)	Sandy Gleyed Matrix (S4)	Coast Prairie Redox (A16)
_ Histic Epipedon (A2)	Sandy Sieyed Madix (64) Sandy Redox (S5)	Dark Surface (S7)
Black Histic (A3)	Stripped Matrix (S6)	Iron-Manganese Masses (F12)
Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1)	Very Shallow Dark Surface (TF12)
Stratified Layers (A5)	Coamy Gleyed Matrix (F2)	Other (Explain in Remarks)
2 cm Muck (A10)	Depleted Matrix (F3)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Redox Dark Surface (F6)	
Thick Dark Surface (A11)	Depleted Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
	Redox Depressions (F8)	
_ Sandy Mucky Mineral (S1)	Redox Depressions (Fo)	wetland hydrology must be present,
_ 5 cm Mucky Peat or Peat (S3)		unless disturbed or problematic
estrictive Layer (if observed):		
Type: N N	_	Hydric Soil Present? Yes No
Depth (inches):	the second secon	nyaric Soil Present? Yes No
- nove		
DROLOGY		
/DROLOGY /etland Hydrology Indicators:	uired: check all that aooly)	Secondary indicators (minimum of two require
OROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one is requ		Secondary Indicators (minimum of two requires
TOROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one is requested)	Water-Stained Leaves (B9)	Surface Soil Cracks (B6)
TOROLOGY Vetland Hydrology Indicators rimary Indicators (minimum of one is requestional form) Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9) Aquatic Fauna (B13)	Surface Soil Cracks (B6)Drainage Patterns (B10)
PROLOGY Petland Hydrology Indicators rimary Indicators (minimum of one is requestional formation (A1) High Water Table (A2) Saturation (A3)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14)	Surface Soil Cracks (B6)Drainage Patterns (B10)Dry-Season Water Table (C2)
PROLOGY Tetland Hydrology Indicators: Timary Indicators (minimum of one is requested by the control of the co	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1)	 Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
POROLOGY Vetland Hydrology Indicators rimary Indicators (minimum of one is requestional formation (A1) High Water Table (A2) Saturation (A3)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14)	 Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
PROLOGY Vetland Hydrology Indicators rimary Indicators (minimum of one is requested by the second of the second	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1)	 Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
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CDROLOGY etland Hydrology Indicators rimary Indicators (minimum of one is requested by the control of the con	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (Presence of Reduced Iron (C4)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)
POROLOGY Tetland Hydrology Indicators Trimary Indicators (minimum of one is requested by the control of the c	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Stunted or Stressed Plants (D1)
EDROLOGY etland Hydrology Indicators imary Indicators (minimum of one is requested by the control of the cont	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (C1) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Gauge or Well Data (D9)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Stunted or Stressed Plants (D1)
etland Hydrology Indicators imary Indicators (minimum of one is requested by the control of the	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (C1) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Gauge or Well Data (D9)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Stunted or Stressed Plants (D1)
Portional Proposition (Page 1997) Petland Hydrology Indicators frimary Indicators (minimum of one is requested by the Portion (A1) High Water Table (A2) Saturation (A1) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B1) Sparsely Vegetated Concave Surface (B1)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (C1) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Gauge or Well Data (D9) (B8) Other (Explain in Remarks)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Stunted or Stressed Plants (D1)
Portland Hydrology Indicators rimary Indicators (minimum of one is requested by the control of t	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (C1) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Gauge or Well Data (D9) (B8) Other (Explain in Remarks)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Stunted or Stressed Plants (D1)
Portional Present? Portional Presents Portional Present P	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Gauge or Well Data (D9) (B8) Other (Explain in Remarks) No Depth (inches):	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Stunted or Stressed Plants (D1) Buomorphic Position (D2) FAC-Neutral Test (D5)
TOROLOGY Tetland Hydrology Indicators Timary Indicators (minimum of one is requested water (A1) High Water Table (A2) Saturation (A1) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B1) Sparsely Vegetated Concave Surface (B1) Indicator Visible on Aerial Imagery (B2) The Sparsely Vegetated Concave Surface (B1) The Spar	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Gauge or Well Data (D9) (B8) Other (Explain in Remarks) No Depth (inches):	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Stunted or Stressed Plants (D1)
PROLOGY Petland Hydrology Indicators rimary Indicators (minimum of one is requested by the control of the cont	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Gauge or Well Data (D9) (B8) Other (Explain in Remarks) No Depth (inches):	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5)
Portland Hydrology Indicators rimary Indicators (minimum of one is requested Water (A1) High Water Table (A2) Saluration (A1) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface Beld Observations: Urface Water Present? Ves Saluration Presen	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Gauge or Well Data (D9) (B8) Other (Explain in Remarks) No Depth (inches): No Depth (inches): Wetla	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5)
Mater Table (A2) Saturation (A1) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (E Sparsely Vegetated Concave Surface eld Observations: Urface Water Present? Ves Saturation Present? Yes Includes capillary fringe) escribe Recorded Data (stream gauge, memarks:	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Gauge or Well Data (D9) (B8) Other (Explain in Remarks) No Depth (inches): No Depth (inches): Wetla	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5)
Portional Present? Yes attraction Present? The property of the present of the pres	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Gauge or Well Data (D9) (B8) Other (Explain in Remarks) No Depth (inches): No Depth (inches): Wetla	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5)

WEILAND DEI		ONDAIA	1 OIGH	- imawest itegior	•
Project/Site: Line 880		City/County: _	Stil	ouis (0	_ Sampling Date
Applicant/Owner: 5 place				State: MC)	_ Sampling Point: une flow
Investigator(s):		Section, Town	nship, Rai	nge: 1907	
Landform (hillslope, terrace, etc.):				(concave, convex, none	NONE
Slope (%):				to the same	Datum: PAL 93
				The state of the s	lication: None
Are climatic / hydrologic conditions on the site typical for th		100	10		
Are Vegetation, Soil, or Hydrology					
				Normal Circumstances"	
Are Vegetation, Soil, or Hydrology				eded, explain any answ	
SUMMARY OF FINDINGS – Attach site map		sampling	point ic	ocations, transect	s, important features, etc
	No	is the	Sampled	Area	
5/	No No		a Wetlan		No
Remarks:	8	6/	1 t	1	1
- Area wetland sample point	/A	PFQY.	Adja	Down DE	d mmatthes
VEGETATION – Use scientific names of plants		para	01	FEMPTO	COMPEX
		Domist !-	odina*==	Daminance Test	drobont.
Tree Stratum (Plot size: 30 /)	Absolute % Cover	Dominant In	Status	Dominance Test wor Number of Dominant S	
1 Acer rubrum	20	7 5	AC	That Are OBL, FACW,	
2. Ulmus americana	10		ACW	Total Number of Domi	nant (
3. Salive Minra	_ 10	7 0	<u>BL</u>	Species Across All Str	
4				Percent of Dominant S	Species (20)
5	- 712			That Are OBL, FACW,	
Saping/Shrub Stratum (Plot size: \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	40	= Total Cover		Prevalence Index wo	rkehoot:
1. ACDA TUWW	5	YF	AC	Total % Cover of:	
2			//_	-	x 1 =
3					x 2 =
4				FAC species	x 3 =
5.				FACU species	x 4 =
<u> </u>	_5_	Total Cover		UPL species	x 5 =
Herb Stratum (Plot size:)	1.0	Y -		Column Totals:	(A) (B)
1 Phalanis arundina usa	- 60	11	ACW	December 15 for	
2 Boeheria cylindrica	-10	-M- F	ACW	Prevalence Index Hydrophytic Vegetati	
3 Apacynum annabinum		_/v_ +	ACU		Hydrophylic Vegetation
4			_	2 - Dominance Te	
5.				3 - Prevalence Ind	
7				_	Adaptations ¹ (Provide supporting
7 8				data in Remark	s or on a separate sheet)
9.				Problematic Hydro	phytic Vegetation¹ (Explain)
10					
7416	75	Total Cover		¹ Indicators of hydric so be present, unless dist	il and wetland hydrology must urbed or problematic.
1. Taxis and valvey vaditavis	5	YE	AC		
			115	Hydrophytic Vegetation	1/
2,	- France	Total Cause		Present? Ye	es No
Remarks: (Include photo numbers here or on a separate		Total Cover			1
- P M	311001.)				
- FUILE					

SOIL

Profile Description: (Describe to the dep Depth Matrix		ent the i Feature:		or conlin	n the absence	or indicaturs.)
(inches) Color (moist) %	Color (moist)	%	Type*	_Loc2	Texture	Remarks
0-5 104R4/2 95	104R4/4	5	_	M	Sill	
5-17 104A4/1 90	104B314	-		M	SILL	
101111111111111111111111111111111111111	1040514		-	-0.0	0.66	
	10143/1			111		
				-		
Type: C=Concentration, D=Depletion, RM	I=Reduced Mutra MS		Sand Gra	ains.	² Location	: PL=Pore Lining, M=Matrix
lydric Soil Indicators:	Tiodased illiana, illia	111001101	00110			for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Gl	eved Ma	trix (S4)		Coast I	Prairie Redox (A16)
Histic Epipedon (A2)	Sandy Re	-				urface (S7)
Black Histic (A3)	Stripped I	Matrix (S	6)		Iron-Ma	anganese Masses (F12)
Hydrogen Sulfide (A4)	Loamy M	ucky Min	eral (F1)		Very SI	hallow Dark Surface (TF12)
Stratified Layers (A5)	Loamy GI				Other (Explain in Remarks)
2 cm Muck (A10)	≥ Depleted					
Depleted Below Dark Surface (A11)	Redox Da				31	م المام الما
Thick Dark Surface (A12) Sandy Mucky Mineral (S1)	Depleted Redox De					of hydrophytic vegetation and I hydrology must be present,
Sandy Mucky Mineral (S1) 5 cm Mucky Peat or Peat (S3)	Kedox De	pression	is (FO)			disturbed or problematic
Restrictive Layer (if observed):					unicas	distarbed of problemade
Type: Now						4
Depth (inches):					Hydric Soil	Present? Yes No
Deptil (iliches).						
-hove						
YDROLOGY						
YDROLOGY Vetland Hydrology Indicators:	ired: check all that appl	v)			Secondar	ry Indicators (minimum of two required)
YDROLOGY Vetland Hydrology Indicators: trimary Indicators (minimum of one is requi	- /		es (B9)			
POROLOGY Vetland Hydrology Indicators: timary Indicators (minimum of one is requi	✓ Water-Staine	ed Leave			Surfa	ace Soil Cracks (B6)
/DROLOGY //etland Hydrology Indicators: https://example.com/dicators/fine-is-required- Surface Water (A1) High Water Table (A2)	✓ Water-Staine Aquatic Faul	ed Leave na (B13)			Surfa Drain	ace Soil Cracks (B6) nage Patterns (B10)
VDROLOGY Vetland Hydrology Indicators: Timary Indicators (minimum of one is required by the Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Staine Aquatic Faul True Aquatic	ed Leave na (B13) Plants (B14)		Surfa Drair Dry-S	ace Soil Cracks (B6) nage Patterns (B10) Geason Water Table (C2)
VOROLOGY Vetland Hydrology Indicators: Inimary Indicators (minimum of one is required by the second of the second	Water-Staine Aquatic Faul True Aquatic Hydrogen St	ed Leave na (B13) Plants (ulfide Od	B14) or (C1)	ng Roots	Surfa Drain Dry-S Cray	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8)
Verland Hydrology Indicators: Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Staine Aquatic Faul True Aquatic	ed Leave na (B13) Plants (ulfide Od izospher	B14) or (C1) es on Livi		Surfa Drain Dry-9 Crayo (C3) Satu	ace Soil Cracks (B6) nage Patterns (B10) Geason Water Table (C2)
YDROLOGY Vetland Hydrology Indicators: Chimary Indicators (minimum of one is required to the second of the second	Water-Staind Aquatic Faul True Aquatic Hydrogen St Oxidized Rh	ed Leave na (B13) Plants (ulfide Od izospher Reduced	B14) or (C1) es on Livi d Ir o n (C4)	Surfa Drair Cray Cray (C3) Satur	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aenal Imagery (C9)
YDROLOGY Vetland Hydrology Indicators: Dimary Indicators (minimum of one is required to the state of the stat	Water-Staind Aquatic Faul True Aquatic Hydrogen Staind Oxidized Rh Presence of	ed Leave na (B13) Plants (ulfide Od izosphen Reduced Reductio	B14) or (C1) es on Livi d Ir o n (C4 on in Tilled)	Surfa Drain Dry-{ Crayly Satun Stunt	ace Soil Cracks (B6) hage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one is required by the second of the second	Water-Staind Aquatic Faul True Aquatic Hydrogen Staind Oxidized Rh Presence of Recent Iron Thin Muck S	ed Leave na (B13) Plants (ulfide Od izospher Reduced Reductio urface (C	B14) or (C1) es on Livi d Iron (C4 on in Tilled)	Surfa Drain Dry-{ Crayly Satun Stunt	ace Soil Cracks (B6) hage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) no phic Position (D2)
YDROLOGY Vetland Hydrology Indicators: Immary Indicators (minimum of one is requi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Again Mat or Crust (B4) Iron Deposits (B5)	Water-Staine Aquatic Faul Aquatic Faul True Aquatic Hydrogen Staine Oxidized Rh Presence of Recent Iron Thin Muck S Gauge or Water	ed Leave na (B13) plants (ulfide Od izosphen Reduced Reductio urface (C ell Data (B14) or (C1) es on Livi d Iron (C4 on in Tilled C7))	Surfa Drain Dry-{ Crayly Satun Stunt	ace Soil Cracks (B6) hage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) no phic Position (D2)
YDROLOGY Vetland Hydrology Indicators: Firmary Indicators (min mum of one is required.) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface (Water-Staind Aquatic Faul Aquatic Faul True Aquatic Hydrogen Staind Oxidized Rh Presence of Recent Iron Thin Muck S Gauge or We	ed Leave na (B13) plants (ulfide Od izosphen Reduced Reductio urface (C ell Data (B14) or (C1) es on Livi d Iron (C4 on in Tilled C7))	Surfa Drain Dry-{ Crayly Satun Stunt	ace Soil Cracks (B6) hage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) no phic Position (D2)
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YDROLOGY Vetland Hydrology Indicators: Primary Indicators (min mum of one is required.) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface (ield Observations: urface Water Present? Yes	Water-Staine Aquatic Faul True Aquatic Hydrogen St Oxidized Rh Presence of Recent Iron Thin Muck S Gauge or Wo (B8) Other (Expla	ed Leave na (B13) : Plants (ulfide Od izosphen Reduceio Reductio urface (C ell Data (in in Rer	B14) or (C1) or (C1) d fron (C4 on in Tillec C7) D9) narks)) t Soils (C6	Surfa Drain Dry-{ Crayly Satun Stunt	ace Soil Cracks (B6) hage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) no phic Position (D2)
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High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Dont Deposits (B3) Alga Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface (field Observations: Surface Water Present? Water Table Present? Yes Vater Table Present? Yes Saturation Present? Includes capillary fringe) Describe Recorded Data (stream gauge, mo	Water-Staine Aquatic Faul True Aquatic Hydrogen Staine Oxidized Rh Presence of Recent Iron Thin Muck S To Gauge or W B8) Other (Explain No Depth (inch No Depth (inch	ed Leave na (B13) c Plants (ulfide Od izospher Reduced Reductio urface (C ell Data (in in Rer es):	B14) or (C1) es on Livi d fron (C4 on in Tillec C7) D9) narks)) f Soils (C6	Surfa Drain Dry-8 Crayi (C3) Satui Stuni Si) FAC	ace Soil Cracks (B6) hage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) horphic Position (D2) Neutral Test (D5)
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YDROLOGY Vetland Hydrology Indicators: Primary Indicators (mornium of one is required by the second of the second	Water-Staine Aquatic Faul True Aquatic Hydrogen Staine Oxidized Rh Presence of Recent Iron Thin Muck S To Gauge or W B8) Other (Explain No Depth (inch No Depth (inch	ed Leave na (B13) c Plants (ulfide Od izospher Reduced Reductio urface (C ell Data (in in Rer es):	B14) or (C1) es on Livi d fron (C4 on in Tillec C7) D9) narks)) f Soils (C6	Surfa Drain Dry-8 Crayi (C3) Satui Stuni Si) FAC	ace Soil Cracks (B6) hage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) horphic Position (D2) Neutral Test (D5)

Appleant/Owner: SPINE Appleant/Owner: SPINE Appleant/Owner: SPINE Stato MO Sampling Point: UP HOW Section, Township, Range 176.0 Landform (hillstope, terrace, etc.): 3p PTLSS/LYN ON hillStop Local roted (concave convex, none): Datum: UP HOW Shope (N): Lat. 3 8. 73 1 9 15 Long: 90. 3456 19 Datum: UP HOW Are Calmable I hydrology conditions on the site typical for this time of year? Yes No (If no explain in Remarks) Are Vegetation Soil or thydrology A significantly disturbed? Are Vegetation Soil or thydrology A significantly disturbed? Are Vegetation Present? Yes No is the Sampled Area within a Wetland? Vegetation Present? Yes No within a Wetland? Wetland Hydrology Present? Yes No within a Wetland? Wetland Hydrology Present? Yes No of the Sampled Area within a Wetland? Wetland Hydrology Present? Yes No of the Sampled Area within a Wetland? Wetland Hydrology Present? Yes No of the Sampled Area within a Wetland? Wetland Hydrology Present? Yes No of the Sampled Area within a Wetland? Wetland Hydrology Present? Yes No of the Sampled Area within a Wetland? Wetland Hydrology Present? Yes No of the Sampled Area within a Wetland? Wetland Hydrology Present? Yes No of the Sampled Area within a Wetland? Wetland Hydrology Present? Yes No of the Sampled Area within a Wetland? Wetland Hydrology Present? Yes No of the Sampled Area within a Wetland? Wetland Hydrology Present? Yes No of the Sampled Area within a Wetland? Wetland Hydrology Present? Yes No of the Sampled Area within a Wetland? Wetland Hydrology Present? Yes No of the Sampled Area within a Wetland? Wetland Hydrology Present? Yes No of the Sampled Area within a Wetland? Wetland Hydrology Present? Yes No of the Sampled Area within a Wetland? Yes No of the North N	Project/Site: Line 880		City/County:	St	Louis	Sampling Date 2-18-20
Investigator(s): No. Section, Township, Range 1960 Landform (Milstops, terrace, etc.) Se PRISSION ON INTESTIGNATION (Milstops, terrace, etc.) Se PRISSION ON INTESTIGNATION (Milstops) Lat. 35 * 93 1 945 Long 9.0 * J. 156 94 Datum: JAN 98 No. Milstops (Milstops) Milstops (Milstop	Applicant/Owner: Spine				State: \M ()	
Landform (hillslope, terrace, etc.): **NP 155.50 M hillson to the size to the control of t			Section To	unchin Po		outspining Former of the Control
Significantly disturbed? Are Vegetation Present? Yes No Is the Sampled Area within a Wetland? Vegetation Present? Vestand hydrology Present? Yes No Is the Sampled Area within a Wetland? Vegetation Present? Yes No Is the Sampled Area within a Wetland? Vegetation Present? Yes No Is the Sampled Area within a Wetland? Vegetation Present? Yes No Is the Sampled Area within a Wetland? Vegetation Present? Yes No Is the Sampled Area within a Wetland? Vegetation Present? Yes No Is the Sampled Area within a Wetland? Vegetation Present? Yes No Is the Sampled Area within a Wetland? Vegetation Present? Yes No Is the Sampled Area within a Wetland? Vegetation Present? Yes No Is the Sampled Area within a Wetland? Vegetation Present? Yes No Is the Sampled Area within a Wetland? Vegetation Present? Yes No Is the Sampled Area within a Wetland? Vegetation Present? Yes No Is the Sampled Area within a Wetland? Vegetation Present? Vegetation Present? Yes No Is the Sampled Area within a Wetland? Vegetation Present? Yes No Is the Sampled Area within a Wetland? Vegetation Present? Yes No Is the Sampled Area within a Wetland? Vegetation Present? Vegetation Present? Vegetation Present? Yes No Is the Sampled Area within a Wetland? Vegetation Present? Vegetation Present? Vegetation Present? Vegetation Present? Vegetation Present? No Is the Sampled Area within a Wetland? Vegetation Present? No Is the Sampled Area within a Wetland? Vegetation Present? No Is the Sampled Area within a Wetland? Vegetation Present? No Is the Sampled Area within a Wetland? Vegetation Present? No Is the Sampled Area within a Wetland? No Is the						C-10 C-11 C
Soil Map Unit Name						
Are climatic / hydrology 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 (If no, explain 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 Hydrology Present? Yes No within a Wetland? Yes No within a Wetland? Yes No Wetland Hydrology Present? Yes No No Sandard Park Park Park Park Park Park Park Park						The second secon
Are Vegetation M Soil M or Hydrology M significantly disturbed? Are Normal Circumstances' present? Yes No Are Vegetation M Soil M or Hydrology M naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No is the Sampled Area within a Wettand? Yes No Wetland Hydrology Present? Yes No No No Wetland Hydrology Present? Yes No				. /		
Are Vegetation Soil or Hydrology Insturally 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 Welland Hydrology Present? Yes No Welland Hydrology Present? Yes No Within a Wetland? Yes No Welland Hydrology Present? Yes No Welland Hydrology Present. Yes No Welland Hydrology Presents of Demant Species Trans Are OBL, FACW, or FAC. (A) Total Number of Dominant Species Across All Strate: (B) Prevalence Index worksheet: Total Scover of Multiply by OBL species X 1 = FACW species X 2 = FAC Species X 3 = FAC Uspecies X 4 = UPL species X 4 = UPL speci	Are climatic / hydrologic conditions on the site typical for thi	s time of ye	ar? Yes	✓ No _	(If no, explain in Re	emarks.)
Are Vegetation Soil or Hydrology Insturally 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 Welland Hydrology Present? Yes No Welland Hydrology Present? Yes No Within a Wetland? Yes No Welland Hydrology Present? Yes No Welland Hydrology Present. Yes No Welland Hydrology Presents of Demant Species Trans Are OBL, FACW, or FAC. (A) Total Number of Dominant Species Across All Strate: (B) Prevalence Index worksheet: Total Scover of Multiply by OBL species X 1 = FACW species X 2 = FAC Species X 3 = FAC Uspecies X 4 = UPL species X 4 = UPL speci	Are Vegetation \nearrow Soil \nearrow or Hydrology \nearrow	significantly	disturbed?	Are	Normal Circumstances" p	resent? Yes No No
Hydrophytic Vegetation Present? Hydrophytic Vegetation Present? Hydrophytic Vegetation Present? Hydrophytic Vegetation Present? Yes No within a Wetsand? Welsland Hydrology Present? Hydrophytic Vegetation Present? Hydrophytic Vegetation Present? Hydrophytic Vegetation Present? Westand? Westand. Westand? Westand. Westand? Westand. Westand? Westand. Westand? Westand? Westand? Westand. Westand? Westand. Westand						
Step Sampled Area Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Within a Wetland? Yes No Wetland Hydrology Present? Yes No Within a Wetland? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Yes No Wetland Hydrology must be present. (Include photo numbers here or on a separate sheet) Hydrophytic Vegetation Yes No Hydrophytic Vegetation Yes No	SUMMARY OF FINDINGS - Attach site map	showing	sampling	g point l	ocations, transects	important features, etc.
Welland Hydrology Present? Yes No within a Wetland? Yos No Remarks: - Area so with point for PEW/T solated wettened WWO UP?! - Area so with point for PEW/T solated wettened WWO UP?! - Area so with point for PEW/T solated wettened WWO UP?! - Area so with point for PEW/T solated wettened WWO UP?! - Area so with point for PEW/T solated wettened WWO UP?! - Area so with point for PEW/T solated wettened WWO UP?! - Area so with point for PEW/T solated wettened WWO UP?! - Area so with point for PEW/T solated wettened WWO UP?! - Area so with point for PEW/T solated wettened WWO UP?! - Area so with point for PEW/T solated wettened WWO UP?! - Area so with point for PEW/T solated wettened WWO UP?! - Area so with point for PEW/T solated wettened WWO UP?! - Area so with point for PEW/T solated wettened WWO UP?! - Area so with point for PEW/T solated wettened WWO UP?! - Area so with point for PEW/T solated wettened WWO UP?! - Area so with point for PEW/T solated wettened or problematic. - Total Cover - Total	Hydrophytic Vegetation Present? Yes N	lo				2
Remarks: - Area sawale fourther PEW/Tsolated wettend WWG UP?? - Area possibly old form pond VEGETATION - Use scientific names of plants. Tree Stratum (Plot size: 30') - Absolute Stratum (Plot size: 15') - Absolute Stratum (Plot size: 15') - Total Number of Dominant Species Number of Dominant Species Prevent of Dominant Prevent Of P		10			_	
VEGETATION – Use scientific names of plants. Tree Stratum (Plot size: 30 V) Absolute Dominant Indicator Number of Dominant Species That Are OBL, FACW, or FAC: (A)		0	withi	n a Wetlar	nd? Yes	No
VEGETATION – Use scientific names of plants. Tree Stratum (Piot size: 30) Absolute % Cover Shecies? Status Number of Dominant Species That Are OBL, FACW, or FAC: (A) Total Number of Dominant Species That Are OBL, FACW, or FAC: (B) Fercent of Dominant Species That Are OBL, FACW, or FAC: (B) Total Number of Dominant Species That Are OBL, FACW, or FAC: (B) Fercent of Dominant Species That Are OBL, FACW, or FAC: (B) Fercent of Dominant Species That Are OBL, FACW, or FAC: (B) Fercent of Dominant Species That Are OBL, FACW, or FAC: (B) Fercent of Dominant Species That Are OBL, FACW, or FAC: (B) Fercent of Dominant Species That Are OBL, FACW, or FAC: (B) Fercent of Dominant Species That Are OBL, FACW, or FAC: (B) Fercent of Dominant Species That Are OBL, FACW, or FAC: (B) Fercent of Dominant Species That Are OBL, FACW, or FAC: (B) Fervalence Index worksheet: Total % Cover of Multioly by: (B) Fervalence Index worksheet: Total % Cover of Multioly by: (B) Fervalence Index worksheet: Total % Cover of Multioly by: (B) Fervalence Index worksheet: Total % Cover of Multioly by: (B) Fervalence Index worksheet: Total % Cover of Multioly by: (B) Fervalence Index worksheet: Total % Cover of Multioly by: (B) Fervalence Index worksheet: Total % Cover of Multioly by: (B) Fervalence Index worksheet: Total % Cover of Multioly by: (B) Fervalence Index worksheet: Total Cover of Multioly by: (B) Fervalence Index worksheet: Total Cover of Multioly by: (B) Fervalence Index worksheet: Total Cover of Multioly by: (B) Fervalence Index worksheet: Total Cover of Multioly by: (B) Fervalence Index worksheet: Total Cover of Multioly by: (B) Fervalence Index worksheet: Total Cover of Multioly by: (B) Fervalence Index worksheet: Total Cover of Multioly by: (B) Fervalence Index worksheet: Total Cover of Multioly by: (B) Fervalence Index worksheet: Total Cover of Multioly by: (B) Fervalence Index worksheet: Total Cover of Multioly by: (B) Fervalence Index worksheet: Total Cover of Multioly by: (B) Fe	- Area sample point ton PEW			une to	land wwo	MPISI
Absolute % Gover Status (Plot size: 30 /) Absolute % Gover Species? Status Dominant Indicator Species? Status Number of Dominant Species That Are OBL, FACW, or FAC. (A) Total Number of Dominant Species That Are OBL, FACW, or FAC. (A) Total Are OBL, FACW, or FAC. (A) Total Are OBL, FACW, or FAC. (A) Percent of Dominant Species That Are OBL, FACW, or FAC. (A) Prevalence Index worksheet: Total Are OBL, FACW, or FAC. (A) Bapling/Shrub Stratum (Plot size: 5 /) A FACW species x 1 = FACW species x 2 = FAC species x 3 = FACW species x 4 = UPL species x 4 = UPL species x 4 = UPL species x 5 = Column Totals: (A) (B) Prevalence Index = B/A = FACW species x 5 = Column Totals: (A) (B) Prevalence Index = B/A = FACW species x 5 = Column Totals: (A) (B) Prevalence Index = B/A = FACW species x 5 = Column Totals: (A) (B) Prevalence Index = B/A = FACW species x 5 = Column Totals: (A) (B) Prevalence Index = B/A = FACW species x 5 = Column Totals: (A) (B) Prevalence Index = B/A = FACW species x 5 = Column Totals: (A) (B) Prevalence Index = B/A = FACW species x 5 = Column Totals: (A) (B) Prevalence Index = B/A = FACW species x 5 = Column Totals: (A) (B) Prevalence Index = B/A = FACW species x 5 = Column Totals: (A) (B) Prevalence Index = B/A = FACW species x 5 = Column Totals: (A) (B) Prevalence Index = B/A = FACW species x 5 = Column Totals: (A) (B) Prevalence Index = B/A = FACW species x 5 = Column Totals: (B) Prevalence Index = B/A = FACW species x 5 = Column Totals: (B) Prevalence Index = B/A = FACW species x 5 = Column Totals: (B) Prevalence Index = B/A = FACW species x 5 = Column Totals: (B) Prevalence Index = B/A = FACW species x 5 = Column Totals: (B) Prevalence Index = B/A = FACW species x 5 = Column Totals: (B) Prevalence Index = B/A = FACW species x 5 = Column Totals: (B) Prevalence Index = B/A = FACW species x 5 = Column Totals: (B) Prevalence Index = B/A = FACW species x 5 = Column Totals: (B) Prevalence Index = B/A = FACW species x 5 = Column Totals: (B) Prevalence Index = B/A = FACW speci			u ci			
Number of Dominant Species That Are OBL, FACW, or FAC. (A)	VEGETATION – Ose scientific flames of plants.		Dit	t = -11 +	Bankana Takunda	1
Species Across All Strata:	Tree Stratum (Plot size: 301)				Number of Dominant Sp	ecies
## Percent of Dominant Species That Are OBL, FACW, or FAC: Prevalence Index worksheet: Total % Cover of:	2				Total Number of Domina	ant /
That Are OBL, FACW, or FAC: (A/B) Sapling/Shrub Stratum (Plot size: 5) 1.	4. Absent				, ·	
Prevalence Index worksheet: Total % Cover of:		0	= Total Cove			
Total % Cover of: Multioly by: OBL species	Sapling/Shrub Stratum (Plot size: 1)				Prevalence Index work	sheet:
## FACW species	1				Total % Cover of:	Multioly by:
FAC species	2.				OBL species	x 1 =
FACU species x 4 =	3.	. ——			FACW species	x 2 =
Herb Stratum (Plot size: 5 v) Float Cover UPL species x 5 =	4 / Tusen				FAC species	x 3 =
Column Totals:	5				FACU species	x 4 =
1.	510	\triangle	= Total Cove	er	UPL species	x 5 =
### Hydrophytic Vegetation Indicators: A	Herb Stratum (Plot size:	00	4	100	Column Totals:	(A) (B)
### Hydrophytic Vegetation Indicators: A	1 / Malatitelia	00_		7136	Decorder - Lode	- D(A -
4.				FACM		
5					\	** ***********************************
6		1007			-	
7						
8	6					
9	7.				4 - Morphological Adda in Remarks	laptations' (Provide supporting or on a separate sheet)
10	8.					
Woody Vine Stratum (Plot size: 30') 1.	9.				i robiematio riyarop	Tytic Vegetation (Explain)
1	-	85	= Total Cove	er er		
C = Total Cover Remarks: (Include photo numbers here or on a separate sheet.)	1.					/
Remarks: (Include photo numbers here or on a separate sheet.)	2. HUSEALA					V No
			= Total Cove	er		
- PO		sheet.)				
	~ NO					



Profile Description: (Describe to the depl Depth Matrix	Redax Feat				
(inches) Color (moist) %	Color (moist) %		Loc	Texture	Remarks
0-17 2,5/4/1 80	10 YR3/4 9	- 6	MIPL	Sich	
	754847/1	-	MA		
	4310 10 6				
			-		
7	D. (1997) 110 11				
Type: C=Concentration, D=Depletion, RM= Hydric Soil Indicators:	Reduced Malnx, MS=Mas	ked Sand Gr	ains.		=Pure Lining, M=Matrix.
•	O and dry Olever d	5.4 - 4.5 - 4 0 .4 \			Problematic Hydric Soils ³ :
Histosol (A1) Histic Epipedon (A2)	Sandy Gleyed Sandy Redox			Coast Prair	ie Redox (A16)
Black Histic (A3)	Sandy Redox Stripped Matri	-			re (57) Inese Masses (F12)
Hydrogen Sulfide (A4)	Loamy Mucky				w Dark Surface (TF12)
Stratified Layers (A5)	Loamy Gleyed	• •			ain in Remarks)
2 cm Muck (A10)	Depleted Matr				
Depleted Below Dark Surface (A11)	Redox Dark S				
Thick Dark Surface (A12)	Depleted Dark	Surface (F7)	3Indicators of h	ydrophytic vegetation and
Sandy Mucky Mineral (S1)	Redox Depres	sions (F8)		wetland hyd	Irology must be present,
5 cm Mucky Peat or Peat (S3)				unless dist	irbed or problematic.
Restrictive Layer (if observed):					
Type: UtWO	_			Hydric Soil Pres	sent? Yes No No
					ient? Yes No
Depth (inches):	9		* 1	nyuric Soil Pres	
Remarks				nyuric Sui Pres	
YDROLOGY			,	nyune son Pres	
YDROLOGY Wetland Hydrology Indicators:	act check all that apply)		,		
YDROLOGY Yetland Hydrology Indicators: Primary Indicators (minimum of one is require		aves (PO)		Secondary In	dicators (minimum of two required)
YDROLOGY Veiland Hydrology Indicators: Primary Indicators (minimum of one is required)	Water-Stained Le	, ,		Secondary In	dicators (minimum of two required) Soil Cracks (B6)
YDROLOGY Welland Hydrology Indicators: Primary Indicators (minimum of one is required by the control of the c	Water-Stained Le Aquatic Fauna (B	13)		Secondary In Surface S Drainage	dicators (minimum of two required) Soil Cracks (B6) Patterns (B10)
YDROLOGY Velland Hydrology Indicators: Primary Indicators (minimum of one is required by the company of the c	Water-Stained Le Aquatic Fauna (B True Aquatic Plan	13) its (B14)		Secondary In Surface S Drainage Dry-Seas	dicators (minimum of two required) Soil Cracks (B6) Patterns (B10) on Water Table (C2)
YDROLOGY Velland Hydrology Indicators: Primary Indicators (minimum of one is required by the control of the c	Water-Stained Le Aquatic Fauna (B True Aquatic Plan Hydrogen Sulfide	13) its (B14) Odor (C1)	ing Poets (f	Secondary In Surface S Drainage Dry-Seas Crayfish	dicators (minimum of two required) Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8)
YDROLOGY Velland Hydrology Indicators: Primary Indicators (minimum of one is required by the primary Indicators (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Stained Le Aquatic Fauna (B True Aquatic Plan Hydrogen Sulfide Oxidized Rhizosp	13) its (B14) Odor (C1) heres on Liv		Secondary In Surface S Drainage Dry-Seas Crayfish Saturatio	dicators (minimum of two required) Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9)
YDROLOGY Velland Hydrology Indicators: Primary Indicators (minimum of one is required by the primary Indicators (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Water-Stained Le Aquatic Fauna (B True Aquatic Plan Hydrogen Sulfide Oxidized Rhizosp Presence of Redu	13) lts (B14) Odor (C1) heres on Liv liced Iron (C4	I)	Secondary In Surface S Drainage Dry-Seas Crayfish Saturatio Stunted of	dicators (minimum of two required Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1)
YDROLOGY Velland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	Water-Stained Le Aquatic Fauna (B True Aquatic Plan Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu	13) Its (B14) Odor (C1) heres on Liv Iced Iron (C4 ction in Tilled	I)	Secondary In Surface S Drainage Dry-Seas Crayfish Saturatio Stunted C	dicators (minimum of two required Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) hic Position (D2)
YDROLOGY Welland Hydrology Indicators: Primary Indicators (minimum of one is require Sudace 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)	Water-Stained Le Aquatic Fauna (B True Aquatic Plan Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Thin Muck Surface	13) Its (B14) Odor (C1) heres on Liv Iced Iron (C4 ction in Tilled	I)	Secondary In Surface S Drainage Dry-Seas Crayfish Saturatio Stunted C	dicators (minimum of two required Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1)
YDROLOGY Yetland Hydrology Indicators: Primary Indicators (minimum of one is required by the control of the c	Water-Stained Le Aquatic Fauna (B True Aquatic Plan Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Thin Muck Surface Gauge or Well Da	13) lits (B14) Odor (C1) heres on Liv iced Iron (C4 ction in Tilled e (C7) ita (D9)	I)	Secondary In Surface S Drainage Dry-Seas Crayfish Saturatio Stunted C	dicators (minimum of two required Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) hic Position (D2)
YDROLOGY Welland Hydrology Indicators: Primary Indicators (minimum of one is require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B	Water-Stained Le Aquatic Fauna (B True Aquatic Plan Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Thin Muck Surfac	13) lits (B14) Odor (C1) heres on Liv iced Iron (C4 ction in Tilled e (C7) ita (D9)	I)	Secondary In Surface S Drainage Dry-Seas Crayfish Saturatio Stunted C	dicators (minimum of two required) Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) or Stressed Plants (D1) hic Position (D2)
YDROLOGY Welland Hydrology Indicators: Primary Indicators (minimum of one is required by the control of the c	Water-Stained Le Aquatic Fauna (B True Aquatic Plan Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Thin Muck Surface Gauge or Well Da 8) Other (Explain in	13) lits (B14) Odor (C1) heres on Liv iced Iron (C4 ction in Tilled e (C7) ita (D9)	I)	Secondary In Surface S Drainage Dry-Seas Crayfish Saturatio Stunted C	dicators (minimum of two required) Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) or Stressed Plants (D1) hic Position (D2)
YDROLOGY Welland Hydrology Indicators: Primary Indicators (minimum of one is required by the control of the c	Water-Stained Le Aquatic Fauna (B True Aquatic Flat Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Thin Muck Surfact Gauge or Well Da Other (Explain in	13) Its (B14) Odor (C1) heres on Liv iced Iron (C4 ction in Tilled e (C7) Ita (D9) Remarks)	d Soils (C6)	Secondary In Surface S Drainage Dry-Seas Crayfish Saturatio Stunted C	dicators (minimum of two required) Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) or Stressed Plants (D1) hic Position (D2)
YDROLOGY Netland Hydrology Indicators: Primary Indicators (minimum of one is required by the primary Indicators (minimum of one is required by the primary Indicators (minimum of one is required by the primary Indicators (Marks (Mar	Water-Stained Le Aquatic Fauna (B True Aquatic Flar Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Thin Muck Surfac Gauge or Well Da Other (Explain in Depth (inches):	13) Its (B14) Odor (C1) heres on Liv iced Iron (C4 ction in Tiller e (C7) ita (D9) Remarks)	l) d Soils (C6)	Surface S Surface S Drainage Dry-Seas Crayfish Saturatio Stunted of	dicators (minimum of two required) Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) hic Position (D2) tral Test (D5)
YDROLOGY Metland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B) Field Observations Surface Water Present? Ves Note Table Present? Ves Note Table Present? Ves Note Table Present?	Water-Stained Le Aquatic Fauna (B True Aquatic Plan Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Thin Muck Surface Gauge or Well Da Other (Explain in Depth (inches):	13) Its (B14) Odor (C1) heres on Liv iced Iron (C4 ction in Tiller e (C7) ita (D9) Remarks)	l) d Soils (C6)	Surface S Surface S Drainage Dry-Seas Crayfish Saturatio Stunted of	dicators (minimum of two required) Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) or Stressed Plants (D1) hic Position (D2)
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Primary Indicators (minimum of one is required by the control of t	Water-Stained Le Aquatic Fauna (B True Aquatic Plan Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Thin Muck Surfac Gauge or Well Da Other (Explain in Depth (inches): Depth (inches)	13) Its (B14) Odor (C1) heres on Liv Iced Iron (C4 ction in Tiller e (C7) Ita (D9) Remarks)	d Soils (C6) Wetlar	Secondary In Surface S Drainage Dry-Seas Crayfish Saturatio Stunted of FAC-Neu FAC-Neu	dicators (minimum of two required) Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) hic Position (D2) tral Test (D5)
Primary Indicators (minimum of one is required by the Carlotte Car	Water-Stained Le Aquatic Fauna (B True Aquatic Plan Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Thin Muck Surfac Gauge or Well Da Other (Explain in Depth (inches): Depth (inches)	13) Its (B14) Odor (C1) heres on Liv Iced Iron (C4 ction in Tiller e (C7) Ita (D9) Remarks)	d Soils (C6) Wetlar	Secondary In Surface S Drainage Dry-Seas Crayfish Saturatio Stunted of FAC-Neu FAC-Neu	dicators (minimum of two required) Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) hic Position (D2) tral Test (D5)
YDROLOGY Metland Hydrology Indicators: Primary Indicators (minimum of one is required by the primary Indicators (minimum of one is required by the primary Indicators (minimum of one is required by the primary Indicators (Maximum of One is required by the Indicators (Maximum of One is required by the Indicators (Maximum of One is required by the Indicators (Maximum of	Water-Stained Le Aquatic Fauna (B True Aquatic Plan Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Thin Muck Surfac Gauge or Well Da Other (Explain in Depth (inches): Depth (inches)	13) Its (B14) Odor (C1) heres on Liv Iced Iron (C4 ction in Tiller e (C7) Ita (D9) Remarks)	d Soils (C6) Wetlar	Secondary In Surface S Drainage Dry-Seas Crayfish Saturatio Stunted C FAC-Neu FAC-Neu	dicators (minimum of two required) Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) hic Position (D2) tral Test (D5)

Project/Site: Line 880		City/County: 5	Louis Sampling Date 2-20-20
Applicant/Owner: Spire			State: MO Sampling Point: Wetan
		Saction Township	Range: 17 7E / 47 W
Landform (hillslope, terrace, etc.)			
Slope (%): Lat:			241612 Datum: NA-083
Soil Map Unit Name:	7-197	. Slupes 2	NWI classification: PUB Gh
Are climatic / hydrologic conditions on the site typical for this	s time of ye	ar7 Yes No	(If no, explain in Remarks)
Are Vegetation Soit or Hydrology s	significantly	disturbed? A	re "Normal Circumstances" present? Yes No
Are Vegetation . Soil . or Hydrology . r			f needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing	sampling poin	t locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X N	lo		
Hydric Soil Present? Yes N	lo	is the Samp	
	lo	within a We	
-Area sample point for DEN	1/ad	aust we	Hand wmosip122
- Area mapped NWI			
VEGETATION – Use scientific names of plants.			
Tree Stratum (Plot size: 30')	Absolute	Dominant Indicate	
Λ	% Gover	Species? Status	- Number of Dominant Species
1. ALL FUBRUM			That Are OBL, FACW, or FAC: (A)
2.			Total Number of Dominant
3.			Species Across All Strata: (B)
4			Percent of Dominant Species That Are OBL, FACW, or FAC: 66.67% (A/B)
5.		= Total Cover	That Are OBL, FACW, or FAC: 66.67 / (A/B)
Sapling/Shrub Stratum (Plot size: 15)		= Total Cover	Prevalence Index worksheet:
1 Rosa multiflora	5	Y FAC	Total % Cover of: Multiply by:
2			OBL species x 1 =
3.			FACW species x 2 =
4			FAC species x 3 =
5			FACU species x 4 =
F.	_5	= Total Cover	UPL species x 5 =
Herb Stratum (Plot size:)	1	V - 01	Column Totals: (A) (B)
1 Ranunculus scelevatus	1	_/_ OBL	E Browless Late Bit
2 Carex Unipinoidea	-5	N OBL	Prevalence Index = B/A =
3. Leuning miner	-2	N DBL	Hydrophytic Vegetation Indicators:
4. honicona japonica	->-	TAC	1 - Rapid Test for Hydrophytic Vegetation
5			2 - Dominance Test is -50% 3 - Prevalence Index is ≤3.01
6			4 - Morphological Adaptations ¹ (Provide supporting
			data in Remarks or on a separate sheet)
8			Problematic Hydrophytic Vegetation¹ (Explain)
9	_	$\overline{}$	-
Woody Vine Stratum (Plot size: 30 V)	30	= Total Cover	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1			Moderation
, Hosenst			- Hydrophytic Vegetation
	0	= Total Cover	Present? Yes No
Remarks: (Include photo numbers here or on a separate s		- Total Cover	/
- N M	,		
N UVE			

SOIL		Samping Point we Have
Brofile Description: (Describe to the dec	th needed to document the indicator or confirm	
Depth Matrix	Redox Features	the absence of mulcators.)
(inches) Color (mojet) % (0-3 \(\frac{2.5}{0}\) \(\frac{2.5}{0}\) \(\frac{100}{0}\) (3-17 \(\frac{5.44}{1}\) \(\frac{8.5}{0}\)	Color (maist) % Type Loc²	Texture Remarks MUCK S,`C
Type: C=Concentration, D=Depletion, RM= Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 5 cm Mucky Peat or Peat (S3) Restrictive Layer (if observed): Type: Depth (inches): Remarks:	Reduced Matrix, MS=Masked Sand Grains. Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8)	Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils³: Coast Prairie Redox (A16) Dark Surface (S7) Iron-Manganese Masses (F12) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic Hydric Soil Present? Yes No
YDROLOGY Wetland Hydrology Indicators:		
telement of the could be a section at		
Primary Indicators (minimum of one is require	ed; check all that apply)	Secondary Indicators (minimum of two required)
Primary-Indicators (minimum of one is require L'Suplace Water (A1)	ed: check all that apply) Water-Stained Leaves (B9)	Secondary Indicators (minimum of two required) Surface Soil Cracks (B6)
himary-Indicators (minimum of one is require Surface Water (A1)	Water-Stained Leaves (B9) Aquetic Fauna (B13)	
nimary-Indicators (minimum of one is required Surface Water (A1) I 191 Water Table (A2) Saturation (A3)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2)
Surface Water (A1) Lagranger Table (A2) Saturation (A3) Water Marks (B1)	Water-Stained Leaves (B9) Agustic Founa (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1)	 Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
Surface Water (A1) Fig. Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Stained Leaves (B9) Agustic Founa (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (C	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Surface Water (A1) Fig. Water Table (A2) Sacuration (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Water-Stained Leaves (B9) Aguatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (C	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunder or Stressed Plants (D1)
with the category of the control of	Water-Stained Leaves (B9) Aguatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (C Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunder or Stressed Plants (D1) Segmental Position (D2)
The control of the co	Water-Stained Leaves (B9) Aquatic Founa (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (C) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunder or Stressed Plants (D1)
water Mater (A1) Fig. Water (A1) Fig. Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Agai Mat or Crust (B4) Iron Deposits (B5)	Water-Stained Leaves (B9) Aguatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (C Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Gauge or Well Data (D9)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunder or Stressed Plants (D1) Segmental Position (D2)
Surface Water (A1) Fig. Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Agai Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7 Sparsely Vegetated Concave Surface (B	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (C) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunder or Stressed Plants (D1) Segmental Position (D2)
Surface Water (A1) Fig. Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Diff Deposits (B3) Fig. Water Marks (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (Bald Observations) Urface Water Present? Yes Note of the property	Water-Stained Leaves (B9) Agulatic Faulia (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (C Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunded or Stressed Plants (D1) Segmental Position (D2)
Surface Water (A1) Fig. Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Diff Deposits (B3) Fig. Water Marks (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (Bald Observations) Urface Water Present? Yes Note of the property	Water-Stained Leaves (B9) Agulatic Found (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (C) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunder or Stressed Plants (D1) FAC-Neutral Test (D5)
Surface Water (A1) Fig. Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drill Deposits (B3) Graf Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7 Sparsely Vegetated Concave Surface (Biold Observations) urface Water Present? Ves Vater Table Present? Atturation Present? Yes Note that the present of	Water-Stained Leaves (B9) Agulatic Found (B13) True Aquate Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (C) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks) Depth (inches): Depth (inches): Wetlan	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunder or Stressed Plants (D1) FAC-Neutral Test (D5) and Hydrology Present? Yes No
Primary Indicators (minimum of one is required by the (A1) Fig. Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Agail Mar or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B) Gild Observations Surface Water Present? Ves Vater Table Present? Ves Saturation Present? Ves Includes capillary fringe) Secribe Recorded Data (stream gauge, more	Water-Stained Leaves (B9) Agulatic Found (B13) True Aquate Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (C Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks) Depth (inches): Depth (inches): Wetlan	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunder or Stressed Plants (D1) Page 1
Primary Indicators (minimum of one is required by the (A1) Fig. Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Agail Mar or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (Bield Observations: Surface Water Present? Ves Vater Table Present? Ves Saturation Present? Ves Includes capillary fringe) Secribe Recorded Data (stream gauge, more	Water-Stained Leaves (B9) Agulatic Found (B13) True Aquate Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (C Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks) Depth (inches): Depth (inches): Wetlan	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunder or Stressed Plants (D1) Plants (D2) FAC-Neutral Test (D5) and Hydrology Present? Yes No available:

WMO-JJP-12-3

Project/Site: Live 880	City/Count	y: 5+, Louis Co Sampling Date: 2-20-20
Applicant/Owner: 5 0 1 A		State: MO Sampling Point: We How
Investigator(s):	Section To	ownship, Range: 16 / 7E / 47W
Landform (hillslope, terrace, etc.):		
		90, 14043/ Datum: NA1383
•		e roded NWI classification: NOne
Are climatic / hydrologic conditions on the site typical for t		
		Are 'Normal Circumstances" present? Yes No
Are Vegetation $\underline{\hspace{0.1cm}\mathcal{N}}$, Soil $\underline{\hspace{0.1cm}\mathcal{N}}$, or Hydrology $\underline{\hspace{0.1cm}\mathcal{N}}$	_ naturally problematic?	(If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site ma	p showing samplir	g point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes	No	
Hydric Soil Present? Yes	No st	ne Sampled Area
Wetland Hydrology Present? Yes		nin a Wetland? Yes No No
-Avec sample point for	PSS/Abuti	of methand umassp123
l VEGETATION – Use scientific names of plant	is.	
2 8'-	Absolute Dominant	Indicator Dominance Test worksheet:
Tree Stratum (Plot size: 30)	% Cover Species?	Number of Dominant Species 4
1. Acer Micundo		That Are OBL, FACW, or FAC: (A)
2 Ulmus ahusirana		Total Number of Dominant
3		Species Across All Strata: (B)
4.		Percent of Dominant Species
0.	/O = Total Co	That Are OBL, FACW, or FAC (A/B)
Sapling/Shrub Stratum (Plot size: 15)		Prevalence Index worksheet:
1. Catalpa speciosa	20 1	Total % Cover of: Multiply by:
2. Aces negunda	5 Y	FA OBL species x 1 =
3,		
4		FAC species x 3 =
5		FACU species x 4 =
5'5	25 = Total Cov	
1. Case v UU Divoide a	20 Y	Column Totals: (A) (B)
2. Carex Juy da	10 7	Prevalence Index = B/A =
2 Pag triutalis	10 7	FACW Hydrophytic Vegetation Indicators:
4 Humulus ignomicus	- 10 Y	1 - Rapid Test for Hydrophytic Vegetation
5 To Dlace late false	5-1	OP L 21 - Dominance Test is >50%
6		3 - Prevalence Index is ≤3.01
7.		4 - Morphological Adaptations (Provide supporting
8.		data in Remarks or on a separate sheet)
9		Problematic Hydrophytic Vegetation¹ (Explain)
10		
Woody Vine Stratum (Plot size: 30'r)	= Total Cov	ler landicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
		——— Hydrophytic
1. Alvert		
2 Absent	= Total Cov	Vegetation Present? Yes No

WMS JJ PIZ3 PSS Sampling Point: wetland

SOIL

Depth (inches) Color (moist) % (0 Y R 3/3 /00 (0 -17 10 Y R 4/1 86	Calar (maist)					
5-6 104R3/3 100		%	Type	Loc	Texture	Remarks
					Sich	
011 1071 11 66	2040361	m	-	A. DI		-
	4.5 /K 14	10		Mr. AT	Sich	
	4.57R76	2		M		
	104R 2/1	_2_	_	M		(mangamese conc.)
		_	_			
Type: C=Concentration, D=Depletion, RM	I=Reduced Matrix, MS=	=Masked	Sand Gra	ains.		: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ :
_ Histosol (A1)	Sandy Gl	eved Mat	rix (S4)			Prairie Redox (A16)
Histic Epipedon (A2)	Sandy Re	-				urface (S7)
Black Histic (A3)	Stripped !					anganese Masses (F12)
Hydrogen Sulfide (A4)	Loamy M	ucky Mine	eral (F1)			hallow Dark Surface (TF12)
_ Stratified Layers (A5)	Loamy Gi	eyed Ma	rix (F2)		Other (Explain in Remarks)
2 cm Muck (A10)	Depleted	Matrix (F	3)			
Depleted Below Dark Surface (A11)	Redox Da				_	
_ Thick Dark Surface (A12)	Depleted					of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Redox De	epression	s (F8)			hydrology must be present,
_ 5 cm Mucky Peat or Peat (S3)					unless	disturbed or problematic.
estrictive Layer (if observed):						\
Type: Nowe	_				Hydric Soil	Present? Yes No
Depth (inches):					1.,01.000.	100
(DBOLOGY						0.5
	4					
etland Hydrology Indicators:	ired: check all#tfat appl	v)			Seconda	ry Indicators (minimum of two exquire
letland Hydrology Indicators: rimary Indicators (minimum of one is requi			z (BQ)			ry Indicators (minimum of two require-
letland Hydrology Indicators: rimary Indicators (minimum of one is requi _ Surface Water (A1)	Water-Staine	ed Leave	s (B9)		Surfa	ice Soil Cracks (B6)
Tetland Hydrology Indicators: rimary Indicators (minimum of one is requi Surface Water (A1) High Water Table (A2)	Water-Staine Aquatic Faur	ed Leave: na (B13)	·		Surfa	ice Soil Cracks (B6) lage Patterns (B10)
retland Hydrology Indicators: rimary Indicators (minimum of one is requi Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Staine Aquatic Faur True Aquatic	ed Leave: na (B13) : Plants (I	314)		Surfa	ice Soil Criicks (B6) jage Patterns (B10) Geason Water Table (C2)
retland Hydrology Indicators: rimary Indicators (minimum of one is requi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Staine Aquatic Faur True Aquatic Hydrogen St	ed Leave: na (B13) : Plants (I ulfide Odd	314) or (C1)	on Boots (f	Surface Drain Dry-S Cray	ice Soil Cricks (B6) lage Patterns (B10) Geason Water Table (C2) fish Burrows (C8)
retland Hydrology Indicators: rimary Indicators (minimum of one is requi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Staine Aquatic Faur True Aquatic Hydrogen Su Oxidized Rhi	ed Leave: na (B13) Plants (I ulfide Odd izosphere	314) or (C1) es on Livi		Surfa Drain Cray Cray C3) Satu	ice Soil Cracks (B6) lage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9)
rimary Indicators: rimary Indicators (minimum of one is requi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Water-Staine Aquatic Faur True Aquatic Hydrogen Su Oxidized Rhi Presence of	ed Leave: na (B13) : Plants (I ulfide Odd izosphere Reduced	314) or (C1) es on Livi Iron (C4)	Surfi Orali Cray C3) Saturi Sturi	ice Soil Cracks (B6) lage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) led or Stressed Plants (D1)
retland Hydrology Indicators: rimary Indicators (minimum of one is requi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	Water-Staine Aquatic Faur True Aquatic Hydrogen Su Oxidized Rhi Presence of Recent Iron	ed Leave: na (B13) : Plants (I ulfide Odd izosphere Reduced Reduction	314) or (C1) es on Livi Iron (C4 n in Tilled)	Surfa Drair Dry-S Cray Cray Satur Stunt	ice Soil Cracks (B6) lage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) led or Stressed Plants (D1) lice phic Fostion (D2)
rimary Indicators (minimum of one is requi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Iron Deposits (B5)	Water-Staine Aquatic Faur True Aquatic Hydrogen Su Oxidized Rhi Presence of Recent Iron Thin Muck S	ed Leave: na (B13) c Plants (I ulfide Odd izosphere Reduced Reduction urface (C	314) or (C1) es on Livir Iron (C4 n in Tilled)	Surfa Drair Dry-S Cray Cray Satur Stunt	ice Soil Cracks (B6) lage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) led or Stressed Plants (D1)
retland Hydrology Indicators: rimary Indicators (minimum of one is requi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B	Water-Staine Aquatic Faur True Aquatic Hydrogen Staine Oxidized Rhi Presence of Recent Iron Thin Muck S Gauge or Wa	ed Leave: na (B13) Plants (I ulfide Odd izosphere Reduced Reducion urface (C ell Data (I	314) or (C1) es on Livie fron (C4 or in Tilled 7))	Surfa Drair Dry-S Cray Cray Satur Stunt	ice Soil Cracks (B6) lage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) led or Stressed Plants (D1) lice phic Fostion (D2)
rimary Indicators (minimum of one is requirement) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B) Sparsely Vegetated Concave Surface (I	Water-Staine Aquatic Faur True Aquatic Hydrogen Staine Oxidized Rhi Presence of Recent Iron Thin Muck S Gauge or Wa	ed Leave: na (B13) Plants (I ulfide Odd izosphere Reduced Reducion urface (C ell Data (I	314) or (C1) es on Livie fron (C4 or in Tilled 7))	Surfa Drair Dry-S Cray Cray Satur Stunt	ice Soil Cracks (B6) lage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) led or Stressed Plants (D1) lice phic Fostion (D2)
Vetland Hydrology Indicators: rimary Indicators (minimum of one is requi Surface Water (A1) Vigh Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B' Sparsely Vegetated Concave Surface (I	Water-Staine Aquatic Faur Aquatic Faur True Aquatic Hydrogen Staine Oxidized Rhi Presence of Recent Iron Thin Muck S Thin Muck S To Gauge or Wo	ed Leave: na (B13) : Plants (I ulfide Odd izosphere Reduced Reduciol urface (C ell Data (I in in Rerr	314) or (C1) es on Livie fron (C4 or in Tilled 7))	Surfa Drair Dry-S Cray Cray Satur Stunt	ice Soil Cracks (B6) lage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) led or Stressed Plants (D1) lice phic Fostion (D2)
Vetland Hydrology Indicators: rimary Indicators (minimum of one is requi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B' Sparsely Vegetated Concave Surface (Ield Observations. urface Water Present? Yes	Water-Staine Aquatic Faur Aquatic Faur True Aquatic Hydrogen Su Oxidized Rhi Presence of Recent Iron Thin Muck S 7) Gauge or Wo B8) Other (Expla	ed Leave: na (B13) : Plants (I ulfide Odd izosphere Reduced Reducliol urface (C ell Data (I in in Rem	314) or (C1) or (C1) es on Livi lron (C4 on in Tilled 7) D9) narks))	Surfa Drair Dry-S Cray Cray Satur Stunt	ice Soil Cracks (B6) lage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) led or Stressed Plants (D1) lice phic Fostion (D2)
rimary Indicators (minimum of one is requi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface (I Beld Observations Vater Table Present? Ves Ves Versidators Ves Ves Versidators	Water-Staine Aquatic Faur True Aquatic Hydrogen Su Oxidized Rhi Presence of Recent Iron Thin Muck S 7) Gauge or Wo B8) Other (Expla	ed Leave: na (B13) Plants (I ulfide Odd izosphere Reduced Reducion urface (C ell Data (I in in Rerr es):	314) or (C1) or (C1) es on Livi lron (C4 on in Tilled 7) D9) narks)) Soils (C6)	Surface Drain Dry-S Cray C3) Satur Stunt FAC	ice Soil Cracks (B6) lage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) led or Stressed Plants (D1) morphic Position (D2) Neutral Test (D5)
rimary Indicators (minimum of one is requi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface (Indicated Water Present? Ves Vater Table Present? Yes Vater Table Present? Yes Vater Table Present? Yes Vater Table Present?	Water-Staine Aquatic Faur Aquatic Faur True Aquatic Hydrogen Su Oxidized Rhi Presence of Recent Iron Thin Muck S 7) Gauge or Wo B8) Other (Expla	ed Leave: na (B13) Plants (I ulfide Odd izosphere Reduced Reducion urface (C ell Data (I in in Rerr es):	314) or (C1) or (C1) es on Livi lron (C4 on in Tilled 7) D9) narks)) Soils (C6)	Surface Drain Dry-S Cray C3) Satur Stunt FAC	ice Soil Cracks (B6) lage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) led or Stressed Plants (D1) lice phic Fostion (D2)
rimary Indicators (minimum of one is requi Surface Water (A1) Figh Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B' Sparsely Vegetated Concave Surface (Ield Observations urface Water Present? Ves Saturation Present? Ves Saturation Present? Set Surface Ves Saturation Present	Water-Staine Aquatic Faur Aquatic Faur True Aquatic Hydrogen Su Oxidized Rhi Presence of Recent Iron Thin Muck S Other (Expla	ed Leave: na (B13) Plants (I ulfide Odd izosphere Reduced Reducion urface (C ell Data (I in in Rerr es):	or (C1) or (C1) es on Livi lron (C4 n in Tilled 7) D9) harks)	Soils (C6)	Surface Drain Dry-S Dry-S Cray C3) Satur Stunt FAC- nd Hydrology	ice Soil Cracks (B6) lage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) led or Stressed Plants (D1) morphic Position (D2) Neutral Test (D5)
Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface (I leid Observations urface Water Present? Vater Table Present? Yes aturation Present? Yes Auturation Present? Yes Sparsely Vegetated Concave Surface (I leid Observations) Vater Table Present? Yes Auturation Present? Yes Sparsely Ves Sparsely Yes Sparse	Water-Staine Aquatic Faur Aquatic Faur True Aquatic Hydrogen Su Oxidized Rhi Presence of Recent Iron Thin Muck S Other (Expla	ed Leave: na (B13) Plants (I ulfide Odd izosphere Reduced Reducion urface (C ell Data (I in in Rerr es):	or (C1) or (C1) es on Livi lron (C4 n in Tilled 7) D9) harks)	Soils (C6)	Surface Drain Dry-S Dry-S Cray C3) Satur Stunt FAC- nd Hydrology	ice Soil Cracks (B6) lage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) led or Stressed Plants (D1) morphic Position (D2) Neutral Test (D5)
rimary Indicators (minimum of one is requirement) Indicator (minimum of one is requirement) Indicators (minimum of one is	Water-Staine Aquatic Faur True Aquatic Hydrogen Su Oxidized Rhi Presence of Recent Iron Thin Muck S Thin Muck S Other (Explain) Depth (inches) No Depth (inches) Depth (inches)	ed Leave: na (B13) Plants (I ulfide Odd izosphere Reduced Reducion urface (C elil Data (I in in Rerr es): es):	or (C1) or (C1) or (C1) or (C4) fron (C4 or in Tilled 7) O9) harks)	Soils (C6) Wetlanections), if	Surface Drain Dry-S Dry-S Cray C3) Satur Stunt FAC- nd Hydrology	ice Soil Cracks (B6) lage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) led or Stressed Plants (D1) morphic Position (D2) Neutral Test (D5)
Vetland Hydrology Indicators: rimary Indicators (minimum of one is requi Surface Water (A1) Vigh Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B' Sparsely Vegetated Concave Surface (Ield Observations urface Water Present? Ves Vater Table Present? Ves Vater Table Present? Ves	Water-Staine Aquatic Faur True Aquatic Hydrogen Su Oxidized Rhi Presence of Recent Iron Thin Muck S Thin Muck S Other (Explain) Depth (inches) No Depth (inches) Depth (inches)	ed Leave: na (B13) Plants (I ulfide Odd izosphere Reduced Reducion urface (C elil Data (I in in Rerr es): es):	or (C1) or (C1) or (C1) or (C4) fron (C4 or in Tilled 7) O9) harks)	Soils (C6) Wetlanections), if	Surface Drain Dry-S Dry-S Cray C3) Satur Stunt FAC- nd Hydrology	ice Soil Cracks (B6) lage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) led or Stressed Plants (D1) morphic Position (D2) Neutral Test (D5)
Vetland Hydrology Indicators: rimary Indicators (minimum of one is requi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Staine Aquatic Faur True Aquatic Hydrogen Su Oxidized Rhi	ed Leave: na (B13) Plants (I ulfide Odd izosphere	314) or (C1) es on Livi		Surfa Drain Cray Cray C3) Satu	ice Soil Cracks (B6) lage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (

VMO-JJP-123

Project/Site: Live 880	City/	County: St.	Louis	_ Sampling Date:	2-20-2
Applicant/Owner: Spine			State: Mo	_ Sampling Point	we they
Investigator(s): 10 P-WJW	Sect	ion, Township, R	tange: 16/7E	1471	0 47 684
Landform (hillslope, terrace, etc.): Flood plai			of (concave, convex, none)	COM COLL	0
Slope (%): 0% Lat: 38, 821446	Long	-90.2	II A S / poor	Datum: WA	
Soil Map Unit Name: Mentro Silt loam	CONTRACTOR OF THE PARTY OF THE		led NWI classific	cotion: Aki a 4	000
Are climatic / hydrologic conditions on the site typical for t	his time of year?	Yes I No	(If no evaluin in F	Cation	
Are Vegetation, Soil, or Hydrology	significantly distu		"Normal Circumstances"		/
Are Vegetation, Soil, or Hydrology	naturally problem		needed, explain any answe		No
SUMMARY OF FINDINGS - Attach site map				•	atures, etc.
	No			(8)	
Hydric Soil Present? Yes	No	Is the Sample			
	No	within a Wetla	nd? Yes 🔼	No	
- Area sample point for	PEM/A	butting	metland	nomonif	23
VEGETATION – Use scientific names of plants					
Tree Stratum (Plot size: _30 1/2)	Absolute Don % Cover Spe	ninant Indicator	Dominance Test works		
1	78 OOVER ODE	oles: Olatus	Number of Dominant Sp That Are OBL, FACW, o	ecies	(4)
2			-		— (A)
3.			Total Number of Domina Species Across All Strata		(B)
4. / 1030101			Percent of Dominant Spe		_ (3)
5			That Are OBL, FACW, or	FAC: 100%	(A/B)
Sapling/Shrub Stratum (Plot size: 151)	= Tota	II Cover	Prevalence Index works	shoot.	
1			Total % Cover of:		v.
2.				x1=	
3.			FACW species		
4 705000			FAC species	x 3 =	2.
5			FACU species	x 4 =	
Herb Stratum (Plot size: 5'V)	= Total	Cover		x 5 =	
1 Boehmeria culindrica	20 Y	FACU	Column Totals:	(A)	(B)
2. Symphyotrichum lanceolectum	20 4	FALW	Prevalence Index =	B/A =	
3. Por Trivialis	15 Y	FACU	Hydrophytic Vegetation	Indicators:	=
4 Typha latitolia	10 N	OBL	1 - Rapid Test for Hyd	rophytic Vegetation	n
5. Geum Canadinsis	5 N	_ FACU	2 - Dominance Test is		
6 Carex Vulpinoidea	_S_N	_ 08 L	3 - Prevalence Index i		
7			4 - Morphological Ada data in Remarks or	ptations¹ (Provide s	supporting
B 9.			Problematic Hydrophy		
9			· · · · · · · · · · · · · · · · ·	do vederation (EX	piain)
Noody Vine Stratum (Plot size: 30 1/2)	75 = Total (Cover	¹ Indicators of hydric soil an be present, unless disturbe	nd wetland hydrolog ad or problematic.	y must
1			Hydrophytic		
- Husent		\	Vegetation C	X	
Pamesta, (lash de ab-t	= Total (Cover	Present? Yes_/	No	
Remarks: (Include photo numbers here or on a separate sh	eet.)				
i di					

Sampling Point wetterno

Profile Description: (De					to the second of	Committee of the Commit
Oepth N (inches) Color (m	fatrix oist) %	Color (moist)	Features % Type	Loci	Tauchusa	
D-10 10 VA	3/3 100	CONTRACT .	79 1990	Loc	Texture	Remarks
0 17 10/1	15/100	72021		- DT	Sill	
COLL TOAK	11 86.	4.578-14	10 C	M-PL	SiCL	
*		7.57 R416	2 6	m		
	1	NVRZI.	7 /	M		
		11				Manjamose Conc)
						,
				_		
'Type: C=Concentration, [D=Depletion, RM=F	Reduced Matrix, MS=	Masked Sand C	Frains.	³ Location:	PL=Pore Lining, M=Matrix.
Hydric Soil Indicators:					Indicators f	or Problematic Hydric Soils ¹ :
Histosol (A1)		Sandy Gle	eyed Matrix (S4)		Coast P	rairie Redox (A16)
Histic Epipedon (A2)		Sandy Re			Dark Su	rface (S7)
Black Histic (A3)			/latrix (S6)		Iron-Mai	ngenese Masses (F12)
Hydrogen Sulfide (A4)			cky Mineral (F1			allow Dark Surface (TF12)
Stratified Layers (A5)			eyed Matrix (F2)		Other (E	xplain in Remarks)
2 cm Muck (A10)			Matrix (F3)			
Depleted Below Dark S			rk Surface (F6)	_		
Thick Dark Surface (A1 Sandy Mucky Mineral (Dark Surface (F	7)	Indicators o	f hydrophytic vegetation and
5 cm Mucky Peat or Pe		Redox Dep	pressions (F8)		wetland i	nydrology must be present,
5 cm Mucky Peat or Pe Restrictive Layer (if obser					unless di	sturbed or problematic.
41-0 4	+441+					-
		_				
Type:	_					
Depth (inches):		_			Hydric Soil Pr	resent? Yes No
Depth (inches):				,	Hydric Soil Pi	resent? Yes No
Depth (inches):	Drs:			,	Hydric Soll Pi	resent? Yes No
Depth (inches):		chack allefust analysis		,		
Depth (inches):		h /		7	Secondary	indicators (minimum of two requires
Depth (inches): Depth (inches): Demarks: POPULOGY Tetland Hydrology Indicated Improving Indicators (minimum Surface Water (A1)		Water-Stained	Leaves (B9)	,	Secondary	indicators (minimum of two required
Depth (inches): Demarks: DROLOGY Total Hydrology Indicate timery Indicators (minimum Surface Water (A1) High Water Table (A2)		Water-Stained Aquatic Fauna	Leaves (B9) (B13)		Secondary Surface	Indicators (minimum of two requires Soil Cracks (B6) e Patterns (B10)
Depth (inches): DROLOGY Total Hydrology Indicate timery Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3)		Water-Stained Aquatic Fauna True Aquatic F	Leaves (B9) (B13) Plants (B14)		Secondary Surface Urainag Dry-Sea	Indicators (minimum of two requires Soil Cracks (Bis) se Patterns (B10) ason Water Table (C2)
Depth (inches): DROLOGY Total Hydrology Indicate timery Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)		Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulfi	Leaves (B9) (B13) Plants (B14) ide Odor (C1)	,	Surface Dry-Sea Crayfish	Indicators (minimum of two required Soil Cracks (B6) se Patterns (B10) ason Water Table (C2) in Burrows (C8)
Depth (inches): Demarks: DROLOGY Total Hydrology Indicator (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)		Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulfi	Leaves (B9) (B13) Plants (B14) ide Odor (C1) papheres on Livi		Surface Orainag Dry-Sea Crayfish Saturati	Indicators (minimum of two required Polit Cracks (B16) Politerns (B10) ason Water Table (C2) In Burrows (C8) on Visible on Aerial Imagery (C9)
Depth (inches): Itemarks: POPOLOGY Tetland Hydrology Indicat Imary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)		Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulfi Oxidized Rhizo	Leaves (B9) (B13) Plants (B14) ide Odor (C1) Ospheres on Livinduced Iron (C4)	Secondary Surface Drainag Dry-See Crayfish Saturati	Indicators (minimum of two required P Soil Cracks (B6) P Patterns (B10) ason Water Table (C2) In Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1)
Depth (inches): Demarks: DROLOGY Tetland Hydrology Indicate timery Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)		Water-Stained Aquatic Fauna True Aquatic F Hydrogen Suff Oxidized Rhize Presence of Ra Recent Iron Re	Leaves (B9) (B13) Plants (B14) ide Odor (C1) repheres on Livinduced from (C4) aduction in Titled)	Secondary Surface Lorainag Dry-Sea Crayfist Saturati Stanted	indicators (minimum of two required soil Cracks (B6) the Patterns (B10) ason Water Table (C2) the Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
Depth (inches): Depth (inches):	of one is required	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Suffi Oxidized Rhize Presence of Re Recent Iron Re Thin Muck Surf	Leaves (B9) (B13) Plants (B14) ide Odor (C1) papheres on Livinduced fron (C4 iduction in Titled face (C7))	Secondary Surface Lorainag Dry-Sea Crayfist Saturati Stanted	Indicators (minimum of two required Properties (B6) Patterns (B10) ason Water Table (C2) Patterns (C8) On Visible on Aerial Imagery (C9) or Stressed Plants (D1)
Depth (inches): Depth (inches):	of one is required	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulfi Oxidized Rhizo Presence of Ri Recent Iron Re Thin Muck Surf	Leaves (B9) (B13) Plants (B14) ide Odor (C1) repheres on Livinduced Iron (C4 reduction in Titled face (C7) Data (D9))	Secondary Surface Lorainag Dry-Sea Crayfist Saturati Stanted	indicators (minimum of two required soil Cracks (B6) the Patterns (B10) ason Water Table (C2) the Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
Depth (inches): Itemarks: DROLOGY Totland Hydrology Indicate timery Indicators (minimum 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 Aer Sparsely Vegetated Conditions Total Conditions (A2)	of one is required	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Suffi Oxidized Rhize Presence of Re Recent Iron Re Thin Muck Surf	Leaves (B9) (B13) Plants (B14) ide Odor (C1) repheres on Livinduced Iron (C4 reduction in Titled face (C7) Data (D9))	Secondary Surface Lorainag Dry-Sea Crayfist Saturati Stanted	indicators (minimum of two required soil Cracks (B6) the Patterns (B10) ason Water Table (C2) the Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
Depth (inches): Itemarks: DROLOGY Tetland Hydrology Indicate timery Indicators (minimum 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 Aere Sparsely Vegetated Contected Observations:	rial Imagery (B7) cave Surface (B8)	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulfi Oximized Rhize Presence of Ri Recent Iron Re Thin Muck Surf Gauge or Well Other (Explain	Leaves (B9) (B13) Plants (B14) ide Odor (C1) papheres on Livinduced fron (C4 eduction in Titled face (C7) Data (D9) in Remarks))	Secondary Surface Lorainag Dry-Sea Crayfist Saturati Stanted	indicators (minimum of two required soil Cracks (B6) the Patterns (B10) ason Water Table (C2) the Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
Depth (inches): Depth (inches):	of one is required	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulfi Oxidized Rhizo Presence of Ri Recent Iron Re Thin Muck Surf	Leaves (B9) (B13) Plants (B14) ide Odor (C1) papheres on Livinduced fron (C4 eduction in Titled face (C7) Data (D9) in Remarks))	Secondary Surface Lorainag Dry-Sea Crayfist Saturati Stanted	indicators (minimum of two required Properties (B6) Patterns (B10) ason Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
Depth (inches): Itemarks: DROLOGY Tetland Hydrology Indicate timery Indicators (minimum 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 Aere Sparsely Vegetated Contected Observations:	rial Imagery (B7) cave Surface (B8)	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulfi Oximized Rhize Presence of Ri Recent Iron Re Thin Muck Surf Gauge or Well Other (Explain	Leaves (B9) (B13) Plants (B14) ide Odor (C1) bepheres on Livinduced fron (C4 iduction in Titled face (C7) Data (D9) in Remarks))	Secondary Surface Lorainag Dry-Sea Crayfist Saturati Stanted	indicators (minimum of two required Properties (B6) Patterns (B10) ason Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
Depth (inches): Itemarks: DROLOGY Internal Hydrology Indicate timery Indicators (minimum 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 Aere Sparsely Vegetated Concept Observations Indicator Vegetated Concept Observations Indicator Present? Internal Present? Internal Present? Internal Present? Internal Present?	rial Imagery (B7) cave Surface (B8) Yes No Yes No	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulfi Oxidized Rhize Presence of Re Recent Iron Re Thin Muck Surf Gauge or Well Other (Explain Depth (Inches) Depth (Inches)	Leaves (B9) (B13) Plants (B14) ide Odor (C1) bepheres on Livinduced fron (C4 eduction in Titled face (C7) Data (D9) in Remarks)	Soils (C6)	Secondary Surface FAC-Ne	indicators (minimum of two required Soil Cracks (B6) to Patterns (B10) ason Water Table (C2) in Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D6)
Depth (inches): Itemarks: POPOLOGY Tetland Hydrology Indicate Immery Indicators (minimum 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 Aer Sparsely Vegetated Conducted Observations Inface Water Present? Internation Present? Internation Present?	rial Imagery (B7) cave Surface (B8) Yes No Yes No	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulfi Oxidized Rhize Presence of Re Recent Iron Re Thin Muck Surf Gauge or Well Other (Explain Depth (Inches) Depth (Inches)	Leaves (B9) (B13) Plants (B14) ide Odor (C1) bepheres on Livinduced fron (C4 eduction in Titled face (C7) Data (D9) in Remarks)	Soils (C6)	Secondary Surface FAC-Ne	indicators (minimum of two required soil Cracks (B6) se Patterns (B10) ason Water Table (C2) a Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)
Depth (inches): Itemarks: DROLOGY Internal Hydrology Indicate timery Indicators (minimum 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 Aere Sparsely Vegetated Concept Observations rface Water Present? ater Table Present? turation Present?	rial Imagery (B7) cave Surface (B8) Yes No Yes No	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulfi Oxidized Rhize Presence of Re Recent Iron Re Thin Muck Surf Gauge or Well Other (Explain Depth (Inches) Depth (Inches)	Leaves (B9) (B13) Plants (B14) ide Odor (C1) bepheres on Livinduced fron (C4 eduction in Titled face (C7) Data (D9) in Remarks)	Soils (C6)	Secondary Surface FAC-Ne	indicators (minimum of two required soil Cracks (B6) se Patterns (B10) ason Water Table (C2) a Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)
Depth (inches): Itemarks: POPOLOGY Tetland Hydrology Indicat Immery Indicators (minimum 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 Aer Sparsely Vegetated Content and Observations rface Water Present? ater Table Present? turation Present? cudes capillary fringe) scribe Recorded Data (stre	rial Imagery (B7) cave Surface (B8) Yes No Yes No	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulfi Oxidized Rhize Presence of Re Recent Iron Re Thin Muck Surf Gauge or Well Other (Explain Depth (Inches) Depth (Inches)	Leaves (B9) (B13) Plants (B14) ide Odor (C1) bepheres on Livinduced fron (C4 eduction in Titled face (C7) Data (D9) in Remarks)	Soils (C6)	Secondary Surface FAC-Ne	indicators (minimum of two required soil Cracks (B6) se Patterns (B10) ason Water Table (C2) a Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)

WMO-JJP- 124 PFO

Investigator(s): Landform (hillslope, lerrace, etc.) Slope (%): Lat: Soil Map Unit Name: Are climatic / hydrologic cunditions on the site typical for this tare Vegetation Are Vegetation Soil or Hydrology Are Vegetation Summary OF FINDINGS — Attach site map structure of the site of the	Section, Township Local re Long: 90, 3 1	NWI classification: PEM 1 / 551 F Io (If no, explain in Remarks.) Are "Normal Circumstances" present? Yes No If needed, explain any answers in Remarks.)
Landform (hillslope, lerrace, etc.) Slope (%): Lat: Soil Map Unit Name: Are climatic / hydrologic cunditions on the sile typical for this tare Vegetation Are Vegetation Soil Are Vegetation Soil Are Hydrology national Hydrophytic Vegetation Present? Hydroc Soil Present? Yes No No	Section, Township Local re Long: - 90, 3 Long: - 9	NWI classification: PEM 1 / 551 F No (If no, explain in Remarks.) No (If needed, explain any answers in Remarks.)
Soil Map Unit Name: Are climatic / hydrologic conditions on the site typical for this I Are Vegetation, Goil or Hydrology nat SUMMARY OF FINDINGS — Attach site map st Hydrophytic Vegetation Present? Hydric Soil Present? Yes No	Long: 3(0 per sime of year? Yes Notificantly disturbed? Aurally problematic? (I	NWI classification: PEM1/551F No (If no, explain in Remarks.) Are "Normal Circumstances" present? Yes No If needed, explain any answers in Remarks.)
Soil Map Unit Name: Are climatic / hydrologic conditions on the site typical for this I Are Vegetation, Goil or Hydrology nat SUMMARY OF FINDINGS — Attach site map st Hydrophytic Vegetation Present? Hydric Soil Present? Yes No	Long: 3(0 per sime of year? Yes Notificantly disturbed? Aurally problematic? (I	NWI classification: PEM1/551F No (If no, explain in Remarks.) Are "Normal Circumstances" present? Yes No If needed, explain any answers in Remarks.)
Are climatic / hydrologic conditions on the sile typical for this to Are Vegetation, Soil or Hydrology nate SUMMARY OF FINDINGS - Attach site map sto Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No No No Are Vegetation, Soil or Hydrology nate SUMMARY OF FINDINGS - Attach site map sto Hydrophytic Vegetation Present? Yes No No No No No No No	ime of year? Yes Notificantly disturbed? A purally problematic? (I	NWI classification: PEM 1 / 551 F lo (If no, explain in Remarks.) Are "Normal Circumstances" present? Yes No If needed, explain any answers in Remarks.)
Are Vegetation, Soil or Hydrology signary	ime of year? Yes N nificantly disturbed? A urally problematic? (I nowing sampling poin	lo (If no, explain in Remarks.) Are "Normal Circumstances" present? Yes No If needed, explain any answers in Remarks.)
Are Vegetation, Goil, or Hydrology signature, Soil or Hydrology nature, Soil or Hydrology nature, Soil or Hydrology nature, Soil	nificantly disturbed? A urally problematic? (I nowing sampling poin	Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil or Hydrology nat SUMMARY OF FINDINGS - Attach site map st Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No	urally problematic? (I	If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map she Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No	owing sampling poin	lf needed, explain any answers in Remarks.) nt locations, transects, important features, etc
Hydrophytic Vegetation Present? Hydric Soil Present? Yes No Yes No		etcomes, dianacom, important leatures, etc
Hydric Soil Present? Yes No		
	Is the Samp	eled Area
	within a Wet	tland? Yes No
Botton land PFO		
Mapped NWI.		
VEGETATION – Use scientific names of plants.		
Tree Stratum (Diet sies)	bsolute Dominant Indicato Cover Species? Status	
E	Cover Species? Status	Number of Dominant Species
2. Papulus deltoides	FAL	That Are OBL, FACW, or FAC: (A)
3. Acer saccheringm	5 Y. FACH	Total Number of DominanI
4. Platanus occidentalis	5 N FACY	
5.	3 70 17100	Percent of Dominant Species
1-1	75 = Total Cover	That Are OBL, FACW, or FAC: 3.3 (A/B)
Sanling/Shrub Stratum (Plot size:)	- 1 otal Cover	Prevalence Index worksheet:
1 Lonicera Maackii	Y UPL	Total % Cover of: Multiply by:
Francisco nicra	5 Y FACE	
3		FACW species x 2 =
		FAC species x 3 =
i		FACU species x 4 =
ferb Stratum (Plot size: 5 /	O = Tolal Cover	UPL species x 5 =
Symphyetrichum lanceplatum	5 Y FAC	Column Totals: (A) (B)
THE THE PERSON THE PER	J -1 17L	
C1+1-2		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 Adaptations (Provide supporting data in Remarks or on a separate sheet)
		Problematic Hydrophytic Vegetation¹ (Explain)
),		
Absent	= Total Cover	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
		Hydrophytic Vegetation
C	= Total Cover	Present? Yes No
imarks: (Include photo numbers here or on a separate sheet.)	rotal COVE	

-	-	
e.	a	

Sampling Point: PFO

Profile Description: (Describe to the Depth Matrix	Redox Fee				
(inches) Color (moist) %	Color (moist) 9	Type	Loci	Texture	Remarks
0-2" 10YR2/1 100)		_	Muck	
2-17" 2.5 73/1 85	104R314 1	5 5	MIPL	SICL	
ype: C=Concentration, D=Depletion, F ydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 5 cm Mucky Peat or Peat (S3)	Sandy Gleyed Sandy Redox Stripped Matri Loamy Mucky Loamy Gleyed Depleted Matri Redox Dark S Redox Depres	Matrix (S4) (S5) x (S6) Mineral (F1) Matrix (F2) x (F3) urface (F6) Surface (F7)		Indicators for Coast Pra Dark Surf Iron-Mang Very Shal Other (Ex	PL=Fore Lining, M=Mairix. r Problematic Hydric Soils*: iririe Redox (A16) ace (S7) panese Masses (F12) low Dark Surface (TF12) plain in Remarks) hydrophytic vegetation and edrology must be present, turbed or problematic.
- Chieffer			- 1	Hydric Soil Pre	sent? Yes 🔼 No
		4 -			
DROLOGY		-			
DROLOGY etland Hydrology Indicators:	uired: check all that apply)	-		Secondary in	adicators (minimum of two require
DROLOGY etland Hydrology Indicators: mary Indicators (minimum of one is req Surface Water (A1) High Water Table (A2)	Water-Stained Lea	3)		Surface	dicators (minimum of two requires Soil Cracks (B6) Pattems (B10)
DROLOGY etland Hydrology Indicators: Imary Indicators (minimum of one is reg Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Stained Lea Aquatic Fauna (B1 True Aquatic Plan	3) s (B14)		Surface Drainage Dry-Seas	Soil Cracks (B6) Patterns (B10) son Water Table (C2)
DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one is reg Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Stained Lea Aquatic Fauna (B1 True Aquatic Plant Hydrogen Sulfide	3) s (B14) Odor (C1)		Surface Drainage Dry-Seas Crayfish	Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8)
emarks: DROLOGY etland Hydrology Indicators: Imary Indicators (minimum of one is reg Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Stained Lea Aquatic Fauna (Ba True Aquatic Plan Hydrogen Sulfide Oxidized Rhizosph	3) s (B14) Odor (C1) teres on LivIn	g Roots (C	Surface Drainage Dry-Seas Crayfish 3) Saturation	Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) n Visible on Aenal Imagery (C9)
emarks: DROLOGY atland Hydrology Indicators: Imary Indicators (minimum of one is reg Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Water-Stained Lea Aquatic Fauna (Ba True Aquatic Plant Hydrogen Sulfide Oxidized Rhizosph Presence of Redu	3) is (B14) Odor (C1) ieres on Livin ced Iron (C4)		Surface Dralnage Dry-Sease Crayfish Saturatio	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) or Stressed Plants (D1)
DROLOGY atland Hydrology Indicators: mary Indicators (minimum of one is req Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	Water-Stained Lea Aquatic Fauna (B1 True Aquatic Plant Hydrogen Sulfide of Coxidized Rhizosph Presence of Reduction Reduction	3) Is (B14) Odor (C1) Iteres on Livin Ced Iron (C4) Itlon in Tilled		Surface Dralnage Dry-Sease Crayfish Saturatio Stunted of	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) or Stressed Plants (D1) Inic Position (D2)
DROLOGY atland Hydrology Indicators: mary Indicators (minimum of one is req 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)	Water-Stained Lea Aquatic Fauna (Ba True Aquatic Plant Hydrogen Sulfide of Control Oxidized Rhizosph Presence of Reduction Red	3) Is (B14) Odor (C1) Iteres on Livin Ced Iron (C4) Itlon in Tilled It (C7)		Surface Dralnage Dry-Sease Crayfish Saturatio Stunted of	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) or Stressed Plants (D1)
DROLOGY Itland Hydrology Indicators: mary Indicators (minimum of one is reg Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	Water-Stained Lea Aquatic Fauna (Ba True Aquatic Plant Hydrogen Sulfide of Control Oxidized Rhizosph Presence of Reduct Recent Iron Reduct Thin Muck Surface B7) Gauge or Well Date	s (B14) Sider (C1) Defers on Livin Ced Iron (C4) Hon In Tilled (C7) a (D9)		Surface Dralnage Dry-Sease Crayfish Saturatio Stunted of	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) or Stressed Plants (D1) Inic Position (D2)
DROLOGY atland Hydrology Indicators: mary Indicators (minimum of one is req Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (I Sparsely Vegetated Concave Surface	Water-Stained Lea Aquatic Fauna (B1 True Aquatic Plant Hydrogen Sulfide of Control Oxidized Rhizosph Presence of Reduction Red	s (B14) Sider (C1) Defers on Livin Ced Iron (C4) Hon In Tilled (C7) a (D9)		Surface Dralnage Dry-Sease Crayfish Saturatio Stunted of	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) or Stressed Plants (D1) Inic Position (D2)
emarks: DROLOGY etland Hydrology Indicators: Imary Indicators (minimum of one is reg Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B) Sparsely Vegetated Concave Surface Id Observations:	Water-Stained Lea Aquatic Fauna (Ba True Aquatic Plan Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Reduc Thin Muck Surface B7) Gauge or Well Dat (B8) Other (Explain in Red	s (B14) Sider (C1) Defers on Livin Ced Iron (C4) Hon In Tilled (C7) a (D9)		Surface Dralnage Dry-Sease Crayfish Saturatio Stunted of	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1)
emarks: DROLOGY etland Hydrology Indicators: Imary Indicators (minimum of one is req Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B) Sparsely Vegetated Concave Surface Ind Observations: face Water Present? Yes	Water-Stained Lea Aquatic Fauna (B1 Aquatic Fauna (B1 True Aquatic Plani Hydrogen Sulfide Oxidized Rhizosph Presence of Redui Recent Iron Reduce Thin Muck Surface B7) Gauge or Well Dat (B8) Other (Explain in Reduce) No Depth (Inches):	is (B14) Odor (C1) heres on Livin ced fron (C4) flon in Tilled (C7) a (D9) hemarks)		Surface Dralnage Dry-Sease Crayfish Saturatio Stunted of	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1)
emarks: DROLOGY etland Hydrology Indicators: Imary Indicators (minimum of one is reg Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface Indice Water Present? Yes Ster Table Present? Yes Ster Table Present? Yes Ster Table Present? Yes	Water-Stained Lea Aquatic Fauna (B1 True Aquatic Plant Hydrogen Sulfide Oxidized Rhizosph Presence of Reduce Recent Iron Reduce Thin Muck Surface B7) Gauge or Well Date (B8) Other (Explain in Reduce) No Depth (Inches): No Depth (inches):	is (B14) Odor (C1) heres on Livin ced Iron (C4) flon in Tilled f(C7) a (D9) hemarks)	Soils (C6)	Surface Drainage Dry-Sear Crayfish 3) Saturatio Stunted of Geometry FAC-New	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Initial Test (D5)
emarks: DROLOGY etland Hydrology Indicators: Imary Indicators (minimum of one is req Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B) Sparsely Vegetated Concave Surface Indicate Water Present? Ster Table Present? Ves Versalt Versalt Ves Versalt Versalt Ves Versalt Versalt Ves Versalt Versalt Versalt Ves Versalt Versa	Water-Stained Lea Aquatic Fauna (B1 True Aquatic Plant Hydrogen Sulfide Oxidized Rhizosph Presence of Reduce Recent Iron Reduce Thin Muck Surface B7) Gauge or Well Date (B8) Other (Explain in Reduce) No Depth (Inches): No Depth (inches):	is (B14) Odor (C1) heres on Livin ced Iron (C4) flon in Tilled f(C7) a (D9) hemarks)	Soils (C6)	Surface Drainage Dry-Sear Crayfish 3) Saturatio Stunted of Geometry FAC-New	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Initial Test (D5)
emarks: DROLOGY etland Hydrology Indicators: Imary Indicators (minimum of one is reg Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface Indice Water Present? Yes Ster Table Present? Yes Ster Table Present? Yes Ster Table Present? Yes	Water-Stained Lea Aquatic Fauna (B1 True Aquatic Plant Hydrogen Sulfide Oxidized Rhizosph Presence of Reduce Recent Iron Reduce Thin Muck Surface B7) Gauge or Well Date (B8) Other (Explain in Reduce) No Depth (Inches): No Depth (inches):	is (B14) Odor (C1) heres on Livin ced Iron (C4) flon in Tilled f(C7) a (D9) hemarks)	Soils (C6)	Surface Drainage Dry-Sear Crayfish 3) Saturatio Stunted of Geometry FAC-New	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Initial Test (D5)
emarks: DROLOGY etland Hydrology Indicators: Imary Indicators (minimum of one is req Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (I) Sparsely Vegetated Concave Surface Ind Observations: Ifface Water Present? Iter Table Present? Ite	Water-Stained Lea Aquatic Fauna (B1 True Aquatic Plant Hydrogen Sulfide Oxidized Rhizosph Presence of Reduce Recent Iron Reduce Thin Muck Surface B7) Gauge or Well Date (B8) Other (Explain in Reduce) No Depth (Inches): No Depth (inches):	is (B14) Odor (C1) heres on Livin ced Iron (C4) flon in Tilled f(C7) a (D9) hemarks)	Soils (C6)	Surface Drainage Dry-Sear Crayfish 3) Saturatio Stunted of Geometry FAC-New	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Initial Test (D5)

574	- Limitation DATA FORM - Midwest Region	
Project/Site: 1/CE	City/County: St, Louis Co Sampling Dat	2/12/
Applicant/Owner:	State: MO Sampling Poir	it PEM
	Section, Township, Range: 16/75/471/	
Landform (hillslope, terrace, etc.):	Local relief (concave, convex, none):Concel	~
Slope (%): 42% Lat: 3% \$18406	Long: - 90 2 30 601 Datum: 1	1083
Soil Map Unit Name:	ter complex, 9-20%, slipes NWI classification: New	C
Are climatic / hydrologic conditions on the site typical for t	his time of year? Yes X 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 maj	showing sampling point locations, transects, important	features, etc.
Hydrophytic Vegetation Present? Yes	No	
I	No is the Sampled Area	
Wetland Hydrology Present? Yes	No No	_
0000000000	epression next to a highway.	
VEGETATION – Use scientific names of plants	3.	
30'	Absolute Dominant Indicator Dominance Test worksheet:	
Tree Stratum (Plot size: 30')	5 Cover 5 Decies? Status Number of Dominant Species	
1. Absent	That Are OBL, FACW, or FAC:	(A)
2	Total Number of Dominant	
4.	Species Across All Strata:	(B)
5,	Percent of Dominant Species	17
18"	= Total Cover	(A/B)
Sapling/Shrub Stratum (Plot size: 15/	Prevalence Index worksheet:	
1. Absent		v bv:
3.	OBL species #1#	
4,	FACW species x2 = FAC species x3 =	
5.	FAC species x3 = FACU species x4 =	
51/	= Total Cover UPL species x5=	
Herb Stratum (Plot size:	3 Column Totals: (A)	
Echinochlan crus-salli	35 7 086	10,
Setacia viridis	Prevalence index = B/A =	-
	Hydrophytic Vegetation Indicators:	
5	1 - Rapid Test for Hydrophytic Veget 2 - Dominance Test is >50%	ation
3.	3 - Prevalence Index is \$3.0'	- 1
7.	4 - Morphological Adaptations' (Provi	ide Supporting
3.	data in Remarks or on a separate	sheet)
	Problematic Hydrophytic Vegetation ¹	(Explain)
0.		
Woody Vine Stratum (Plot size: 301/	Total Cover 1 Indicators of hydric soil and wetland hydrobe present, unless disturbed or problemate	logy must
Absent		
	Hydrophytic Vegetation	
	C = Total Cover Present? Yes No	
lemarks: (Include photo numbers here or on a separate s		
		1

SOIL

Sampling Point: Wetland

Profile Description: (Describe Depth Matrix		Red	ox Features	3			
(inches) Color (moist)	%	Color (moist)	%	Type	Loc2	Texture	Remarks
0-6" loyR4/2	70	2.544/1	20	D	M	SICL	
		10483/4	10	-	MIPL		
6-17" WYR6/2	60	10485/4	25		M	Clay	
10 111-12		104R416	15	\overline{c}	40		
		10 14 .16					
	=		_	_	_		30000
Type: C=Concentration, D=Dep	oletion, RM:	=Reduced Matrix, M	IS=Masked	Sand Gr	ains.		PL=Pore Lining, M=Matrix. r Problematic Hydric Soils ³ :
lydric Soll Indicators:		Condu	Clayed Ma	tris (CA)			airie Redox (A16)
Histosol (A1)			Gleyed Ma Redox (S5)			Dark Sur	•
Histic Epipedon (A2) Black Histic (A3)			ed Matrix (S				ganese Masses (F12)
Hydrogen Sulfide (A4)			Mucky Min	•		_	illow Dark Surface (TF12)
Stratified Layers (A5)			Gleyed Ma				kplain in Remarks)
2 cm Muck (A10)			ed Matrix (F			5 (E)	
Depleted Below Dark Surfac	e (A11)		Dark Surfa	-			
Thick Dark Surface (A12)	· · · · /		ed Dark Su)	3Indicators of	f hydrophytic vegetation and
Sandy Mucky Mineral (S1)			Depression				ydrology must be present,
5 cm Mucky Peat or Peat (S	3)						sturbed or problematic.
Restrictive Layer (if observed)							
Type:						Hydric Soil Pr	resent? Yes <u>**</u> No
						I myuric Soil Pr	696HTL 162 MO
Depth (Inches):Remarks:		_		,			
		_		,			
Remarks:				,			
Remarks: YDROLOGY		red; check all that a	oely)	,		Secondary	
Remarks: YDROLOGY Vetland Hydrology Indicators:			ocky) ained Leave	es (B9)			
Remarks: YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of c			ained Leave			Surface	Indicators (minimum of two require
YDROLOGY Vetiand Hydrology Indicators: 'immary Indicators (minimum of c Surface Water (A1) High Water Table (A2)		Water-Sta	ained Leave auna (B13)			Surface	Indicators (minimum of two require e Soil Cracks (B6)
YDROLOGY Vetland Hydrology Indicators: Inmary Indicators (minimum of c Surface Water (A1)		Water-Sta Aquatic Fa True Aqua	ained Leave auna (B13) atic Plants ((B14)		Surface Draina Dry-Se	Indicators (minimum of two require e Soil Cracks (B6) ge Patterns (B10)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of orallog) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)		Water-Sta Aquatic Face True Aqua Hydrogen	ained Leave auna (B13) atic Plants (Sulfide Od	(B14) lor (C1)	ing Roots (Surface Draina Dry-Se Crayfis	Indicators (minimum of two require e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) th Burrows (C8)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)		Water-Sta Aquatic Factor True Aquatic Factor Fact	ained Leave auna (B13) atic Plants (Sulfide Od Rhizospher	(B14) lor (C1) es on Livi		Surface Drainage Dry-Se Crayfis C3) Satura	Indicators (minimum of two require e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) th Burrows (C8) tion Visible on Aenal Imagery (C9)
YDROLOGY Vetland Hydrology Indicators: Cimary Indicators (minimum of of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)		Water-Sta Aquatic Fi True Aqua Hydrogen Oxidized I	ained Leave auna (B13) atic Plants (Sulfide Od Rhizospher of Reduces	(B14) for (C1) es on Livi	1)	Surface Drainage Dry-Se Crayfis C3) Satural	Indicators (minimum of two require e Soil Cracks (B6) ge Patterns (B10) asson Water Table (C2) th Burrows (C8) tion Visible on Aenal Imagery (C9) d or Stressed Plants (D1)
YDROLOGY Vetiand Hydrology Indicators: Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)		Water-Sta Aquatic Fi True Aqua Hydrogen Oxidized I Presence Recent Inc	ained Leave auna (B13) atic Plants (Sulfide Od Rhizospher of Reduced on Reduction	(B14) for (C1) es on Livi d fron (C4 in in Tilled	1)	Surface Drainage Dry-Se Crayfis Saturage Sturtege Geometrical	Indicators (minimum of two require e Soil Cracks (B6) ge Patterns (B10) sason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) uphic Position (D2)
YDROLOGY Vetiand Hydrology Indicators: Primary Indicators (minimum of of of other content	one is requi	Water-Sta Aquatic Factor Advantic Factor	ained Leave auna (B13) atic Plants (Sulfide Od Rhizospher of Reduces on Reduces c Surface (C	(B14) for (C1) es on Livi d fron (C4 in in Tiller C7)	1)	Surface Drainage Dry-Se Crayfis Saturage Sturtege Geometrical	Indicators (minimum of two require e Soil Cracks (B6) ge Patterns (B10) asson Water Table (C2) th Burrows (C8) tion Visible on Aenal Imagery (C9) d or Stressed Plants (D1)
YDROLOGY Vetiand Hydrology Indicators: Immary Indicators (minimum of of of other continuous) — Surface Water (A1) — High Water Table (A2) — Saturation (A3) — Water Marks (B1) — Sediment Deposits (B2) — Drift Deposits (B3) — Algal Mat or Crust (B4) — Iron Deposits (B5) — Inundation Visible on Aerial I	magery (B	Water-Sta Aquatic Fi Aquatic Fi True Aqua Hydrogen Oxidized I Presence Recent Inc Thin Muck To Gauge or	ained Leave auna (B13) atic Plants (Sulfide Od Rhizospher of Reduced on Reduction c Surface (C Well Data ((B14) lor (C1) es on Livi d Iron (C4 in in Tilled C7)	1)	Surface Drainage Dry-Se Crayfis Saturage Sturtege Geometrical	Indicators (minimum of two require e Soil Cracks (B6) ge Patterns (B10) sason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) uphic Position (D2)
YDROLOGY Vetiand Hydrology Indicators: Immary Indicators (minimum of community of	magery (B	Water-Sta Aquatic Fi Aquatic Fi True Aqua Hydrogen Oxidized I Presence Recent Inc Thin Muck To Gauge or	ained Leave auna (B13) atic Plants (Sulfide Od Rhizospher of Reduces on Reduces c Surface (C	(B14) lor (C1) es on Livi d Iron (C4 in in Tilled C7)	1)	Surface Drainage Dry-Se Crayfis Saturage Sturtege Geometrical	Indicators (minimum of two requires e Soil Cracks (B6) ge Patterns (B10) sason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) uphic Position (D2)
YDROLOGY Vetiand Hydrology Indicators: Primary Indicators (minimum of C Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial I Sparsely Vegetated Concave ield Observations:	magery (Bi	Water-Sta Aquatic Formula Aqu	ained Leave auna (B13) atic Plants (Sulfide Od Rhizospher of Reduced on Reduction of Surface (C Well Data (plain in Rer	(B14) for (C1) es on Livi d Iron (C4 in in Tilleo (C7) (D9) marks)	1)	Surface Drainage Dry-Se Crayfis Saturage Sturtege Geometrical	Indicators (minimum of two requires e Soil Cracks (B6) ge Patterns (B10) sason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) uphic Position (D2)
YDROLOGY Vetland Hydrology Indicators: Immary Indicators (minimum of of of other content	magery (Base Surface (I	Water-Sta Aquatic Factor Factor Aquatic Factor Fact	ained Leave auna (B13) atic Plants (Sulfide Od Rhizospher of Reduced on Reduction of Surface (C Well Data (plain in Rer	(B14) for (C1) es on Livi d Iron (C4 in in Tilleo (C7) (D9) marks)	1)	Surface Drainage Dry-Se Crayfis Saturage Sturtege Geometrical	Indicators (minimum of two requires e Soil Cracks (B6) ge Patterns (B10) sason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) uphic Position (D2)
YDROLOGY Vetland Hydrology Indicators: Inmary Indicators (minimum of	magery (Base) Surface (I	Water-Sta Aquatic Fi Aquatic Fi True Aqua Hydrogen Oxidized I Presence Recent In Thin Muck Thin Muck The Gauge or Gauge or Other (Ex	ained Leave auna (B13) atic Plants (Sulfide Od Rhizospher of Reduced on Reduced on Reduced (Well Data (plain in Rer aches):	(B14) for (C1) es on Livi d Iron (C4 in in Tilleo (C7) (D9) marks)	d Soils (C6)	Surface Drainae Dry-Se Crayfis C3) Seturae Sturae Geome	Indicators (minimum of two requires e Soil Cracks (B6) ge Patterns (B10) hason Water Table (C2) his Burrows (C8) tion Visible on Aerial Imagery (C9) dior Stressed Plants (D1) hiphic Position (D2) eutral Test (D5)
YDROLOGY Vetland Hydrology Indicators: Immary Indicators (minimum of 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 Aerial I Sparsely Vegetated Concaverield Observations: urface Water Present? Vater Table Present? Yaturation Present? Yaturation Present? Yacuration Present?	magery (B) a Surface (I	Water-Sta Aquatic Fi True Aqua Hydrogen Oxidized I Presente Recent Inc Thin Much Gauge or 38) Other (Exp	ained Leave auna (B13) atic Plants (Sulfide Od Rhizospher of Reduces on Reduces on Reduces (Surface (C Well Data (plain in Rer aches): aches):	(B14) for (C1) es on Livid Iron (C4 in in Tillet (C7) (D9) marks)	d Soils (C6	Surface Drainage Dry-Se Crayfis C3) Saturage Stunded Geometry FAC-N	Indicators (minimum of two requires e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) eth Burrows (C8) tion Visible on Aerial Imagery (C9) dor Stressed Plants (D1) arphic Position (D2) eutral Test (D5)
YDROLOGY Vetiand Hydrology Indicators: Primary Indicators (minimum of of of other content	magery (B) a Surface (I	Water-Sta Aquatic Fi True Aqua Hydrogen Oxidized I Presente Recent Inc Thin Much Gauge or 38) Other (Exp	ained Leave auna (B13) atic Plants (Sulfide Od Rhizospher of Reduces on Reduces on Reduces (Surface (C Well Data (plain in Rer aches): aches):	(B14) for (C1) es on Livid Iron (C4 in in Tillet (C7) (D9) marks)	d Soils (C6	Surface Drainage Dry-Se Crayfis C3) Saturage Stunded Geometry FAC-N	Indicators (minimum of two requires e Soil Cracks (B6) ge Patterns (B10) hason Water Table (C2) his Burrows (C8) tion Visible on Aerial Imagery (C9) dior Stressed Plants (D1) hiphic Position (D2) eutral Test (D5)
YDROLOGY Vetiand Hydrology Indicators: Primary Indicators (minimum of C Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial I Sparsely Vegetated Concave (Indicators) For Indicators (Ind	magery (B) a Surface (I	Water-Sta Aquatic Fi True Aqua Hydrogen Oxidized I Presente Recent Inc Thin Much Gauge or 38) Other (Exp	ained Leave auna (B13) atic Plants (Sulfide Od Rhizospher of Reduces on Reduces on Reduces (Surface (C Well Data (plain in Rer aches): aches):	(B14) for (C1) es on Livid Iron (C4 in in Tillet (C7) (D9) marks)	d Soils (C6	Surface Drainage Dry-Se Crayfis C3) Saturage Stunded Geometry FAC-N	Indicators (minimum of two requires e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) arphic Position (D2) eutral Test (D5)
YDROLOGY Vetiand Hydrology Indicators: Primary Indicators (minimum of of of other content	magery (B) a Surface (I	Water-Sta Aquatic Fi True Aqua Hydrogen Oxidized I Presente Recent Inc Thin Much Gauge or 38) Other (Exp	ained Leave auna (B13) atic Plants (Sulfide Od Rhizospher of Reduces on Reduces on Reduces (Surface (C Well Data (plain in Rer aches): aches):	(B14) for (C1) es on Livid Iron (C4 in in Tillet (C7) (D9) marks)	d Soils (C6	Surface Drainage Dry-Se Crayfis C3) Saturage Stunded Geometry FAC-N	Indicators (minimum of two requires e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) arphic Position (D2) eutral Test (D5)

Investigator(s):	e: Sampling Point:
Investigator(s): The Section, Township, Range: Investigator(s): The Section, Township, Range: Investigator(s): Local relief (concave, coston) Local	one onvex, none): Datum: Datum: NWI classification: none o, explain in Remarks.) cumstances" present? Yes No in any answers in Remarks.) transects, important features, etc. Yes No No Yes No No No No No No No No No No
Slope (%):	NWI classification:
Slope (%):	NWI classification:
Soil Map Unit Name: Lowmo silt loam, 0 to 2 percent slopes, occasionally flooded Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no Are Vegetation No Soil No or Hydrology No significantly disturbed? Are "Normal Cinnare Vegetation No Soil No or Hydrology No naturally problematic? (If needed, explain the Vegetation Present? If needed, explain the Vegetation Present? Yes No Is the Sampled Area Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes Yes No Wetland Hydrology Present? Yes	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no Are Vegetation N Soil N or Hydrology N significantly disturbed? Are "Normal Cinnare Vegetation N Soil N or Hydrology N naturally problematic? (If needed, explain SUMMARY OF FINDINGS – Attach site map showing sampling point locations. Hydrophytic Vegetation Present? Yes No Is the Sampled Area Wetland Hydrology Present? Yes No Within a Wetland? Tree Stratum (Plot size: 30) Absolute Dominant Indicator Species? Status Number of That Are Cover Species? Total Num Species A Percent of That Are Cover Sapiling/Shrub Stratum (Plot size: 15) Prevalence FACW species. Sapiling/Shrub Stratum (Plot size: 15) Prevalence FACW species. FACW species Stratum (Plot size: 15) Prevalence FACW species FACU species Stratum (Plot size: 15) Prevalence FACU species Stratum (Plot size: 15) Prevalence FACU species FACU species Stratum (Plot size: 15) Prevalence FACU species FACU species Stratum (Plot size: 15) Prevalence FACU species Stratum (Plot size: 15) Prevalence FACU species FACU species Stratum (Plot size: 15) Prevalence FACU species FACU species FACU species Stratum (Plot size: 15) Prevalence FACU species FACU spec	c, explain in Remarks.) cumstances" present? Yes _X No in any answers in Remarks.) transects, important features, etc. Yes _X No
Are Vegetation N Soil N or Hydrology N significantly disturbed? Are 'Normal Circ Vegetation N Soil N or Hydrology N naturally problematic? (If needed, explain the Vegetation N Soil N or Hydrology N naturally problematic? (If needed, explain the Vegetation Present? Yes No Is the Sampled Area Wetland Hydrology Present? Yes No Within a Wetland? Vegetation Present? Yes No Is the Sampled Area Wetland Hydrology Present? Yes No Within a Wetland? Vegetation Present? Yes No Is the Sampled Area Wetland Hydrology Present? Yes No Within a Wetland? Vegetation Present? Yes No Is the Sampled Area Wetland Hydrology Present? Yes No Within a Wetland? Vegetation Present? Yes No Is the Sampled Area Wetland Hydrology Present? Yes No Within a Wetland? Vegetation Present? Yes No Is the Sampled Area Within a Wetland? Vegetation Present? Yes No Is the Sampled Area Within a Wetland? Vegetation Present? Yes No Is the Sampled Area Within a Wetland? Vegetation Present? Yes No Is the Sampled Area Within a Wetland? Vegetation Present? Yes No Is the Sampled Area Within a Wetland? Vegetation Present? Yes No Is the Sampled Area Within a Wetland? Vegetation Present? Yes No Is the Sampled Area Within a Wetland? Vegetation Present? Yes No Is the Sampled Area Within a Wetland? Vegetation Present? Yes No Is the Sampled Area Within a Wetland? Vegetation Present? Yes No Is the Sampled Area Within a Wetland? Vegetation Present? Yes No Is the Sampled Area Within a Wetland? Vegetation Present? Yes No Is the Sampled Area Within a Wetland? Vegetation Present? Yes No Is the Sampled Area Within a Wetland? Vegetation Present? Yes No Is the Sampled Area Within a Wetland? Vegetation Present? Yes No Is the Sampled Area Within a Wetland? Vegetation Present? Yes No Is the Sampled Area Within a Wetland? Vegetation Present? Yes No Is the Sampled Area Within a Wetland? Vegetation Present? Yes No Is the Sampled Area Within a Wetland? Vegetation Present? Yes No Is the Sampled Area Within a Wetland?	cumstances" present? Yes X No
Are Vegetation No. Soil No. or Hydrology No. naturally problematic? (If needed, explain a suppliar of the stratum (Plot size: 1.5.) Attach site map showing sampling point locations. Hydrophytic Vegetation Present? Yes No. Is the Sampled Area within a Wetland? Wetland Hydrology Present? Yes No. Within a Wetland? Absolute No. Secientific names of plants. Tree Stratum (Plot size: 1.5.) Absolute No. Secientific names of plants. Total Number of That Are Co. Secientific names of plants. Total Number of That Are Co. Secientific names of plants. Secientific names of plants. Total Number of That Are Co. Secientific names of plants. Total Number of That Are Co. Secientific names of plants. Total Number of That Are Co. Secientific names of plants. Second Number of That Are Co. Secientific names of plants. Total Cover Secientific names of plants.	in any answers in Remarks.) transects, important features, etc. Yes No
Hydrophytic Vegetation Present? Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Wetland Hydrology Present? Presents: Presents: Presents: Tree Stratum (Plot size: 30') Sapiling/Shrub Stratum (Plot size: 15') Sapiling/Shrub Stratum (Plot size: 15') Sapiling/Shrub Stratum (Plot size: 15') Language Stratum (Plot size: 15') Balling/Shrub Stratum (Plot size: 15') Language Stratum (Plot size: 15') Hydrophytic Vegetation Present? Yes	transects, important features, etc. Yes No
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Remarks: PEM Absolute Dominant Indicator Species? Status Status Status Status Status Status Status Status Status Species Status Status Species Status Species	Yes No
Hydric Soil Present? Wetland Hydrology Present? Remarks: PEM /EGETATION – Use scientific names of plants. Tree Stratum (Plot size: 30') Absolute Dominant Indicator Species? Status Number of That Are Companies of Prevalence Septiments (Plot size: 15') Bapting/Shrub Stratum (Plot size: 15') Sapiling/Shrub Stratum (Plot size: 15') Corrected to Total Cover Species (Prevalence Septiments) FAC species A Stratum (Plot size: 15') Total Cover Stratum (Plot size: 15') FAC species A Species Stratum (Plot size: 15') Total Cover Stratum (Plot size: 15') Total Cover Species A Species Stratum (Plot size: 15') Total Cover Species A Species Stratum (Plot size: 15') Total Cover Species A Species Stratum (Plot size: 15') Total Cover Species A Species Stratum (Plot size: 15') Total Cover Species A Species Stratum (Plot size: 15') Total Cover Species A Species Stratum (Plot size: 15') Total Cover Species A Species Stratum (Plot size: 15') Total Cover Species A Species Stratum (Plot size: 15')	
Wetland Hydrology Present? Yes	
Absolute Dominant Indicator Species? Status Status Status Species Status Species Status Species Status Species Status Species	
/EGETATION - Use scientific names of plants. Tree Stratum (Plot size:	
Absolute Dominant Indicator Species? Status Number of That Are Cover Sapiling/Shrub Stratum (Plot size:	
Absolute Dominant Indicator Species? Status Number of That Are Cover Sapiling/Shrub Stratum (Plot size:	
Tree Stratum (Plot size: 30') Absolute 9	Tank
Tree Stratum (Plot size: 75) % Cover Species? Status 1.	
Total Num Species A Percent of That Are C Sapling/Shrub Stratum (Plot size:	ce Test worksheet:
3. Percent of That Are Comparison of The Cover Sapiling/Shrub Stratum (Plot size:	Dominant Species DBL, FACW, or FAC:/ (A)
Percent of That Are Control of That Are Contro	
Percent of That Are Compared to the Compared t	cross All Strata: (B)
That Are C Sapling/Shrub Stratum (Plot size:	
Prevalence Total OBL speci FACW speci FAC speci FACU speci	DBL, FACW, or FAC: 100 (A/B)
Total 1 OBL speci FACW speci FAC speci FACU speci FACU speci FACU speci FACU speci FACU speci FACU speci	
OBL species A 10 FACW species FACU species	e Index worksheet:
FACW specific FACU specific FA	% Cover of: Multiply by: x 1 =
FAC speci	cies x 2 =
FACU special cover UPL special	98 x 3 =
Herb Stratum (Plot size: = Total Cover UPL specie	cies x 4 =
Herb Stratum (Plot size:)	x 5 =
Column To	tals: (A) (B)
ECHINACHEM PROPERTY 50 PARW	
	sience Index = B/A =
	ic Vegetation Indicators:
	oid Test for Hydrophytic Vegetation
	ninance Test is >50% valence Index is ≤3,0°
	phological Adaptations ¹ (Provide supporting
	priological Adaptations (Provide supporting in Remarks or on a separate sheet)
	matic Hydrophytic Vegetation ¹ (Explain)
0	
Indicators	
Voody Vine Stratum (Plot size: 50)	of hydric soil and wetland hydrology must
Hydrophyt	of hydric soil and wetland hydrology must unless disturbed or problematic.
Vegetation	unless disturbed or problematic.
= Total Cover Present?	unless disturbed or problematic.

Sampling Point: (VETLAND)

	latrix	 .		x Feature				
inches) Color (m	oist)	%	Color (moist)	%	_Type'	Loc ²	Texture	Remarks
1-2 10YR	3/	75	5 x 5/8	25		P L	Sic	
2-4 /aya	3/1	98	5 yR 5/8	2	C	p	5: 6	
• •	311		7				5:6	· · · · · · · · · · · · · · · · · · ·
							-	
				_				
				_	_			
ype: C=Concentration,	D=Depletio	on, RM=	Reduced Matrix, MS	S=Masked	Sand Gra	ains.	² Location: Pl	L=Pore Lining, M=Matrix.
ydric Soil Indicators:						_	Indicators for	Problematic Hydric Soils ³ :
_ Histosol (A1)			Sandy C	Bleyed Ma	trix (S4)		Coast Prai	rie Redox (A16)
Histic Epipedon (A2)			Sandy F	Redox (S5))		Dark Surfa	ice (S7)
Black Histic (A3)				l Matrix (S	•		Iron-Manga	anese Masses (F12)
_ Hydrogen Sulfide (A4))			Wucky Min				ow Dark Surface (TF12)
Stratified Layers (A5)				Sleyed Ma	. ,		Other (Exp	olain in Remarks)
_ 2 cm Muck (A10) _ Depleted Below Dark :	Surface /A	44)		d Matrix (F				
_ Depleted Below Dark : _ Thick Dark Surface (A	•		Redox E	Jark Surfa d Dark Sur			Vinaliananii - 61	Annalisa a la calda a compansión de la comp
_ Sandy Mucky Mineral				a Dank Sur Depression				hydrophytic vegetation and
_ 5 cm Mucky Peat or P			Kedox C	-cpi casion	(O.1)		_	drology must be present, urbed or problematic.
estrictive Layer (if obse						· · · · · ·	umess ulst	us pera or problematic.
-								
							Hydric Soil Pres	sent? Yes 🔼 No
Depth (inches):					, 1991		<u> </u>	
marks:	, <u>, , , , , , , , , , , , , , , , , , </u>							
DROLOGY			- Victoria					
emarks: DROLOGY stland Hydrology Indica	ators:		d check all that one	ska				
pmarks: DROLOGY etland Hydrology Indicators (minimum	ators:	s required	· -		(90)			
DROLOGY etland Hydrology Indicators (minimum Surface Water (A1)	ators: m of one is	s required	Water-Stair	ed Leave:	s (89)		Surface :	Soil Cracks (B6)
DROLOGY Itland Hydrology Indicators (minimumous Marce Water (A1) High Water Table (A2)	ators: m of one is	s required	Water-Stair Aquatic Fau	ned Leave: ina (B13)			Surface : Drainage	Soil Cracks (B6) Patterns (B10)
PROLOGY etland Hydrology Indicators (minimumous Mariace Water (A1) High Water Table (A2) Saturation (A3)	ators: m of one is	s required	Water-Stair Aquatic Fau True Aquati	ed Leave: ina (B13) c Plants (£	314)		Surface S Drainage Dry-Seas	Soil Cracks (B6) Patterns (B10) son Water Table (C2)
DROLOGY atland Hydrology Indica mary Indicators (minimur Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	ators: m of one is	s required	Water-Stair Aquatic Fau True Aquati Hydrogen S	ned Leave una (B13) c Plants (f sulfide Odd	314) or (C1)		Surface S Drainage Dry-Seas Crayfish	e Patterns (B10) son Water Table (C2) Burrows (C8)
procedures: DROLOGY Stand Hydrology Indications (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	ators: m of one is	s required	Water-Stair Aquatic Fau True Aquati — Hydrogen S — Oxidized Ri	ned Leaves ina (B13) c Plants (f sulfide Odo nizosphere	314) or (C1) es on Livin	_	Surface S Drainage Dry-Seas Crayfish C3) Saturatio	Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9)
emarks: DROLOGY stland Hydrology Indica mary Indicators (minimumos Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	ators: m of one is	s required	Water-Stair Aquatic Fau True Aquati Hydrogen S Oxidized Rt	ned Leaves una (B13) c Plants (E sulfide Odo nizosphere f Reduced	314) or (C1) es on Livin fron (C4)		Surface S Drainage Dry-Seas Crayfish C3) Saturatio Stunted of	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) N Visible on Aerial Imagery (C9) Stressed Plants (D1)
DROLOGY atland Hydrology Indica mary Indicators (minimul Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	ators: m of one is	s required	Water-Stair Aquatic Fau True Aquati Hydrogen S Oxidized Ri Presence of	ned Leaver una (B13) c Plants (E ulfide Odd nizosphere f Reduced Reduction	314) or (C1) es on Livin fron (C4) n in Tilled		Surface S Drainage Dry-Seas Crayfish Saturatio Stunted of Geomorp	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) N Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Shic Position (D2)
DROLOGY stland Hydrology Indica mary Indicators (minimul 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)	ators: m of one is		Water-Stair Aquatic Fau True Aquati Hydrogen S Oxidized Rt Presence of Recent Iron Thin Muck S	ned Leaves ina (B13) c Plants (f sulfide Odo nizosphere f Reduced Reduction Surface (C	314) or (C1) es on Livir fron (C4) n in Tilled 7)		Surface S Drainage Dry-Seas Crayfish Saturatio Stunted of Geomorp	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) N Visible on Aerial Imagery (C9) Stressed Plants (D1)
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APPENDIX B Upland Data Forms (Additional Features Only)



Project/Site: STL Project Applicant/Owner: Street Appl	na Date: 11 // /
Investigator(s): Chronic Manager Section, Township, Range: Local relief (concave, convex, none): Catholic Manager Stop (Map Unit Name: Creation of Stop (Map Unit Name) of Map Unit Name: Creation of Stop (Map Unit Name) of Map Unit Name: Creation of Stop (Map Unit Name) of Map Unit Name: Creation of Stop (Map Unit Name) of Map Unit Name: Creation of Stop (Map Unit Name) of Map Unit Name: Creation of Stop (Map Unit Name) of Map Unit Name: Creation of Map	
Landform (hillslope, terrace, etc.):	25
Slope (%): 12 Lat 39,026 Long: 90.377376 Datum Soil Map Unit Name: 10 Long: 10 St. St. St. St. No. (If no. explain in Remarks.) Are Vegetation 250 or Hydrology 2 significantly disturbed? (If no. explain in Remarks.) Are Vegetation 250 or Hydrology 2 naturally problematic? (If no. explain in Remarks.) Are Vegetation 250 or Hydrology 2 naturally problematic? (If no. explain in Remarks.) Are Vegetation 250 or Hydrology 2 naturally problematic? (If no. explain in Remarks.) Are Vegetation 250 or Hydrology 3 naturally problematic? (If no. explain in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, imports Hydrophytic Vegetation Present? Yes No	
Soil Map Unit Name:	
Are expendited hydrocogic conditions on the site typical for this time of year? Yes No (if no, explain in Remarks.) Are Vegetation Soil or Hydrology Naturally problematic? (if needed, explain any answers in Rema Studies and Soil No, or Hydrology Naturally problematic? (if needed, explain any answers in Rema Studies and Studies No.) Bydding Present? Yes No Is the Sampled Area within a Wetland? Yes No. Wetland Hydrology Present? Yes No. Wetland Hydrology Present? Yes No. Wetland Hydrology Present? Yes No. Wetland Present? Yes No. Wetland Present? Yes No. Wetland? Yes No. Wetla	NAUES
Are Vegetation Soil or Hydrology Naturally problematic? Are Vegetation Soil Nor Hydrology Naturally problematic? (If needed, explain any answers in Rema SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, imported the state of the sampled Area within a Wetland? Yes No	NA
SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, imports thydrophytic Vegetation Present? Yes No Is the Sampled Area within a Wetland? Yes No Within a Wetland? Ye	
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Total Number of Dominant Species Across Alf Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: Prevalence Index worksheet: Total **Cover of: M OBL species x 1 = FACW species x 2 = FAC species x 3 = FACU species x 4 = UPL species x 5 = Column Totals: (A) Prevalence Index = B/A = Hydrophytic Vegetation Indicators 1 - Rapid Test for Hydrophytic Vegetation in Remarks or on a sepan Problematic Hydrophytic Vegetation Interpretation of bydric resil and worksheet: Interpretation of Dominant Species of Dominant Species of That Are OBL, FACW, or FAC: Interpretation of Dominant Species of Dominant Species of That Are OBL, FACW, or FAC: Interpretation of Dominant Species of That Are OBL, FACW, or FAC: Interpretation of Dominant Species of That Are OBL, FACW, or FAC: Interpretation of Dominant Species of That Are OBL, FACW, or FAC: Interpretation of Dominant Species of That Are OBL, FACW, or FAC: Interpretation of Dominant Species of That Are OBL, FACW, or FAC: Interpretation of Dominant Species of That Are OBL, FACW, or FAC: Interpretation of Dominant Species of That Are OBL, FACW, or FAC: Interpretation of Dominant Species of That Are OBL, FACW, or FAC: Interpretation of Dominant Species of That Are OBL, FACW, or FAC: Interpretation of Dominant Species of That Are OBL, FACW, or FAC: Interpretation of Dominant Species of That Are OBL, FACW, or FAC: Interpretation of Dominant Species of That Are OBL, FACW, or FAC: Interpretation of Dominant Species of That Are OBL, FACW, or FAC: Interpretation of Dominant Species of That Are OBL, FACW, or FAC: Interpretation of Dominant Species of That Are OBL, FACW, or FAC: Interpretation of Dominant Species of That Are OBL, FACW, or FAC: Interpretation of Dominant Species of That Are OBL, FACW, or FAC: Interpretation of Dominant Species of That Are OBL, FACW, or FAC: Interpretation of Dominant Species of That Are OBL, FACW, or FACW,	(A)
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Total & Cover of Mobiles Species	, tuo
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1 - Rapid Test for Hydrophylic Ve 2 - Dominance Test is >60% 3 - Prevalence Index is <3.0¹ 4 - Morphological Adaptations (F data in Remarks or on a separ Problematic Hydrophytic Vegetati	-
2 - Dominance Tent is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (F chata in Remarks or on a separ Problematic Hydrophytic Vegetati	
	regetation
4 - Morphological Adaptations (f data in Remarks or on a separ Problematic Hydrophytic Vegetati	
Problematic Hydrophytic Vegetati	(Provide supporting
Problematic Hydrophytic Vegetati	arate sheet)
Indicators of hydric soil and walled	ıtion¹ (Explain)
ody Vine Stratum (Plot size:) = Total Cover be present, unless disturbed or proble	
Triot Size.	hydrology must
Alasond	
Hydrophytic	
Vegetation Present? Yes No	o
marks: (Include photo numbers here or on a separate sheet.)	

Sampling Point UPLAND

Depth	Matrix		Redo	x Feature	25			
(inches)	Color (maist)	_%_	Color (mojst)	%_	Type	_Loc*	<u>Texture</u>	Remarks
0-16"	[UYR 3/2	90	10 YR 3/6	5	(M	54	
			104R 5/6	-		40	-	
		_	10 11/ -10			70		
		-						
		_	-					
		_						
Type: C=Car	ncentration, D=Deple	etion, RM=	Reduced Matrix, Ma	S=Masked	5and Gr	ains.	I ocation: I	PL=Pore Lining, M=Matrix.
Hydric Soil In	idicators:					2112.	Indicators fo	r Problematic Hydric Soils
Histosol (A	A1)		Sandy 6	Sleyed Ma	triv (S4)			
Histic Epij	pedon (A2)			Redox (S5	. , ,		Coast Fit	airie Redox (A16)
Black Hist				Matrix (S	•			ganese Masses (F12)
	Sulfide (A4)			Mucky Min	•			llow Dark Surface (TF12)
	Layers (A5)			Sleyed Ma				plain in Remarks)
2 cm Muci	k (A10)			Matrix (F	, ,		0.110, (Ex	pian in itematks)
	Below Dark Surface	(A11)		ark Surfa				
	Surface (A12)		,		rface (F7)		3Indicators of	hydrophytic vegetation and
	cky Mineral (S1)		Redox D	epression	ıs (F8)		wetland hy	drology must be present,
	ty Peat or Peat (\$3)						uniess dis	turbed or problematic.
lestrictive La	yar (if observed):							
Туре:	NOIL							~
							Hydric Soil Pre	sant? Yes No
Depth (inche	es):		-					
emarks:			-					
PROLOGY	logy Indicators:		d: check all that appl	lv)				
DROLOGY	f logy Indicators: ors (minimum of one		d: Check all that appl		· /BO)		Secondary In	dicators (minimum of two required
DROLOGY etland Hydro imary Indicato Surface Wa	logy Indicators: ors (minimum of one iter (A1)		Water-Staine	ed Leaves	; (B9)		Secondary In	dicators (minimum of two required Soil Cracks (B6)
DROLOGY etland Hydro imary Indicato Surface Wa High Water	logy Indicators: ors (minimum of one ter (A1) Table (A2)		Water-Staine	ed Leaves na (B13)			Secondary In Surface s Drainage	dicators (minimum of two required Soil Cracks (B6)
DROLOGY etland Hydro imary Indicato Surface Wa High Water Saturation (fogy Indicators: ors (minimum of one ster (A1) Table (A2) A3)		Water-Staine Aquatic Faul True Aquatic	ed Leaves na (B13) : Plants (B	314)		Secondary In Surface : Drainage Dry-Seas	dicators (minimum of two required Soil Cracks (B6) Patterns (B10) son Water Table (C2)
DROLOGY etland Hydro imary Indicato Surface Wa High Water Saturation (Water Marks	logy Indicators: ors (minimum of one iter (A1) Table (A2) A3) s (B1)		Water-Staine Aquatic Faul True Aquatic Hydrogen Su	ed Leaves na (B13) : Plants (B ulfide Odo	314) τ (C1)		Secondary In Surface : Drainage Dry-Seas Crayfish	dicators (minimum of two required Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8)
DROLOGY etland Hydro imary Indicato Surface Wa High Water Saturation (Water Mark: Sediment D	f logy Indicators: ors (minimum of one oter (A1) Table (A2) A3) s (B1) eposits (B2)		Water-Staine Aquatic Faur True Aquatic Hydrogen Su	ed Leaves na (B13) : Plants (B ulfide Odo izosphere:	814) r (C1) s on Living	Ronts (C	Secondary in Surface: Drainage Dry-Seas Crayfish Saturation	dicators (minimum of two required Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9)
DROLOGY etland Hydro imary Indicate Surface Wa High Water Saturation (Water Mark: Sediment De	fogy Indicators: for (minimum of one oter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3)		Water-Staine Aquatic Faur True Aquatic Hydrogen Su Osidized Rhi	ed Leaves na (B13) : Plants (B ulfide Odo izospheres Reduced	314) r (C1) s on Living Iron (C4)		Secondary in Surface: Drainage Dry-Seas Crayfish Saturation Stunted of	dicators (minimum of two required Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9)
DROLOGY etland Hydro imary Indicate Surface Wa High Water Saturation (Water Marks Sediment De Drift Deposit Algal Mat or	fogy Indicators: ors (minimum of one) ster (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) Crust (B4)		Water-Staine Aquatic Faut True Aquatic Hydrogen Su Osidized Rhi Presence of Rocont Iron i	ed Leaves na (B13) : Plants (B ulfide Odo izospheres Reduced	314) r (C1) s on Living fron (C4) in Tilled S		Secondary In Surface : Drainage Dry-Seas Crayfish Saturation Stunted of	edicators (minimum of two required Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) thic Position (D2)
DROLOGY etland Hydro imary Indicate Surface Wa High Water Saturation (Water Marks Sediment De Drift Deposit Algal Mat or	fogy Indicators: ons (minimum of one) ster (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) Crust (B4) s (B5)	is require	Water-Staine Aquatic Fau True Aquatic Hydrogen Su Osidized Rhi Presence of Recent Iron i Thin Muck Su	ed Leaves na (B13) Plants (B lifide Odor cospheres Feducad Feducad urface (C7	314) r (C1) s on Living Iron (C4) in Tilled 5		Secondary In Surface : Drainage Dry-Seas Crayfish Saturation Stunted of	dicators (minimum of two required Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9)
DROLOGY etland Hydro imary Indicato Surface Wa High Water Saturation (Water Marks Sediment De Drift Deposit Algal Mat or Iron Deposit	fogy Indicators: on (minimum of one) ster (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) Crust (B4) cs (B5) /isible on Aerial Imag	je required	Water-Staine Aquatic Faur True Aquatic Hydrogen Su Osidized Rhi Presence of Recent Iron i Thin Muck Su Gauge or We	ed Leaves na (B13) c Plants (B ulfide Odor cosphere Reduced Reduction urface (C7	B14) r (C1) s on Living fron (C4) in Tilled 5 ')		Secondary In Surface : Drainage Dry-Seas Crayfish Saturation Stunted of	edicators (minimum of two required Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) thic Position (D2)
DROLOGY etland Hydro imary Indicato Surface Wa High Water Saturation (Water Market Sediment De Drift Deposit Algal Mat or Iron Deposit Inundation V Sparsely Ve	logy Indicators: on (minimum of one) ster (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) c Crust (B4) ss (B5) /isible on Aerial Imag	je required	Water-Staine Aquatic Faur True Aquatic Hydrogen Su Osidized Rhi Presence of Recent Iron i Thin Muck Su Gauge or We	ed Leaves na (B13) c Plants (B ulfide Odor cosphere Reduced Reduction urface (C7	B14) r (C1) s on Living fron (C4) in Tilled 5 ')		Secondary In Surface : Drainage Dry-Seas Crayfish Saturation Stunted of	edicators (minimum of two required Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) thic Position (D2)
DROLOGY etland Hydro imary Indicato Surface Wa High Water Saturation (Water Mark: Sediment De Drift Deposit Algal Mat or Iron Deposit Inundation V Sparsely Ve	fogy Indicators: ors (minimum of one iter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) Crust (B4) s (B5) /isible on Aerial Imagetated Concave Su	je required gery (B7) urface (B8)	Water-Staine Aquatic Faur True Aquatic Hydrogen St Osidized Rhi Presence of Recent Iron i Thin Muck St Gauge or We Other (Explai	ed Leaves na (B13) : Plants (B ilfide Odo izosphera Reduced Teduction urface (C7 oli Data (D n in Rema	B14) r (C1) s on Living fron (C4) in Tilled 5 ')		Secondary In Surface : Drainage Dry-Seas Crayfish Saturation Stunted of	edicators (minimum of two required Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) thic Position (D2)
DROLOGY etland Hydro imary Indicato Surface Wa High Water Saturation (Water Mark: Sediment Di Drift Deposit Algal Mat or Iron Deposit Inundation V Sparsely Ve	fogy Indicators: In (minimum of one oter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) Crust (B4) cs (B5) fisible on Aerial Imagetated Concave Sugerated	is required gery (B7) urface (B8)	Water-Staine Aquatic Faur True Aquatic Hydrogen Su Osidized Rhi Presence of Rocent Iron i Thin Muck Su Gauge or We Other (Explai	ed Leaves na (B13) : Plants (B ulfide Odo cosphere Reduced Reducion urface (C7 oll Data (D n in Rema	B14) r (C1) s on Living fron (C4) in Tilled 5 ')		Secondary In Surface : Drainage Dry-Seas Crayfish Saturation Stunted of	edicators (minimum of two required Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) thic Position (D2)
DROLOGY etland Hydro imary Indicato Surface Wa High Water Saturation (Water Mark: Sediment De Drift Deposit Algal Mat or Iron Deposit Inundation V Sparsely Ve	fogy Indicators: In (minimum of one oter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) Crust (B4) cs (B5) fisible on Aerial Imagetated Concave Sugerated	is required gery (B7) urface (B8)	Water-Staine Aquatic Faur True Aquatic Hydrogen St Osidized Rhi Presence of Recent Iron i Thin Muck St Gauge or We Other (Explai	ed Leaves na (B13) : Plants (B ulfide Odo cosphere Reduced Reducion urface (C7 oll Data (D n in Rema	B14) r (C1) s on Living fron (C4) in Tilled 5 ')		Secondary In Surface : Drainage Dry-Seas Crayfish Saturation Stunted of	edicators (minimum of two required Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) thic Position (D2)
DROLOGY etland Hydro imary Indicato Surface Wa High Water Saturation (Water Mark: Sediment Do Drift Deposit Algal Mat or Iron Deposit Inundation V Sparsely Ve Ind Observation face Water Picter Table Preseuration Preseu	Ilogy Indicators: Instrument (Minimum of one oter (A1) Table (A2) A3) Is (B1) Is (B3) Is (B3) Is (B4) Is (B5) Is (B6) Is (B6) Is (B6) Is (B7) Is (B8)	gery (B7) erface (B8)	Water-Staine Aquatic Faur True Aquatic Hydrogen Su Osidized Rhi Presence of Rocent Iron i Thin Muck Su Gauge or We Other (Explai	ed Leaves na (B13) : Plants (B ilfide Odo cosphere Reduced Reduced In Data (D n in Rema	B14) r (C1) s on Living fron (C4) in Tilled 5 ')	iois (C6)	Secondary In Surface : Drainage Dry-Seas Crayfish Saturation Stunted of	dicators (minimum of two required Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) or Stressed Plants (D1) thic Position (D2) trail Test (D5)
DROLOGY etland Hydro imary Indicato Surface Wa High Water Saturation (Water Market Sediment De Drift Deposit Algal Mat or Iron Deposit Inundation V Sparsely Ve Ind Observation face Water Presented	logy Indicators: ors (minimum of one ster (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) c Crust (B4) ts (B5) //sible on Aerial Image getated Concave Su ons: resent? Yes _ y finge)	gery (B7) Inface (B8) No No	Water-Staine Aquatic Faur True Aquatic Hydrogen Su Osidized Rhi Presence of Recent Iron i Thin Muck Su Gauge or We Other (Explai	ed Leaves na (B13) : Plants (B ulfide Odo cosphere Feduced Teducion urface (C7 oli Data (D n in Rema	314) r (C1) s on Living lron (C4) in Tilled 5 r) 9) arks)	Wetland	Secondary in Surface S Drainage Dry-Seas Crayfish Saturation Stunted of FAC-Neu	dicators (minimum of two required Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) or Stressed Plants (D1) thic Position (D2) trail Test (D5)
DROLOGY etland Hydro imary Indicato Surface Wa High Water Saturation (Water Marks Sediment Do Drift Deposit Algal Mat or Iron Deposit Inundation V Sparsely Ve Ind Observation face Water Proceedings of the Presentation Present	logy Indicators: ors (minimum of one ster (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) c Crust (B4) ts (B5) //sible on Aerial Image getated Concave Su ons: resent? Yes _ y finge)	gery (B7) Inface (B8) No No	Water-Staine Aquatic Faur True Aquatic Hydrogen St Osidized Rhi Presence of Rocent Iron i Thin Muck St Gauge or We Other (Explai	ed Leaves na (B13) : Plants (B ulfide Odo cosphere Feduced Teducion urface (C7 oli Data (D n in Rema	314) r (C1) s on Living lron (C4) in Tilled 5 r) 9) arks)	Wetland	Secondary in Surface S Drainage Dry-Seas Crayfish Saturation Stunted of FAC-Neu	dicators (minimum of two required Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) or Stressed Plants (D1) thic Position (D2) trail Test (D5)
DROLOGY etland Hydro imary Indicato Surface Wa High Water Saturation (Water Market Sediment De Drift Deposit Algal Mat or Iron Deposit Inundation V Sparsely Ve Ind Observation face Water Presented	logy Indicators: ors (minimum of one ster (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) c Crust (B4) ts (B5) //sible on Aerial Image getated Concave Su ons: resent? Yes _ y finge)	gery (B7) Inface (B8) No No	Water-Staine Aquatic Faur True Aquatic Hydrogen Su Osidized Rhi Presence of Rocent Iron i Thin Muck Su Gauge or We Other (Explai	ed Leaves na (B13) : Plants (B ulfide Odo cosphere Feduced Teducion urface (C7 oli Data (D n in Rema	314) r (C1) s on Living lron (C4) in Tilled 5 r) 9) arks)	Wetland	Secondary in Surface S Drainage Dry-Seas Crayfish Saturation Stunted of FAC-Neu	dicators (minimum of two required Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) or Stressed Plants (D1) thic Position (D2) trail Test (D5)
DROLOGY etland Hydro imary Indicato Surface Wa High Water Saturation (Water Marks Sediment Do Drift Deposit Algal Mat or Iron Deposit Inundation V Sparsely Ve Ind Observation face Water Proceedings of the Presentation Present	logy Indicators: ors (minimum of one ster (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) c Crust (B4) ts (B5) //sible on Aerial Image getated Concave Su ons: resent? Yes _ y finge)	gery (B7) Inface (B8) No No	Water-Staine Aquatic Faur True Aquatic Hydrogen Su Osidized Rhi Presence of Rocent Iron i Thin Muck Su Gauge or We Other (Explai	ed Leaves na (B13) : Plants (B ulfide Odo cosphere Feduced Teducion urface (C7 oli Data (D n in Rema	314) r (C1) s on Living lron (C4) in Tilled 5 r) 9) arks)	Wetland	Secondary in Surface S Drainage Dry-Seas Crayfish Saturation Stunted of FAC-Neu	dicators (minimum of two required Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) or Stressed Plants (D1) thic Position (D2) trail Test (D5)

Reset Form

WETLAND DETERMINATION DATA FORM – Midwest Region

WIL-DFW-001

Project/Site: STL Pipeline		City/Coun	ity: <u>Jersey C</u>	0.	Sampling Date: <u>9/23/2016</u>
Applicant/Owner: Spire				State: IL	Sampling Point: Upland
Investigator(s): _D. Ware and R. Maggiore					
				(concave, convex, none):	
Slope (%): 5 Lat:			='		
'					assification:
Are climatic / hydrologic conditions on the site typical for					
Are Vegetation, Soil, or Hydrology	_ significantly	disturbed	? Are "	Normal Circumstances" p	oresent? Yes <u>X</u> No
Are Vegetation, Soil, or Hydrology	_ naturally pro	blematic?	lf ne	eded, explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS – Attach site ma	p showing	sampli	ing point l	ocations, transects	, important features, etc.
Hydrophytic Vegetation Present? Yes	No X		41 011	A	
Hydric Soil Present? Yes			the Sampled		No X
Wetland Hydrology Present? Yes	No x	l wi	thin a Wetlar	id? fes	NO
Remarks: Upland Pit for WIL-DFW-001 dug in an adjacent upland VEGETATION – Use scientific names of plan		vetland			
Table 1 Plant	Absolute	Domina	nt Indicator	Dominance Test work	sheet:
<u>Tree Stratum</u> (Plot size:30) 1	% Cover	Species	? Status	Number of Dominant Sp That Are OBL, FACW, of	pecies
2				Total Number of Domin Species Across All Stra	
4				Percent of Dominant Sp That Are OBL, FACW, o	
	_	= Total C		·	
Sapling/Shrub Stratum (Plot size: 15)				Prevalence Index work	
1				Total % Cover of:	
2					x 1 = x 2 = 10
3				FACW species5	x 3 = 15
4				FAC species 60	
5		T-4-10		-	$\frac{5}{200}$ $\times 5 = \frac{200}{200}$
Herb Stratum (Plot size:5)		= Total C	over	Column Totals: 11	
1. Eleusine indica	35	Yes	FACU	Goldmin Totals	<u> </u>
2. Setaria viridis	30	Yes	UPL	Prevalence Index	= B/A =
3. Plantago lanceolata	10	No	FACU	Hydrophytic Vegetation	on Indicators:
4. Daucus carota	10	No	UPL	Dominance Test is	
5. Phleum pratense	10	No	FACU	Prevalence Index is	
6. <i>Trifolium pratense</i>	5	No	<u>FACU</u>		ptations ¹ (Provide supporting
7. Echinoclora crus-galli	5	No	FACW		s or on a separate sheet) phytic Vegetation ¹ (Explain)
8. Xanthium strumarium		No	FAC	i iobiematic riyurop	myno vegetation (Explain)
9				¹ Indicators of hydric soi	I and wetland hydrology must
10				be present, unless distu	
Woody Vine Stratum (Plot size:30)		= Total C	over	Hydrophytic	
1.				Vegetation	
2		= Total C	over	Present? Yes	s No X
Remarks: (Include photo numbers here or on a separat	te sheet.)			I	

SOIL Sampling Point: Upland

Profile Des	cription: (Describe	e to the dept	h needed to docur	nent the	indicator	or confir	m the absence of i	ndicators.)
Depth	Matrix			x Feature				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks
0-4"	10YR 4/3	100					SiL	
4-15	5YR 4/6	80	7.5YR 4/3	20	<u>C</u>	М	SiCL	
							· <u></u>	
				-			· ———	_
	-							
		pletion, RM=	Reduced Matrix, CS	S=Covere	ed or Coate	ed Sand G		on: PL=Pore Lining, M=Matrix.
Hydric Soil								Problematic Hydric Soils ³ :
Histoso	` '				atrix (S4)			irie Redox (A16)
	pipedon (A2) istic (A3)			Redox (Sa d Matrix (anese Masses (F12) Dlain in Remarks)
	en Sulfide (A4)			•	ວດ) ineral (F1)		Other (Exp	Diain in Remarks)
	d Layers (A5)		-	-	latrix (F2)			
	uck (A10)		-	d Matrix				
Deplete	d Below Dark Surfa	ce (A11)		Dark Surf	. ,			
	ark Surface (A12)				urface (F7)		hydrophytic vegetation and
	Mucky Mineral (S1)	20)	Redox I	Depression	ons (F8)			drology must be present,
	ucky Peat or Peat (Layer (if observed						uniess dis	turbed or problematic.
Type:	Layer (II observed	•						
Depth (in							Hydric Soil Pre	esent? Yes No X
Remarks:							- I yano com i io	
	201							
HYDROLO								
_	drology Indicators							
	-	one is requir	ed; check all that ar		(5.0)			ndicators (minimum of two required)
	Water (A1)		Water-Sta		` ,			Soil Cracks (B6)
High wa	ater Table (A2)		Aquatic Fa True Aqua					e Patterns (B10) ason Water Table (C2)
	Marks (B1)		Hydrogen		. ,			Burrows (C8)
_	nt Deposits (B2)		Oxidized F			ina Roots	·	on Visible on Aerial Imagery (C9)
	posits (B3)		Presence			-		or Stressed Plants (D1)
	at or Crust (B4)		Recent Iro	n Reduct	tion in Tille	d Soils (C	· 	rphic Position (D2)
Iron De	posits (B5)		Thin Muck	Surface	(C7)		FAC-Ne	eutral Test (D5)
Inundati	ion Visible on Aeria	l Imagery (B7) Gauge or	Well Data	a (D9)			
	y Vegetated Conca	ve Surface (E	38) Other (Exp	olain in R	emarks)			
Field Obser								
		·	No 🗶 Depth (in					
Water Table			lo <u>X</u> Depth (in					
Saturation P	Present? pillary fringe)	Yes N	lo <u>X</u> Depth (in	ches):		Wet	land Hydrology Pr	resent? Yes NoX
		m gauge, mo	nitoring well, aerial	photos, p	revious ins	spections).	, if available:	
Remarks:								
Remarks.								

-21 1			- Midwest Region	
Project/Site: 57L P.A	eline	City/County:	Scott Ca.	_ Sampling Date: 12/2/
Applicant/Owner:			State: #	Sampling Point: 4PL4
Investigator(s): <u> </u>		Section, Township,		13 N
Landform (hillslope, terrace, etc.):	Hillslope	•	lief (concave, convex, none)	
Slope (%): 5% Lat: 39.	540212	_ Long: _ 90, 4	4 3 3 4 4 4 4	
Soil Map Unit Name: Elco silty	clay loam, 10-19	Kr. Slugge Sam	rely endeanwi classific	Datum: NADE3
Are climatic / hydrologic conditions on t	the site typical for this time of	you? You Y	NWI classific	cation:/V/A
Are Vegetation, Soil, or	Hydrology A significant			
Are Vegetation , Soil , or	Hydrology V significanti		re "Normal Circumstances" p	
SUMMARY OF FINDINGS - A	ittach site map showin	g sampling poin	f needed, explain any answe	rs in Remarks.)
Hydrophytic Vegetation Present?	Yes No X	o maring point	t locations, transects	, important features, etc.
Hydric Soil Present?	Yes No	Is the Sampl	ed Area	
Wetland Hydrology Present?	Yes No	within a Wet		No X
Remarks:				
Upland representative		na-oul E	×T,	
* Active agricultur	al field;	Suil + No	cetation dis	tidas
VEGETATION - Use scientific n	ames of plants.		ACIA/104 -1.3	Wise
Tree Stratum (Plot size: 30'/	Absolute	Dominant Indicator	Dominance Test works	to vite
1. Absent) <u>% Cover</u>	Species? Status	Number of Dominant Spe	
	Open-A		That Are OBL, FACW, or	FAC:(A)
2			Total Number of Domina	
3 4			Species Across Alt Strata	(B)
5			Percent of Dominant Spe	cies 6.
	(-1)	= Total Cover	That Are OBL, FACW, or	FAC:(A/B)
Sapling/Shrub Stratum (Plot size:	5/	- Total Cover	Prevalence Index works	heet:
			Total % Cover of:	Multiply by:
2			OBL species	x1= 0
			FACW species	x2= 0
			FAC species	_ x 3 =O
			FACU species	x 4 =O
lerb Stratum (Plot size:	:	= Total Cover	UPL species 100	_ x5= <u>500</u>
Glycine max		y hAL	Column Totals: 100	(A) <u>500</u> (B)
Lanina amplexic	enle 10	N UPL	Prevalence Index =	R/A = 5.00
· 			Hydrophytic Vegetation I	
		r	1 - Rapid Test for Hydi	
			2 - Dominance Test is	
			3 - Prevalence Index is	s ≤3.0¹
			4 - Morphological Adap	tations' (Provide supporting
			data in Remarks or	on a separate sheet)
			Problematic Hydrophyt	ic Vegetation' (Explain)
	100 =	T-1-10	Indicators of hydric soil and	wetland hustests
oody Vine Stratum (Plot size: 301)		Total Cover	be present, unless disturbed	or problematic.
Absent				
			Hydrophytic Vegetation	
marke: Analysis - L	=	Total Cover	Present? Yes	No
marks: (Include photo numbers here or	On a senarate choot \			
	on a separate sneet.)			
	vegetation			

Profile Description: (Describe to the depth	needed to document the indicator or co-	Sampling Point: 4 PC
Depth Matrix	Redox Features	min the absence of mulcators.)
(inches) Color (moist) %	Color (moist) _ % Type Loc	
0-16' 104K 5/6 95	104R5/4 5 D M	
10 10 17 15 15 15 15 15 15 15 15 15 15 15 15 15	10/2/4 5 0	SiCL
Type: C=Concentration, D=Depletion, RM=Re	educed Matrix, MS=Masked Sand Grains.	² Location: PL=Pore Lining, M=Matrix.
lydric Soil Indicators:		indicators for Problematic Hydric Soils
Histosol (A1)	Sandy Gleyed Matrix (\$4)	Coast Prairie Redox (A16)
Histic Epipedon (A2)	Sandy Redox (S5)	Dark Surface (S7)
Black Histic (A3)	Stripped Matrix (S6)	Iron-Manganese Masses (F12)
Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1)	Very Shallow Dark Surface (TF12)
Stratified Layers (A5)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
_ 2 cm Muck (A10)	Depleted Matrix (F3)	
Depleted Below Dark Surface (A11)	Redox Dark Surface (F6)	
Thick Dark Surface (A12)	Depleted Dark Surface (F7)	3Indicators of hydrophytic vegetation and
_ Sandy Mucky Mineral (S1)	Redox Depressions (F8)	wetland hydrology must be present,
_ 5 cm Mucky Peat or Peat (S3)		unless disturbed or problematic.
estrictive Layer (if observed):		
Type:		
emarka: No hydric Soi	l indicators c	Hydric Soll Present? Yes No
emarka;	l indicators c	
emarka: No hydric sui	l indicators o	
DROLOGY	l indicators e	
PROLOGY etland Hydrology Indicators:		observed.
PROLOGY etland Hydrology Indicators:	check all that apply)	Secondary Indicators (minimum of two require
DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one is required: _ Surface Water (A1)	check all that apply) Water-Stained Leaves (89)	Secondary Indicators (minimum of two require Surface Soil Cracks (86)
DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one is required: Surface Water (A1) High Water Table (A2)	check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13)	Secondary Indicators (minimum of two require Surface Soil Cracks (B6) Drainage Patterns (B10)
POROLOGY Suitand Hydrology Indicators: Surface Water (A1) High Water Table (A2) Saturation (A3)	heck all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14)	Secondary Indicators (minimum of two require Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2)
DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one is required: Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1)	Secondary Indicators (minimum of two require Surface Soil Cracks (B6) Dralnage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
TOROLOGY etland Hydrology Indicators; imary Indicators (minimum of one is required: Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	heck all that apply) Water-Stained Leaves (89) Aquatic Fauna (813) True Aquatic Plants (814) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots	Secondary Indicators (minimum of two require Surface Soil Cracks (B6) Dralnage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
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TOROLOGY etland Hydrology Indicators: imary Indicators (minimum of one is required: 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)	heck all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C	Secondary Indicators (minimum of two require Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)
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TDROLOGY etland Hydrology Indicators: imary Indicators (minimum of one is required: Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7)	theck all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Thin Muck Surface (C7) Gauge or Well Data (D9)	Secondary Indicators (minimum of two require Surface Soil Cracks (B6) DraInage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
TOROLOGY etland Hydrology Indicators: imary Indicators (minimum of one is required: Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8)	heck all that apply) Water-Stained Leaves (89) Aquatic Fauna (813) True Aquatic Plants (814) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C) Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks)	Secondary Indicators (minimum of two require Surface Soil Cracks (B6) DraInage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
TOROLOGY etland Hydrology Indicators: imary Indicators (minimum of one is required: Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Ind Observations: Inface Water Present? Yes No	meck all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Candidate of the Candidate	Secondary Indicators (minimum of two requires Surface Soil Cracks (B6) DraInage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5)
TOROLOGY Interpretation (A) Interpretation (B) Interpretation (heck all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks) Depth (inches): Depth (inches):	Secondary Indicators (minimum of two requires Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5)
TOROLOGY etland Hydrology Indicators: imary Indicators (minimum of one is required: Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Ind Observations: rface Water Present? Inter Table Present?	heck all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks) Depth (inches): Depth (inches):	Secondary Indicators (minimum of two requires Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5)
TOROLOGY Interpretation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Ind Observations: Trace Water Present? Yes No extraction of the present?	heck all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks) Depth (inches): Depth (inches):	Secondary Indicators (minimum of two requires Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5)
TOROLOGY Interpretation (A) Interpretation (B) Interpretation (meck all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C7) Gauge or Well Data (D9) Other (Explain in Remarks) Depth (inches): Depth (inches): Depth (inches): Wet	Secondary Indicators (minimum of two requires Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5)

plicant/Owner:			State: Sampling Point: Upland Sampling Sampling Point: Upland Sampli
	18 to 35		
,		7	NWI classification:
climatic / hydrologic conditions on the site typical for	The state of the s	CHOCK THE RESERVE TO	(If no, explain in Remarks.)
Vegetation 1 Sail 1 or Hydrology N	significantly	disturbed? Are	"Normal Circumstances" present? Yes No
Vegetation N. Soil N., or Hydrology N.	naturally pro	bismatic? (if n	needed, explain any answers in Remarks.)
MMARY OF FINDINGS - Attach site ma	p showing	sampling point	locations, transects, important features, etc
drophytic Vegetation Present? Yes	No V		
rdric Soil Present? Yes	No V	Is the Sampie	
etland Hydrology Present? Yes	No	within a Wetla	ind? Yes No
Area upland sample poi	nt fer	r wetlands	S WI LJJP006/WILJJP006A
GETATION – Use scientific names of plant	s.	-	
ne Stratum (Plot size: 30'	Absolute	Dominant Indicator	Dominance Test worksheet:
RE OLIMINITY (PIOT SIZE:)	% Cover	Species? Status	Number of Dominant Species
			That Are OBL, FACW, or FAC: (A)
A1		$\overline{}$	Total Number of Dominant
HUSEN			Species Across All Strata: (B)
10200			Percent of Dominant Species 33%
- Int	- B	T.1.10	That Are OBL, FACW, or FAC:(A/B)
ling/Shrub Stratum (Plot size:		= Total Cover	Prevalence Index worksheet:
CONUS demamondi	10	Y FAC	Total % Cover of: Multiply by
			OBL species _ x 1 =
			FACW species = 2 =
			FAC species x3 =
			FACU species x4 =
(-)	10:	Total Cover	UPL species x5 =
Stratum (Plot size:	7 🕋	٧	Column Totals: (A) (B)
Schedonorus arundinaceus	<u> </u>	- FACH	
Dattiffiz glomerate	25	Y FALL	Prevalence index = B/A =
ridens flauns	40	N WAT	Hydrophytic Vegetation Indicators:
Imbrosia artimis	10.	N FACO	1 - Rapid Test for Hydrophytic Vegetation
geratina altissima	10.	FACU	2 - Dominance Test is >50%
ymplayatrichum lazum	-5-	N FACU	3 - Prevalence Index is ≤3.01
olida, o canadensis	- 5	N FACU	4 - Morphological Adaptations (Provide supporting
rigeran Canadenis	<u>S</u> .	N FACE	data in Remarks or on a separate sheet)
U			Problematic Hydrophytic Vegetation1 (Explain)
*			Nedictor of buddings and an area of
tv Vine Stratum (Plot size: 30'v)	105 =	Total Cover	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
A\ , , ,			Hydrophytic
Hoserd			Vegetation
,	0	Total Cover	Present? Yes No

SOIL

Profile Desc Depth	Metrix			. Features	s			
(inches)	Color (moist)	_%	Color (moist)	%_	Type'	Loc ²	Texture	Remarks
0-3	104R3/2	90	10484/4	10		M	Sil-	
3-17	10 YR 4/4	75	7.5484/	25		m	SiCL_	
ydric Soll In Histosol (/ Histic Epip Bleck Hist Hydrogen Strattfied L 2 cm Mucl Depleted E Thick Dark Sandy Mucl 5 cm Muck	A1) pedon (A2) tic (A3) Sulfide (A4) Layers (A5)		Sandy Gl Sandy Ro Stripped	eyed Mat adox (S5) Matrix (S6 ucky Mine leyed Mat Metrix (F3 ark Surfac Derk Surfac	trix (S4) 6) eral (F1) trix (F2) 3) ce (F6) face (F7)		Indicators fo Coest Property Surface Iron-Mang Very Sha Other (Ex	PL=Pore Lining, M=Matrix. r Problematic Hydric Soils ³ : airle Redox (A16) face (S7) ganese Masses (F12) flow Dark Surface (TF12) roplain in Remarks) hydrophytic vegetation and ydrology must be present, sturbed or problematic.
. ,,,,,,			_					
Depth (inche	es):		_				Hydric Soil Pro	esant? Yes No
Depth (Inche emarks:	es):Y						nyune son Pri	10 <u>V</u>
Depth (Inchesemants: - W M P	Y plogy Indicators:						10000	
Depth (Inches marks: - PMP DROLOGY etiand Hydrosimary Indicator	Y plogy Indicators: prs (minimum of one	is required			(80)		Secondary I	ndicators (minimum of two require
Depth (Inches marks: DROLOGY etiand Hydromary Indicato Surface Wa	Y plogy Indicators: ors (minimum of one	is required	Water-Staine	d Leaves	s (B9)		Secondary	ndicators (minimum of two require Soil Cracks (86)
Depth (Inchestmarks: - N M DROLOGY etiand Hydromary Indicate Surface Water High Weter	y plogy Indicators: ors (minimum of one ater (A1) Table (A2)	is required	Water-Staine	d Leaves a (B13)			5econdary Surface Drainag	ndicators (minimum of two require Soil Cracks (86) e Patterns (810)
Depth (Inchesements: - North DROLOGY etiand Hydro mary Indicate Surface Wat High Weter Saturation (y plogy Indicators: ors (minimum of one ater (A1) Table (A2) (A3)	is required	Water-Staine Aquatic Faur True Aquatic	d Leaves a (B13) Plants (B	314)		5econdary Surface Drainag Dry-Sea	ndicators (minimum of two require Soil Cracks (B6) e Patterns (B10) son Water Table (C2)
DROLOGY etiand Hydro mary Indicate Surface Wa High Weter Saturation (Water Mark	y plogy Indicators: ors (minimum of one ater (A1) Table (A2) (A3) us (B1)	is required	Water-Staine Aquatic Faur True Aquatic Hydrogen Su	d Leaves a (B13) Plants (B lifide Odo	314) or (C1)	Posts (Surface Drainag Dry-Sea Crayfish	ndicators (minimum of two require Soil Cracks (B6) e Patterns (B10) son Water Table (C2)
DROLOGY etland Hydro mary Indicate Surface Water High Weter Saturation (Water Mark Sediment D	y plogy Indicators: ors (minimum of one ater (A1) Table (A2) (A3) ss (B1) deposits (B2)	is required	Water-Staine Aquatlc Faur True Aquatic Hydrogen Su Oxidized Rhi	ed Leaves na (B13) Plants (B lifide Odoi zospheres	314) or (C1) s on Livin		Secondary Surface Dry-Sea Crayfish C3) Saturati	ndicators (minimum of two require Soil Cracks (B6) e Patterns (B10) son Water Table (C2) a Burrows (C8) on Visible on Aerial Imagery (C9)
DROLOGY etland Hydro imary Indicate Surface Wat High Weter Saturation (Water Mark Sediment D Drift Deposi	y plogy Indicators: prs (minimum of one ater (A1) Table (A2) (A3) ss (B1) peposits (B2) its (B3)	is required	Water-Staine Aquatic Faur True Aquatic Hydrogen Su Oxidized Rhi Presence of	d Leaves a (B13) Plants (B difide Odo zospheres	314) or (C1) s an Livin Iron (C4)		Secondary Surface Drainag Dry-Sea Crayfish C3) Saturati Stunted	ndicators (minimum of two require Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) a Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1)
DROLOGY The property of the p	y plogy Indicators: prs (minimum of one ater (A1) Table (A2) (A3) ss (B1) peposits (B2) its (B3) r Crust (B4)	is required	Water-Staine Aquatic Faur True Aquatic Hydrogen Su Oxidized Rhi Presence of I	ed Leaves a (B13) Plants (B lifide Odor zospheres Reduced	314) or (C1) s on Livin Iron (C4) in Tilled		Secondary Surface Drainag Dry-Sea Crayfish C3) Saturati Stunted Geomor	ndicators (minimum of two require Soil Cracks (B6) the Patterns (B10) the son Water Table (C2) the Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) tiphic Position (D2)
DROLOGY etland Hydro imary Indicate Surface Wa High Weter Saturation (Water Mark Sediment D Drift Deposi Algal Mat or	y plogy Indicators: prs (minimum of one ater (A1) Table (A2) (A3) (A3) (A3) (A5) (B1) (A5) (A5) (A5) (A5) (A5) (A5) (A5) (A5		Water-Staine Aquatic Faur True Aquatic Hydrogen Su Oxidized Rhi Presence of I Recent Iron F	ed Leaves a (B13) Plants (B lifide Odor zospheres Reduced Reduction urface (C7	314) or (C1) os on Livin Iron (C4) o in Tilled		Secondary Surface Drainag Dry-Sea Crayfish C3) Saturati Stunted Geomor	ndicators (minimum of two require Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) a Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1)
DROLOGY The property of the p	ology Indicators: ors (minimum of one ater (A1) Table (A2) (A3) us (B1) peposits (B2) its (B3) r Crust (B4) ts (B5) Visible on Aerial Ime	gery (B7)	Water-Staine Aquatic Faur True Aquatic Hydrogen Su Oxidized Rhi Presence of I Recent Iron F Thin Muck Su	ed Leaves in (B13) Plants (B iffide Odor cospheres Reduced Reduction urface (C7	314) or (C1) os an Livin Iron (C4) o in Tilled (7)		Secondary Surface Drainag Dry-Sea Crayfish C3) Saturati Stunted Geomor	ndicators (minimum of two require Soil Cracks (B6) the Patterns (B10) the son Water Table (C2) the Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) tiphic Position (D2)
Depth (Inchesemants: DROLOGY etiand Hydro imary Indicate Surface Water Mark Saturation (Water Mark Sediment D Drift Deposit Iron Deposit Inundation (Sparsely Ve	ology Indicators: ors (minimum of one ater (A1) Table (A2) (A3) Is (B1) Ites (B3) Ir Crust (B4) Its (B5) Visible on Aerial Ime agetated Concave Si	gery (B7)	Water-Staine Aquatic Faur True Aquatic Hydrogen Su Oxidized Rhi Presence of I Recent Iron F Thin Muck Su Gauge or We	ed Leaves in (B13) Plants (B iffide Odor cospheres Reduced Reduction urface (C7	314) or (C1) os an Livin Iron (C4) o in Tilled (7)		Secondary Surface Drainag Dry-Sea Crayfish C3) Saturati Stunted Geomor	ndicators (minimum of two require Soil Cracks (B6) the Patterns (B10) the son Water Table (C2) the Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) tiphic Position (D2)
Depth (Inche emarks: DROLOGY etiand Hydro imary Indicate Surface Wat High Weter Saturation (Water Mark Sediment D Drift Deposit Inon Deposit Inundation (Sparsely Ve	es): plogy Indicators: prs (minimum of one ater (A1) Table (A2) (A3) us (B1) peposits (B2) its (B3) r Crust (B4) ts (B5) Visible on Aerial Ime agetated Concaive Si ons:	gery (87) urface (88)	Water-Staine Aquatic Faur True Aquatic Hydrogen Su Oxidized Rhi Presence of I Recent Iron F Thin Muck Su Gauge or We	d Leaves a (B13) Plants (B lifide Odol zosphere: Reduced Reduction urface (C7	314) or (C1) os an Livin Iron (C4) o in Tilled (7)		Secondary Surface Drainag Dry-Sea Crayfish C3) Saturati Stunted Geomor	ndicators (minimum of two require Soil Cracks (B6) the Patterns (B10) the son Water Table (C2) the Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) tiphic Position (D2)
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WIL-JJP-007 and WETLAND DETERMINATION DATA FORM - Midwest Region WIL-JJP-008 City/County: Green Project/Site: Sampling Date: 9-17-2016 Applicant/Owner: 50 ~ State: TLL Sampling Point: Upland Investigator(s): Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): UCVV Long: -9d. 430 264 Datum: NA 1) 18-35% Shee en lad NWI classification: ___ Soil Map Unit Name: Hokey Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ (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, etc. Hydrophytic Vegetation Present? Yes No is the Sampled Area Hydric Soil Present? Wetland Hydrology Present? within a Wetland? - Area upland sample motland **VEGETATION** – Use scientific names of plants. Absolute Dominant Indicator Dominance Test worksheet: Tree Stratum (Plot size: 16 Cover Species? Status Number of Dominant Species That Are OBL, FACW, or FAC: **Total Number of Dominant** Species Across All Strata: (B) Percent of Dominant Species That Are OBL, FACW, or FAC: = Total Cover Sapling/Shrub Stratum (Plot size: Pravalence Index worksheet: Total % Cover of: Multiply by OBL species x 1 = FACW species x 2 = FAC species FACU species = Total Cover Column Totals: __ FACH FACE Prevalence Index = B/A = Hydrophytic Vegetation Indicatorse FACU _ 1 - Rapid Test for Hydrophysic Vegetation __ 2 - Dominance Test is >50% FACIN 3 - Prevalence Index is ≤3.01 4 - Morphological Adaptations¹ (Provide supporting data in Remark of on a separate sheet) Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must = Total Cover be present, unless disturbed or problematic. Woody Vine Stratum (Plot size: **Hydrophytic** Vegetation Present? Yes = Total Cover Remarks: (Include photo numbers here or on a separate shee

SOIL

Sampling Point UPland

Depth Metrix	pth needed to document the indicator or Redox Features		- V
(inches) Color (moist) %	Color (moist) % Type'	Loc ² Texture	Remarks
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		20100	
104R4/4 30			
	The second secon	- 4	
			-
Tune CyConcestration DeDepletion PM	=Reduced Matrix, MS=Masked Sand Grain	2) ocatio	n: PL=Pore Lining, M=Matrix.
lydric Sail Indicators:	-reduced malife, md-masked being Grant		s for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Clayed Matrix (SA)		
Histosof (A1) Histic Epipedon (A2)	Sandy Gleyed Matrix (S4) Sandy Redox (S5)		t Prairle Redox (A16)
_		_	Surface (S7)
Black Histic (A3)	Stripped Matrix (S6)	_	Manganese Masses (F12)
Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1)		Shallow Dark Surface (TF12)
Stratified Layers (A5)	Loamy Gleyed Matrix (F2)	Other	(Explain in Remarks)
2 cm Muck (A10)	Depleted Matrix (F3)		
Depleted Below Dark Surface (A11)	Redox Dark Surface (F6)	3, 4, 4, 4, 4	a of budgeship dis acceptable and a
Thick Dark Surface (A12)	Depleted Dark Surface (F7)		s of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Redox Depressions (F8)		d hydrology must be present,
5 cm Mucky Peat or Peat (S3)		uniess	disturbed or problematic.
Restrictive Layar (if observed):			
Туре:		Hydric Soil	Present? Yes No
-Soil disturbed, 1	nossible due Corr	m fond	
-Soil disturbed, 1 Spoil -Zwatnix colos	nossible due for	m fond	
-Soil disturbed, 1 Spoil -Zwatrix colus o DROLOGY		m fond	
Termants: -Soil disturbed, 1 -Spoil -Zwatrix colus of TOROLOGY Totand Hydrology Indicators:	due to miring or	m pond f soil	poil
temarks: - Soil disturbed, 1 - Spoil - Zwatrix colus of /DROLOGY /etland Hydrology Indicators: charty Indicators (minimum of one is required)	due to Miring or	m pond f soil o	ny Indicators (minimum of two requires
Termants: - Soil disturbed, 1 - Spoil - Zwatrix Colus (CDROLOGY Vetland Hydrology Indicators: rimery Indicators (minimum of one is require _ Surface Water (A1)	red: check ell that apply) Water-Stained Leaves (B9)	m pend	ary Indicators (minimum of two requires face Soil Cracks (86)
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FOROLOGY Total Hydrology Indicators: Indicators (minimum of one is required) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	red: check ell that enoiv) Water-Stained Leaves (89) Aquatic Fauna (813) True Aquatic Plants (814) Hydrogen Sulfide Odor (C1) Oxidized Rhizcapheres on Living Presence of Reduced Iron (C4) Recent Iron Reduction in Titled Sc Thin Muck Surface (C7) Gauge or Well Data (D9)	Secondi Suri Drai Dry Cray Roots (C3) Satu Stur	inv Indicators (minimum of two moures face Soil Cracks (88) nage Patterns (810) Season Water Table (C2) /fish Burrows (C8) iration Visible on Aerial Imagery (C9) ated or Stressed Plants (D1) morphic Position (D2)
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For I disturbed / Sporil disturbed / Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7 Sparsely Vegetated Concave Surface (Beld Observations: Inface Water Present? Yes Maturation Present?	red: check eli that anniv) Water-Stained Leaves (89) Aquatic Fauna (813) True Aquatic Plants (814) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Presence of Reduced iron (C4) Recent Iron Reduction in Tilled Sc Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks) Depth (inches): Depth (inches):	Saconda Sunda Drai Dry Cray Roots (C3) — Satu Stur Situr FAC	inv indicators (minimum of two required face Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) rifish Burrows (C8) uration Visible on Aerial Imagery (C9) ated or Stressed Plants (D1) morphic Position (D2)Neutral Test (D5)

roject/Site:STL	City/0	County: 101544 Sampling Date: 11-17-
oplicant/Owner:S place		State: D Sampling Point: UD Gu
vestigator(s):	Section	on, Township, Range:
andform (hillslope, terrace, etc.):	e	Local relief (concave, convex, none):
lope (%): Lat:	Long	
oil Map Unit Name:		NWI classification:
re climatic / hydrologic conditions on the site typical fo		
e Vegetation, Soil, or Hydrology	/ significantly distur	
e Vegetation Soil , or Hydrology		
		old? (If needed, explain any answers in Remarks.) pling point locations, transects, important features, etc.
	. No	, and the state of
lydric Soil Present? Yes	No	is the Sampled Area
	No	within a Wetland? Yes No
-Area upland sample poi -Area within activ		
GETATION - Use scientific names of plan		1 1100
ee Stratum (Plot size: 30)	Absolute Domi	nant Indicator Dominance Test worksheet:
(101 Size	% Cover Spec	Number of Dominant Species
		That Are OBL, FACW, or FAC: (A)
		Total Number of Dominant
14 lo sem		Species Across All Strata: (B)
+		Percent of Dominant Species
	= Total	Cover That Are OBL, FACW, or FAC: (A/B)
pling/Shrub Stratum (Plot size:		Prevalence Index worksheet:
Λ1 -		OBL species x 1 =
HUSDAN		FACW species x 2 =
7 32000		FAC species x 3 =
	()	FACU species x 4 =
b Stratum (Plot size:)	= Total	
Lamium atmost		Column Totals: (A) (B)
stellar la medita	_ 5	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 Adaptations' (Provide supporting
		data in Remarks or on a separate sheet)
		Problematic Hydrophytic Vegetation¹ (Explain)
dy Vine Stratum (Plot size: _ 30 V)	= Total C	over Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
		Hydrophytic
A		Vegetation
Absent		vegetation
Alo SLAX harks: (Include photo numbers here or on a separate	= Total C	Present? Vec

Depth	Matrix	120000000000000000000000000000000000000	th needed to docum	Feature			mrs announ	of marcatara.
(inches)	Color (moist)	_%_	Color (moist)	36	Type	Loc2	Texture	Remarks
0-17-10	04R5/4	90	2.545/2	10	1)	M	501	Fine sandy
							301	-Time sandy
								-2.2
		+						
		_						
	Sanger States							
lydric Soli Indic	ntration, D=Depl	etion, FM=	Reduced Matrix, MS	=Masked	Sand Gra	ins.	² Locatio	n: PL=Pore Lining, M=Matrix.
_							Indicators	for Problematic Hydric Soils ¹ :
_ Histosol (A1)				eyed Mat	. ,			Prairie Redox (A16)
_ Histic Epiped				edox (S5)				Surface (S7)
_ Black Histic (Matrix (St	•			lengenese Messes (F12)
_ Hydrogen Sui _ Stratified Lay			Loamy M	-				Shallow Dark Surface (TF12)
_ 3 cm Muck (A			Loamy Gi				Other	(Explain in Remarks)
	ow Dark Surface	(A14)	Depleted					
_ Depleted Belo _ Thick Dark St		(A11)	Redox Da				3,	
Sandy Mucky			Depleted		. ,			of hydrophytic vegetation and
	eat or Peat (53)		Redox De	pressions	s (F8)			d hydrology must be present,
strictive Layer					- in		unless	disturbed or problematic.
Type:	ACTUAL DESIGNATION OF THE							
Depth (inches):			_				Hydric Soil	Present? Yes No
Deput (mones).								Present? Yes No
marka: NM			_				3	
- Nove							à	
DROLOGY	ny Indicators						3	
DROLOGY tland Hydrolog							3	
OROLOGY tland Hydrolog	(minimum of one	is required	: check all that apply				3	
OROLOGY tland Hydrolog nary Indicators (Surface Weter	(<u>minimum of one</u> (A1)	is required	Water-Stained	d Leaves	(B9)		Secondar	
DROLOGY Illand Hydrolog nary Indicators Surface Weter High Water Tal	(minimum of one (A1) ble (A2)	is required	Water-Stained	d Leaves a (B13)			<u>Secondar</u> Surfa	y Indicators (minimum of two require
DROLOGY tland Hydrolog nary Indicators (Surface Weter High Water Tal Saturation (A3)	(minimum of one (A1) ble (A2)	is required	Water-Stained Aquatic Faund True Aquatic	d Leaves a (B13) Plants (B	14)		<u>Secondar</u> Surfa Drain	y Indicators (minimum of two require ice Soil Cracks (B6) age Patterns (B10)
DROLOGY Iland Hydrolog nary Indicators Surface Weter High Water Tal Saturation (A3) Water Marks (E	(minimum of one (A1) ble (A2) 31)	is required	Water-Stained Aquatic Faund True Aquatic Hydrogen Sul	d Leaves a (B13) Plants (B fide Odor	14) (C1)		Secondar Surfa Drain Dry-S Crayf	y Indicators (minimum of two require ice Soil Cracks (B6) age Patterns (B10) leason Water Table (C2)
DROLOGY Iland Hydrolog nary Indicators (Surface Weter High Water Tal Saturation (A3) Water Marks (E Sediment Depo	(<u>minimum of one</u> (A1) ble (A2)) 31) ssits (B2)	is required	Water-Stained Aquatic Faund True Aquatic Hydrogen Sul	d Leaves a (B13) Plants (B fide Odor	14) (C1)	Roots (C	Surfa Surfa Drain Dry-S Crayf	y Indicators (minimum of two required to Soil Cracks (B6) age Patterns (B10) dieason Water Table (C2) dies Burrows (C8)
DROLOGY tland Hydrolog mary Indicators (Surface Weter High Water Tal Saturation (A3) Water Marks (E Sediment Depo	(<u>minimum of one</u> (A1) ble (A2) 331) ssits (B2) B3)	is required	Water-Stained Aquatic Faund True Aquatic	d Leaves a (B13) Plants (B fide Odor oapheres	14) (C1) on Living	Roots (C:	Secondar Surfa Drain Dry-S Crayf Satur	y Indicators (minimum of two require ice Soil Cracks (B6) age Patterns (B10) ieason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9)
DROLOGY Iland Hydrolog nary Indicators (Surface Weter High Water Tal Saturation (A3) Water Marks (E Sediment Depo	(minimum of one (A1) ble (A2) (B1) (B1) usits (B2) (B3) ust (B4)	is reauired	Water-Stainer Aquatic Faunt True Aquatic I Hydrogen Sut Oxidized Rhiz	d Leaves a (B13) Plants (B fide Odor oapheres leduced li	14) (C1) on Living ron (C4)		Secondar Surfa Drain Dry-S Crayf Saturn	v Indicators (minimum of two require ice Soil Cracks (B6) age Patterns (B10) ieason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1)
DROLOGY Iland Hydrolog nary Indicators (Surface Weter High Water Tal Saturation (A3) Water Marks (E Sediment Deposits (I Algal Mat or Cri Iron Deposits (E	(minimum of one (A1) ble (A2) (B1) (B1) usits (B2) (B3) ust (B4)		Water-Stainer Aquatic Faunt True Aquatic I Hydrogen Sut Oxidized Rhiz	d Leaves a (B13) Plants (B' fide Odor oapheres deduced li eduction i	14) (C1) on Living ron (C4) in Tilled So		Secondar Surfa Drain Crayf Saturi	y Indicators (minimum of two require ce Soil Cracks (B6) age Patterns (B10) deason Water Table (C2) dish Burrows (C8) ation Visible on Aerial Imagery (C9) and or Stressed Plants (D1) derophic Position (D2)
DROLOGY Itand Hydrolog nary Indicators Surface Weter High Water Tal Saturation (A3) Water Marks (E Sediment Deposits (I Algal Mat or Cr Iron Deposits (E Inundetion Visit	(minimum of one (A1) ble (A2)) (B1) (B3) (B3) (B4) (B4) (B6) (B4)	gery (B7)	Water-Stainer Aquatic Faunt True Aquatic I Hydrogen Sut Oxidized Rhiz Presence of R Recent Iron R	d Leaves a (B13) Plants (B' fide Odor oapheres deduced li eduction i	14) (C1) on Living ron (C4) in Tilled Sc		Secondar Surfa Drain Crayf Saturi	v Indicators (minimum of two require ice Soil Cracks (B6) age Patterns (B10) ieason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1)
DROLOGY Iland Hydrolog nary Indicators Surface Weter High Water Tal Saturation (A3) Water Marks (E Sediment Deposits (I Algal Mat or Cre Iron Deposits (E Inundetion Visit Sparsely Veget	(minimum of one (A1) ble (A2)) (B1) psits (B2) (B3) ust (B4) (B5) ple on Aeriel Imagated Concave Su	gery (B7)	Water-Stainer Aquatic Fauna True Aquatic I Hydrogen Sut Oxidized Rhiz Presence of R Recent Iron R Thin Muck Sur	d Leaves a (B13) Plants (B' fide Odor oapheres deduced li eduction i face (C7)	14) (C1) on Living ron (C4) in Tilled So		Secondar Surfa Drain Crayf Saturi	y Indicators (minimum of two require ce Soil Cracks (B6) age Patterns (B10) deason Water Table (C2) dish Burrows (C8) ation Visible on Aerial Imagery (C9) and or Stressed Plants (D1) derophic Position (D2)
DROLOGY tland Hydrolog mary Indicators Surface Weter High Water Tal Saturation (A3) Water Marks (E Sediment Depo Drift Deposits (I Algal Mat or Cri Iron Deposits (E Inundetion Visit Sparsely Veget d Observations	(minimum of one (A1) ble (A2) (B3) sits (B2) B3) ust (B4) 35) ble on Aeriel Imagated Concave Su	gery (B7)	Water-Stainer Aquatic Fauna True Aquatic Hydrogen Sut Oxidized Rhiz Presence of R Recent Iron R Thin Muck Sur Gauge or Well	d Leaves a (B13) Plants (B' fide Odor oapheres deduced li eduction i face (C7)	14) (C1) on Living ron (C4) in Tilled So		Secondar Surfa Drain Crayf Saturi	y Indicators (minimum of two requires ce Soil Cracks (B6) age Patterns (B10) deason Water Table (C2) dish Burrows (C8) ation Visible on Aerial Imagery (C9) and or Stressed Plants (D1) derophic Position (D2)
DROLOGY Illand Hydrolog mary Indicators Surface Weter High Water Tal Saturation (A3) Water Marks (E Sediment Depo Drift Deposits (I Algal Mat or Cri Iron Deposits (E Inundetion Visit Sparsely Veget d Observations	(minimum of one (A1) ble (A2)) (B1) sits (B2) (B3) sust (B4) (B5) ble on Aeriel Imagated Concave Sust	gery (B7) urface (B8) No _	Water-Stainer Aquatic Fauna True Aquatic I Hydrogen Suft Oxidized Rhiz Presence of R Recent Iron R Thin Muck Surt Gauge or Well Other (Explain	d Leaves a (B13) Plants (B' fide Odor oapheres deduced li eduction i face (C7) Data (D8 in Remai	14) (C1) on Living ron (C4) in Tilled So		Secondar Surfa Drain Crayf Saturi	y Indicators (minimum of two requires ce Soil Cracks (B6) age Patterns (B10) deason Water Table (C2) deason Water Table (C2) dish Burrows (C8) ation Visible on Aerial Imagery (C9) and or Stressed Plants (D1) derophic Position (D2)
DROLOGY Illand Hydrolog mary Indicators (Surface Weter High Water Tal Saturation (A3) Water Marks (E Sediment Depo Drift Deposits (I Algal Mat or Cri Iron Deposits (E Inundetion Visit Sparsely Veget d Observations ace Water Prese	(minimum of one (A1) ble (A2)) (B1) sits (B2) (B3) sust (B4) (B5) ble on Aeriel Imagated Concave Sust	gery (B7) urface (B8) No _	Water-Stainer Aquatic Fauna True Aquatic I Hydrogen Suf Oxidized Rhiz Presence of R Recent Iron R Thin Muck Sur Gauge or Well Other (Explain	d Leaves a (B13) Plants (B' fide Odor oapheres deduced li eduction i face (C7) Data (D8 in Remai	14) (C1) on Living ron (C4) in Tilled So		Secondar Surfa Drain Crayf Saturi	y Indicators (minimum of two requires ce Soil Cracks (B6) age Patterns (B10) deason Water Table (C2) deason Water Table (C2) dish Burrows (C8) ation Visible on Aerial Imagery (C9) and or Stressed Plants (D1) derophic Position (D2)
DROLOGY Illand Hydrolog mary Indicators Surface Weter High Water Tail Saturation (A3) Water Marks (E Sediment Deposits (I Algal Mat or Cru Iron Deposits (E Inundetion Visit Sparsely Veget d Observations face Water Present are Table Present under Capillary for	(minimum of one (A1) ble (A2)) (B1) sits (B2) (B3) sust (B4) (B5) ble on Aeriel Imagated Concave Sust (B4) (B4) (B5) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7	gery (B7) urface (B8) No No	Water-Stainer Aquatic Fauna True Aquatic I Hydrogen Suft Oxidized Rhiz Presence of R Recent Iron R Thin Muck Surt Gauge or Well Other (Explain Depth (Inches	d Leaves a (B13) Plants (B' fide Odor oapheres deduced li eduction i face (C7) Data (D8 in Remai	14) (C1) c on Living ron (C4) in Tilled Sc)) rks)	Wetland	Secondar Surfar Drain Dry-S Crayf Satur Stunt FAC-I	y Indicators (minimum of two requires ce Soil Cracks (B6) age Patterns (B10) deason Water Table (C2) dish Burrows (C8) ation Visible on Aerial Imagery (C9) and or Stressed Plants (D1) derophic Position (D2)
DROLOGY Iland Hydrolog mary Indicators Surface Weter High Water Tail Saturation (A3) Water Marks (E Sediment Deposits (I Inon Deposits (E Inundetion Visit Sparsely Veget d Observations face Water Present ration Present?	(minimum of one (A1) ble (A2)) (B1) sits (B2) (B3) sust (B4) (B5) ble on Aeriel Imagated Concave Sust (B4) (B4) (B5) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7	gery (B7) urface (B8) No No	Water-Stainer Aquatic Faunt True Aquatic I Hydrogen Suf Oxidized Rhiz Presence of R Recent Iron R Thin Muck Sur Gauge or Well Other (Explain	d Leaves a (B13) Plants (B' fide Odor oapheres deduced li eduction i face (C7) Data (D8 in Remai	14) (C1) c on Living ron (C4) in Tilled Sc)) rks)	Wetland	Secondar Surfa Drain Crayf 3) Saturt Stunto Georr FAC-I	y Indicators (minimum of two requires ce Soil Cracks (B6) age Patterns (B10) deason Water Table (C2) dish Burrows (C8) ation Visible on Aerial Imagery (C9) ded or Stressed Plants (D1) dorphic Position (D2) Neutral Test (D5)
DROLOGY Itland Hydrolog mary Indicators Surface Weter High Water Tal Saturation (A3) Water Marks (E Sediment Deposits (I Algal Mat or Cn Iron Deposits (E Inundetion Visit Sparsely Veget d Observations ace Water Present er Table Present; under capillary for	(minimum of one (A1) ble (A2)) (B1) sits (B2) (B3) sust (B4) (B5) ble on Aeriel Imagated Concave Sust (B4) (B4) (B5) (B7) (B7) (B7) (B7) (B7) (B7) (B7) (B7	gery (B7) urface (B8) No No	Water-Stainer Aquatic Fauna True Aquatic I Hydrogen Suft Oxidized Rhiz Presence of R Recent Iron R Thin Muck Surt Gauge or Well Other (Explain Depth (Inches	d Leaves a (B13) Plants (B' fide Odor oapheres deduced li eduction i face (C7) Data (D8 in Remai	14) (C1) c on Living ron (C4) in Tilled Sc)) rks)	Wetland	Secondar Surfa Drain Crayf 3) Saturt Stunto Georr FAC-I	y Indicators (minimum of two requires ice Soil Cracks (B6) age Patterns (B10) ieason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) torphic Position (D2) Neutral Test (D5)
DROLOGY Illand Hydrolog mary Indicators Surface Weter High Water Tai Saturation (A3) Water Marks (E Sediment Depo- Drift Deposits (I Algal Mat or Cn Iron Deposits (E Inundetion Visit Sparsely Veget d Observations face Water Present uration Present? udes capillary in cribe Recorded I	(minimum of one (A1) ble (A2)) (B1) sits (B2) B3) ust (B4) B5) ble on Aeriel Imagated Concave Sure ent? Yes _ Yes _ Yes _ Inge) Data (stream gau	gery (B7) urface (B8)	Water-Stainer Aquatic Fauna True Aquatic Fauna Hydrogen Sult Oxidized Rhiz Presence of R Recent Iron R Thin Muck Sun Gauge or Well Other (Explain Depth (Inches Depth (inches	d Leaves a (B13) Plants (B' fide Odor oapheres deduction i face (C7) Data (D6 in Remai	14) (C1) con Living ron (C4) in Tilled Sc) (C) rks)	Wetland	Secondar Surfa Surfa Drain Dry-S Crayf Saturt Stunto FAC-I	y Indicators (minimum of two requires oce Soil Cracks (B6) age Patterns (B10) deason Water Table (C2) dish Burrows (C8) ation Visible on Aerial Imagery (C9) add or Stressed Plants (D1) dorphic Position (D2) Neutral Test (D5)
DROLOGY Illand Hydrolog mary Indicators (Surface Weter High Water Tail Saturation (A3) Water Marks (E Sediment Deposits (I Algal Mat or Cn Iron Deposits (E Inundetion Visit Sparsely Veget d Observations face Water Present acce Water Present ration Present? udes capillary in ribe Recorded I	(minimum of one (A1) ble (A2)) (B1) sits (B2) B3) ust (B4) B5) ble on Aeriel Imagated Concave Sure ent? Yes _ Yes _ Yes _ Inge) Data (stream gau	gery (B7) urface (B8)	Water-Stainer Aquatic Fauna True Aquatic I Hydrogen Suft Oxidized Rhiz Presence of R Recent Iron R Thin Muck Surt Gauge or Well Other (Explain Depth (Inches	d Leaves a (B13) Plants (B' fide Odor oapheres deduction i face (C7) Data (D6 in Remai	14) (C1) con Living ron (C4) in Tilled Sc) (C) rks)	Wetland	Secondar Surfa Surfa Drain Dry-S Crayf Saturt Stunto FAC-I	y Indicators (minimum of two requires ce Soil Cracks (B6) age Patterns (B10) deason Water Table (C2) dish Burrows (C8) ation Visible on Aerial Imagery (C9) ded or Stressed Plants (D1) dorphic Position (D2) Neutral Test (D5)

WEILAND DETERMINAT	FION DATA FORM - Midwest Region
Project/Site: STL Project	City/County: Greene Co, Sampling Date: 2-21-20
Applicant/Owner: Spine	State: TL Sampling Point: UP (GW)
Investigator(s):	Section, Township, Range: 14/12V/9V
Landform (hillslope, terrace, etc.): Plain	Local relief (concave, convex, none):
Slope (%): Lat: 39, 217,989	Long: 90.404138 Datum: NAD87
^	cool nesig ody NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year	ar? Yes No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly	
Are Vegetation Soil or Hydrologynaturally prol	
	sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	In the Country to Lo
Hydric Soil Present? Wetland Hydrology Present? Yes No X	is the Sampled Area within a Wetland? Yes No
Remarks:	
- Area upland sample point for	wetlands wIndfil8/wIndipil9
VEGETATION - Use scientific names of plants.	The state of the s
Absolute	Dominant Indicator Dominance Test worksheet:
Tree Stratum (Plot size: 30) % Cover	Species? Status Number of Dominant Species
2	That Are OBL, FACW, or FAC: (A)
3.	Total Number of Dominant
4. /-tbsem	Species Across All Strata: (B)
5	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum (Plot size: 15)	Prevalence Index worksheet:
1	Total % Cover of: Multiply by:
2	OBL species x1= O
3.	FACW species 25 x2 = 50
4. /+4/5000	FAC species x3 = O
5	FACU species x 4 =
Herb Stratum (Plot size: 5)	Total Cover UPL species 10 x 5 = 50
1. Panirum dichatomittara 20_	Column Totals: 35 (A) 100 (B)
2 famium amplexicaul 10	Y UPL Prevalence Index = B/A = 2,86
3 Kamunculus abortions 5	Hydrophytic Vegetation Indicators:
4	1 - Rapid Test for Hydrophytic Vegetation
5	2 - Dominance Test is >50%
6	3 - Prevalence Index is ≤3.0¹
3	4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
)	Problematic Hydrophytic Vegetation¹ (Explain)
10	
Noody Vine Stratum (Plot size: 30')	otal Cover Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Absent	Hydrophytic
7	Vegetation Present? Yes No.
Remarks: (Include photo numbers here or on a separate sheet,)	otal Cover Yes No
-Area plemed agricultural file	26
0	N N

Sampling Point: Upland

SOIL

Profile Description: (De Depth	Matrix			Feature				
(inches) Color (m	noist)	%	Color (moist)	_%	Type	_Loc²	Texture	Remarks
0-6 251	3/7_/	00				_	SCL	(Astrones)
6-17 10YA	3/2	90	2544/	10	7	M	SCL	
	10	/ U _		10		1//	oll.	
Type: C=Concentration,	D=Depletion	n, RM=Re	educed Matrix, MS	-Masked	Sand Gra	ins.	*Location: 1	PL=Pore Lining, M=Matrix.
lydric Soil Indicators:							Indicators fo	r Problematic Hydric Solls ³ :
Histosol (A1)			Sandy Gl	eyed Mat	rix (S4)			airie Redox (A16)
Histic Epipedon (A2)			Sandy Re				Dark Sur	
_ Black Histic (A3)			Stripped I	•	•			ganese Masses (F12)
Hydrogen Sulfide (A4)Stratified Layers (A5)			Loamy Me					llow Dark Surface (TF12)
_ Stratified Layers (A5) _ 2 cm Muck (A10)			Loamy Gl	•	, ,		Other (Ex	plain in Remarks)
_ Depleted Below Dark S	Surface (A1	1)	Depleted Redox Da					
Thick Dark Surface (A		''	Depleted				3Indicators of	haradan min ati
_ Sandy Mucky Mineral ((S1)		Redox De				wetland h	hydrophytic vegetation and reference of the research reference of the reference of the research reference of the research reference of the
5 cm Mucky Peat or Pe	eat (S3)		_		- ()		unless dis	turbed or problematic.
strictive Layer (If obser								tailoud or problematic.
Type:	<u> </u>					- 1		
Depth (inches):							Hydric Soil Pre	sent? Yes No 🔀
marks;								
emarks;								
emarks;							*	
DROLOGY					,			* +
DROLOGY								• +
DROLOGY Itland Hydrology Indicat mary Indicators (minimum		equired: c					Secondary In	dicators (minimum of two require
DROLOGY Itland Hydrology Indicat many Indicators (minimum Surface Water (A1)		equired: c	Water-Stained	d Leaves	(B9)			dicators (minimum of two require
DROLOGY Itland Hydrology Indicat mary Indicators (minimum Surface Water (A1) High Water Table (A2)		equired: c	Water-Stained	d Leaves (B13)			Surface	
DROLOGY Itland Hydrology Indicat mary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3)		equired: c	Water-Stained Aquatic Fauna True Aquatic F	d Leaves a (B13) Plants (B1	14)		Surface : Drainage Dry-Seas	Soil Cracks (B6) Patterns (B10) on Water Table (C2)
DROLOGY Itland Hydrology Indicat mary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)		equired: c	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf	d Leaves a (B13) Plants (B1 fide Odor	14) (C1)		Surface : Drainage Dry-Seas Crayfish	Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8)
DROLOGY Itland Hydrology Indicat mary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)		equired: c	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sult Oxidized Rhize	d Leaves a (B13) Plants (B1 fide Odor ospheres	14) (C1) on Living	Roots (C3	Surface : Drainage Dry-Seas Crayfish	Soil Cracks (B6) Patterns (B10) on Water Table (C2)
DROLOGY Itland Hydrology Indicat mary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)		equired: c	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize Presence of R	d Leaves a (B13) Plants (B1 fide Odor ospheres educed in	14) (C1) on Living on (C4)	•	Surface : Orainage Dry-Seas Crayfish) Saturatio Stunted c	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) N Visible on Aenal Imagery (C9) Stressed Plants (D1)
DROLOGY Itland Hydrology Indicat mary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)		equired: c	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron Re	d Leaves a (B13) Plants (B1 fide Odor ospheres educed In	14) (C1) on Living on (C4) in Tilled So	•	Surface : Drainage Dny-Seas Crayfish Saturatio Stunted common	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) In Stressed Plants (D1) In Position (D2)
DROLOGY Itland Hydrology Indicat mary Indicators (minimum 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)	of one is n		Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron Re Thin Muck Sur	d Leaves a (B13) Plants (B1 fide Odor ospheres aduced in eduction in	(C1) on Living on (C4) in Tilled So	•	Surface : Drainage Dny-Seas Crayfish Saturatio Stunted common	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) N Visible on Aenal Imagery (C9) Stressed Plants (D1)
DROLOGY Itland Hydrology Indicat mary Indicators (minimum 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 Aet	n <u>of one is r</u> rial Imagery	(B7)	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron Re Thin Muck Sur Gauge or Well	d Leaves a (B13) Plants (B1 fide Odor ospheres educed in eduction in face (C7)	(C1) on Living on (C4) in Tilled So	•	Surface : Drainage Dny-Seas Crayfish Saturatio Stunted common	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) In Stressed Plants (D1) In Position (D2)
DROLOGY Itland Hydrology Indicat mary Indicators (minimum 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 Aer Sparsely Vegetated Cone	n <u>of one is r</u> rial Imagery	(B7)	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron Re Thin Muck Sur	d Leaves a (B13) Plants (B1 fide Odor ospheres educed in eduction in face (C7)	(C1) on Living on (C4) in Tilled So	•	Surface : Drainage Dny-Seas Crayfish Saturatio Stunted common	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) In Stressed Plants (D1) In Position (D2)
DROLOGY Itland Hydrology Indicat mary Indicators (minimum 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 Aer Sparsely Vegetated Cone d Observations:	n <u>of one is r</u> rial Imagery	(B7) e (B8)	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron Re Thin Muck Sur Gauge or Well Other (Explain	d Leaves a (B13) Plants (B1 fide Odor ospheres deduced In eduction in face (C7) Data (D9 in Reman	(C1) on Living on (C4) in Tilled So	•	Surface : Drainage Dny-Seas Crayfish Saturatio Stunted common	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) In Stressed Plants (D1) In Position (D2)
DROLOGY Itland Hydrology Indicat mary Indicators (minimum 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 Aet Sparsely Vegetated Cond d Observations: face Water Present?	n of one is re rial Imagery cave Surfac	(B7) is (B8) No	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron Re Thin Muck Sur Gauge or Welf Other (Explain	d Leaves a (B13) Plants (B1 fide Odor ospheres educed in eduction in face (C7) Data (D9 in Reman	(C1) on Living on (C4) in Tilled So	•	Surface : Drainage Dny-Seas Crayfish Saturatio Stunted common	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) In Stressed Plants (D1) In Position (D2)
DROLOGY Itland Hydrology Indicat mary Indicators (minimum 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 Aet Sparsely Vegetated Cond d Observations: Face Water Present? er Table Present?	rial Imagery cave Surfac Yes	(B7) ee (B8) No No No	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron Re Thin Muck Sur Gauge or Welf Other (Explain	d Leaves a (B13) Plants (B1 fide Odor ospheres educed in eduction in face (C7) Data (D9 in Reman	(C1) on Living on (C4) in Tilled So	•	Surface : Drainage Dny-Seas Crayfish Saturatio Stunted common	Patterns (B10) con Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) hic Position (D2)
DROLOGY Itland Hydrology Indicat mary Indicators (minimum 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 Aet Sparsely Vegetated Cond d Observations: dace Water Present? er Table Present? uration Present?	n of one is re rial Imagery cave Surfac	(B7) is (B8) No	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron Re Thin Muck Sur Gauge or Welf Other (Explain	d Leaves a (B13) Plants (B1 fide Odor ospheres educed in eduction in face (C7) Data (D9 in Reman	(C1) on Living on (C4) in Tilled So	bils (C6)	Surface : Drainage Dny-Seas Crayfish Saturatio Stunted common	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) In Stressed Plants (D1) In Position (D2) Iral Test (D5)
DROLOGY Itland Hydrology Indicat mary Indicators (minimum 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 Aet Sparsely Vegetated Cond dobservations: Face Water Present? er Table Present? uration Present? uration Present?	rial Imagery cave Surfac Yes Yes	(B7) ee (B8) No No No	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sult Oxidized Rhize Presence of R Recent Iron Re Thin Muck Sur Gauge or Well Other (Explain Depth (Inches Depth (Inches	d Leaves a (B13) Plants (B1 fide Odor cospheres deduced in face (C7) Data (D9 in Reman	(C1) on Living ron (C4) in Tilled Sc ()	wetland	Surface : Drainage Dry-Seas Crayfish) Saturatio Stunted c Geomorp FAC-Neu	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) In Stressed Plants (D1) In Position (D2) Iral Test (D5)
DROLOGY Itland Hydrology Indicat mary Indicators (minimum 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 Aet Sparsely Vegetated Cond d Observations: ace Water Present? er Table Present? uration	rial Imagery cave Surfac Yes Yes	(B7) ee (B8) No No No	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sult Oxidized Rhize Presence of R Recent Iron Re Thin Muck Sur Gauge or Well Other (Explain Depth (Inches Depth (Inches	d Leaves a (B13) Plants (B1 fide Odor cospheres deduced in face (C7) Data (D9 in Reman	(C1) on Living ron (C4) in Tilled Sc ()	wetland	Surface : Drainage Dry-Seas Crayfish) Saturatio Stunted c Geomorp FAC-Neu	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) In Stressed Plants (D1) In Position (D2) Iral Test (D5)
DROLOGY Itland Hydrology Indicat mary Indicators (minimum 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 Aer Sparsely Vegetated Cone d Observations face Water Present? er Table Present? uration Present?	rial Imagery cave Surfac Yes Yes	(B7) ee (B8) No No No	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sult Oxidized Rhize Presence of R Recent Iron Re Thin Muck Sur Gauge or Well Other (Explain Depth (Inches Depth (Inches	d Leaves a (B13) Plants (B1 fide Odor cospheres deduced in face (C7) Data (D9 in Reman	(C1) on Living ron (C4) in Tilled Sc ()	wetland	Surface : Drainage Dry-Seas Crayfish) Saturatio Stunted c Geomorp FAC-Neu	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) In Stressed Plants (D1) In Position (D2) Iral Test (D5)
DROLOGY Itland Hydrology Indicat mary Indicators (minimum 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 Aet Sparsely Vegetated Cond d Observations: ace Water Present? er Table Present? uration	rial Imagery cave Surfac Yes Yes	(B7) ee (B8) No No No	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sult Oxidized Rhize Presence of R Recent Iron Re Thin Muck Sur Gauge or Well Other (Explain Depth (Inches Depth (Inches	d Leaves a (B13) Plants (B1 fide Odor cospheres deduced in face (C7) Data (D9 in Reman	(C1) on Living ron (C4) in Tilled Sc ()	wetland	Surface : Drainage Dry-Seas Crayfish) Saturatio Stunted c Geomorp FAC-Neu	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) In Stressed Plants (D1) In Position (D2) Iral Test (D5)

WIL- JJP-120 + 121 UPL

Project/Site: STL	City/County: (Greene Co. sometime 2/21
Applicant/Owner:Spine		Samping Law - / - / /
Investigator(s): JJP / WJW	Santian Tourse	hip, Range: 1/12/19/
andform (hitstope, terrace, etc.); Floedp)	-1-	
Sope (%): 0 Lat: 39, 232	Long: - 90.	relief (concave, convex, none):
oil Map Unit Name: Lauresun Sil	t lasm s I were s	- dr. Super NW classification: NAD 83
re climatic / hydrologic conditions on the site t	mired freship the state of the	Will dessification:
re climatic / hydrologic conditions on the site to the Vegetation, Soil, or Hydrologic	ypical for this time of year? Yes	
a Vagetation Soil or Hydrolo	aignificantly disturbed?	Are "Normal Circumstances" present? Yes X No No
		(If needed, explain any answers in Remarks.) int locations, transects, important features, e
lydrophytic Vegetation Present? Yes	No X	eatures, e
lydric Soil Present? Yes		npied Area
	No within a W	Vetland? Yes No
pland representative	to WIL- JP - 120	04 121, Active agricultural
field. Soil + ves tis	typed	
GETATION - Use scientific names		
ee Stratum (Fict size: 30'/	Absolute Dominant Indica	for Dominance Test worksheet:
Absent	% Cover Species? State	()
		That Are OBL, FACW, or FAC: (A)
		Total Number of Dominant
		Species Across All Strata: (B)
		Percent of Dominant Species That Are OBL, FAGW, or FAC:
pling/Shrub Stratum (Plot siza: 15'/	= Total Cover	
Absent		Prevalence Index worksheet:
1		OBL species
		51000
		FAC species
		FACU species X4: 20
Stratum, (Plot size:5')	= Total Cover	UPL species
Stellaria media	F Y Full	Column Totals:
7.150.0		1
		Hydrophytic Vegetation Indicators:
		1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50%
		3 - Prevalence Index is ≤3.0¹
		4 - Morphological Adaptations* (Provide supporting
		data in Remarks or on a separate sheet)
		Problematic Hydrophytic Vegetation¹ (Explain)
ty Vine Stratum (Plat size: 30')	= Total Cover	¹ Indicators of hydric soil and welland hydrology must be present, unless disturbed or problematic.
ASIENT		Hydrophytic
		Vegetation Present? Yes No
rks: (Include photo numbers here or on a se	Total Cover	Tes No /

WIL-JUP-120+121

SOIL

Sampling Point: \\PLAND

(inches) Color (moist) %	Redax Features Color (moist) % Type Loc	Tout	P
0-6" 25/3/2 95	1 LUL - 1		Remarks
		SCL -	
6-17" 2574/1 60	2.574/3 40 C M	SCL_	
	+		
Type: C=Concentration, D=Depletion, RM=Re	educed Matrix, MS=Masked Sand Grains.	² Location: P	L=Pare Lining, M=Matrix.
Hydric Soll Indicators:		Indicators for	Problematic Hydric Soils
Histosol (A1)	Sandy Gleyed Matrix (S4)		rie Redox (A16)
Histic Epipedon (A2)	Sandy Redox (S5)	Dark Surfa	• •
Black Histic (A3)	Stripped Metrix (S6)	Iron-Mang	anese Messes (F12)
Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1)	Very Shall	ow Dark Surface (TF12)
Stratified Layers (A5)	Loamy Gleyed Matrix (F2)	Other (Exp	lain in Remarks)
2 cm Muck (A10)	Depleted Matrix (F3)		
Depleted Below Dark Surface (A11) Thick Dark Surface (A12)	Redox Dark Surface (F6)	31	
Sendy Mucky Mineral (S1)	Depleted Dark Surface (F7)Redox Depressions (F8)		ydrophytic vegetation and
5 cm Mucky Peat or Peat (S3)	Redox Depressions (FB)		frology must be present, urbed or problematic.
Restrictive Layer (if observed):		unless dist	arbed or problematic.
Type:			
Depth (Inches):		Hydric Soil Pres	sent? Yes No
	indicators observed	1.	
No hadric Soil	indicators observed	d.	
No hadric Soil	indicators observed	<i>I</i> .	
Mo hadric Soil (DROLOGY Vetland Hydrology Indicators:	· · · · · · · · · · · · · · · · · · ·		ficators (minimum of two required
Mo hadric Soil (DROLOGY Vetland Hydrology Indicators:	theck all that apply)	Secondary Inc	ficators (minimum of two required
Mo hydric Soil (DROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one is required: c	· · · · · · · · · · · · · · · · · · ·	Secondary In	oil Cracks (B6)
PO hadr. C Soil POROLOGY Tetland Hydrology Indicators: rimary Indicators (minimum of one is required: c Surface Water (A1)	heck all that apply) Water-Stained Leaves (89)	Secondary Inc. Surface S Drainage	oil Cracks (86) Pattems (810)
POROLOGY Total Hydrology Indicators: Timary Indicators (minimum of one is required: c Surface Water (A1) High Water Table (A2)	heck all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13)	Secondary In: Surface S Drainage Dry-Seas	ioil Cracks (86) Patterns (810) on Water Table (C2)
/DROLOGY String Indicators: Indicators: Indicators Indicato	theck all that apply) Water-Stained Leaves (89) Aquatic Fauna (813) True Aquatic Plants (814)	Secondary Int Surface S Drainage Dry-Seas Crayfish 6	oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8)
/DROLOGY String Indicators Indicators	theck all that apply) Water-Stained Leaves (89) Aquatic Fauna (813) True Aquatic Plants (814) Hydrogen Sulfide Odor (C1)	Secondary Int Surface S Drainage Dry-Seas Crayfish B	oil Cracks (B6) Patterns (B10) on Water Table (C2) Surrows (C8) visible on Aenal Imegery (C9)
YDROLOGY Vetland Hydrology Indicators: Inimary Indicators (minimum of one is required: c Surface Water (A1) High Water Table (A2) Saturation (A3) Water Merks (B1) Sediment Deposits (B2)	heck all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (Secondary Inc. Surface S Drainage Dry-Seas Crayfish E C3) Saturation Stunted o	oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8)
YDROLOGY Vetland Hydrology Indicators: Inmary Indicators (minimum of one is required: c Surface Water (A1) High Water Table (A2) Saturation (A3) Water Merks (B1) Sediment Deposits (B2) Drift Deposits (B3)	heck all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (Presence of Reduced Iron (C4)	Secondary Inc. Surface S Drainage Dry-Seas Crayfish E C3) Saturation Stunted o Geomorpi	oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) I Visible on Aerial Imegery (C9) r Stressed Plants (D1)
POROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one is required: c Surface Water (A1) High Water Table (A2) Saturation (A3) Water Merks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	heck all that apply) Water-Stained Leaves (89) Aquatic Fauna (813) True Aquatic Plants (814) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6)	Secondary Inc. Surface S Drainage Dry-Seas Crayfish E C3) Saturation Stunted o Geomorpi	oil Cracks (B6) Patterns (B10) On Water Table (C2) Burrows (C8) I Visible on Aenal Imegery (C9) Ir Stressed Plants (D1) In Position (D2)
// DROLOGY // Jetland Hydrology Indicators: rimary Indicators (minimum of one is required: of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Merks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8)	Mater-Stained Leaves (89) — Water-Stained Leaves (89) — Aquatic Fauna (813) — True Aquatic Plants (814) — Hydrogen Sulfide Odor (C1) — Oxidized Rhizospheres on Living Roots (— Presence of Reduced Iron (C4) — Recent Iron Reduction in Tilled Soils (C6) — Thin Muck Surface (C7)	Secondary Inc. Surface S Drainage Dry-Seas Crayfish E C3) Saturation Stunted o Geomorpi	oil Cracks (B6) Patterns (B10) On Water Table (C2) Burrows (C8) I Visible on Aenal Imegery (C9) Ir Stressed Plants (D1) In Position (D2)
rDROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one is required: c Surface Water (A1) High Water Table (A2) Saturation (A3) Water Merks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8)	Mater-Stained Leaves (89) Aquatic Fauna (813) True Aquatic Plants (814) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Gauge or Well Deta (D9) Other (Explain in Remerks)	Secondary Inc. Surface S Drainage Dry-Seas Crayfish E C3) Saturation Stunted o Geomorpi	oil Cracks (B6) Patterns (B10) On Water Table (C2) Burrows (C8) I Visible on Aenal Imegery (C9) Ir Stressed Plants (D1) In Position (D2)
YDROLOGY Vetland Hydrology Indicators: Idimary Indicators (minimum of one is required: c Surface Water (A1) High Water Table (A2) Saturation (A3) Water Merks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) and Observations: Irface Water Present? Yes No	theck all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Gauge or Well Deta (D9) Other (Explain in Remerks)	Secondary Inc. Surface S Drainage Dry-Seas Crayfish E C3) Saturation Stunted o Geomorpi	oil Cracks (B6) Patterns (B10) On Water Table (C2) Burrows (C8) I Visible on Aenal Imegery (C9) Ir Stressed Plants (D1) In Position (D2)
YDROLOGY Vetland Hydrology Indicators: Immary Indicators (minimum of one is required: c Surface Water (A1) High Water Table (A2) Saturation (A3) Water Merks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) and Observations:	Mater-Stained Leaves (89) Aquatic Fauna (813) True Aquatic Plants (814) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Gauge or Well Deta (D9) Other (Explain in Remerks)	Secondary Inc. Surface S Drainage Dry-Seas Crayfish E C3) Saturation Stunted o Geomorpi	oil Cracks (B6) Patterns (B10) on Water Table (C2) Surrows (C8) a Visible on Aerial Imegery (C9) or Stressed Plants (D1) nic Position (D2) ral Test (D5)
POROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one is required: o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Merks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Ind Observations: Irface Water Present? Yes No ater Table Present? Yes No	Mater-Stained Leaves (89) Aquatic Fauna (813) True Aquatic Plants (814) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Gauge or Well Deta (D9) Other (Explain in Remerks) Depth (Inches): Depth (inches): Depth (inches):	Secondary Inc. Surface S Drainage Dry-Seas Crayfish I C3) Saturation Stunted o Geomorpi FAC-Neur	coil Cracks (B6) Patterns (B10) Pon Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) In Stressed Plants (D1) Inic Position (D2) Inal Test (D5)
YDROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one is required: of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Merks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Indicators (B8) Ind	Mater-Stained Leaves (89) Aquatic Fauna (813) True Aquatic Plants (814) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Gauge or Well Deta (D9) Other (Explain in Remerks) Depth (Inches): Depth (inches): Depth (inches):	Secondary Inc. Surface S Drainage Dry-Seas Crayfish I C3) Saturation Stunted o Geomorpi FAC-Neur	oil Cracks (B6) Patterns (B10) on Water Table (C2) Surrows (C8) a Visible on Aerial Imegery (C9) or Stressed Plants (D1) nic Position (D2) ral Test (D5)
YDROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one is required: c Surface Water (A1) High Water Table (A2) Saturation (A3) Water Merks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Ind Observations: Irrace Water Present? Yes No ater Table Recorded Data (stream gauge, monitoric	Mater-Stained Leaves (89) Aquatic Fauna (813) True Aquatic Plants (814) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Gauge or Well Deta (D9) Other (Explain in Remerks) Depth (Inches): Depth (inches): Depth (inches):	Secondary Inc. Surface S Drainage Dry-Seas Crayfish I C3) Saturation Stunted o Geomorpi FAC-Neur	oil Cracks (B6) Patterns (B10) on Water Table (C2) Surrows (C8) a Visible on Aerial Imegery (C9) or Stressed Plants (D1) nic Position (D2) ral Test (D5)
YDROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one is required: c Surface Water (A1) High Water Table (A2) Saturation (A3) Water Merks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Ind Observations: Inface Water Present? Yes No ater Table Present? Yes No	Mater-Stained Leaves (89) Aquatic Fauna (813) True Aquatic Plants (814) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Gauge or Well Deta (D9) Other (Explain in Remerks) Depth (Inches): Depth (inches): Depth (inches):	Secondary Inc. Surface S Drainage Dry-Seas Crayfish I C3) Saturation Stunted o Geomorpi FAC-Neur	oil Cracks (B6) Patterns (B10) on Water Table (C2) Surrows (C8) a Visible on Aerial Imegery (C9) or Stressed Plants (D1) nic Position (D2) ral Test (D5)

WIL-JJP-122 upc

Project/Site:	City/County: Co, Sampling Date: 2/2
Applicant/Owner: Spire	
Investigator(s): TP/VTV	State: TL Sampling Point: VPLA Section, Township, Range: 23/12V/9N
Landform (hillslope, terrace, etc.): Plain	
Slope (%): 27. Lat: 39. 214095	
Soil Map Unit Name: Green bush 3:	Datum: AIAD X3
Are Versetation V 7 2 11 V 11	f this time of year? Yes Al-
Are Vegetation Y Soil Y , or Hydrology N	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 m	ap showing sampling point locations, transects, important features, e
Hydrophytic Vegetation Present? Yes	No >
Hydric Soil Present? Yes	
Wetland Hydrology Present? Yes	No within a Wetland? Yes No
Remarks: upland representative tu	WFL-JJP-122. Active agricultural field.
EGETATION – Use scientific names of plar	ts.
Tree Stratum, (Plot size: 30/)	Absolute Dominant Indicator % Cover Species? Status
Absent	Number of Dominant Species ()
	That Are OBL, FACW, or FAC: (A)
911	Total Number of Dominant
	Species Across All Strata: (B)
,	Percent of Dominant Species
apling/Shrub Stratum (Plot size:	= Total Cover (A/B)
Absent	Prevalence Index worksheet:
	Total % Cover of: Multiply by:
	510
	FAC species x3 = FACU species (
51	O - Talel O
arb Stratum (Plot size:)	Column Totals:) 5 40 90
Stellaria medica	- 13 / WP() - (6)
	10 Y FACH Prevalence Index = B/A = 3, 6
	Hydrophytic Vegetation Indicators:
	1 - Rapid Test for Hydrophytic Vegetation
	4 - Morphological Adaptations (Provide supporting
	data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation ¹ (Explain)
ody Vine Stratum (Plot size: 30'/)	2-5 = Total Cover Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
7 (0 30)	Hydrophytic
	Vegetation
	= Total Cover Present? Yes No

WIL-JJP-122

SOIL

Sampling Point: UPLAND

Profile Description: (Describe to Depth Matrix						
(inches) Color (moist)	% Cn	Redax F lar (maist)	% Type	Facil .	Tankina	Daniel
0-17" 10YR3/2		Wr.tmonto		Loc	Texture	Remarks
0 17 10 IV-13	100				26	
					-	
Type: C=Concentration, D=Deplet	ion RM=Reduc	ad Matrix MC-L	Insked Seed Gre		2) and the	Di album Materia Managari
lydric Soil Indicators:	ich, Min-Reduc	od militing mig-is	makeu Janu Gra	1115.	Indicators fo	PL=Pore Lining, M=Matrix. or Problematic Hydric Soils 1:
•		04-01-	144.11 (54)			- ALLEGE -
Histosol (A1)			ed Malrix (S4)			airie Redox (A16)
Histic Epipedon (A2)		Sandy Red			Dark Sur	face (S7)
Black Histic (A3)		Stripped Ma	atrix (S6)		Iron-Man	ganese Masses (F12)
Hydrogen Sulfide (A4)		Loamy Muc	ky Mineral (F1)		Very Sha	llow Dark Surface (TF12)
Stratified Layers (A5)		Loamy Gley	ed Matrix (F2)		Other (Ex	(plain in Remarks)
2 cm Muck (A10)		Depleted M	atrix (F3)		•	
Depleted Below Dark Surface (411)	Redox Dark	Surface (F6)			
Thick Dark Surface (A12)		Depleted Da	ark Surface (F7)		3Indicators of	hydrophytic vegetation and
Sendy Mucky Mineral (S1)			ressions (F8)			ydrology must be present,
5 cm Mucky Peat or Peat (S3)		_	· · · · · · · · · · · · · · · · · ·			sturbed or problematic.
estrictive Layer (if observed):					4	starbed of problematic.
Type:Nons						1.4
					Hydric Soll Pr	esent? Yes No X
Depth (inches):					,	000iiii 103 m0
emarks: No hydric	soil	indica	ators	obs	erved.	
No hydric	soil	indica	ators	obs	erved.	
No hydric	soil	indica	ators	obsi	eved.	
DROLOGY Total Hydrology Indicators:			ators	obsi	erved.	
DROLOGY Total Hydrology Indicators:			ators	obs		ndicators (minimum of two required
DROLOGY etland Hydrology Indicators:				obs	. Secondary	
DROLOGY otland Hydrology Indicators: imary Indicators (minimum of one i		k all that apply)	Leaves (B9)	obs	Secondary Surface	Soil Cracks (B6)
DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one i Surface Water (A1) High Water Table (A2)		k all that apply) Water-Stained Aquatlc Fauna	Leaves (B9) (B13)	obs	Secondary Surface Drainag	Soil Cracks (B6) e Patterns (B10)
DROLOGY otland Hydrology Indicators: imary Indicators (minimum of one i Surface Water (A1) High Water Table (A2) Saturation (A3)		k all that apply) Water-Stained Aquatlc Fauna True Aquatic Pl	Leaves (B9) (B13) lants (B14)	obs	Secondary Surface Drainag Dry-Sea	Soil Cracks (B6) e Pattems (B10) ason Water Table (C2)
DROLOGY otland Hydrology Indicators: imary Indicators (minimum of one i Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)		k all that apply) Water-Stained Aquatic Fauna True Aquatic Pi Hydrogen Sulfic	Leaves (B9) (B13) lants (B14) de Odor (C1)		Secondary Surface Drainag Dry-Sea Crayfish	Soil Cracks (B6) e Pattems (B10) ason Water Table (C2) a Burrows (C8)
DROLOGY ctland Hydrology Indicators: imary Indicators (minimum of one i Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)		k all that apply) Water-Stained Aquatic Fauna True Aquatic Pi Hydrogen Sulfic Oxidized Rhizo	Leaves (B9) (B13) lants (B14) de Odor (C1) spheres on Living		Secondary Surface Drainag Dry-Sea Crayfish	Soil Cracks (B6) e Pattems (B10) ason Water Table (C2)
DROLOGY otland Hydrology Indicators: imary Indicators (minimum of one i Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)		k all that apply) Water-Stained Aquatic Fauna True Aquatic Pi Hydrogen Sulfic	Leaves (B9) (B13) lants (B14) de Odor (C1) spheres on Living		Secondary Surface Drainag Dry-Sea Crayfish Saturati	Soil Cracks (B6) e Pattems (B10) ason Water Table (C2) a Burrows (C8)
**DROLOGY Color		k all that apply) Water-Stained Aquatic Fauna True Aquatic Pl Hydrogen Sulfic Oxidized Rhizo	Leaves (B9) (B13) lants (B14) de Odor (C1) spheres on Living	g Roots (C3	Secondary Surface Drainag Dry-Sea Crayfish Saturati Stunted	Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) a Burrows (C8) on Visible on Aenal Imagery (C9) or Stressed Plants (D1)
**DROLOGY Interpretation Property		Water-Stained Aquatic Fauna True Aquatic Pi Hydrogen Sulfic Oxidized Rhizo Presence of Re Recent Iron Re	Leaves (B9) (B13) lants (B14) de Odor (C1) spheres on Living duced Iron (C4) duction in Tilled S	g Roots (C3	Secondary Surface Drainag Dry-Sea Crayfish Saturati Stunted Geomoi	Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) a Burrows (C8) on Visible on Aenal Imagery (C9) or Stressed Plants (D1) phic Position (D2)
**DROLOGY **Total Hydrology Indicators: imary Indicators (minimum of one in the indicators (minimum of one	s required: chec	water-Stained Aquatic Fauna True Aquatic Pi Hydrogen Sulfic Oxidized Rhizo Presence of Re Recent Iron Re-	Leaves (B9) (B13) lants (B14) de Odor (C1) spheres on Living duced Iron (C4) duction in Tilled S ace (C7)	g Roots (C3	Secondary Surface Drainag Dry-Sea Crayfish Saturati Stunted Geomoi	Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) a Burrows (C8) on Visible on Aenal Imagery (C9) or Stressed Plants (D1)
DROLOGY otland Hydrology Indicators: imary Indicators (minimum of one i Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imag	s required: chec	water-Stained Aquatic Fauna True Aquatic Pi Hydrogen Sulfic Oxidized Rhizo Presence of Re Recent Iron Re- Thin Muck Surfa	Leaves (B9) (B13) lants (B14) de Odor (C1) spheres on Living duced Iron (C4) duction in Tilled S ace (C7) Data (D9)	g Roots (C3	Secondary Surface Drainag Dry-Sea Crayfish Saturati Stunted Geomoi	Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) a Burrows (C8) on Visible on Aenal Imagery (C9) or Stressed Plants (D1) phic Position (D2)
DROLOGY otland Hydrology Indicators: imary Indicators (minimum of one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imag Sparsely Vegetated Concave Sur	s required: chec	water-Stained Aquatic Fauna True Aquatic Pi Hydrogen Sulfic Oxidized Rhizo Presence of Re Recent Iron Re-	Leaves (B9) (B13) lants (B14) de Odor (C1) spheres on Living duced Iron (C4) duction in Tilled S ace (C7) Data (D9)	g Roots (C3	Secondary Surface Drainag Dry-Sea Crayfish Saturati Stunted Geomoi	Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) a Burrows (C8) on Visible on Aenal Imagery (C9) or Stressed Plants (D1) phic Position (D2)
**DROLOGY **etland Hydrology Indicators:* imary Indicators (minimum of one in _ Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Sparsely Vegetated Concave Surial Observations:	ery (B7)	k all that apply) Water-Stained Aquatic Fauna True Aquatic Pi Hydrogen Sulfic Oxidized Rhizo Presence of Re Recent Iron Rec Thin Muck Surfa Gauge or Well I Other (Explain i	Leaves (B9) (B13) lants (B14) de Odor (C1) spheres on Living duced Iron (C4) duction in Tilled S ace (C7) Data (D9) n Remarks)	g Roots (C3	Secondary Surface Drainag Dry-Sea Crayfish Saturati Stunted Geomoi	Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) a Burrows (C8) on Visible on Aenal Imagery (C9) or Stressed Plants (D1) phic Position (D2)
**DROLOGY State Indicators Indicators	ery (B7)	water-Stained Aquatic Fauna True Aquatic Pi Hydrogen Sulfic Oxidized Rhizo Presence of Re Recent Iron Re- Thin Muck Surfa	Leaves (B9) (B13) lants (B14) de Odor (C1) spheres on Living duced Iron (C4) duction in Tilled S ace (C7) Data (D9) n Remarks)	g Roots (C3	Secondary Surface Drainag Dry-Sea Crayfish Saturati Stunted Geomoi	Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) a Burrows (C8) on Visible on Aenal Imagery (C9) or Stressed Plants (D1) phic Position (D2)
**DROLOGY **otland Hydrology Indicators:* imary Indicators (minimum of one in the surface Water (A1) - High Water Table (A2) - Saturation (A3) - Water Marks (B1) - Sediment Deposits (B2) - Drift Deposits (B3) - Algal Mat or Crust (B4) - Iron Deposits (B5) - Inundation Visible on Aerial Image - Sparsely Vegetated Concave Surface Water Present? - Yes	ery (B7)	k all that apply) Water-Stained Aquatic Fauna True Aquatic Pl Hydrogen Sulfic Oxidized Rhizo Presence of Re Recent Iron Rec Thin Muck Surfa Gauge or Well I Other (Explain i	Leaves (B9) (B13) lants (B14) de Odor (C1) spheres on Living duced Iron (C4) duction in Tilled S ace (C7) Data (D9) n Remarks)	g Roots (C3	Secondary Surface Drainag Dry-Sea Crayfish Saturati Stunted Geomoi	Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) a Burrows (C8) on Visible on Aenal Imagery (C9) or Stressed Plants (D1) phic Position (D2)
**Torong Section 1.0 Present?* **Torong Section 1.0 Present.* **Torong Section 1.0 Present.*	ery (B7)face (B8)	k all that apply) Water-Stained Aquatic Fauna True Aquatic Pi Hydrogen Sulfic Oxidized Rhizo Presence of Re Recent Iron Rec Thin Muck Surfa Gauge or Well I Other (Explain i	Leaves (B9) (B13) lants (B14) de Odor (C1) spheres on Living duced Iron (C4) duction in Tilled S ace (C7) Data (D9) n Remarks)	g Roots (C3 Soils (C6)	Secondary Surface Drainag Dry-Sea Crayfish Saturati Stunted Geomoi	e Pattems (B10) ason Water Table (C2) b Burrows (C8) on Visible on Aenal Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)
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DROLOGY **Total Hydrology Indicators: imary Indicators (minimum of one in the surface Water (A1)	ery (B7)	water-Stained Aquatic Fauna True Aquatic Pi Hydrogen Sulfic Oxidized Rhizo Presence of Re Recent Iron Rec Thin Muck Surfa Gauge or Well I Other (Explain i Depth (Inches) Depth (Inches)	Leaves (B9) (B13) lants (B14) de Odor (C1) spheres on Living duced Iron (C4) duction in Tilled S ace (C7) Data (D9) n Remarks)	g Roots (C3 Soils (C6)	Secondary Surface Drainag Dry-Sea Crayfish Saturati Stunted Geomoi FAC-Nea	Soil Cracks (B6) e Pattems (B10) ason Water Table (C2) a Burrows (C8) on Visible on Aenal Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)
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DROLOGY **Total Hydrology Indicators: imary Indicators (minimum of one in surface Water (A1)	ery (B7) face (B8) No No No No	water-Stained Aquatic Fauna True Aquatic Pi Hydrogen Sulfic Oxidized Rhizo Presence of Re Recent Iron Rec Thin Muck Surfa Gauge or Well I Other (Explain i Depth (Inches) Depth (Inches)	Leaves (B9) (B13) lents (B14) de Odor (C1) spheres on Living duced Iron (C4) duction in Tilled S ace (C7) Data (D9) n Remarks)	g Roots (C3 Soils (C6)	Secondary Surface Drainag Dry-Sea Crayfish Saturati Stunted Geomoi FAC-Nea	Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) a Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)

WIL-JJP-123+124

WETLAND DETERMINATION DATA FORM - Midwest Region City/County: Greene Co Sampling Date: 2/24/17 Project/Site: 5TL Applicant/Owner: Spice State: IL Sampling Point: MPLAND Investigator(s): TT / VT W Section, Township, Range: 23/124/1W Local relief (concave, convex, none): Convex - 90,399845 Datum: NAN E) Long: ___ 100 5-107, slipps, eroded NWI classification: N/A Are climatic / hydrologic conditions on the sile 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 X Are Vegetation _ N _ Seil _ N _ or Hydrology _ N _ naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Hydric Soil Present? is the Sampled Area Wetland Hydrology Present? within a Wetland? Remarks: representative -10 WIL- JJP- 123 + 124. Upland near Stream / ag. VEGETATION - Use scientific names of plants. Absolute Duminard Indicator Tree Stratum (Plot size: 307 Dominance Test worksheet: % Cover Species? Status Number of Dominant Species 1 Maching somiforg FACY That Are OBL, FACW, or FAC: 2 Prunus seroting FACY Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: = Total Cover Sapilng/Shrub Stratum (Plot size: 15 Prevalence Index worksheet: 1. Kubus alleghaniensis FACH Total % Cover of: OBL species x 1 = FACW species FAC species 10 FACU species UPL species Herb Stratum (Plot size: Column Totals: 1. Seteria viridis 2. Anbrosia Prevalence Index = B/A = 4.13 Stellaria Hydrophytic Vegetation Indicators: 10 FACY _ 1 - Rapid Test for Hydrophytic Vegetation _ 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.01 4 - Marphological Adaptations* (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must 50 = Total Cover Woody Vine Stratum (Plnl size: 30/ be present, unless disturbed or problematic. Hydrophytic Vegetation _ = Total Cover Present? Remarks: (Include photo numbers here or on a separate sheet.)

hydrophytic veg. indicators observed.

No

Sampling Point: UPLAND

Profile Descr Depth	Matrix		Red	ox Feature	15			
(inches)	Color (maist)	%	Color (moist)	. %	Type	Loc2	Texture	Remarks
0-4"	10/12/2	100	-	~	-	-	SICL	- Indiana
4-17"	INVRY/3		~		_		5700	
14	10 JK 1/3	100		- 1	-		SCL	
_		_		_	_	_		
ydric Soil Ind Histosol (A Hislic Epip Black Hisli Hydrogen Stratified L 2 cm Muck Depleted E Thick Dark	dicators: (1) edon (A2) c (A3) Sulfide (A4) ayers (A5) (A10) selow Dark Surface Surface (A12) sky Mineral (S1)	e (A11)	Sandy F Stripped Loamy N Loamy O Pepleted Redox D Depleted	S=Masked Gleyed Ma Redox (S5) I Matrix (S Mucky Min Gleyed Ma d Matrix (F Dark Surfact Derk Surfact Depression	Irix (S4)) 6) eral (F1) etrix (F2) ce (F6) face (F7)	ins.	Indicators for Coast Pra Dark Surfi Iron-Mang Very Shal Other (Ex	PL=Pore Lining, M=Mairix. r Problematic Hydric Soils*; irire Redox (A16) ace (S7) ganese Masses (F12) low Dark Surface (TF12) plain in Remarks) hydrophytic vegetation and advology must be present,
	y Peat or Peat (S3	3)	1.600x 0	chi essioi i	ia (FO)			drology must be present, turbed or problematic.
strictive Lay	er (if observed):						Griffeda Ula	wises of problematic.
Туре:	Nure		_					\ <u>\</u>
Depth (inche	-1.					1	Hydric Soil Pre	sent? Yes No X
marks:		C Sui	l indice	tuls	· obs	eive		
amarks:	o hydri	C Sui	l indice	turs	obs.	l(Vt c		
DROLOGY	o hydri	C Sui	l indice	turs	- c63.	l(Vt a		
DROLOGY	legy Indicators:				065	P(Vta		
DROLOGY	legy Indicators:		; check all that app	ılv)		PIVto	<i>i.</i>	dicators (minimum of two require
DROLOGY Itland Hydro mary Indicato Surface Wa	legy Indicators:		: check all that app	ly) ed Leaves		l(Vt c	Secondary In	
DROLOGY Itland Hydro mary Indicato Surface Wa High Water	legy Indicators: rs (minimum of onter (A1) Table (A2)		: check all that app Water-Stain Aquallc Fau	lv) ed Leaves na (B13)	s (B9)	l(Vt a	Secondary In	dicators (minimum of two require
DROLOGY Itland Hydro Mary Indicato Surface Wat High Water Saturation (legy Indicators: rs (minimum of on ter (A1) Table (A2) A3)		: check all that app	lv) ed Leaves na (B13)	s (B9)	l(Vt a	Secondary In Surface : Oralnage	dicators (minimum of two require Soil Cracks (B6)
DROLOGY Illand Hydro mary Indicato Surface Wa High Water	legy Indicators: rs (minimum of on ter (A1) Table (A2) A3)		: check all that app Water-Stain Aquallc Fau	ilv) ed Leaves na (B13) c Plants (B	s (B9)	l(Vt a	Secondary In Surface : Drainage Dry-Seas	dicators (minimum of two require Soil Cracks (B6) Patterns (B10)
DROLOGY Interpolation Surface Wat High Water Saturation (A) Water Marks Sediment De	legy Indicators: rs (minimum of on ter (A1) Table (A2) A3) s (B1) eposits (B2)		check all that app Water-Stain Aquatlc Fau	ed Leaves na (B13) c Plants (B	s (B9) 314) or (C1)		Secondary In Surface: Drainage Dry-Seas Crayfish	dicators (minimum of two require Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8)
DROLOGY Itland Hydro Surface Wat High Water Saturation (A	legy Indicators: rs (minimum of on ter (A1) Table (A2) A3) s (B1) eposits (B2)		check all that app Water-Stain Aquatlc Fau True Aquati Hydrogen S	ed Leaves na (B13) c Plants (B ulfide Odo izosphere:	s (B9) 314) r (C1) s on Living		Secondary In Surface: Drainage Dry-Seas Crayfish Saturatio	dicators (minimum of two require Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9)
DROLOGY Itland Hydro Surface Wat High Water Saturation (A) Water Marks Sediment De	legy Indicators: rs (minimum of onter (A1) Table (A2) A3) s (B1) eposits (B2) s (B3)		Water-Stain Aquatic Fau True Aquati Hydrogen S Oxidized Rh	ed Leaves na (B13) c Plants (E ulfide Odo izosphere: Reduced	s (B9) 314) r (C1) s on Living Iron (C4)	Roots (C	Secondary In Surface : Drainage Crayfish Saturatio Stunted of	Cicators (minimum of two require Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) or Stressed Plants (D1)
DROLOGY Illand Hydro Mary Indicato Surface Wat High Water Saturation (A) Water Marks Sediment De Orlft Deposit	legy Indicators: rs (minimum of on ter (A1) Table (A2) A3) s (B1) eposits (B2) s (B3) Crusl (B4)		Check all that app Water-Stain Aquatic Fau True Aquati Hydrogen S Oxidized Rh	ed Leaves na (B13) c Plants (E ulfide Odo izosphere: Reduced Reduction	s (B9) 314) r (C1) s on Living Iron (C4)	Roots (C	Secondary In Surface: Drainage Crayfish Saturatio Stunted of	dicators (minimum of two require Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) or Stressed Plants (D1)
DROLOGY Illand Hydro Mary Indicato Surface Water High Water Saturation (A Water Marks Sediment De Drift Deposit Algal Mat or Iron Deposit	legy Indicators: rs (minimum of onter (A1) Table (A2) A3) s (B1) eposits (B2) rs (B3) Crusl (B4) s (B5) lisible on Aerial Im	e is required	Check all that app Water-Stain Aquatlc Fau True Aquati Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S	ed Leaves na (B13) c Plants (B ulfide Odo izosphere: Reduced Reduction curface (C7 ell Data (D	s (B9) 314) or (C1) s on Living lron (C4) or In Tilled S 7)	Roots (C	Secondary In Surface: Drainage Crayfish Saturatio Stunted of	dicators (minimum of two require Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) or Stressed Plants (D1)
DROLOGY Iland Hydro Mary Indicato Surface Water Saturation (A Water Marks Sediment De Orlft Deposit Algal Mat or Iron Deposit Inundation V Sparsely Veg	legy Indicators: rs (minimum of onter (A1) Table (A2) A3) s (B1) eposits (B2) rs (B3) Crusl (B4) s (B5) isible on Aerial Imgetated Concave S	e is required	Check all that app Water-Stain Aquatlc Fau True Aquati Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S	ed Leaves na (B13) c Plants (B ulfide Odo izosphere: Reduced Reduction curface (C7 ell Data (D	s (B9) 314) or (C1) s on Living lron (C4) or In Tilled S 7)	Roots (C	Secondary In Surface: Drainage Crayfish Saturatio Stunted of	dicators (minimum of two require Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) or Stressed Plants (D1)
DROLOGY Interval Indicator Surface Wat High Water Saturation (A) Water Marks Sediment De Drift Deposit Algal Mat or Iron Deposit Inundation V Sparsely Veg Id Observation	legy Indicators: rs (minimum of on ter (A1) Table (A2) A3) s (B1) eposits (B2) s (B3) Crusl (B4) s (B5) isible on Aerial Imgetated Concave Sons:	e is required agery (B7) Surface (B8)	Check all that app Water-Stain Aquatic Fau True Aquatic Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S Gauge or Wi Other (Expla	ed Leaves na (B13) c Plants (B ulfide Odo izosphere: Reduced Reduction curface (C7 ell Data (D	s (B9) 314) or (C1) s on Living lron (C4) or In Tilled S 7)	Roots (C	Secondary In Surface: Drainage Crayfish Saturatio Stunted of	dicators (minimum of two require Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) or Stressed Plants (D1)
DROLOGY Island Hydro Mary Indicato Surface Wat High Water Saturation (A) Water Marks Sediment De Orlft Deposit Algal Mat or Iron Deposit Inundation V Sparsely Veg Id Observation face Water Pr	legy Indicators: rs (minimum of onter (A1) Table (A2) A3) s (B1) eposits (B2) s (B3) Crusl (B4) s (B5) isible on Aerial Imgetated Concave Sons: resent?	e is required agery (B7) Surface (B8)	check all that apo Water-Stain Aquatlc Fau True Aquatic Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S Gauge or Wo	ed Leaves na (B13) c Plants (B ulfide Odo izosphere: Reduced Reduction surface (C7 ell Data (D in in Rema	s (B9) 314) or (C1) s on Living lron (C4) or In Tilled S 7)	Roots (C	Secondary In Surface: Drainage Crayfish Saturatio Stunted of	dicators (minimum of two require Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) or Stressed Plants (D1)
DROLOGY Itland Hydro Mary Indicato Surface Wat High Water Saturation (A Water Marks Sediment De Orlft Deposit Algal Mat or Iron Deposit Inundation V Sparsely Veg d Observation face Water Pr	legy Indicators: rs (minimum of onter (A1) Table (A2) A3) s (B1) eposits (B2) s (B3) Crusl (B4) s (B5) isible on Aerial Imgetated Concave Sons: resent?	e is required agery (B7) Surface (B8)	Check all that app Water-Stain Aquatic Fau True Aquatic Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S Gauge or Wi Other (Expla	ed Leaves na (B13) c Plants (B ulfide Odo izosphere: Reduced Reduction surface (C7 ell Data (D in in Rema	s (B9) 314) or (C1) s on Living lron (C4) or In Tilled S 7)	Roots (C	Secondary In Surface: Drainage Crayfish Saturatio Stunted of	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Chic Position (D2) Itral Test (D5)
DROLOGY Island Hydro Island Hydro Island Hydro Surface Wat High Water Saturation (A Water Marke Sediment De Drift Deposit Algal Mat or Iron Deposit Inundation V Sparsely Ver Id Observation face Water Preservation Preservation	legy Indicators: rs (minimum of on ter (A1) Table (A2) A3) s (B1) eposits (B2) s (B3) Crusl (B4) s (B5) lisible on Aerial Imgetated Concave Sons: resent? Yes eent? Yes	e is required agery (B7) Surface (B8)	check all that apo Water-Stain Aquatlc Fau True Aquatic Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S Gauge or Wo	ed Leaves na (B13) c Plants (B ulfide Odo izosphere: Reduced Reduction surface (C7 ell Data (D in in Rema	s (B9) 314) or (C1) s on Living lron (C4) or In Tilled S 7)	Roots (Coils (C6)	Secondary In Surface: Drainage Crayfish Saturatio Stunted of	dicators (minimum of two require Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) or Stressed Plants (D1) Phic Position (D2)
DROLOGY atland Hydro imary Indicato Surface Wat High Water Saturation (A Water Marks Sediment De Drift Deposit Algal Mat or Iron Deposit Inundation V Sparsely Veg Id Observation face Water Pr ter Table Prese uration Prese	legy Indicators: rs (minimum of on ter (A1) Table (A2) A3) s (B1) eposits (B2) s (B3) Crusl (B4) s (B5) isible on Aerial Imgetated Concave Sons: resent? Yes ent? Yes	e is required agery (B7) Surface (B8)	Check all that app Water-Stain Aquatic Fau True Aquatic Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S Gauge or Wi Other (Expla	ed Leaves na (B13) c Plants (B ulfide Odo izosphere: Reduced Reduction curface (C7 ell Data (D in in Rema	s (B9) 314) or (C1) s on Living Iron (C4) on Tilled S 7) 99) arks)	Roots (Coils (C6)	Secondary In Surface: Drainage Dry-Seas Crayfish Saturatio Stunted of FAC-Neur	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Chic Position (D2) Itral Test (D5)
DROLOGY atland Hydro imary Indicato Surface Wat High Water Saturation (A Water Marks Sediment De Drift Deposit Algal Mat or Iron Deposit Inundation V Sparsely Veg Id Observation face Water Pr ter Table Prese uration Prese	legy Indicators: rs (minimum of on ter (A1) Table (A2) A3) s (B1) eposits (B2) s (B3) Crusl (B4) s (B5) isible on Aerial Imgetated Concave Sons: resent? Yes ent? Yes	e is required agery (B7) Surface (B8)	Check all that app Water-Stain Aquatic Fau True Aquatic Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S Gauge or W Other (Expla	ed Leaves na (B13) c Plants (B ulfide Odo izosphere: Reduced Reduction curface (C7 ell Data (D in in Rema	s (B9) 314) or (C1) s on Living Iron (C4) on Tilled S 7) 99) arks)	Roots (Coils (C6)	Secondary In Surface: Drainage Dry-Seas Crayfish Saturatio Stunted of FAC-Neur	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Chic Position (D2) Itral Test (D5)
DROLOGY atland Hydro imary Indicato Surface Wat High Water Saturation (A Water Marks Sediment De Orlft Deposit Algal Mat or Iron Deposit Inundation V Sparsely Veg Id Observation face Water Preservation Preservation Trace Records	legy Indicators: rs (minimum of on ter (A1) Table (A2) A3) s (B1) eposits (B2) s (B3) Crusl (B4) s (B5) isible on Aerial Imgetated Concave Sons: resent? Yes ent? Yes	agery (B7) Surface (B8) NoNoNo	Check all that app Water-Stain Aquatic Fau True Aquatic Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S Gauge or Wo Other (Expla	ed Leaves na (B13) c Plants (B ulfide Odo izosphere: Reduced Reduction surface (C7 ell Data (D in in Rema es): es):	s (B9) 314) or (C1) s on Living Iron (C4) on Tilled S 7) 99) arks)	Roots (Coils (C6)	Secondary In Surface: Drainage Dry-Seas Crayfish Saturatio Stunted of FAC-Neur	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Chic Position (D2) Itral Test (D5)

Project/Site: 57L		City/County:	Sampling Date: 2/24//
Applicant/Owner:	1		State: JL Sampling Point: UPLAND
Investigator(s):		Section Township	Range: 23/12/9/
Landform (hillslope, terrace, etc.): Place			
Slope (%): 1/1 Lat: 39, 207689		Long: - 10, 3	lief (concave, convex, none):
- I 3			
	um, 5	- 10% STAPE	NWI classification: NIA
Are climatic / hydrologic conditions on the site typical for	this time of y	sar? Yes X No	(If no, explain in Remarks.)
Are Vegetation Soil ur Hydrology			re *Normal Circumstances" present? Yes No
	naturally pe		needed, explain any answers in Remarks.)
44 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	12	sampling poin	t locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes	No	is the Sampi	ed Area
	No V	within a Wet	
Remarks:	NO y	Within a viol	165 NO _/
upland representative to	WI	L-JJP-125	
Soil and was disturbed:	acti.	soy be.	n field.
VEGETATION – Use scientific names of plant		any bear	M Likidi
		_	
Tree Stratum (Plot size: 30'/	Absolute % Cover	Dominant Indicator Species? Status	
1	-	- Citation	The Association of Dominant Species
2 Sent			Inat Are OBL, FACW, or FAC:(A)
3			Total Number of Dominant Species Across All Strata: (B)
4			
5			Percent of Dominant Species
15-15	0	= Total Cover	That Are OBL, FACW, or FAC: (A/B)
Saoling/Shrub Stratum (Plot size: 15)			Prevalence Index worksheet:
Absent			Total % Cover of:Multiply by:
2.			OBL species x1 =
3			FACW species x 2 = 0
4			FAC species x 3 = 0
0	- 17		FACU species 50 x 4 = 200
Herb Stratum (Plot size: 51/		= Total Cover	UPL species x5 = X5
1. Stelleria media	20	Y FACU	Column Totals: 65 (A) 275 (B)
2. Lamium amplexirante	15	Y UPL	Prevalence Index = B/A = 4,23
3. Arassica Sp. *	204	* *	Hydrophytic Vegetation Indicators:
4			1 - Rapid Test for Hydrophytic Vegetation
5.			2 - Dominance Test is >50%
0			3 - Prevalence index is ≤3.0¹
7.			4 - Morphological Attautations (Provide supporting
5			data in Remarks or on a separate sheet)
			Problematic Hydrophytic Vegetation ¹ (Explain)
10			la constant de la con
Woody Vine Stratum (Plot size: 30'/)	65 =	Total Cover	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Absent			Midrophysia
-			Hydrophytic Vegetation
	0	Total Cover	Present? Yes No
Remarks (Include photo numbers here or on a separate of Species not identified beyon Calculations.			.I have been omitted for

Sampling Point: WLAND

SOIL

Profile Desc	cription: (Describe	to the dep				or confirm	the absence	of indicators.)
Depth	Color (moist)	- Or	Calor (moist)	K Features	Type'	Loc ²	Texture	Remarks
(inches)			COIOI (IIIOSAU		1100		51	TOSHER
0.8"	10484/2	160	11110261	~			300	
8-17"	7.71	95	104R3/4			14	70	
	-							
				_		_		
Type: C=C	ancentration, D=Dep	letion, RM:	Reduced Matrix, MS	=Masked	Sand Gra	ains.	2Location:	PL=Pore Lining, M=Matrix.
Hydric Soll							Indicators	for Problematic Hydric Soils³:
Histosol	I (A1)		Sandy G	leyed Ma	trix (S4)		Coast F	Prairie Redox (A16)
_	pipedon (A2)		Sandy R	edox (S5))		Dark S	urface (S7)
Black H	istic (A3)		Stripped	Matrix (S	6)		Iron-Ma	anganese Masses (F12)
	en Sulfide (A4)		Loamy N	lucky Min	eral (F1)		Very SI	nallow Dark Surface (TF12)
	d Layers (A5)		Loamy C	Sleyed Ma	trix (F2)		Other (Explain in Remarks)
2 cm Mu	uck (A10)		∑ Depleted	d Matrix (F	3)			4
	d Below Dark Surfac	e (A11)	_	ark Surfa	, ,		2	
_	ark Surface (A12)			d Dark Sui				of hydrophytic vegetation and
_	Mucky Mineral (S1)		Redox D	epression	ıs (F8)			hydrology must be present,
	ucky Peat or Peat (S						unless	disturbed or problematic
	Layer (If observed):							
Тура:	7001.0	tion.					Hydric Soil	Presant? Yes No No
Depth (in	ches):		_				,	
IYDROLO	GY							
Wetland Hy	drology Indicators:							
Primary India	cators (minimum of o	ne is requir	ed: check all that an	aly)			Secondar	y Indicators (minimum of two required)
Surface	Watar (A1)		Water-Stair	ned Laave	s (B9)		Surfa	ice Soil Cracks (B6)
_ High Wa	iter Table (A2)		Aquatic Fa	una (B13)			Drain	age Patterns (B10)
Saturation	on (A3)		Trua Aquat	lc Plants (B14)		Dry-S	Season Water Table (C2)
	larks (B1)		Hydrogen S	Sulfide Od	or (C1)		Cray	fish Burrows (C8)
	nt Deposits (B2)		Oxidized R	hizospher	es on Livi	ng Roots (C3) Satui	ration Visible on Aenal Imagery (C9)
	oosits (B3)		Presence o	f Reduced	d Iron (C4)	Stunt	ed or Stressed Plants (D1)
	at or Crust (B4)		Recent Iron					norphic Position (D2)
_ •	osits (B5)		Thin Muck			` '		Neutral Test (D5)
	on Visible on Aerial I	magary (B7	1					• •
	Vegetated Concave							
Field Observ								
Surface Wate	er Prasant? Ye	/ se	lo 🔀 Depth (inc	hes):	<u> </u>	_		
Water Table			lo 🔀 Dapth (inc			_ [
Saturation Pr	resant? Your	es N	lo Depth (inc	hes):	-			Presant? Yes No
Describe Rec	corded Data (stream	gauge, mo	nitoring well, aerial p	holos, pre	vious insp	ections), i	f available:	NA
Remarks:								
4	No had	10	indicator	15	<i>*</i>	bserv	re-l	
	70				W.	א זיכו ע	COL	

-21 1			- Midwest Region	
Project/Site: 57L P.A	eline	City/County:	Scott Ca.	_ Sampling Date: 12/2/
Applicant/Owner:			State: #	Sampling Point: 4PL4
Investigator(s): <u> </u>		Section, Township,		13 N
Landform (hillslope, terrace, etc.):	Hillslope	•	lief (concave, convex, none)	
Slope (%): 5% Lat: 39.	540212	_ Long: _ 90, 4	4 3 3 4 4 4 4	
Soil Map Unit Name: Elco silty	clay loam, 10-19	Kr. Slugge Sam	rely endeanwi classific	Datum: NADE3
Are climatic / hydrologic conditions on t	the site typical for this time of	you? You Y	NWI classific	cation:/V/A
Are Vegetation, Soil, or	Hydrology A significant			
Are Vegetation , Soil , or	Hydrology V significanti		re "Normal Circumstances" p	
SUMMARY OF FINDINGS - A	ittach site map showin	g sampling poin	f needed, explain any answe	rs in Remarks.)
Hydrophytic Vegetation Present?	Yes No X	o maring point	t locations, transects	, important features, etc.
Hydric Soil Present?	Yes No	Is the Sampl	ed Area	
Wetland Hydrology Present?	Yes No	within a Wet		No. X
Remarks:				
Upland representative		na-oul E	×T,	
* Active agricultur	al field;	Suil + No	cetation dis	tidas
VEGETATION - Use scientific n	ames of plants.		ACIA/104 -1.3	Wise
Tree Stratum (Plot size: 30'/	Absolute	Dominant Indicator	Dominance Test works	to vite
1. Absent) <u>% Cover</u>	Species? Status	Number of Dominant Spe	
	Open-A		That Are OBL, FACW, or	FAC:(A)
2			Total Number of Domina	
3 4			Species Across Alt Strata	(B)
5			Percent of Dominant Spe	cies 6.
	(-1)	= Total Cover	That Are OBL, FACW, or	FAC:(A/B)
Sapling/Shrub Stratum (Plot size:	5/	- Total Cover	Prevalence Index works	heet:
			Total % Cover of:	Multiply by:
2			OBL species	x1= 0
			FACW species	x2= 0
			FAC species	_ x 3 =O
			FACU species	x 4 =O
lerb Stratum (Plot size:	:	= Total Cover	UPL species 100	_ x5= <u>500</u>
Glycine max		y hAL	Column Totals: 100	(A) <u>500</u> (B)
Lanina amplexic	enle 10	N UPL	Prevalence Index =	R/A = 5.00
· 			Hydrophytic Vegetation I	
		r	1 - Rapid Test for Hydi	
			2 - Dominance Test is	
			3 - Prevalence Index is	s ≤3.0¹
			4 - Morphological Adap	tations' (Provide supporting
			data in Remarks or	on a separate sheet)
			Problematic Hydrophyt	ic Vegetation' (Explain)
	100 =	T-1-10	Indicators of hydric soil and	wetland hustests
oody Vine Stratum (Plot size: 301)		Total Cover	be present, unless disturbed	or problematic.
Absent				
			Hydrophytic Vegetation	
marke: Analysis - L	=	Total Cover	Present? Yes	No
marks: (Include photo numbers here or	On a senarate choot \			
	on a separate sneet.)			
	vegetation			

Depth Matrix Golor (moist) %	h needed to document the indicator or confine Redox Features Color (moist) % Type Loc 10 / R 5/4 S D M	_
Type: C=Concentration, D=Depletion, RM=F Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1)	Reduced Matrix, MS=Masked Sand Grains. Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8)	Coast PL=Pare Lining M=Matrix indicators for Problematic Hydric Soils Coast Prairie Redox (A16) Dark Surface (S7) Iron-Manganese Masses (F12) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present,
_ 5 cm Mucky Peat or Peat (S3) estrictive Layer (if observed): Type:	=	unless disturbed or problematic. Hydric Soll Present? Yes No
Mo hydric so.	1 indicators o	is served.

High Water Table (A2) Aquatic Fauna (B13) __ Drainage Patterns (B10) Saturation (A3) True Aquatic Plants (B14) ___ Dry-Season Water Table (C2) Water Marks (B1) __ Hydrogen Sulfide Odor (C1) Crayfish Burrows (C8) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2) Iron Deposits (B5) Thin Muck Surface (C7) FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Field Observations: Surface Water Present? Depth (inches): Water Table Present? Depth (inches) Saturation Present? Depth (inches): Wetland Hydrology Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: hydrology indicators observed.

WETLAND DETERMINATION DATA FORM - Midwest Region

WIL-TMA-003

Project/Site: Spire		City/County: 50	++	Sampling Date: 9-10-2
Applicant/Owner: Spirc STL		,		Sampling Point: Uplan
				4, TI2N. RIZV
andform (hillslope, terrace, etc.):	-	Local relief	f (concave, convex, non	e): <u>A) (///</u>
lope (%): Lat:		.ong: <u>~ 40.4</u> 3	0255	_ Datum: <u>PA \ 89</u>
oil Map Unit Name Hickory silt loam	18 to 3	5% Sieres	NWI class	fication: NM
re climatic / hydrologic conditions on the site typical for	this time of yea	r? Yes 🗴 No	(If no, explain in	Remarks.)
re Vegetation N Soil N or Hydrology	significantly d	Isturbed? Are	'Normal Circumstances	o" present? Yes No
re Vegetation Soil, or Hydrology			eeded, explain any ansi	
UMMARY OF FINDINGS - Attach site ma				
	No_V			
Hydric Soil Present? Yes	No	is the Sample		
Wetland Hydrology Present? Yes	No	within a Wetla	nd? Yes	No
- Area sample point for 1	1011.	d william	ACOR	
- Area sample mois for	JUCY COM	0, 93.2 12 17	7	
		-		
EGETATION – Use scientific names of plan	its.			
ree Stratum (Plot size:)	0.000	Dominant Indicator	Dominance Test wo	rksheet:
Carra OVata	<u>% Cover</u>		Number of Dominant	
Questis rubra		Y FACU	That Are OBL, FACW	/, or FAC: (A)
Libras rubre	$-\frac{20}{20}$	FAL	Total Number of Dom	7
THURS IN NA		THE	Species Acroes All St	rata: <u>6</u> (B)
			Percent of Dominant	
-	80:	Tatal Course	That Are OBL, FACW	, or FAC: 0/. (A/E
apling/Shrub Stratum (Plot size:)	<u> </u>	Total Cover	Prevalence Index ws	arksheet:
Lonicava Unoccowii	70	Y FACU	Total % Cover of:	Muttoty by:
Carva ovata	10	V FACU		x1=
Querrus imbriguin	5	N FACE	FACW species	×2=
leglans nova	5	N FACE		x3=
9 0				x4=
M- 1	40 =	Total Cover	UPL species	15=
arb Stratum (Plot size:		V	Column Totals:	(A) (B)
_Solidaco renadensis	<u> 30</u> -	Y FACU		
- Ageratina altispina 1	70	Y. FACU		x = B/A =
Porsicuria pensylverisa	_ <i></i>	N FACW	Hydrophytic Vegetat	
Toxicademond Wholicous	- == -	N FAC	-	Hydrophytic Vegetation
Apacyaum caraction		N FAC	2 - Dominance Te	
Ribus Flagellaris		N FACO	3 - Prevalence Inc	
Ridens transcosa	<u> </u>	FACU	4 - Morphological	Adaptations ¹ (Provide supporting s or on a separate sheet)
Symphyetichum pilosum		N FACE		ophytic Vegetation¹ (Explain)
			Problematic Hydro	opriyiic vegetation (Explain)
			1Indicators of hudes	il and wetland hydrology must
the second secon	85 =	Total Cover	be present, unless dist	
odv Vine Stratum (Plot size:)			Hydrophytic	
podv Vine Stratum (Plot size: 30 V)			Vegetation	
		Fotal Cover	Vegetation	No

WILTMAGG 3
Sampling Point: Upland

Depth Metrix	Redox Features			
(inches) Color (maist) %	Color (moist) %	Type' Loc2	<u>Texture</u> _	Remarks
D-6" 104A3/4 100			Sill-	
6"-12" 104R46 90	104R4/2 10	M	sich_	
ype: C=Concentration, D=Depletion, RM=	=Reduced Matrix, MS=Masked S	and Grains.		L=Pore Lining, M=Matrix.
ydric Soil Indicators:				Problematic Hydric Soils ¹ :
_ Histosol (A1)	Sandy Gleyed Matri	ix (S4)	_	rie Redox (A16)
_ Histic Epipedon (A2) _ Black Histic (A3)	Sandy Redox (S5) Stripped Matrix (S6)	,	Dark Surfa	ice (5/) anese Masses (F12)
_ Hydrogen Sulfide (A4)	Loamy Mucky Miner	•		ow Dark Surface (TF12)
Stratified Layers (A5)	Loamy Gleyed Matri			Main in Remarks)
_ 2 cm Muck (A10)	Depleted Matrix (F3)		,
Depleted Below Dark Surface (A11)	Redox Dark Surface			
_ Thick Dark Surface (A12)	Depleted Dark Surfa			nydrophytic vegetation and
Sandy Mucky Mineral (S1)	Redox Depressions	(F8)	_	drology must be present,
5 cm Mucky Peat or Peat (53) strictive Layer (if observed):			uniess dist	urbed or problematic.
Type: ~o~e				
Depth (inches):	-		Hydric Soil Pre	sent? Yes No
-have			_	
DROLOGY				
DROLOGY tiand Hydrology Indicators:	eri: check all that angly)		Secondary in	dicators (minimum of two moules)
DROLOGY Stland Hydrology Indicators: many Indicators (minimum of one is require		(FQ)		
DROLOGY Itland Hydrology Indicators: mary Indicators (minimum of one is require Surface Water (A1)	Water-Stained Leaves ((B9)	Surface	Soil Cracks (B6)
DROLOGY Itland Hydrology Indicators: mary Indicators (minimum of one is require Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (Aquatic Fauna (B13)		Surface : Drainage	Soil Cracks (B6) Patterns (B10)
DROLOGY Itland Hydrology Indicators: mary Indicators (minimum of one is require Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Stained Leaves (Aquatic Fauna (B13) True Aquatic Plants (B1	14)	Surface: Drainage Dry-Seas	Soil Cracks (86) Patterns (810) son Water Table (C2)
DROLOGY Stand Hydrology Indicators: Mary Indicators (minimum of one is require Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (Aquatic Fauna (B13) True Aquatic Plants (B1 Hydrogen Sulfide Odor	(C1)	Surface: Drainage Dry-Seas Crayfish	Soil Cracks (86) Patterns (810) son Water Table (C2) Burrows (C8)
DROLOGY Stand Hydrology Indicators: mary Indicators (minimum of one is require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Stained Leaves (Aquatic Fauna (B13) True Aquatic Plants (B1	(C1) an Living Roots (C	Surface: Drainage Dry-Seat Crayfish Saturation	Soil Cracks (86) Patterns (810) son Water Table (C2)
DROLOGY etiand Hydrology Indicators: mary Indicators (minimum of one is require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Stained Leaves (Aquatic Fauna (B13) True Aquatic Plants (B1) Hydrogen Sulfide Odor Oxidized Rhizospheres	(C1) on Living Roots (C ron (C4)	Surface: Drainage Dry-Sease Crayfish Saturatio	Soil Cracks (B8) Patterns (B10) son Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9)
DROLOGY etland Hydrology Indicators: mary Indicators (minimum of one is require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Water-Stained Leaves (Aquatic Fauna (B13) True Aquatic Plants (B1) Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced In	(C1) (C1) on Living Roots (C ron (C4) in Tilled Solls (C6)	Surface: Drainage Dry-Seat Crayfish Saturatio Geomory	Soil Cracks (B8) Patterns (B10) Son Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1)
DROLOGY Internal Hydrology Indicators: mary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	Water-Stained Leaves (Aquatic Fauna (B13) True Aquatic Plants (B1 Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced Ir Recent Iron Reduction i Thin Muck Surface (C7)	(C1) (C1) on Living Roots (C ron (C4) in Tilled Solls (C6)	Surface: Drainage Dry-Seat Crayfish Saturatio Geomory	Soil Cracks (B8) Patterns (B10) Pon Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Phic Position (D2)
DROLOGY Itland Hydrology Indicators: mary Indicators (minimum of one is require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B6)	Water-Stained Leaves (Aquatic Fauna (B13) True Aquatic Plants (B1 Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced in Recent Iron Reduction i Thin Muck Surface (C7) Gauge or Well Data (D9	(C1) (C1) on Living Roots (C ron (C4) in Tilled Solls (C6))	Surface: Drainage Dry-Seat Crayfish Saturatio Geomory	Soil Cracks (B8) Patterns (B10) Pon Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Phic Position (D2)
DROLOGY Internal Hydrology Indicators: mary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B6) Indicators:	Water-Stained Leaves (Aquatic Fauna (B13) True Aquatic Plants (B1 Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced Ir Recent Iron Reduction i Thin Muck Surface (C7) Gauge or Well Data (D9 8) Other (Explain in Remain	(C1) (C1) on Living Roots (C ron (C4) in Tilled Solls (C6))	Surface: Drainage Dry-Seat Crayfish Saturatio Geomory	Soil Cracks (B6) Patterns (B10) Pon Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Phic Position (D2)
DROLOGY etland Hydrology Indicators: mary Indicators (minimum of one is require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B6) Id Observations:	Water-Stained Leaves (Aquatic Fauna (B13) True Aquatic Plants (B1 Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced in Recent Iron Reduction i Thin Muck Surface (C7) Gauge or Well Data (D9 6) Other (Explain in Remain	(C1) (C1) on Living Roots (C ron (C4) in Tilled Solls (C6))	Surface: Drainage Dry-Seat Crayfish Saturatio Geomory	Soil Cracks (B6) Patterns (B10) Pon Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Phic Position (D2)
DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one is require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B) Ind Observations: face Water Present? Yes No.	Water-Stained Leaves (Aquatic Fauna (B13) True Aquatic Plants (B1 Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced Ir Recent Iron Reduction i Thin Muck Surface (C7) Gauge or Well Data (D9 8) Other (Explain in Remain	(C1) (C1) on Living Roots (C ron (C4) in Tilled Solls (C6))	Surface: Drainage Dry-Seat Crayfish Saturatio Geomory	Patterns (B10) son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) or Stressed Plants (D1) whic Position (D2)
DROLOGY etiand Hydrology Indicators: mary Indicators (minimum of one is require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Id Observations: face Water Present? Yes Noter Table Present? Yes Note Tabl	Water-Stained Leaves (Aquatic Fauna (B13) True Aquatic Plants (B1 Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced in Recent Iron Reduction i Thin Muck Surface (C7) Gauge or Well Data (D9 6) Other (Explain in Remain	(C1) on Living Roots (Cron (C4) in Tilled Solls (C6)) rks)	Surface: Drainage Dry-Seat Crayfish Saturatio Geomory	Soil Cracks (B8) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Shic Position (D2) Itral Test (D5)
DROLOGY etiand Hydrology Indicators: mary Indicators (minimum of one is require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (Bild Observations: face Water Present? Ves Notation Present? Yes Notation Present?	Water-Stained Leaves (Aquatic Fauna (B13) True Aquatic Plants (B1 Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced in Recent Iron Reduction i Thin Muck Surface (C7) Gauge or Well Data (D9 Other (Explain in Remail	(C1) on Living Roots (Cron (C4) in Tilled Solls (C6)) rks) Wetlan	Surface: Drainage Dry-Sear Crayfish: 3) Saturatio Stunted of Geomory FAC-Neu	Soil Cracks (B8) Patterns (B10) Pon Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) In Stressed Plants (D1) Phic Position (D2) Itral Test (D5)
DROLOGY etiand Hydrology Indicators: mary Indicators (minimum of one is require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (Bild Observations: face Water Present? Ves Notation Present? Yes Notation Present?	Water-Stained Leaves (Aquatic Fauna (B13) True Aquatic Plants (B1 Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced in Recent Iron Reduction i Thin Muck Surface (C7) Gauge or Well Data (D9 Other (Explain in Remail	(C1) on Living Roots (Cron (C4) in Tilled Solls (C6)) rks) Wetlan	Surface: Drainage Dry-Sear Crayfish: 3) Saturatio Stunted of Geomory FAC-Neu	Soil Cracks (B8) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Shic Position (D2) Itral Test (D5)
DROLOGY etiand Hydrology Indicators: imary Indicators (minimum of one is require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B6) Indicate Water Present? Inter Table Present? Ves Noter Table Pre	Water-Stained Leaves (Aquatic Fauna (B13) True Aquatic Plants (B1 Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced in Recent Iron Reduction i Thin Muck Surface (C7) Gauge or Well Data (D9 Other (Explain in Remail	(C1) on Living Roots (Cron (C4) in Tilled Solls (C6)) rks) Wetlan	Surface: Drainage Dry-Sear Crayfish: 3) Saturatio Stunted of Geomory FAC-Neu	Soil Cracks (B8) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aarial Imagery (C9) Or Stressed Plants (D1) Shic Position (D2) Itral Test (D5)
DROLOGY etiand Hydrology Indicators: mary Indicators (minimum of one is require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (Bild Observations: face Water Present? Ves No suration Present? Yes No suration	Water-Stained Leaves (Aquatic Fauna (B13) True Aquatic Plants (B1 Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced in Recent Iron Reduction i Thin Muck Surface (C7) Gauge or Well Data (D9 Other (Explain in Remail Depth (inches): Depth (inches): Depth (inches):	(C1) on Living Roots (Cron (C4) in Tilled Solls (C6)) orks) Wettan	Surface: Drainage Dry-Sear Crayfish: 3) Saturatio Stunted of Geomory FAC-Neu	Soil Cracks (B8) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aarial Imagery (C9) Or Stressed Plants (D1) Shic Position (D2) Itral Test (D5)
DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one is require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (Bild Observations: Iface Water Present? Ves Notestated Concave	Water-Stained Leaves (Aquatic Fauna (B13) True Aquatic Plants (B1 Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced in Recent Iron Reduction i Thin Muck Surface (C7) Gauge or Well Data (D9 Other (Explain in Remail Depth (inches): Depth (inches): Depth (inches):	(C1) on Living Roots (Cron (C4) in Tilled Solls (C6)) orks) Wettan	Surface: Drainage Dry-Sear Crayfish: 3) Saturatio Stunted of Geomory FAC-Neu	Soil Cracks (B8) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aarial Imagery (C9) Or Stressed Plants (D1) Shic Position (D2) Itral Test (D5)

		City/County:S+.	Chan les Sampling Date: 10-15-
pplicant/Owner:			State: Mo Sampling Point: Voland
vestigetor(s): J) P T M A			lange: Section 1838, Lock, Grat
			of (concave, convex, none):
lope (%): Lat:		Long: <u>-70.</u> 26	0706 Datum: NAD 9.3
oil Map Unit Name: Sans Acres 5 1/4 Clay	1,0-7%	Slopes , OCCANO	cally flee shirt cleseification: N/A
re climatic / hydrologic conditions on the site typical for			(If no, explain in Remarks.)
re Vegetation <u>r</u> , Sail <u>V</u> , or Hydrology <u>V</u>	significantly	disturbed? Are	"Normal Circumstances" present? YesNo
e Vegetation, Soil, or Hydrology	naturally pro	blematic? (If n	needed, explain any answers in Remarks.)
UMMARY OF FINDINGS - Attach site ma	o showing	sampling point	locations, transects, important features, etc
Hydrophytic Vegetation Present? Yes	-		,,,,,
Hydric Soil Present? Yes		Is the Sample	d Area
Vetland Hydrology Present? Yes	No V	within a Wetla	nd? Yes No
- Area upland sample poir	VOI A-CV	use Figs a	W W W 17 100 4
- Area active so bean	ticle		
EGETATION – Use scientific names of plant	ts.		
ree Stratum (Plot size: 30 \		Dominant Indicator	Dominance Test worksheet:
ee Spardin (Piot size:)	% Cover	Species? Status	Number of Dominant Species
			That Are OBL, FACW, or FAC: (A)
			Total Number of Dominant
Ab sent			Species Across All Strata: (B)
1			Percent of Dominant Species
151		= Total Cover	That Are OBL, FACW, or FAC: (A/B)
aoling/Shrub Stratum (Plot size: 15'r)			Pravalence Index worksheet:
			Total % Cover of:Multioly by:
			OBL species x 1 =
A be cont			FACW species # 2 =
71330001			FAC species x3 =
			FACU species x4=
erb Stratum (Plot size:)		Total Cover	UPL species x5 =
Clycine may	50	YUPL	Column Totals: (A) (B)
			Prevalence Index = B/A =
			Hydrophytic Vegetation Indicators:
			1 - Rapid Test for Hydrophytic Vegetation
			2 - Dominence Test is >50%
			3 - Prevalence Index is ≤3.01
			4 - Morphological Adaptations¹ (Provide supporting
			data in Remarks or on a separate sheet)
			Problematic Hydrophytic Vegetation ¹ (Explain)
			Indicators of hydric soil and welland hydrology must
ody Vine Stratum (Plot size: 30'r)	50 =	Total Cover	be present, unless disturbed or problematic.
A. 1			Muriennhurie
/ / /			Hydrophytic Vegetation
Hysent			a 10 11 11
Assem		Total Cover	Present? Yes No

W MONPOOY

SOIL Sampling Point: Upland Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Redox Features Depth Color (moist) % Type Loc Texture (inches) Color (moist) 100 Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ³Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: Indicators for Problematic Hydric Soils _ Histosol (A1) Sandy Gleyed Matrix (S4) _ Cosst Prairie Redox (A16) Histic Epipedon (A2) __ Sandy Redox (S5) __ Dark Surface (S7) Black Histic (A3) ___ Stripped Matrix (S6) Iron-Manganesa Masses (F12) Hydrogan Sulfide (A4) __ Loamy Mucky Mineral (F1) Very Shallow Dark Surface (TF12) _ Stratified Layers (A5) __ Loamy Gleyed Matrix (F2) Other (Explain in Remarks) 2 cm Muck (A10) Depleted Matrix (F3) _ Depleted Below Dark Surface (A11) Redox Dark Surface (F6) _ Thick Dark Surface (A12) Depleted Dark Surface (F7) 3Indicators of hydrophytic vegetation and Sandy Mucky Mineral (\$1) Redox Depressions (F8) wetland hydrology must be present. 5 cm Mucky Peat or Peat (S3) unless disturbed or problematic. Restrictive Layer (if observed): NM Type: ___ Hydric Soil Present? Yes Depth (Inches): No Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of two required) Surface Water (A1) Water-Stained Leaves (B9) ___ Surface Soil Cracks (B6) High Water Table (A2) Aquatic Fauna (B13) __ Drainage Patterns (B10) Saturation (A3) True Aquatic Plants (B14) __ Dry-Season Water Table (C2) Water Marks (B1) Hydrogen Sulfide Odor (C1) Crayfish Burrows (C8) Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Saturation Visibla on Aerial Imagery (C9) __ Drift Deposits (B3) Presence of Reduced Iron (C4) ___ Stunted or Stressed Plants (D1) Recent iron Reduction in Tilled Soils (C6) __ Algal Mat or Crust (B4) Geomorphic Position (D2) Iron Deposits (85) Thin Muck Surface (C7) FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Sparsely Vagetated Concava Surface (B8) Other (Explain in Remarks) Field Observations: Surface Water Present? Depth (Inches): Water Table Present? Depth (inches): ___ No ____ Depth (inches): Saturation Present? Wetland Hydrology Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, manitoring well, serial photos, previous inspections), if available: -No hydroless indicators obscrued

WETLAND DETERMINATION DATA FORM – Midwest Region

WMO-JJP-008

Applicant/Owner:	Long: -90.36	
Hydrophytic Vegetation Present? Yes	No	-d 6
Hydric Soil Present? Yes	. 146.7 144.4	
Wetland Hydrology Present? Yes	No within a Wet	land? Yes NO
/EGETATION - Use scientific names of plan		land amoss poog
Tree Stratum (Plot size: 30'()	Absolute Duminant Indicato	
	% Cover Species Status	Number of Dominant Species
- Diospyros Virginiana		That Are OBL, FACW, or FAC: (A)
Ulmus rubus	- CO N EM	Total Number of Dominant
Monustallea	- 5 N FA	7
Carya illinoinesis		Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
15	Total Cover	
Sapling/Shrub Stratum (Plot size: \ \ \ \ \ \ \)	10 Y 54	Prevalence index worksheet:
Loniona Morrewii	10 y when	
Carrie Ovata	10 Y FACU	OBL species x 1 =
. Juylens eineren	S N FACU	FACW species x 2 =
Ribus a Herbeniensis	5 N FACE	FAC species x 3 =
+		FACU species x4=
	30 = Total Cover	UPL species x 5 ≈
arb Stratum (Plot size: 5 /)	= Total Cover	
Schedonorus crondinaceus	66 Y FACU	Column Totals: (A) (B)
Tei folian pratanis	ZO N FACE	
^ \ \	- 20 N CAC	Hydrophytic Vegetation Indicators:
Ambusa tritida	- 20 - F	1 - Rapid Test for Hydrophytic Vegetation
Taxi radeabran radicans	_ 20 _N_ FAC	- - ' ' ' ' ' '
		2 - Dominance Test is >50%
		3 - Prevalence Index is ≤3.01
		4 - Morphological Adaptations¹ (Provide supporting
		data in Remarks or on a separate sheet)
		Problematic Hydrophytic Vegetation¹ (Explain)
).		
oody Vine Stretum (Plot size: 30 //)	70 = Total Cover	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
		Hydrophytic /
Hacent		Vegetation
- And Market Advisor		Present? Yes No
1 1 900	■ Total Cover	1.102011(1.102

Boodcomm

SOIL

Sampling Point:

Type: C=Concentration, D=Depletion, RM=R-Hydric Soil Indicators:	Golor (moist) % Type Loc / (0 y R 1/2 & D M / 2 & D M /	Texture Remarks
Type: C=Concentration, D=Depletion, RM=R	104R3/6 2 8 M	
Type, C=Concentration, D=Depletion, RM=R lydric Soil Indicators:		
Type: C=Concentration, D=Depletion, RM=R lydric Soil Indicators:		
Type: C=Concentration, D=Depletion, RM=R lydric Soil Indicators:		
Type: C=Concentration, D=Depletion, RM=R lydric Soil Indicators:		
Type: C=Concentration, D=Depletion, RM=R lydric Soil Indicators:		
Type: C=Concentration, D=Depletion, RM=R lydric Soil Indicators:		
Type: C=Concentration, D=Depletion, RM=R lydric Soil Indicators:		
lydric Soil Indicators:	Agreement Matter, ME-Marked Cond Copins	² Location: PL=Pore Lining, M=Mainx.
	recoved many, mo-maned dand Grants.	Indicators for Problematic Hydric Soils
Histosol (A1)	Sandy Gleyed Matrix (S4)	Coast Prairie Redox (A16)
Histic Epipedon (A2)	Sandy Redox (S5)	Dark Surface (S7)
Black Histic (A3)	Stripped Matrix (S6)	Iron-Manganese Masses (F12)
Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1)	Very Shallow Dark Surface (TF12)
Stratified Layers (A5)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
2 cm Muck (A10)	Depleted Matrix (F3)	
Depleted Below Dark Surface (A11)	Redox Dark Surface (F6)	
Thick Dark Surface (A12)	Depleted Dark Surface (F7)	³ Indicators of hydrophytic vegetetion and
Sandy Mucky Mineral (S1)	Redox Depressions (F8)	wetland hydrology must be present,
5 cm Mucky Peat or Peat (S3) lastrictive Layer (if observed):		unless disturbed or problematic
4		/
	→	Hydric Soil Present? Yes No V
Depth (inches):	_	Tryand Controduct 103 110
/DROLOGY		
letland Hydrology Indicators: rimary Indicators (minimum of one is required	check all that apply)	Secondary indicators (minimum of two required)
Surface Water (A1)	Water-Stained Leaves (B9)	-
High Water Table (A2)	Aquatic Fauna (B13)	Surface Soil Cracks (B6)
Saturation (A3)	True Aquatic Plants (B14)	Drainage Patterns (B10) Dry-Season Water Table (C2)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (_ , , ,
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reduction In Tilled Soils (C6)	
Iron Deposits (B5)	Thin Muck Surface (C7)	FAC-Neutral Test (D5)
Inundation Visible on Aenal Imagery (B7)	Gauge or Well Data (D9)	
Sparsely Vegetated Concave Surface (B8)		
eld Observations:		
urface Mater Brancott	Depth (Inches):	
Trace vvaler Present? Tes No	/ /	
ater Table Present? Yes No_	1	and Hudeology Propost? Man
	1	and Hydrology Present? Yes No
ater Table Present? Yes No ituration Present? Yes No cludes capillary fringe)	1	
ater Table Present? Yes No_ sturation Present? Yes No_ cludes capillary fringe) scribe Recorded Data (stream gauge, monito	Depth (inches): Wetla	
ater Table Present? Yes No_ ituration Present? Yes No_ cludes capillary fringe) scribe Recorded Data (stream gauge, monito	Depth (inches): Wetla	f available: N/A
ater Table Present? Yes No_ ituration Present? Yes No_ cludes capillary fringe) scribe Recorded Data (stream gauge, monito	Depth (inches): Wetla	f available: N/A

Project/Site: Live 880		City/County: 5+.1	Sampling Date: 2-17-201
Applicant/Owner: Spl A		City/County.	14 -
Investigator(s): 11P-W1W		0 / T / D	
			lange: 14/12 / 1 / 1 / 1 / 1
Landform (hillslope, terrace, etc.):			of (concave, convex, none):
Slope (%): Lat: Lat: 14.7		4	17705 Datum. NAD83
,		lopes, erado	
Are climatic / hydrologic conditions on the site typical for this	time of ye	ar? YesNo	(If no, explain in Remarks.)
Are Vegetation N, Soil N, or Hydrology N si	gnificantly	disturbed? Are	*Normal Circumstances" present? Yes No
Are Vegetation N. Soil N., or Hydrology N. n.	aturally pro	oblematic? (If r	needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map s	showing	sampling point	locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	\times		
Hydric Soil Present? Yes No		is the Sample	
Wetland Hydrology Present? Yes No	\times	within a Wetla	and? Yes No
- Area upland sample poin			A
- Area of sample point	with	NIN reside	ntial yard
VEGETATION – Use scientific names of plants.			
Tree Stratum (Plot size: 30 V)	Absolute	Dominant Indicator Species? Status	Dominance Test worksheet:
1. Quencus Dalustais	10	Species? Status	Number of Dominant Species That Are OBL, FACW, or FAC:
2			That Ale OBL, FACW, OF FAC.
3.			Total Number of Dominant Species Across Ali Strata: (B)
4.			
5.			Percent of Dominant Species That Are OBL, FACW, or FAC (A/B)
, gar,	10	= Total Cover	That Are OBL, FACW, or FAC
Saping/Shrub Stratum (Plot size: 5 /)			Prevalence Index worksheet:
1			Total % Cover of: Multiply by:
2.			OBL species x 1 = 0
3. /			FACW species *2 =
4			FAC species
5,			FACU species (00 x4 = 400
	0	= Total Cover	UPL species
Herb Stratum (Plot size:)	. 7	Y TAGIL	Column Totals: (10 (A) 420 (B)
1 Schedmorus anudinaceus	20	Y TACU	Prevalence Index = B/A = 4.3-0
2 Digitaria Sanguinalis	20	-V-500	Hydrophytic Vegetation indicators:
3. Poa annua	10	-/- FACU	1 - Rapid Test for Hydrophytic Vegetation
4. I citalista vapens	10	N MACO	2 - Dominance Test is >50%
5. Prunolla vulcares	10	N FACU	3 - Prevalence Index is ≤3.01
6. Corastium temtanum	10	~ FACU	4 - Morphological Adaptations ¹ (Provide supporting
7.			data in Remarks or on a separate sheet)
0.			Problematic Hydrophytic Vegetation¹ (Explain)
9			1
Woody Vine Stratum (Plot size: 20 V)	100	= Tolal Cover	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1			Modulator
Aleccent			Hydrophytic Vegetation
- Idagranes	0	= Total Cover	Present? Yes No
Remarks: (Include photo numbers here or on a separate sh			
- PIMP	,		
1- 0.			

wmossp119 Sampling Point: <u>vpland</u>

Profile Description: (Describe to the dep	th needed to document the indicator or confirm	n the absence of indicators.)
Depth <u>Matrix</u>	Redox Features	
(inches) Color (moist) %	Color (moist) % Type Lac	Texture Remarks
0-3 104R 3/2 100		SICL
3-17 104R4/1 80	7.54R3/4 5 C M	('()
	TEMPLE C C MIA	311-1-
	413 14 16 3 C III/PL	
	54R34 2 C M	
	=Reduced Matrix, MS=Masked Sand Grains.	*Location: PL=Pore Lining, M=Matrix
Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Gleyed Matrix (S4)	Coast Prairie Redox (A16)
Histic Epipedon (A2)	Sandy Redox (S5)	Dark Surface (S7)
Bleck Histic (A3)	Stripped Matrix (S6)	Iron-Manganese Masses (F12)
Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1)	Very Shallow Dark Surface (TF12)
Stratified Layers (A5)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
2 cm Muck (A10)	Depleted Mainx (F3)	
Depleted Below Dark Surface (A11)	Redox Dark Surface (F6)	3to Postoro et la
Thick Dark Surface (A12) Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	³ Indicators of hydrophytic vegetation and
5 cm Mucky Peat or Peat (S3)	Redox Depressions (F8)	wetland hydrology must be present, unless disturbed or problematic
Restrictive Layer (if observed):		unless disturbed of problematic
Type: NOV		\
	_	Hydric Soil Present? Yes No
Depth (inches):		
HYDROLOGY		
Wetland Hydrology Indicators:		
Primary Indicators (minimum of one is requir	ed sheet all that apply)	Consider Indicator facilities of the control of
	The state of the s	Secondary Indicators (minimum of two required)
Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9)	Surface Soil Cracks (B6)
_ · · ·	Aquatic Fauna (B13)	Drainage Patterns (B10)
Saturation (A3)	True Aquetic Plants (B14)	Dry-Season Water Table (C2)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (• • • • • • • • • • • • • • • • • • • •
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6)	
Iron Deposits (B5)	Thin Muck Surface (C7)	FAC-Neutral Test (D5)
Inundetion Visible on Aerial Imagery (B7		
Sparsely Vegetated Concave Surface (E Field Observations;	88) Other (Explain in Remarks)	
	No. of the second	
	No Depth (inches):	
Water Table Present? Yes N	lo Depth (inches):	
		nd Hydrology Present? Yes No
(includes capillary fringe)		
(includes capillary fringe) Describe Recorded Data (stream gauge, mo	nitoring well, aerial photos, previous inspections), if	
(includes capillary fringe) Describe Recorded Data (stream gauge, mo		
(includes capillary fringe) Describe Recorded Data (stream gauge, mo		
(includes capillary fringe) Describe Recorded Data (stream gauge, mo		

WMO-JJP- 120

Project/Site: Live, 880		City/County:	Louis (a Sampling Date: Z-18-76
Applicant/Owner: Space			State: MO_ Sampling Point: UDIAND
Investigator(s):		Section, Township, Ra	10 C C C C C C C C C C C C C C C C C C C
Landform (hillstope, terrace, etc.): Hills of			f (concave, convex, none):
	0 100		45962 Datum NAD83
Soil Map Unit Name: MEN FID SITT GLA			lect. NWI classification: None
Are climatic l hydrologic conditions on the site typical for thi	s time of y	ear? Yes No _	(If no, explain in Remarks.)
Are Vegetation M Soil M or Hydrology N s	significantly	disturbed? Are	'Normal Circumstances" present? Yes No
Are Vegetation Soil, or Hydrology r	naturally pr	oblematic? (If n	eeded, explain any answers in Remarks,)
SUMMARY OF FINDINGS - Attach site map	showing	sampling point	locations, transects, important features, etc.
1 1 1 1	lo_		
Hydric Soil Present? Yes N	· ·	Is the Sample	A
	lo <u>~</u>	within a Wetla	
- Area upland sample poin	fo	r wetland	PEM/PFO WMONP120
- Area pasture tield			
VEGETATION – Use scientific names of plants.			
Tree Stratum (Plot size: 30'V)	Absolute % Cover	Dominant Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2			matrice obe; triotr, of the.
3			Total Number of Dominant
4 14 05000			Species Across All Strata: (B)
5.			Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum (Plot size:		= Total Cover	Prevalence Index worksheet:
1			Total % Cover of: Multiply by:
2 1			OBL species
3			FACW species O x 2 = O
4 HOSEM	-		FAC species
5			FACU species (00 x 4 = 400
	7	= Total Cover	UPL species O x 5 = O
Herb Stratum (Plot size:	-0	- Total Gover	Column Totals: 100 (A) 400 (B)
1 Trifolium repens	35	7 FACU	
2 Digitaria Sanguinalis	35	Y FACU	Prevalence Index = B/A = 4.00
3. Fretuca rubra	20	Y FACU	Hydrophytic Vegetation indicators:
4 Pra annia	20	Y FACU	1 - Rapid Test for Hydrophytic Vegetation
5.			2 - Dominance Test is >50%
6.			3 - Prevalence Index is ≤3.01
7.			4 - Morphological Adaptations¹ (Provide supporting
8.			data in Remarks or on a separate sheet)
9.			Problematic Hydrophytic Vegetation ¹ (Explain)
10			[.
	100	= Total Cover	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1		·	Hydrophytic
2. AWSOM		-	Vegetation
, , , , , , , , , , , , , , , , , , , ,		= Total Cover	Present? Yes No
Remarks: (Include photo numbers here or on a separate s	heet.)		
-rone			

Sampling Point:	_
mma 17 b 150	1

Depth Matrix		
	Redox Features	unfirm the absence of indicators.)
(inches) Color (moist) %		oc ² Texture Remarks
10-4 101 R 3/3 100		SIL
4-17 10VR4/3 60	7518416 10 C W	IML SICL
	04R4/2 5 D V	7
	7 - 3 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	70
	OYR JI S U	<u> </u>
*Type: C=Concentration, D=Depletion, RM=F	Reduced Multin MS=Masked Sand Grains	⁷ Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Gleyed Matrix (S4)	Coast Prairie Redox (A16)
Histic Epipedon (A2)	Sandy Redox (S5)	Dark Surface (S7)
Black Histic (A3)	Stripped Matrix (S6)	Iron-Manganese Masses (F12)
Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1)	Very Shallow Dark Surface (TF12)
Stratified Layers (A5)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
2 cm Muck (A10)	Depleted Matrix (F3)	
Depleted Below Dark Surface (A11) Thick Dark Surface (A12)	Redox Dark Surface (F6) Depleted Dark Surface (F7)	3 mail on the same of head combands are same and
Sandy Mucky Mineral (S1)	Redox Depressions (F8)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present,
5 cm Mucky Peat or Peat (S3)	reads papiessions (10)	unless disturbed or problematic.
Restrictive Layer (if observed):		
Type: N M		
Depth (inches):		Hydric Soil Present? Yes No
Remarks:		
-200		
- 1016		0.1
HYDROLOGY		
nibkologi		
Wetland Hydrology Indicators:	t' charte all that apply)	Secondary fedicains (minimum of two marries d)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required		Secondary Indicators (minimum of two required)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1)	Water-Stained Leaves (B9)	Surface Soil Cracks (B6)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9)Aquatic Fauna (B13)	Surface Soil Cracks (B6) Drainage Patterns (B10)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living References.	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) pots (C3) Saturation Visible on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Represence of Reduced Iron (C4)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Represence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) poots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) s (C6) Geomorphic Position (D2)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Represence of Reduced Iron (C4)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required 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)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Represence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Thin Muck Surface (C7) Gauge or Well Data (D9)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) poots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) s (C6) Geomorphic Position (D2)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Romer of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) poots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) s (C6) Geomorphic Position (D2)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Romer of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) poots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) s (C6) Geomorphic Position (D2)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Romer of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) poots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) s (C6) Geomorphic Position (D2)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Represence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) s (C6) Geomorphic Position (D2) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8 Field Observations: Surface Water Present? Yes No Saturation Present? Yes No Since Surface (B8 Field Observations)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Represence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks) Depth (inches): Depth (inches):	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) pots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) s (C6) Geomorphic Position (D2) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Water Table Present? Yes No Saturation Present? Yes No	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Represence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks) Depth (inches): Depth (inches):	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) pots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) s (C6) Geomorphic Position (D2) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8 Field Observations: Surface Water Present? Yes No Saturation Present? Yes No Since Surface (B8 Field Observations)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Represence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks) Depth (inches): Depth (inches):	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) pots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) s (C6) Geomorphic Position (D2) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Water Table Present? Yes No Saturation Present? Yes No Gaturation Present?	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Represence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks) Depth (inches): Depth (inches):	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) pots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) s (C6) Geomorphic Position (D2) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Water Table Present? Yes No Saturation Present? Yes No Gincludes Capillary fringe) Describe Recorded Data (Stream gauge, monitors)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Represence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks) Depth (inches): Depth (inches):	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) pots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) s (C6) Geomorphic Position (D2) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes Notwater Table Present?	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Represence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks) Depth (inches): Depth (inches):	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) pots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) s (C6) Geomorphic Position (D2) FAC-Neutral Test (D5)

WMO-JJP - 121

Project/Site: _Live 880	City/C	county: ST Louis CO Sampling Date: 2-18-20
Applicant/Owner: 5 pive	Only/C	State: M.O Sampling Point: U D land
Investigator(s): 110-w1w	Section	Township Rense: 1960
Landform (hillslope, terrace, etc.): hills le Al		
Slope (%): 4 Lat: 38. 832023	Lance	Local relief (concave, convex, none): No re(ref)
		Supes eroded NWI classification: None
Are climatic / hydrologic conditions on the site typical for	-	
Are Vegetation Soil or Hydrology		100
Are Vegetation Soil, or Hydrology SUMMARY OF FINDINGS Attach site ma		tic? (If needed, explain any answers in Remarks.) pling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes	1	The state of the s
Hydric Soil Present? Yes	7 74	Is the Sampled Area
Wetland Hydrology Present? Yes	1	within a Wetland? Yes No
Remarks: - Avea upland sample po	int for u	retland cump UP121
EGETATION - Use scientific names of plan	ts.	
Tree Stratum (Plot size: 30'V)	Absolute Domi	nant Indicator Dominance Test worksheet:
1.	% Cover Spec	Number of Dominant Species
		That Are OBL, FACW, or FAC:(A)
		Total Number of Dominant
tt DSem		Species Across All Strata: (B)
		Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
apling/Shrub Stratum (Plot size: 15 /)	= Total	Cover That Are OBL, FACW, or FAC: (A/B)
Acon Mundo	~ V	Prevalence Index worksheet:
The regional		
		OBL species x1 = O
		FACW species x2 = 0 FAC species x3 = 1
		FACU species
eman, 1	= Total	
rb Stratum (Plot size:)		Column Tabella ISST III (1)
schedonorus anundinaus	5 100 X	- FAEU
Phloum praterise	- 25 N	Prevalence Index = B/A = 3.97
Dactylus glamenata	<u> 25 //</u>	Hydrophytic Vegetation Indicators:
		1 - Rapid Test for Hydrophytic Vegetation
		3 - Prevalence Index is ≤3.0¹
		4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
		Problematic Hydrophytic Vegetation ¹ (Explain)
pody Vine Stratum (Plot size: 30 V	/5-0 = Total C	over 1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Alacant		- Hydrophytic
HUSUM		Vegetation
marke: (Include phote sumbare base	= Total C	over Present? Yes No
marks: (Include photo numbers here or on a separate s	sneet.)	
More		
		· ·

wwoJJP121 Sampling Point Upland

Profile Description: (Describe to the de Depth Matrix	Reday Features	
(inches) Calar (moist) %	Color (moist) % Type Log*	
0-5 757R4/2 100		SiL
5-17 10YR4/4 10C		Sil
		- 311-
	·	
Type CaConsolution C.C.		
Tydric Soil Indicators:	=Reduced Matrix, MS=Masked Sand Grains.	³ Location: PL=Pore Lining, M=Matrix.
Histosol (A1)	0 1 01 1 1 1 1 1 1 1 1 1	Indicators for Problematic Hydric Soils
Histic Epipedon (A2)	Sandy Gleyed Matrix (S4)	Coast Prairie Redox (A16)
Black Histic (A3)	Sandy Redox (S5) Stripped Matrix (S6)	Dark Surface (S7)
Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1)	Iron-Manganese Masses (F12)
Stratified Layers (A5)	Loamy Gleyed Matrix (F2)	Very Shallow Dark Surface (TF12) Olher (Explain in Remarks)
2 cm Muck (A10)	Depleted Matrix (F3)	Outer (Explain in Remarks)
Depleted Below Dark Surface (A11)	Redox Dark Surface (F6)	
_ Thick Dark Surface (A12)	Depleted Dark Surface (F7)	³ Indicators of hydrophytic vegetation and
_ Sandy Mucky Mineral (S1)	Redox Depressions (F8)	wetland hydrology must be present,
5 cm Mucky Peat or Peat (53)		unless disturbed or problematic.
estrictive Layer (if observed):		
Type:	_	
Depth (inches):		Hydric Soil Present? Yes No
emarks:		
emarks:		
DROLOGY		
DROLOGY etland Hydrology Indicators:		
DROLOGY otland Hydrology Indicators: mary Indicators (minimum of one is require		
DROLOGY otland Hydrology Indicators: mary Indicators (minimum of one is require . Surface Water (A1)	Water-Stained Leaves (B9)	
DROLOGY otland Hydrology Indicators: mary Indicators (minimum of one is require Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9) Aquatic Fauna (B13)	Secondary Indicators (minimum of two require Surface Soil Cracks (B6)
DROLOGY Indicators: Mary Indicators (minimum of one is require) Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14)	Secondary Indicators (minimum of two require Surface Soil Cracks (86) Drainage Patterns (810)
DROLOGY Interpretation (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1)	Secondary Indicators (minimum of two require Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
DROLOGY Indicators: Mary Ind	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (I	Secondary Indicators (minimum of two require Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
DROLOGY Indicators: mary Indicators: Migh Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (C1) Presence of Reduced Iron (C4)	Secondary Indicators (minimum of two require Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)
DROLOGY Interpolation of the	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (I) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6)	Secondary Indicators (minimum of two require Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)
DROLOGY Interpolation of the property of the	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (In Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7)	Secondary Indicators (minimum of two require Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)
DROLOGY Indicators (minimum of one is require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (I) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Gauge or Well Data (D9)	Secondary Indicators (minimum of two require Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
DROLOGY Interpretation (Minimum of one is required and Hydrology Indicators: Mary Indicators (Minimum of one is required and surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (C1) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Gauge or Well Data (D9)	Secondary Indicators (minimum of two require Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
DROLOGY Interpolation of the	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (C1) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks)	Secondary Indicators (minimum of two require Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
DROLOGY Interpretation of the property of the	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (C1) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks)	Secondary Indicators (minimum of two require Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
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DROLOGY Interpretation of the property of the	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (C1) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks) Depth (inches):	Secondary Indicators (minimum of two require Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
DROLOGY Indicators (minimum of one is required surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Id Observations: face Water Present? Yes No uration Present? Yes No	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (C1) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks) Depth (inches): Depth (inches): Wotter	Secondary Indicators (minimum of two require Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5)
DROLOGY Indicators (minimum of one is required surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Id Observations: face Water Present? Yes No uration Present? Yes No	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (C1) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks) Depth (inches):	Secondary Indicators (minimum of two require Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5)
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DROLOGY Interpretation of the property of the	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (C1) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks) Depth (inches): Depth (inches): Wotter	Secondary Indicators (minimum of two require Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5)

WETLAND DE	ETERMINATION DATA FOI	RM – Midwest Region
Project/Site: Live 880	City/County: S	Louis Sampling Date: 2 - 20 - 201
Applicant/Owner: 50 W		State: MO Sampling Point: U OGNO
Investigator(s): JJP-WJW	Section Township	, Range: 17/7E. / 47 V
Landform (hillslope, terrace, etc.):		elief (concave, convex, none):
Slope (%): S Lat: 38 812 301	Long: - 90.	
Soil Map Unit Name		1-1-1-2-1
Are climatic / hydrologic conditions on the site typical fo	1 .	
Are Vegetation, Soil or Hydrology		
		Are 'Normal Circumstances" present? Yes No
Are Vegetation Soil, or Hydrology	The state of the s	lf needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site m	ap showing sampling poir	nt locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes	No No	alad base
Hydric Soil Present? Yes	No Is the Samp	
Wetland Hydrology Present? Yes		
-Aven upland sample po	oint for wetlar	rd wmossp122
,		
MEGETATION Allegation (Communication)		
VEGETATION – Use scientific names of plar		
Tree Stratum (Plot size: 301)	Absolute Dominant Indicate <u>% Cover Species? Statu</u>	
1 Ulmus rubra	5 Y FAC	Number of Dominant Species That Are OBL, FACW, or FAC (A)
2 Juni Derus Virginiana	5 Y FAU	0
3.		Total Number of Dominant Species Across All Strata: (B)
4		
5		Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum (Plot size: 15'r	= Total Cover	Prevalence Index worksheet;
1 Rubus allegheniensis	20 Y FA	U
2 Acen ruhrum	5 N FAC	OBL species O x 1 = O
3. Prunus serotina	5 N FAL	U FACW species x2 =
4		FAC species 60 x3 = 180
5.		FACU species 40 x4=160
	= Total Cover	UPL species x5 =
Harb Stratum (Plot size:)	SO Y FAC	Column Totals: (OO (A) 340 (B)
2 Alliania Roticlata	V FACE	Prevalence Index = B/A = 3.40
3 Rubus alecheniensis	S- N FA()	Hydrophytic Vegetation Indicators:
4.		1 - Rapid Test for Hydrophytic Vegetation
5		2 - Dominance Test is >50%
6		3 - Prevalence Index is ≤3.01
7		4 - Morphological Adaptations¹ (Provide supporting
8.		data in Remarks or on a separate sheet)
9		Problematic Hydrophytic Vegetation¹ (Explain)
10		- Nadianton of hydric - 1 - 1 - 1 - 1 - 1 - 1
Weedy Vine Stratum (Plot size: 30 1/-)	(O) = Total Cover	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1		
2 Ascent		Hydrophytic Vegetation
- ////	= Total Cover	Present? Yes No
Remarks: (Include photo numbers here or on a separa		

None

WMOJSP122 Sampling Point Upland

		n the absence of indicators.)
Depth Matrix	Redox Features	
(inches) Color (moist) %	Color (moist) 16 Type Loc	Texture Remarks
0-6 10/R3/2 100	0.117	316
6-17 2514/2 90	10484/6 5 C M	SCL
/-	7.5183/ 5 C M	
Tune: C=Concentration D=Depletion Bh	/I=Reduced Matrix, MS=Masked Sand Grains	A continue Di allera i laine Adabidatio
Hydric Soil Indicators:	N-Neduced many Mo-Masked Sand Grand	*Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils*:
Histosol (A1)	Sandy Cloud Matrix (S4)	
Histic Epipedon (A2)	Sandy Gleyed Matrix (S4) Sandy Redox (S5)	Coast Prairie Redox (A16)
Black Histic (A3)	Stripped Matrix (S6)	Dark Surface (S7) Iron-Manganese Masses (F12)
Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1)	Very Shallow Dark Surface (TF12)
Stratified Layers (A5)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
2 cm Muck (A10)	Deplated Matrix (F3)	Color (Explain in Nomains)
Depleted Below Dark Surface (A11)	Redox Dark Surface (F6)	
Thick Dark Surface (A12)	Depleted Dark Surface (F7)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Redox Depressions (F8)	wetland hydrology must be present,
5 cm Mucky Peat or Peat (S3)		unless disturbed or problematic.
Restrictive Layer (if observed):		
Туре: <i>N o</i> VY		
Depth (inches):		Hydric Soil Present? Yes No
Remarks:		
YDROLOGY		
Vetland Hydrology Indicators:	19000	de contra de como de c
Primary Indicators (minimum of one is requ	ired: check all that apply)	Secondary Indicators (minimum of two required)
Surface Water (A1)	Water-Stained Leaves (B9)	Surface Soil Cracks (B6)
High Water Table (A2)	Aquatic Fauna (B13)	Drainage Patterns (B10)
Saturation (A3)	True Aquatic Plants (B14)	Dry-Season Water Table (C2)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Drift Deposits (B3) Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)Recent Iron Reduction in Tilled Soils (C6)	
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6)Thin Muck Surface (C7)) Geomorphic Position (D2)
Algal Mat or Crust (B4) Iron Deposits (B5)	 Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Gauge or Well Data (D9)) Geomorphic Position (D2)
Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface	 Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Gauge or Well Data (D9)) Geomorphic Position (D2)
Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (E Sparsely Vegetated Concave Surface (Feld Observations)	Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Gauge or Well Data (D9) (B8) Other (Explain in Remarks)) Geomorphic Position (D2)
Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface (Buface Water Present? Yes	Recent Iron Reduction in Tilled Soils (C6, Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks)) Geomorphic Position (D2)
Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface (Beld Observations) Surface Water Present? Yes Vater Table Present? Yes	Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Gauge or Well Data (D9) B8) Other (Explain in Remarks) No Depth (inches): Depth (inches):) Geomorphic Position (D2)
Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B	Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Gauge or Well Data (D9) B8) Other (Explain in Remarks) No Depth (inches): Depth (inches):) Geomorphic Position (D2) FAC-Neutral Test (D5)
Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (E Sparsely Vegetated Concave Surface of the Imagery (Batter) Surface Water Present? Vater Table Present? Saturation Present? Yes Saturation Present? Yes Describe Recorded Data (stream gauge, m.)	Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Gauge or Well Data (D9) (B8) Other (Explain in Remarks) No Depth (inches): Depth (inches): Wetla) Geomorphic Position (D2) FAC-Neutral Test (D5) Ind Hydrology Present? Yes No
Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (E Sparsely Vegetated Concave Surface of the Imagery (Basel) Surface Water Present? Yes	Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Gauge or Well Data (D9) (B8) Other (Explain in Remarks) No Depth (inches): No Depth (inches): No Depth (inches): Wetla	Geomorphic Position (D2) FAC-Neutral Test (D5) and Hydrology Present? Yes No
Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B	Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Gauge or Well Data (D9) (B8) Other (Explain in Remarks) No Depth (inches): Depth (inches): Wetla	Geomorphic Position (D2) FAC-Neutral Test (D5) and Hydrology Present? Yes No

UPL

Project/Site: Applicant/Owner: Investigator(s): Landform (hillslope, terrace, etc.): Slope (%): Lat: Soil Map Unit Name: Are climatic / hydrologic conditions on the site typical for this	Section, Township, Ra Local reliet Long. — 90, 24	f (concave, convex, none):
Are Vegetation, Soil, or Hydrologys	T	"Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology n		eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map	showing sampling point	locations, transects, important features, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Remarks Accordance Opland Sample for	within a Wetla	nd? Yes No
wmosspr3 PES.		
VEGETATION – Use scientific names of plants.		
1. Acen necundo 2	Absolute Dominant Indicator Species Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC Total Number of Dominant Species Across All Strata: (B)
5	40 = Total Cover 10	Percent of Dominant Species That Are OBL, FACW, or FAC: Prevalence Index worksheet Total Cover of: OBL species FACW species FACW species FAC species X 2 = FAC species X 3 = 1
5	TO = Total Cover The state of	FACU species 50 $x = 400$ UPL species 10 $x = 50$ Column Totals: 100 (A) 370 (B) Prevalence Index = B/A = 3.70 Hydrophytic Vegetation indicators:
4. Allivin Vinage 5. Fraçarba Viriviana 6	\$ \(\frac{1}{1}\) \(\frac{1}\) \(\frac{1}{1}\) \(\frac{1}\) \(\fra	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) Problematic Hydrophytic Vegetation¹ (Explain)
Woody Vne Statum (Plot size: 30) 1.	= Total Cover	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes No
Remarks: (Include photo numbers here or on a separate sh		

WMOSIP123 PEM-PSS
Sampling Point: upland

SOIL

Depth	Matrix			x Feature					(E01000)	
(inches)	Color (moist)		Color (moist)	_%_	Type	_Loc_	Textur	e _	Remari	¢s
2-5	10 YR 3/3	100					210			
5-17-	2.574/2	95	10 YR3/4	5		W	Sic			
	ncentration, D=Dep	felion, RM=f	Reduced Matrix, MS	S=Masked	Sand Gr	ains.			ore Lining, M=1	
lydric Soil I									blematic Hyd	ric Soils
Histosol (Sleyed Ma					Redox (A16)	
	ipedon (A2)			Redox (S5	•			irk Surface (•	~ · ·
Black His				Matrix (S				_	se Masses (F1	•
	n Sulfide (A4)			Aucky Mir				_	Dark Surface (1	IF12)
	Layers (A5)			Heyed Ma			0	ner (Explain	in Remarks)	
_ 2 cm Mud		. (844)		Matrix (F						
	Below Dark Surface	e (A11)	_	ark Surfa			31		L.4:	Name and
	rk Surface (A12)				rface (F7)				ophytic vegeta	
	ucky Mineral (S1)) \	Redox L	epression	ns (FB)			-	ogy must be pr	
	cky Peat or Peat (SC ayer (if observed):						un	iess disturbe	ed or problema	tic.
Type:	ayer (if observed):								\ /	
туре	*		_				Hydric	Soil Presen	t? Yes X	No
Donth (incl									7	
Depth (inclemarks:										
emarks:	e.									
Pemarks:	e.									
Pemarks:	SY rology Indicators:	ne is require	d. check all that app	oly)			Seco	ndary Indica	ators (minimum	of two required
emarks:	e ey	ne is require	d check all that app		es (B9)				ators (minimum Cracks (B6)	of two requires
OROLOG Vetland Hydi rimary Indica Surface V	GY rology Indicators: ators (minimum of o	ne is require		ned Leave				Surface Soil	Cracks (B6)	of two requires
OROLOG Jetland Hydica Surface V High Water	rology Indicators: ators (minimum of o Vater (A1) er Table (A2)	ne is require	Water-Stair Aquatic Fac	ned Leave una (B13)			_	Surface Soil Oralnage Pa	Cracks (B6) tterns (B10)	
POROLOG Vetland Hydica Surface V High Wate Saturation	rology Indicators: ators (minimum of o Vater (A1) er Table (A2)	ne is require	Water-Stair Aquatic Fau True Aquat	ned Leave una (B13) ic Plants ((B14)		_	Surface Soil Drainage Pa Dry-Season	Cracks (B6) tterns (B10) Water Table (C	
OROLOG Vetland Hydic Surface V High Wate Saturation Water Ma	rology Indicators: ators (minimum of o Vater (A1) er Table (A2) n (A3) urks (B1)	ne is require	Water-Stain Aquatic Fau True Aquat Hydrogen S	ned Leave una (B13) ic Plants (Sulfide Od	(B14) lor (C1)	ng Roots	_ _ _	Surface Soil Dralnage Pa Dry-Season Crayfish Bur	Cracks (B6) tterns (B10) Water Table (Crows (C8)	C2)
POROLOG Vetland Hydrimary Indica Surface V High Water Saturation Water Ma Sediment	rology Indicators: ators (minimum of or Vater (A1) er Table (A2) n (A3) arks (B1) Deposits (B2)	ne is require	Water-Stain Aquatic Fai True Aquat Hydrogen S Oxidized Ri	ned Leave una (B13) ic Plants (Sulfide Od hizospher	(B14) lor (C1) res on Livi	•	(C3)	Surface Soil Oralnage Pa Ory-Season Crayfish Bur Saturation V	Cracks (B6) tterns (B10) Water Table (0 rows (C8) isible on Aerial	C2) Imagery (C9)
PROLOGIVETION OF THE PROLOGIC	rology Indicators: ators (minimum of orvater (A1) er Table (A2) n (A3) arks (B1) Deposits (B2) osits (B3)	ne is require	Water-Stain Aquatic Fai True Aquat Hydrogen S Oxidized Ri	ned Leave una (B13) ic Plants (Sulfide Od hizospher f Reduced	(B14) lor (C1) res on Livi d Iron (C4)	(C3)	Surface Soil Oralnage Pa Ory-Season Crayfish Bur Saturation V Stunted or S	Cracks (B6) tterns (B10) Water Table (Crows (C8) isible on Aenal tressed Plants	C2) Imagery (C9)
/DROLOG /etland Hydrimary Indica Surface V High Water Saturation Water Ma Sediment Drift Depo	rology Indicators: ators (minimum of or Vater (A1) er Table (A2) n (A3) orks (B1) Deposits (B2) osits (B3) or Crust (B4)	ne is require	Water-Stain Aquatic Fai True Aquat Hydrogen S Oxidized Ri Presence o Recent Iron	ned Leave una (B13) ic Plants (Sulfide Od hizospher f Reduced Reduction	(B14) lor (C1) res on Livi d Iron (C4 on in Tilled)	(C3)	Surface Soil Dralnage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic	Cracks (B6) tterns (B10) Water Table (Crows (C8) isible on Aerial tressed Plants Position (D2)	C2) Imagery (C9)
/DROLOG /etland Hydrimary Indica Surface V High Water Saturation Water Ma Sediment Drift Depo	rology Indicators: ators (minimum of or Vater (A1) er Table (A2) n (A3) nrks (B1) Deposits (B2) osits (B3) or Crust (B4) osits (B5)		Water-Stair Aquatic Far True Aquat Hydrogen S Oxidized R Presence o Recent Iron	ned Leave una (B13) ic Plants (Gulfide Od hizospher f Reductio Surface (((B14) lor (C1) res on Livi d Iron (C4 on in Tilled C7))	(C3)	Surface Soil Oralnage Pa Ory-Season Crayfish Bur Saturation V Stunted or S	Cracks (B6) tterns (B10) Water Table (Crows (C8) isible on Aerial tressed Plants Position (D2)	C2) Imagery (C9)
/DROLOG /etland Hydinimary Indica Surface V High Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation	rology Indicators: ators (minimum of or Vater (A1) er Table (A2) n (A3) nrks (B1) Deposits (B2) osits (B3) or Crust (B4) osits (B5) n Visible on Aerial In	nagery (B7)	Water-Stain Aquatic Fai True Aquat Hydrogen S Oxidized Ri Presence o Recent Iron Thin Muck S Gauge or W	ned Leave una (B13) ic Plants (Sulfide Od hizospher f Reduced Reduction Surface (C	(B14) lor (C1) res on Livi d Iron (C4 on in Tilled C7))	(C3)	Surface Soil Dralnage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic	Cracks (B6) tterns (B10) Water Table (Crows (C8) isible on Aerial tressed Plants Position (D2)	C2) Imagery (C9)
/DROLOG /etland Hydirimary Indica Surface V High Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Sparsely V	rology Indicators: ators (minimum of or Vater (A1) er Table (A2) n (A3) nrks (B1) Deposits (B2) osits (B3) or Crust (B4) osits (B5) n Visible on Aerial In	nagery (B7)	Water-Stain Aquatic Fai True Aquat Hydrogen S Oxidized Ri Presence o Recent Iron Thin Muck S Gauge or W	ned Leave una (B13) ic Plants (Sulfide Od hizospher f Reduced Reduction Surface (C	(B14) lor (C1) res on Livi d Iron (C4 on in Tilled C7))	(C3)	Surface Soil Dralnage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic	Cracks (B6) tterns (B10) Water Table (Crows (C8) isible on Aerial tressed Plants Position (D2)	C2) Imagery (C9)
POROLOG Vetland Hydrimary Indica Surface V High Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Sparsely V	rology Indicators: ators (minimum of or Vater (A1) er Table (A2) n (A3) urks (B1) Deposits (B2) osits (B3) or Crust (B4) osits (B5) n Visible on Aerial In	nagery (B7) Surface (B8	Water-Stain Aquatic Fai True Aquat Hydrogen S Oxidized Ri Presence o Recent Iron Thin Muck S Gauge or W	ned Leave una (B13) ic Plants (Sulfide Od hizospher f Reducer Reduction Surface (C Vell Data (ain in Rer	(B14) lor (C1) res on Livi d Iron (C4 on in Tilled C7) (D9) marks))	(C3)	Surface Soil Dralnage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic	Cracks (B6) tterns (B10) Water Table (Crows (C8) isible on Aerial tressed Plants Position (D2)	C2) Imagery (C9)
/DROLOG /etland Hyderimary Indica Surface V High Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Sparsely V eld Observer	rology Indicators: ators (minimum of or Vater (A1) er Table (A2) n (A3) urks (B1) Deposits (B2) osits (B3) or Crust (B4) osits (B5) n Visible on Aerial In	nagery (B7) Surface (B8	Water-Stain Aquatic Fai True Aquat Hydrogen S Oxidized Ri Presence o Recent Iron Thin Muck S Gauge or W	ned Leave una (B13) ic Plants (Sulfide Od hizospher f Reducer Reduction Surface (C Vell Data (ain in Rer	(B14) lor (C1) res on Livi d Iron (C4 on in Tilled C7) (D9) marks))	(C3)	Surface Soil Dralnage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic	Cracks (B6) tterns (B10) Water Table (Crows (C8) isible on Aerial tressed Plants Position (D2)	C2) Imagery (C9)
/DROLOG /etland Hyderimary Indica Surface V High Water Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Sparsely V eld Observation //ater Table P aturation Pre	rology Indicators: ators (minimum of or Vater (A1) er Table (A2) in (A3) in (A3) brits (B1) Deposits (B2) brits (B3) or Crust (B4) brits (B5) in Visible on Aerial In Vegetated Concave atlons: Present? Yesent? Yesent? Yesent? Yesent?	magery (B7) Surface (B8 es No	Water-Stain Aquatic Fai True Aquat Hydrogen S Oxidized Ri Presence o Recent Iron Thin Muck S Gauge or W	ned Leave una (B13) ic Plants (Sulfide Od hizospher f Reduceio Reductio Surface (Vell Data (ain in Rer hes):	(B14) lor (C1) res on Livi d Iron (C4 on in Tilled C7) (D9) marks)) I Soils (C6	(C3)	Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic FAC-Neutral	Cracks (B6) tterns (B10) Water Table (Crows (C8) isible on Aerial tressed Plants Position (D2)	C2) Imagery (C9) (D1)
YDROLOG Vetland Hydrimary Indica Surface V High Water Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Sparsely V Staturation Prediction Predic	rology Indicators: ators (minimum of or Vater (A1) er Table (A2) in (A3) in (A3) brits (B1) Deposits (B2) brits (B3) or Crust (B4) brits (B5) in Visible on Aerial In Vegetated Concave atlons: Present? Yesent? Yesent? Yesent? Yesent?	magery (B7) Surface (B8 es No es No	Water-Stain Aquatic Fat True Aquat Hydrogen S Oxidized RI Presence o Recent Iron Thin Muck S Gauge or W Other (Expl	ned Leave una (B13) ic Plants (Sulfide Od hizospher f Reduceto Reductio Surface (Vell Data (ain in Rer hes):	(B14) lor (C1) res on Livi d Iron (C4 on in Tilleo C7) (D9) marks)) I Soils (C6	(C3)	Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic FAC-Neutral	Cracks (B6) tterns (B10) Water Table (Crows (C8) isible on Aerial tressed Plants Position (D2) Test (D5)	C2) Imagery (C9) (D1)
POROLOG Vetland Hydi rimary Indica Surface V High Water Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Sparsely V Seld Observed Vater Table P aturation Prescues apple	rology Indicators: ators (minimum of orvater (A1) er Table (A2) n (A3) arks (B1) Deposits (B2) posits (B3) or Crust (B4) posits (B5) n Visible on Aerial Invegetated Concave atlons: Present? Present? Yesent? Is any frings	magery (B7) Surface (B8 es No es No	Water-Stain Aquatic Fat True Aquat Hydrogen S Oxidized RI Presence o Recent Iron Thin Muck S Gauge or W Other (Expl	ned Leave una (B13) ic Plants (Sulfide Od hizospher f Reduceto Reductio Surface (Vell Data (ain in Rer hes):	(B14) lor (C1) res on Livi d Iron (C4 on in Tilleo C7) (D9) marks)) I Soils (C6	(C3)	Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic FAC-Neutral	Cracks (B6) tterns (B10) Water Table (Crows (C8) isible on Aerial tressed Plants Position (D2) Test (D5)	C2) Imagery (C9) (D1)
POROLOG Vetland Hydi rimary Indica Surface V High Water Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Sparsely V Seld Observed Vater Table P aturation Pre aturation Pre aturation Pre condess capi	rology Indicators: ators (minimum of orvater (A1) er Table (A2) n (A3) arks (B1) Deposits (B2) posits (B3) or Crust (B4) posits (B5) n Visible on Aerial Invegetated Concave atlons: Present? Present? Yesent? Is any frings	magery (B7) Surface (B8 es No es No es No gauge, mani	Water-Stair Aquatic Far True Aquatic Hydrogen S Oxidized RI Presence o Recent Iron Thin Muck S Gauge or W Other (Expl	ned Leave una (B13) ic Plants (Sulfide Od hizospher f Reduceto Reductio Surface (() /ell Data (ain in Rer hes): hes): hes):	(B14) lor (C1) res on Livi d Iron (C4 on in Tilled C7) (D9) marks)	Wetlines),	(C3) (C3) and Hydro	Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic FAC-Neutral	Cracks (B6) tterns (B10) Water Table (Crows (C8) isible on Aerial tressed Plants Position (D2) Test (D5)	C2) Imagery (C9) (D1)

WMO-JJP-124

Project/Site: DIL SCE.	City/County: St. Cours Co Sampling Date: 2-/-	\ \ \ /
Applicant/Owner: Spire	Sampling Date: 67. State: NO Sampling Point: WPL	23/
Investigator(s): JJP / WJ W	Section, Township, Range: 5	<u> </u>
Landform (hillslope, terrace, etc.): Dottom land	Local relief (concave, convex, none):	
	0) Long: -90. 215 249 Datum: 4/AD8	23
Soil Map Unit Name: Mentro Silt la	nam, 5-9%, Slupes, eroded NWI classification: None	
Are climatic / hydrologic conditions on the site typical for	or this time of year? Yes X No. (If no eveloping the provider is the second of the sec	
Are Vegetation, Soil, or Hydrology	significantly disturbed? Are "Normal Circumstances" present? Yes X No	
Are Vegetation, Soil, or Hydrology		o
SUMMARY OF FINDINGS - Attach site m	ap showing sampling point locations, transects, important features	
Hydrophytic Vegetation Present? Yes		s, etc
Hydric Soil Present? Yes		
Wetland Hydrology Present? Yes		
Remarks: Upland representative to L	(A) TO 121	
Forest edge near acti	e ag. field margin	
EGETATION – Use scientific names of plan	its.	
Tree Stratum (Plot size: 30'/	Absolute Dominant Indicator Dominance Test worksheet:	-
Populus detoides	% Cover Species? Status Number of Dominant Species That Are ORL FACW or FAC	
Acor Sacrhalinum	That Are OBL, FACW, or FAC:	(A)
	Total Number of Dominant	
		(B)
	Percent of Dominant Species That Are OBL, FACW, or FAC:	
apling/Shrub Stratum (Plot size: 15/	Total Cover	A/B)
Lonicera magekii	Prevalence Index worksheet:	
Acer neshado	Total 14 COVER OF MULTIDIV DV:	
Cornes dinmmendii	OBL species	
	FAC species 75 x3 = 225	
	FACU species 30 x4 = 120	- 1
arb Stratum (Plot size:	Do = Tolal Cover UPL species 10 x5 = 50	- 1
Lunicera imponica	10 Y FACU Column Totals: 130 (A) 425 ((B)
Elymns canadensis	Prevalence Index = B/A = 3,27	- 1
Stellaria media	10 Y Facy Hydrophytic Vegetation Indicators:	_
Toxicodendron radicans	5 1 FAC 1 - Rapid Test for Hydrophytic Vegetation	- 1
	2 - Dominance Test is >50%	- 1
	3 - Prevalence Index is ≤3.01	
	4 - Morphological Adaptations¹ (Provide supporti	ing
T)	data in Remarks or on a separate sheet)	- 1
	Problematic Hydrophytic Vegetation¹ (Explain)	- 1
ody Vine Stratum (Plot size: 301/	1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Vitis sp. *	10# # Hydrophytic	
	Vegetation	
		1
narks: (Include photo numbers here or on a separate	heet) Present? Yes No	
marks: (Include photo numbers here or on a separate: Species not identified Omitted Fin Calcul	heet)	\dashv

WIL- JJP-124

Sampling Point: 4PL

Depth	Matrix		th needed to docur Redo	x Feature	5			
(inches)	Color (moist)	%	Color (moist)	_%_	Type	Loc	Texture	Remarks
7)~4"	104R3/2	100	-	_	_	-	SICL	
4-17"	104R3/3	98	107R3/4	2	C	M	SICL	
=		=	+		\equiv	=		
ype: C=Cor	ocentration, D=Depl	elian, RM=	Reduced Matrix, MS	=Masked	Sand Gra	ins.	² Location: F	L=Pore Lining, M=Matrix.
lydric Soll in								Problematic Hydric Soils ³ :
Histosol (A	•			eyed Ma	. ,		Coast Pra	irie Redox (A16)
	pedon (A2)			edox (S5)			Dark Surfa	•
_ Black Hist	• •			Matrix (S				anese Masses (F12)
	Sulfide (A4)			łucky Min				low Dark Surface (TF12)
Stratin ed L 2 cm M uck	ayers (A5)			Bleyed Ma			Other (Ex	plain in Remarks)
	R (A10) Below Dark Surface	(Δ11)		Matrix (F				4
	Surface (A12)	((11)		ark Surfac I Dark Sur			3Indiontes - 5	hudenehude vanstade een d
	cky Mineral (S1)			epression				hydrophytic vegetation and
	cky lumeral (31) cy Peat or Peat (S3)		redox D	opi essiuli	S (1 0)			drology must be present, turbed or problematic.
	yer (if observed):					-	uniess disi	urbed or problematic.
Туре:								\
Depth (Inche							Hydric Soil Pre	sent? Yes No
			_				-	
emarks:	10 hydri	c .	Soil in	relien	tors	06	served.	/
Λ		c ·	50.1/ ir	relien	tors	05	served.	,
DROLOGY	logy Indicators:				tors	05	served.	
DROLOGY	logy Indicators:		So, \ \ i'		tors	05		dicators (minimum of two require
DROLOGY	f logy Indicators: as (minimum of one			ly)		ob	. Secondary In	
DROLOGY etland Hydro imary Indicato	f logy Indicators: ars (minimum of one ater (A1)		t: check all that appl	ly) ed Leaves		ob	Secondary In	Soil Cracks (B6)
DROLOGY etland Hydro imary Indicato Surface Wa	f logy Indicators: ars (minimum of one ater (A1) Table (A2)		d: check all that appl Water-Staine Aquatic Faui	lv) ed Leaves na (B13)	s (B9)	06	Secondary In Surface : Drainage	Soil Cracks (B6) Patterns (B10)
DROLOGY etland Hydro imary Indicate Surface Wa High Water	f logy Indicators: In (minimum of one oter (A1) Table (A2) A3)		d: check all that appl Water-Staine Aquatic Faul True Aquatic	lγ) ed Leaves na (B13) : Plants (B	s (B9)	05	Secondary In Surface : Drainage Dry-Seas	Soil Cracks (B6) Patterns (B10) son Water Table (C2)
DROLOGY etland Hydro imary Indicato Surface Wa High Water Saturation (Water Mark	findicators: Institute (A1) Table (A2) A3) s (B1)		d: check all that appl Water-Staine Aquatic Faul True Aquatic Hydrogen Su	iv) ed Leaves na (B13) : Plants (B ulfide Odo	s (B9) 314) r (C1)		Secondary in Surface of the surface	Soil Cracks (B6) Pattems (B10) son Water Table (C2) Burrows (C8)
DROLOGY etland Hydro imary Indicato Surface Wa High Water Saturation (Water Mark Sediment D	findicators: In (minimum of one oter (A1) Table (A2) A3) s (B1) eposits (B2)		d: check all that appl Water-Staine Aquatic Faus True Aquatic Hydrogen Sta Oxidized Rhi	ly) ed Leaves na (B13) : Plants (B ulfide Odo izosphere:	s (B9) 314) r (C1) s on Living		Secondary in Surface of the surface	Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9)
DROLOGY etland Hydro imary Indicate Surface Wa High Water Saturation (Water Mark Sediment D Drift Deposi	f logy Indicators: the (minimum of one oter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3)		d: check all that appl Water-Staine Aquatic Faul True Aquatic Hydrogen Staine Oxidized Rhi Presence of	ly) ed Leaves na (B13) : Plants (B ulfide Odo izosphere: R e duced	s (B9) 314) r (C1) s on Living Iron (C4)	Roots (C3	Secondary In Surface : Dralnage Dry-Seas Crayfish Saturatio	Soil Cracks (B6) Pattems (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1)
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DROLOGY Total Hydro Timary Indicate Surface Water Mark Sediment Deposit Algal Mat or Iron Deposit Inundation N Sparsely Ve Ind Observation Trace Water Presecutive Curion Trace Wat	Idea Indicators: Inter (M1) Table (A2) A3) Is (B1) Imposits (B2) Its (B3) Inter (B4) Its (B5) Its (B5) Its (B6) Its (B6) Its (B7) Its (B8)	gery (B7) urface (B8) No No	d: check all that appl Water-Stains Aquatic Faus True Aquatic Hydrogen Su Oxidized Rhi Presence of Recent Iron I Thin Muck Su Gauge or We Other (Explain) Depth (Inched Depth (Inched Depth (Inched)	lv) ed Leaves na (B13) : Plants (B ulfide Odo izosphere: Reduced Reduction urface (C7 ell Data (D in in Rema	s (B9) s (C1) s on Living lron (C4) in Tilled S 7) 99) arks)	Roots (C3 coils (C6)	Secondary In Surface	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Shic Position (D2) Itral Test (D5)
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C = 1 - 1 -		-1	
Project/Site: STL NCE	Cit	y/County: 5+	Lonis Co Sampling Date: 2/25/1
Applicant/Owner:			State: MU Sampling Point: WPLAN
Investigator(s):	Se	ction, Township, F	Range: 16/75/147V
Landform (hillslope, terrace, etc.)		l ocal relia	of (concerve convey name).
Slope (%): 42 Lat: 38 \$18315	Los	- 90 1	PACE ACADES
Soil Map Unit Name: UC 50 land - Hs	ci.estar	g	G-) () Datum: // V-) D8 3
Are climatic (bedrelopis conditions on the U.S.)	U+3/E/	comprex,	NWI classification:
Are climatic / hydrologic conditions on the sile typical for t	his time of year?	Yes No	(If no, explain in Remarks.)
Are Vegetation 72 Soil 75 or Hydrology 75	significantly dis		a "Normal Circumstences" present? Yes No
Are Vegetation Soil, or Hydrology		Carrier .	needed, explain any enswers in Remarks.) locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes	4	The state of the s	iodations, transects, important leatures, etc.
Hydric Soll Present? Yes		is the Sample	d Area
Wetland Hydrology Present? Yes		within a Wetla	
Remarks:	-		
notand representative to	WMO-	- 110-1	25.
l VEGETATION – Use scientific names of plants	 3.		
30'		minant Indicator	Dominance Test worksheet:
1. Repuls deltoides	56 Cover Sp	A 1	Number of Dominant Species
	= <u>10</u>	Y FAC	That Are OBL, FACW, or FAC:(A)
3	10+	<u>*</u> *	Total Number of Dominant
4			Species Across All Strata: (B)
5.			Percent of Dominant Species
1	10 = To	otal Cover	That Are OBL, FACW, or FAC: (A/B)
SapingrShrub Stratum (Plot size:		olai Cover	Prevalence Index worksheet:
1 Lonicera Manckii	- 2 -	Y UPL	Total % Cover of:Multiply by:
2 Elaegenns umbelleta	5	Y UPL	OBL species x 1 =
3. Cornus drummandi;	7	N FAC	FACW species x 2 =
4			FAC species 12 x 3 = 36
5.			FACU species x4=8
Herb Stratum (Plot size:	(_) = To	tal Cover	UPL species 65 x5= 300
1. Setaria viridis	40	LIPL	Column Totals: 74 (A) 344 (B)
2. Tridens flavus	10	V UPL	Prevelence Index = B/A = 4.65
3. Surgham halepense	2 /	V FACY	Hydrophytic Vegetation Indicators:
4			1 - Rapid Test for Hydrophytic Vegetation
5	-		2 - Dominance Test is >50%
6			3 - Prevalence Index is ≤3.0¹
7			4 - Murphological Adaptations* (Provide supporting
8			data in Remarks or on e separate sheet)
9.			Problematic Hydrophytic Vegetation ¹ (Explain)
10			Noncons and a second
Woody Vine Stratum (Plot size: 30 /	= Tot	al Cover	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
A SEAT	-	Chapter Joseph 4	of productinatio.
- Charles			Hydrophytic Vegetation
	73 -T-	10000	Present? Yes No
Remarks: (Include photo numbers here or on a separate s	heet)	al Cover	
from calculations	nd gen	ns level	have been omitted

Profile Description: (Describe		Dad	ox Feature	-			
Depth Matrix (inches) Calor (maist)	%	Color (moist)	%	Type	Loc2	Texture	Remarks
0.8" WYR 3/3	80	104R 5/6	20	C	Α.	SICL	
			10		40	SICL	
8-17" 101R5/6	90	104R3/3	- 10	_ _		3100	
Type: C=Concentration, D=Dep	tetion, RM:	Reduced Matrix, N	S=Masked	I Sand Gra	ains.	² Location: P	L=Pore Lining, M=Matrix.
lydric Soil Indicators:							Problematic Hydric Soils ³ :
Histosol (A1)		Sandy	Gleyed Ma	atrix (S4)		Coast Pra	irie Redox (A16)
Histic Epipedon (A2)			Redox (SS			Dark Surfa	•
Black Histic (A3)			ed Matrix (S				anese Masses (F12)
Hydrogen Sulfide (A4)			Mucky Mir				ow Dark Surface (TF12)
Stratified Layers (A5)			Gleyed Ma				plain in Remarks)
2 cm Muck (A10)			ed Matrix (
Depleted Below Dark Surface	e (A11)		Dark Surfa	-			
Thick Dark Surface (A12)	•	Deplete	ed Dark Su	ırface (F7)		3Indicators of	hydrophytic vegetation and
Sandy Mucky Mineral (S1)		Redox	Depressio	ns (F8)		wetland hy	drology must be present,
5 cm Mucky Peat or Peat (S3	3)					unless dis	turbed or problematic.
Restrictive Layer (If observed):							
Type:						I	esent? Yes No _X
Depth (inches):						Hydric Soil Pre	sent? Yes No _^_
Remarks: No hydric	50	il Indica	turs	4 05	selve	d.	
No hydric	50	il Indica	turs	05	selve	J.	
No hydric	50	il Indica	tors	4 os	se/ve	J.	
YDROLOGY Vetland Hydrology Indicators:				4 os	se/ve		ndicators (minimum of him con iron
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of o		ed; check all that a	(vlaa		se/ve	Secondary I	
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of or		ed: check all that a	pply) nined Leave	es (B9)	selve	Secondary li	Soil Cracks (B6)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of orange) Surface Water (A1) High Water Table (A2)		ed: check all that a Water-Sta Aquatic F	oply) nined Leave auna (B13)	es (B9)	selve	Secondary II	Soil Cracks (B6) e Patterns (B10)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3)		ed: check all that a Water-Sta — Aquatic F — True Aqua	pply) hined L e av auna (B13) atic Plants	es (B9)) (B14)	selve	Secondary II Surface Drainag Dry-Sea	Soil Cracks (B6) e Patterns (B10) son Water Table (C2)
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YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)		ed: check all that a Water-Sta Aquatic F True Aqua Hydrogen Oxidized	oply) ained Leav auna (B13) atlc Plants Sulfide Oo Rhizosphei	es (B9)) (B14) dor (C1) res on Livi	ng Roots (Secondary II Surface Drainag Dry-Sea Crayfish C3) Saturation	Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)		ed: check all that a Water-Sta Aquatic F True Aqua Hydrogen Oxidized	pply) nined Leave auna (B13) atic Plants Sulfide Oc	es (B9)) (B14) dor (C1) res on Livi	ng Roots (Secondary II Surface Drainag Dry-Sea Crayfish C3) Saturation	Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8)
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Project/Site: 2/4 P/F	PELINE		City/County: 57 - 6	CHARLES CO Sampling Date: 10/15/2
pp.icant/Owner: 5P1RE	576			State: 140 Sampling Point: UPLAN
vestigator(s):	TMA		Section, Township, R	Range: none
				ef (concave, convex, none): LONVEX
				309793 Datum: ~40 83
il Man Unit Name: Lowmo silt lo	nam 0 to 2 percent	slones oc	rasionally flooded	NWI classification:none
				(If no, explain in Remarks.)
Vanctation V * C-11 V	and site typical for the	is time or ye	ear? Yes No	(If no, explain in Remarks.)
* Vegetation/_, Soil/, C	or Hydrology	significantly	disturbed? Are	**Normal Circumstances" present? Yes No
				needed, explain any answers in Remarks.)
ydrophytic Vegetation Present?		~	sampling point	locations, transects, important features, etc
ydric Soil Present?	Yes N	10 ×	is the Sample	d Area
/etland Hydrology Present?	Yes N	lo ×	within a Wetla	and? Yes No
emarks: * HARVESTED		, , , , , , , , , , , , , , , , , , ,		PECENTLY
* FIAR DESTE O	ORN F	7670	PLOWED	PECENTLY
11012.10 -	ATA OF C			
			TLAND WM	10TM A008
GETATION - Use scientific	names of plants			
ee Stratum (Plot size: 30	,	Absolute	Dominant Indicator	Dominance Test worksheet:
e ottatum (Plot size:		% Cover	Species? Status	1 reduited of Continuant Species
5				That Are OBL, FACW, or FAC:(A)
4 10 KE	<u> </u>			Total Number of Dominant
۲-	· · · · · · · · · · · · · · · · · · ·			Species Across All Strata: (B)
				Percent of Dominant Species
				That Are OBL, FACW, or FAC: (A/B)
piling/Shruh Stratum (Plot size:	15'	_	= Total Cover	Prevalence Index worksheet:
	/			
	-			OBL species x 1 =
J. N.				FACW species x 2 =
7./				FAC species x3 =
				FACU species x 4 =
			= Total Cover	UPL species x 5 =
b Stratum (Plot size: 5)			Column Totals: (A) (B)
and the same of th				
· · · · · · · · · · · · · · · · · · ·				Prevalence Index = B/A =
- •				Hydrophytic Vegetation Indicators:
NO. 60				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)
				Problematic Hydrophytic Vegetation (Explain)
				
				¹Indicators of hydric soil and wetland hydrology must
	- 1		Total Cover	be present, unless disturbed or problematic.
ody Vine Stratum (Plot size:				
ody Vine Stratum (Plot size:	<u>(5 </u>			Hydronhydia
36.				Hydrophytic Vegetation
ody Vine Stratum (Plot size:			Total Cover	

Sampling Point: UPL4ND

Depth Matrix	Re	dox Feature:	s			
(inches) Color (moist)	% Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-12 10 YR 3/1 _	99 104R 4	<u> </u>			<u>sc</u> _	
			-			
Type: C=Concentration, D=Depletio	on, RM=Reduced Matrix, I	MS=Masked	Sand Gra	ins.	² Location: F	L=Pore Lining, M=Matrix.
ydric Soil Indicators:					indicators for	Problematic Hydric Soils ³ :
_ Histosol (A1)		Gleyed Mat				írie Redox (A16)
Histic Epipedon (A2)	-	Redox (S5)	•		Dark Surfa	ace (S7)
_ Black Histic (A3)		ed Matrix (St	•			janese Masses (F12)
Hydrogen Sulfide (A4)		/ Mucky Mine				low Dark Surface (TF12)
_ Stratified Layers (A5)		Gleyed Mai			Other (Exp	plain in Remarks)
_ 2 cm Muck (A10)		ed Matrix (F				
 Depleted Below Dark Surface (A1 Thick Dark Surface (A12) 	· —	Dark Surfac			3	
Frick Dark Surface (A12) Sandy Mucky Mineral (S1)	·	ed Dark Sur				hydrophytic vegetation and
_ Sandy Mucky Mineral (S1) _ 5 cm Mucky Peat or Peat (S3)	Kedox	Depression	is (FB)			drology must be present,
estrictive Layer (if observed):					unless dis	turbed or problematic.
Times						
* * * * * * * * * * * * * * * * * * * *						sent? Yes No
Depth (inches):					Hydric Soil Pre	Selift 162 140
Depth (inches):			461		nyanc soll Pre	Sent? (es NO
emarks:	4.0				nydric soil Pre	Sent? (esNo
DROLOGY					nyanc soil Pre	Sent? (esNo
DROLOGY etland Hydrology Indicators:			<u> </u>	-		
PROLOGY etland Hydrology Indicators: imary Indicators (minimum of one is			- (50)		Secondary In	ndicators (minimum of two requir
DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one is Surface Water (A1)	Water-Sta	ined Leaves	s (B9)		Secondary Ir	ndicators (minimum of two requir Soil Cracks (B6)
DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one is Surface Water (A1) High Water Table (A2)	Water-Sta Aquatic F	ined Leaves auna (B13)			Secondary Ir Surface Drainage	ndicators (minimum of two requir Soil Cracks (B6) Patterns (B10)
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PROLOGY etland Hydrology Indicators: imary Indicators (minimum of one is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Sta Aquatic F True Aqua Hydrogen	nined Leaves auna (B13) atic Plants (B Sulfide Odo	314) or (C1)		Secondary Ir Surface Drainage Dry-Sea Crayfish	ndicators (minimum of two requir Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8)
PROLOGY Tetland Hydrology Indicators: Timary Indicators (minimum of one is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Sta Aquatic F True Aqua Hydrogen Oxidized	ined Leaves auna (B13) atic Plants (B Sulfide Odo Rhizosphere	314) or (C1) os on Living	g Roots (C	Secondary Ir Surface Drainage Dry-Sea Crayfish	ndicators (minimum of two requir Soil Cracks (86) e Patterns (810) son Water Table (C2)
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APPENDIX C Stream Data Forms (Additional Features Only)



Spire STL Pipeline Stream Survey Data Collection Form

DATE: 12/2/16	
REVIEWER(S): CDK/W) WEATHER COI	NDITIONS: 45°F Sunny
GAI STREAM ID: STL - (DK-03)	, , , , , ,
STREAM TYPE: PERENNIAL INTERMETTENT EPHEM	ERAL
Stream crossed by centerline:	
Stream crossed by access road:	
PHOTOGRAPHS TAKEN:	
"3-" ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	, 251C
	# <u>3518</u> - Impact Area
- Culvert Ou	Triow
FULLY FUNCTIONAL: YES NO	
Considered fully functional if the following criteria are met:	
Unaltered in any significant manner by human activities	
2. Is stable and does not exhibit headcutting, incision, or excessive aggrad	dation
3. Is connected to its overbank flood plain supporting normal hydrologica	I functions
4. Has a riparian buffer of at least 25 ft in width	Tanctions .
5. If stream segment is impacted by a minor structural alteration but other	erwise fully functional and does not
significantly alter stream segments above and below, then the alteration s	should be considered separate and
moderately functional	and a separate and
MODERATELY FUNCTIONAL: YES NO	
Considered moderately functional if the following are met:	
1. Streams have been altered; however, system recovery has a moderate	probability of occurring naturally
Streams support many, but not all, of the hydraulic and geomorphic fun	actions characteristic of fully functioning streams
of similar order in the watershed	, =====================================
FUNCTIONALLY IMPAIRED: YES	
Considered functionally impaired if the stream has more than one of the fo	ollowing:
L. Has been channelized and shows no evidence of self-recovery	
2. Is levee protected, impounded, or artificially constricted	
B. Entrenched or contains active headcuts	
. Has little or no riparian buffer of deep-rooted vegetation on 1 or both sign	des of channel
. Has banks that are extensively eroded or unstable, bank sloughing, erosi	ional scars
. Has 4 or greater stream impacts within 0.5 mile upstream of proposed st	tream impact, and stream impacts individually
r cumulatively exceed 100 ft in length	
ENERAL WATERSHED AND/OR RIPARIAN AREA CHARACTERISTICS	WITHIN 100FT BUFFER
IGHT BANK: LEFT BANK:	
FORESTED FORESTED	WETLAND
FARMLAND SCRUB/SHRUB FARMLAND	SCRUB/SHRUB
HAYFIELD PRAIRIE HAYFIELD [PRAIRIE
INDUSTRIAL HIGH BLUFFS INDUSTRIAL	HIGH BLUFFS
RESIDENTIAL RESIDENTIAL	

GAI STREAM ID: STL-CDK-033
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet):
FLOW CHARACTERISTICS:
Water present: No water, streambed dry Streambed moist Standing water Flowing water If flow present, estimate stage at time of survey: HIGH MEDIUM DOW
Average depth of water (feet):
BANK EROSION: EXTENSIVE LUTTLE / NONE Explain (sloughing banks, as posed root was, undercut banks, est.):
Expressir (stoughing balks, expused race was, underect bants, etc.):
OBSERVED PRESENCE OF SUBSURFACE FLOW: WATER QUALITY CHARACTERISTICS: Obvious siltation:
Observable water quality (siltation, water color described discolored, oily film, scum, water odor; etc.)
Observable water quality (siltation, water color policy discolored, oily film, scum, water odor; etc.) Identify specific pollutants, if known:
Observable water quality (siltation, water color described discolored, oily film, scum, water odor; etc.)
Observable water quality (siltation, water color described discolored, oily film, scum, water odor; etc.): Identify specific pollutants, if known:
Observable water quality (siltation, water color described discolored, oily film, scum, water odor; etc.) Identify specific pollutants, if known: AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES WETLAND FRINGE: ABUTTING or ADJACENT
Observable water quality (siltation, water color describe: Identify specific pollutants, if known: None
Observable water quality (siltation, water color dear discolored, olly film, scum, water odor; etc.): Identify specific pollutants, if known: AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES WETLAND FRINGE: YES ABUTTING or ADJACENT Describe: BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed? YES DO Describe: Fish or wildlife observed? YES DO Describe:
Observable water quality (siltation, water color design discolored, oily film, scum, water odor; etc.): Identify specific pollutants, if known: AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES WETLAND FRINGE: YES ABUTTING or ADJACENT Describe: BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed? YES NO Describe: Fish or wildlife observed? YES Describe: Habitat for:
Observable water quality (siltation, water color dear discolored, olly film, scum, water odor; etc.): Identify specific pollutants, if known: AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES WETLAND FRINGE: YES ABUTTING or ADJACENT Describe: BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed? YES DO Describe: Fish or wildlife observed? YES DO Describe:
Observable water quality (siltation, water color dest) discolored, oily film, scum, water odor; etc.): Identify specific pollutants, if known:
Observable water quality (siltation, water color dest discolored, oily film, scum, water odor; etc.): Identify specific pollutants, if known: AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES WETLAND FRINGE: YES ABUTTING or ADJACENT Describe: BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed? YES NO Describe: Fish or wildlife observed? YES NO Describe: Habitat for: Fish/spawn areas? YES NO

DATE: 12/2/16 REVIEWER(S): CDK/WTW GAI STREAM ID: SIL-CDK-034 WEATHER CONDITIONS: 45 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
STREAM TYPE: PERENNIAL PINTERMITTENT PEPHEMERAL Stream crossed by centerline: YES Stream crossed by access road: YES
PHOTOGRAPHS TAKEN: #_35_19 - Upstream #_35_0 - Downstream #_35_1 - Impact Area # Culvert Inflow # Culvert Outflow
FULLY FUNCTIONAL: Considered fully functional if the following criteria are met: 1. Unaltered in any significant manner by human activities 2. Is stable and does not exhibit headcutting, incision, or excessive aggradation 3. Is connected to its overbank flood plain supporting normal hydrological functions 4. Has a riparian buffer of at least 25 ft in width
5. If stream segment is impacted by a minor structural alteration but otherwise fully functional and does not significantly alter stream segments above and below, then the alteration should be considered separate and moderately functional
MODERATELY FUNCTIONAL: On Side of Moderate of Streams have been altered; however, system recovery has a moderate probability of occurring naturally 2. Streams support many, but not all, of the hydraulic and geomorphic functions characteristic of fully functioning streams of similar order in the watershed
FUNCTIONALLY IMPAIRED: YES NO Considered functionally impaired if the stream has more than one of the following: 1. Has been channelized and shows no evidence of self-recovery 2. Is levee protected, impounded, or artificially constricted 3. Entrenched or contains active headcuts
 4. Has little or no riparian buffer of deep-rooted vegetation on 1 or both sides of channel 5. Has banks that are extensively eroded or unstable, bank sloughing, erosional scars 6. Has 4 or greater stream impacts within 0.5 mile upstream of proposed stream impact, and stream impacts individually or cumulatively exceed 100 ft in length
RIGHT BANK: FORESTED WETLAND SCRUB/SHRUB HAYFIELD PRAIRIE INDUSTRIAL HIGH BLUFFS RIGHT BANK: WETLAND SCRUB/SHRUB HAYFIELD PRAIRIE RESIDENTIAL RESIDENTIAL WETLAND OF BUFFER WETLAND SCRUB/SHRUB WETLAND SCRUB/SHRUB HAYFIELD PRAIRIE HIGH BLUFFS RESIDENTIAL

REVIEWER(S): CDK/W)W
GAI STREAM ID: STL-CDK-034
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet): 4 ft; at centerline (feet): 4 ft Average bank height (feet): 2 ft; at centerline (feet): 4 ft Bottom width (feet): 3 ft Water width (feet): 1 ft Water depth (feet): 2 ft Ordinary High Water Mark (OHWM), if observed (feet): 1 ft Water depth (feet): 2 ft FLOW CHARACTERISTICS: Water present: No water, STREAMBED DRY NO WATER, STREAMBED DRY STREAMBED MOIST STREAMBED MOIST STREAMBED MOIST
If flow present, estimate stage at time of survey:
Average depth of water (feet):
BANK EROSION: EXTENSIVE MODERATE LITTLE / NONE Explain (sloughing banks, bapused root wads undercut banks, etc.): SCOW
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES YES OBSERVED PRESENCE OF SUBSURFACE FLOW: YES YES
WATER QUALITY CHARACTERISTICS: Obvious siltation: Observable water quality (siltation, water color is cone, discolored, oily film, scum, water odor; etc.): Identify specific pollutants, if known:
Non L
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES
WETLAND FRINGE: YES ABUTTING OF ADJACENT NO Describe:
BIOLOGICAL CHARACTERISTICS:
Macroinvertebrates observed?
ristrot wildlife observed? YES No Describe:
Habitat for:
Fish/spawn areas?
JURISDICTIONAL STATUS:
Is this stream jurisdictional? NO Describe:
OTHER OBSERVATIONS AND COMMENTS: Silt Sand France

DATE: 12/5/16	
REVIEWER(S): CDK/WTW WEATHER C	CONDITIONS: 47°F, Cloudy
GAI STREAM ID: SEL-CDE-035	CONDITIONS. 17 COLCY
244 00.	,
STREAM TYPE: PERENNIAL INTERMITTENT PEPH	EMERAL
Stream crossed by centerline:	EMERAL
Stream crossed by access road:	
Stream crossed by access road.	
PHOTOGRAPHS TAKEN:	
	COL PETER GUILLE
#356 - Upstream E #3527 - Downstream	SSW # 3728 - Impact Area W
#3529 - Culvert Inflow SL #3530 - Culvert	Outflow VF
FULLY FUNCTIONAL: YES	
Considered fully functional if the following criteria are met:	
 Unaltered in any significant manner by human activities 	
2. Is stable and does not exhibit headcutting, incision, or excessive agg	
Is connected to its overbank flood plain supporting normal hydrolog	ical functions
4. Has a riparian buffer of at least 25 ft in width	+ _
5. If stream segment is impacted by a minor structural alteration but of	therwise fully functional and does not
significantly alter stream segments above and below, then the alteration	on should be considered separate and
moderately functional	
MODERATELY FUNCTIONAL: YES	
Considered moderately functional if the following are met:	
1. Streams have been altered; however, system recovery has a moderate	te probability of occurring naturally
2. Streams support many, but not all, of the hydraulic and geomorphic	functions characteristic of fully functioning streams
of similar order in the watershed	tang tangtang streams
FUNCTIONALLY IMPAIRED: NO	
Considered functionally impaired if the stream has more than one of the	e following:
1. Has been channelized and shows no evidence of self-recovery	c tollowing.
Is levee protected, impounded, or artificially constricted	
3. Entrenched or contains active headcuts	
4. Has little or no riparian buffer of deep-rooted vegetation on 1 or both	sides of shares
5. Has banks that are extensively eroded or unstable, bank sloughing, er	isides of channel
6. Has 4 or greater stream impacts within 0.5 mile upstream of proposed	Osional scars
or cumulatively exceed 100 ft in length	a stream impact, and stream impacts individually
GENERAL WATERCHER AND/OR RIDARIAN AREA CHARACTERIST	
GENERAL WATERSHED AND/OR RIPARIAN AREA CHARACTERISTI	CS WITHIN 100FT BUFFER
RIGHT BANK: LEFT BANK:	_6.5.0
RIGHT BANK: FORESTED WETLAND FORESTED	WETLAND
RIGHT BANK: FORESTED WETLAND FORESTED FARMLAND SCRUB/SHRUB LEFT BANK: FORESTED FARMLAND	_6.5.0
RIGHT BANK: FORESTED WETLAND FORESTED FARMLAND SCRUB/SHRUB FARMLAND HAYFIELD PRAIRIE HAYFIELD	WETLAND
RIGHT BANK: FORESTED WETLAND FORESTED	WETLAND SCRUB/SHRUB

DATE: D/5//C REVIEWER(S): CDK/W) W
GAI STREAM ID: STL-CDK-G35
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet):
Average depth of water (feet):
BANK EROSION: EXTENSIVE MODERATE LITTLE / NONE Explain (sloughing banks, exposed root wads undercut banks lett.):
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES YOU
OBSERVED PRESENCE OF SUBSURFACE FLOW: YES NO
OBSERVED PRESERVE OF SUBSURFACE FLOW: YES NO
WATER QUALITY CHARACTERISTICS: Obvious siltation: YES Observable water quality (siltation, water color legislary designed oily film, scum, water odor; etc.)
Identify specific pollutants, if known:
None
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES
WETLAND FRINGE: YES ABUTTING OF ADJACENT NO Describe:
BIOLOGICAL CHARACTERISTICS:
Macroinvertebrates observed? Describe:
Fish or wildlife observed? YES Describe:
Habitat for:
Fish/spawn areas?
JURISDICTIONAL STATUS: Is this stream jurisdictional?
OTHER OBSERVATIONS AND COMMENTS: Silt Sand Scavel

DATE: 12/5/14 REVIEWER(S): CDK/WJL/	117%
GAI STREAM ID: STL COK-0	WEATHER CONDITIONS: 41 Cloudy
STREAM TYPE: PERENNIAL	INTERMITTENT EPHEMERAL
Stream crossed by centerline:	YES ATIO
Stream crossed by access road:	ves Tho
PHOTOGRAPHS TAKEN:	
#_3536 Upstream ESE #_3	- Impact Area 5 w
# Culvert Inflow	# Culvert Outflow
	YES NO
Considered fully functional if the following	criteria are met:
 Unaltered in any significant manner by ho 	uman activities
2. Is stable and does not exhibit headcutting	
3. Is connected to its overbank flood plain s	upporting normal hydrological functions
4. Has a riparian buffer of at least 25 ft in wi	idth
	structural alteration but otherwise fully functional and does not
significantly alter stream segments above ar moderately functional	nd below, then the alteration should be considered separate and
, , , , , , , , , , , , , , , , , , , ,	
MODERATELY FUNCTIONAL:	to brown
Considered moderately functional if the folice	owing are met:
2 Streams support many but not all a full	em recovery has a moderate probability of occurring naturally
of similar order in the watershed	hydraulic and geomorphic functions characteristic of fully functioning streams
FUNCTIONALLY IMPAIRED:	T
	ES NO
Considered functionally impaired if the streat. Has been channelized and shows no evidence of the streat of the streat consideration of the st	m has more than one of the following:
2. Is levee protected, impounded, or artificial3. Entrenched or contains active headcuts	ly constricted
4. Has little or no riparian buffer of deep-roof	ted vegetation on 1 or both sides of channel
5. Has banks that are extensively eroded or u	nstable, bank sloughing, erosional scars
or cumulatively exceed 100 ft in length	mile upstream of proposed stream impact, and stream impacts individually
or cumulatively exceed 100 ft in length	
GENERAL WATERSHED AND/OR RIPARIA	N AREA CHARACTERISTICS WITHIN 100FT BUFFER
RIGHT BANK:	LEFT BANK:
FORESTED WETLAND	
FARMLAND SCRUB/SHRUB	
HAYFELD PRAIRIE	_
☐ INDUSTRIAL ☐ HIGH BLUFFS	HAYFIELD PRAIRIE
RESIDENTIAL HIGH BLUFFS	☐ INDUSTRIAL ☐ HIGH BLUFFS
LI DESIDERATAL	RESIDENTIAL

REVIEWER(S):() /	
	/VJW
GAI STREAM ID: SIL	- CDK-036
STREAM CHANNEL PROP	ERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE):
	dth (feet): 6F+; at centerline (feet): N/A
Average bank height (feet	t): 10 F+ : at centerline (feet): A/ IA
Bottom width (feet) 5	Water width (feet): 1.5 ft Water depth (feet): 1.5 in.
Ordinary High Water Mark	k (OHWM), if observed (feet): 1 1 ++
	6>> 5.5 F+
FLOW CHARACTERISTICS:	
Charles A. Carlotte and Charles and Charle	NATER, STREAMBED DRY STREAMBED MOIST STANDING WATER FLOWING WATER
If flow present, estimate s	
Average depth of water (fe	eet): 1.3 in
BANK EROSION: DEXTER	NSVE MODERATE LITTLE / NONE
	root wad, undercut banks, etc.):
Explain (Stoughing Blinds III	Front wind, birder talling etc.).
OBSERVED PRESENCE OF C	GROUNDWATER SEEPS: Tyes NO
	- / ~
OBSERVED PRESENCE OF S	SUBSURFACE FLOW: YES NO
WATER QUALITY CHARACT	TERISTICS:
Obvious siltation:	VES DINO
Observable water quality (s	ilitation, water color is clear distributed, oily film, scum, water odor; etc.).
Identify specific pollutants,	
ACHIATIC DI ANTO	Non &
AQUATIC PLANTS: PERIP	PHYTON (brown or yellowish algae on rocks or substrate)
WETLAND FRINGE:	YES ABUTTING OF ADJACENT
	YES ABUTTING OF ADJACENT
	TES ABUTTING OF ADJACENT
Describe:	
Describe:	TICS:
Describe:	TICS: ed? \(\text{YES} \) \(\text{Describe}: \)
Describe:	TICS:
Describe:	TICS: ed? \(\text{YES} \) \(\text{Describe}: \)
Describe:	TICS: ed? YES DO Describe: YES NO Describe:
Describe:	TICS: ed? YES NO Describe: YES NO Describe:
BIOLOGICAL CHARACTERIST Macroinvertebrates observed? Fish or wildlife observed? Habitat for: Fish/spawn areas? JURISDICTIONAL STATUS:	TICS: ed? YES NO Describe: YES NO Describe:
	TICS: ed? YES NO Describe: YES NO Describe:
BIOLOGICAL CHARACTERIS: Macroinvertebrates observed? Fish or wildlife observed? Habitat for: Fish/spawn areas? JURISDICTIONAL STATUS: Is this stream jurisdictional?	TICS: ed?
BIOLOGICAL CHARACTERIST Macroinvertebrates observed? Fish or wildlife observed? Habitat for: Fish/spawn areas? JURISDICTIONAL STATUS:	TICS: ed?
BIOLOGICAL CHARACTERIS: Macroinvertebrates observed? Fish or wildlife observed? Habitat for: Fish/spawn areas? FURISDICTIONAL STATUS: Is this stream jurisdictional?	TICS: ed?

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dividually
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DATE: 12/6/14
REVIEWER(S): COK/WJL
GAI STREAM ID: STL-CDK-037
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE):
Average bank-to-bank width (feet): 6 ft; at centerline (feet): W A
Average bank height (feet): 3.5; at centerline (feet): 1//4
Bottom width (feet): 4 f + Water width (feet): 4/y Water depth (feet): 4/y
Ordinary High Water Mark (OHWM), if observed (feet):
FLOW CHARACTERISTICS:
Water present: Water, Streambed dry Streambed moist Standing water Flowing water
If flow present, estimate stage at time of survey: HIGH MEDIUM HOW
Average depth of water (feet):
BANK EROSION: EXTENSIVE MODERATE LITTLE / NONE
Explain (sloughing banks, exposed root wads undercut banks, etc.): 5 (04/
WATER QUALITY CHARACTERISTICS: Obvious siltation: Observable water quality (situation, water color is clear, discolored, oily film, scum, water odor; etc.): Identify specific pollutants, if known: WONE AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES
WETLAND FRINGE: YES ABUTTING OF ADJACENT Describe:
BIOLOGICAL CHARACTERISTICS:
Macroinvertebrates observed? PES Describe:
Fish or wildlife observed?
Habitat for:
Fish/spawn areas?
JURISDICTIONAL STATUS:
Is this stream jurisdictional? VES NO Describe:
OTHER OBSERVATIONS AND COMMENTS: Silt Sand Savel

DATE: 12 REVIEWER(S): GAI STREAM II		V K-038	WEATHER CO	ONDITIONS: 43	of Claudy	/
	: ☐ PERENNIAL — d by centerline: d by access road:	YES YES	NT □ EPHE NO NO	MERAL		
PHOTOGRAPH # 35 42_ #_		# 3543	- Downstream - Culvert C	NW # <u>354</u>	<u>४</u> - Impact Area	NE
 Unaltered in a Is stable and c 	functional if the following significant manner loss not exhibit headc	by human activituding, incision, c	ties or excessive aggr			
 Has a riparian If stream segm 	o its overbank flood p buffer of at least 25 ft ent is impacted by a r stream segments abo tional	: in width minor structural a	alteration but ot	nerwise fully function	nal and does not red separate and	
1. Streams have b	erately functional if the been altered; however rt many, but not all, o	, system recover	y has a moderat	e probability of occu unctions characterist	rring naturally tic of fully functioning	streams
 Has been change Is levee protect Entrenched or of Has little or no Has banks that Has 4 or greater 	IMPAIRED: onally impaired if the nelized and shows no re ed, impounded, or art contains active headcu riparian buffer of deel are extensively eroded of stream impacts with acceed 100 ft in length	evidence of self-r tificially constrict uts p-rooted vegetati d or unstable, bai	recovery ed ion on 1 or both nk sloughing, erc	sides of channel	stream impacts indivi	dually
GENERAL WATE RIGHT BANK: FORESTED FARMLAND HAYFIELD INDUSTRIAL RESIDENTIAL	RSHED AND/OR RIP WETLAND SCRUB/SHRUB PRAIRIE HIGH BLUFFS		HARACTERISTIC LEFT BANK: GORESTED FARMLAND HAYFIELD INDUSTRIAL RESIDENTIAL	S WITHIN 100FT B WETLAND SCRUB/SHRUB PRAIRIE HIGH BLUFFS	BUFFER	

DATE: 12/6/16 REVIEWER(S): CDK/WTV
GAI STREAM ID: SIL-CDK-038
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet): 8 2 at centerline (feet): 1 4 4 Average bank height (feet): 5 5 ft; at centerline (feet): 4 4 Bottom width (feet): 6 6 ft Water width (feet): 3 ft Water depth (feet): 1 1 ft Ordinary High Water Mark (OHWM), if observed (feet): 1 ft
FLOW CHARACTERISTICS:
Water present: NO WATER, STREAMBED DRY STREAMBED MOIST STANDING WATER FLOWING WATER
If flow present, estimate stage at time of survey: HIGH MEDIUM NOW Average depth of water (feet):
BANK EROSION: EXTENSIVE MODERATE LITTLE / NONE
Explain (sloughing banks, exposed root wads, undercut banks, etc.):
OBSERVED PRESENCE OF GROUNDWATER SEEPS: TYES NO
OBSERVED PRESENCE OF SUBSURFACE FLOW: YES NO
WATER CHAIRTY CHARACTERIST
WATER QUALITY CHARACTERISTICS: Obvious siltation:
Observable water quality (siltation, water color is dear, discolored, oily film, scum, water odor; etc.):
Identify specific pollutants, if known:
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES
WETLAND FRINGE: YES ABUTTING OF ADJACENT Describe:
BIOLOGICAL CHARACTERISTICS:
Macroinvertebrates observed? Describe:
rish of which the observed?
Habitat for:
Fish/spawn areas?
JURISDICTIONAL STATUS:
Is this stream jurisdictional? NO Describe:
OTHER OBSERVATIONS AND COMMENTS: Silt Send & Marel Colle

DATE: 12/6 REVIEWER(S): GAI STREAM ID:	(16 CDK/ VT SIL- CDK-	039	WEATHER C	CONDITIONS:	3°F, Cloud	}
STREAM TYPE: Stream crossed b Stream crossed b		☐ INTERMITTEN ☐ YES ☐ YES	IT DEPH	EMERAL		
# 35 4 5 - 0		# 3546	- Downstream - Culvert (- Impact Area	SE
FULLY FUNCTION. Considered fully fun 1. Unaltered in any	ictional if the follow	YES	3-NO net:			
2. Is stable and does3. Is connected to its	s overhank flood ni	itting, incision, or	excessive agg	radation		
4. Has a riparian buf	fer of at least 25 ft	in width	ormai nydrolog	ical functions		
5. If stream segment			Iteration but of	thorwise fully fund	ianalandah	
significantly alter str moderately function	eam segments abov	ve and below, the	en the alteration	on should be consid	lered separate and	
MODERATELY FUN		EX YES] NO			
1. Streams have beer 2. Streams support n	nany, but not all of	the hydraulic an	d geomorphic	te probability of oc	curring naturally istic of fully functioning :	
of similar order in the	e watershed	and my draume and	a geomorphic	idilictions character	isuc of fully functioning	streams
			1-			
UNCTIONALLY IM	PAIRED:	YES 🥦	310			
Considered functions	lly impaired if the s	tream has more	than one of the	e following:		
Has been channelia	ed and shows no e	vidence of self-re	covery	· ·		
. Is levee protected,			d			
. Entrenched or con						
. Has little or no ripa	rian buffer of deep	rooted vegetation	on on 1 or both	sides of channel		
. Has banks that are	extensively eroded	or unstable, ban	k sloughing, er	osional scars		
. Has 4 or greater str	eam impacts within	0.5 mile upstrea	am of proposed	d stream impact, ar	nd stream impacts individ	lually
r cumulatively excee	α 100 π in length					
ENEDAL WATERCH	ICD AND OD DID	D1441 4D74 44		_		
ENERAL WATERSHIGHT BANK:	IED AND/OK KIPA			CS WITHIN 100FT	BUFFER	
	WETLAND	7	FORESTED			
_	SCRUB/SHRUB	_		☐ WETLAND		
_ =	PRAIRIE	r L	FARMLAND	SCRUB/SHRUB		
	HIGH BLUFFS	L F	_ HAYFIELD _ INDUSTRIAL	PRAIRIE		
RESIDENTIAL	WOLLDFOLL?		INDUSTRIAL RESIDENTIAL	HIGH BLUFFS		
		L	T VESTOCIALITYE			

	DATE: $12/6/16$ REVIEWER(S): $50V/\sqrt{3}\sqrt{3}$
	GAI STREAM ID: STL-CDK-039
	STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet):
	BANK EROSION: EXTENSIVE MODERATE LITTLE / NONE Explain (sloughing banks, fixpused root work, undercut banks, etc.):
	OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES NO OBSERVED PRESENCE OF SUBSURFACE FLOW: YES NO WATER QUALITY CHARACTERISTICS: Obvious siltation: YES NO Observable water quality (siltation, water color scheme, discolored, oily film, scum, water odor; etc.):
	Identify specific pollutants, if known:
	AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate)
	WETLAND FRINGE: YES ABUTTING OF ADJACENT NO Describe:
1	BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed?
ŀ	Fish/spawn areas?
	SURISDICTIONAL STATUS: s this stream jurisdictional? NO Describe:
c	OTHER OBSERVATIONS AND COMMENTS: Silty Sand Grave

REVIEWER(S): JIP-7MA GAI STREAM ID: STL JIP019	weather conditions: Clock/No rain/ Last rain event
STREAM TYPE: PERENNIAL IN Stream crossed by centerline: YE Stream crossed by access road: YE	
PHOTOGRAPHS TAKEN: # 4845 - Upstream # 48 # Culvert Inflow #_	346 - Downstream S # Impact Area - Culvert Outflow 4847 RB → w /4848 LB→
FULLY FUNCTIONAL: Considered fully functional if the following cri 1. Unaltered in any significant manner by hun 2. Is stable and does not exhibit headcutting, 3. Is connected to its overbank flood plain sup	teria are met: nan activities incision, or excessive aggradation
4. Has a riparian buffer of at least 25 ft in wid5. If stream segment is impacted by a minor stream	
MODERATELY FUNCTIONAL:	s 🔲 no
Considered moderately functional if the follow	ving are met:
	m recovery has a moderate probability of occurring naturally ydraulic and geomorphic functions characteristic of fully functioning streams
_/	_
FUNCTIONALLY IMPAIRED:	NO NO
Considered functionally impaired if the stream	
 Has been channelized and shows no eviden Is levee protected, impounded, or artificiall 	4.
3. Entrenched or contains active headcuts	y constructed
4. Has little or no riparian buffer of deep-root	ed vegetation on 1 or both sides of channel
5. Has banks that are extensively eroded or un	
	mile upstream of proposed stream impact, and stream impacts individually
or cumulatively exceed 100 ft in length	
	N AREA CHARACTERISTICS WITHIN 100FT BUFFER
RIGHT BANK:	LEFT BANK:
FORESTED WETLAND	FORESTED WETLAND
FARMLAND SCRUB/SHRUB	FARMLAND SCRUB/SHRUB
HAYFIELD PRAIRIE	HAYFIELD PRAIRIE
☐ INDUSTRIAL ☐ HIGH BLUFFS ☐ RESIDENTIAL	☐ INDUSTRIAL ☐ HIGH BLUFFS ☐ RESIDENTIAL
I I NESIDENTIAL	KESIDENTIAL

ANK EROSION: EXTENSIVE MODERATE MUTILE / NONE Xplain (sloughing banks, exposed root wads, undercut banks, etc.) MoDESERVED PRESENCE OF GROUNDWATER SEEPS: YES
DESERVED PRESENCE OF GROUNDWATER SEEPS: YES NO DESERVED PRESENCE OF SUBSURFACE FLOW: YES NO WATER QUALITY CHARACTERISTICS: Divious siltation: YES NO NO Deservable water quality (siltation, water color of clear, discolored, olly film, scum, water odor; etc.): dentify specific pollutants, if known: QUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES WETLAND FRINGE: YES ABUTTING or ADJACENT Describe: WIGHOUS ALGAE STREET ON DESCRIBE: NO DESCRIBE: SIND SECRIBE: SIND DESCRIBE: SIND DESCR
DESERVED PRESENCE OF GROUNDWATER SEEPS: YES NO DESERVED PRESENCE OF SUBSURFACE FLOW: YES NO VATER QUALITY CHARACTERISTICS: Divious siltation: YES NO NO DESERVED Water quality (siltation, water color of clear, discolored, oily film, scum, water odor; etc.): dentify specific pollutants, if known: QUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES VETLAND FRINGE: YES ABUTTING or ADJACENT DESCRIBE: DESCRIBE: NO DESCRIBE: Macroinvertebrates observed? YES NO DESCRIBE: ish or wildlife observed? YES NO DESCRIBE:
DESERVED PRESENCE OF GROUNDWATER SEEPS: YES NO DESERVED PRESENCE OF SUBSURFACE FLOW: YES NO VATER QUALITY CHARACTERISTICS: Divious siltation: YES NO NO DESERVED water quality (siltation, water color a clear, discolored, oily film, scum, water odor; etc.): dentify specific pollutants, if known: QUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES VETLAND FRINGE: YES ABUTTING or ADJACENT DESCRIBE: DESCRIBE: NO DESCRIBE: DESCRIBE: NO DESCRIBE:
DESERVED PRESENCE OF GROUNDWATER SEEPS: YES NO DESERVED PRESENCE OF SUBSURFACE FLOW: YES NO VATER QUALITY CHARACTERISTICS: Divious siltation: YES NO Deservable water quality (siltation, water color a clear, discolored, olly film, scom, water odor; etc.): dentify specific pollutants, if known: AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES VETLAND FRINGE: YES ABUTTING or ADJACENT DESCRIBE: BIOLOGICAL CHARACTERISTICS:
DESERVED PRESENCE OF GROUNDWATER SEEPS: YES NO DESERVED PRESENCE OF SUBSURFACE FLOW: YES NO VATER QUALITY CHARACTERISTICS: Divious siltation: YES NO Deservable water quality (siltation, water color in clear, discolored, olly film, soum, water odor; etc.): dentify specific pollutants, if known: AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES VETLAND FRINGE: YES ABUTTING or ADJACENT
DBSERVED PRESENCE OF GROUNDWATER SEEPS: YES NO DBSERVED PRESENCE OF SUBSURFACE FLOW: YES NO VATER QUALITY CHARACTERISTICS: Divious siltation: YES NO NO Dbservable water quality (siltation, water color of clear, discolored, oily film, scorn, water odor; etc.): dentify specific pollutants, if known: AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES WETLAND FRINGE: YES ABUTTING or ADJACENT
DBSERVED PRESENCE OF GROUNDWATER SEEPS: YES NO DBSERVED PRESENCE OF SUBSURFACE FLOW: YES NO VATER QUALITY CHARACTERISTICS: Divious siltation: YES NO Dbservable water quality (siltation, water color of clear, discolored, oily film, scum, water odor; etc.): dentify specific pollutants, if known: AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES
DBSERVED PRESENCE OF GROUNDWATER SEEPS: YES NO DBSERVED PRESENCE OF SUBSURFACE FLOW: YES NO VATER QUALITY CHARACTERISTICS: Divious siltation: YES NO Dbservable water quality (siltation, water color of clear, discolored, oily film, scum, water oilor; etc.):
DBSERVED PRESENCE OF GROUNDWATER SEEPS: YES NO DBSERVED PRESENCE OF SUBSURFACE FLOW: YES NO VATER QUALITY CHARACTERISTICS: Divious siltation: YES NO
DBSERVED PRESENCE OF GROUNDWATER SEEPS: YES NO DBSERVED PRESENCE OF SUBSURFACE FLOW: YES NO
DBSERVED PRESENCE OF GROUNDWATER SEEPS: YES NO
explain (sloughing banks, exposed root wads, undercut banks, etc.)
Average depth of water (feet):
f flow present, estimate stage at time of survey. HIGH MEDIUM LOW MAN
Water present: ☐ NO WATER, STREAMBED DRY STREAMBED MOIST ☐ STANDING WATER ☐ FLOWING WATER
LOW CHARACTERISTICS:
Ordinary High Water Mark (OHWM), if observed (feet):
Bottom width (feet): 6" Water width (feet): 100 Water depth (feet): 100
Average bank height (feet): at centerline (feet):
Average bank-to-bank width (feet): at centerline (feet):
GAI STREAM ID: STLWP019
DATE:

DATE: 9-12-2016 REVIEWER(S): 13P-TMA GAI STREAM ID: STUDIO20	WEATHER CONDITIONS: Clear/No rain/last rain
STREAM TYPE: PERENNIAL INTER Stream crossed by centerline: YES Stream crossed by access road: YES	RMITTENT EPHEMERAL NO NO
PHOTOGRAPHS TAKEN: # Y850 - Upstream SE # Y85 # - Culvert Inflow #_	- Downstream NW # Impact Area - Culvert Outflow 4852 RB→Nを/4853LB→S
	n activities cision, or excessive aggradation orting normal hydrological functions
·	☐ NO ng are met: recovery has a moderate probability of occurring naturally draulic and geomorphic functions characteristic of fully functioning streams
FUNCTIONALLY IMPAIRED: Considered functionally impaired if the stream h 1. Has been channelized and shows no evidence 2. Is levee protected, impounded, or artificially of 3. Entrenched or contains active headcuts 4. Has little or no riparian buffer of deep-rooted 5. Has banks that are extensively eroded or unst 6. Has 4 or greater stream impacts within 0.5 mi or cumulatively exceed 100 ft in length	e of self-recovery constricted d vegetation on 1 or both sides of channel
GENERAL WATERSHED AND/OR RIPARIAN A RIGHT BANK: FORESTED WETLAND FARMLAND SCRUE/SHRUB HAYFIELD PRAIRIE INDUSTRIAL HIGH BLUFFS RESIDENTIAL	AREA CHARACTERISTICS WITHIN 100FT BUFFER LEFT BANK: FORESTED WETLAND SCRUB/SHRUB HAYFIELD PRAIRIE INDUSTRIAL HIGH BLUFFS RESIDENTIAL

Identify specific pollutants, if known appendix periphyrod wetland fringe: Describe: BIOLOGICAL CHARACTERISTICS Macroinvertebrates observed? Fish or wildlife observed? Habitat for: Fish/spawn areas? JURISDICTIONAL STATUS: Is this stream jurisdictional?	YES YES YES YES	ABUT	algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES TING or ADJACENT AND Describe: Describe: AND Describe: Connects to NHD
AQUATIC PLANTS: PERIPHYTO WETLAND FRINGE: Describe: BIOLOGICAL CHARACTERISTICS Macroinvertebrates observed? Fish or wildlife observed? Habitat for: Fish/spawn areas? JURISDICTIONAL STATUS:	YES YES YES YES	□ ABUT	Describe: Describe:
AQUATIC PLANTS: PERIPHYTO WETLAND FRINGE: Describe: BIOLOGICAL CHARACTERISTICS Macroinvertebrates observed? Fish or wildlife observed? Habitat for: Fish/spawn areas?	ON (brown o	□ ABUT	Describe:
AQUATIC PLANTS: PERIPHYTO WETLAND FRINGE: Describe: BIOLOGICAL CHARACTERISTICS Macroinvertebrates observed? Fish or wildlife observed? Habitat for:	ON (brown o	□ ABUT	Describe:
AQUATIC PLANTS: PERIPHYTO WETLAND FRINGE: Describe: BIOLOGICAL CHARACTERISTICS Macroinvertebrates observed? Fish or wildlife observed?	ON (brown o	□ ABUT	Describe:
AQUATIC PLANTS: PERIPHYTO WETLAND FRINGE: Describe: BIOLOGICAL CHARACTERISTICS Macroinvertebrates observed?	ON (brown o	□ ABUT	Describe:
AQUATIC PLANTS: PERIPHYTO WETLAND FRINGE: Describe: BIOLOGICAL CHARACTERISTICS	ON (brown o	ABUT	TING OF ADJACENT
AQUATIC PLANTS: PERIPHYTO WETLAND FRINGE: Describe:	DN (brown o		V
AQUATIC PLANTS: PERIPHYTO WETLAND FRINGE:	DN (brown o		V
	DN (brown o		V
		مديرها احسناما	Class on rodes or substrate). THE AMENITORIS ALCAE. THAN COORDINGS
Identify specific pollutants, if kr	nown:		
WATER QUALITY CHARACTERIS Obvious siltation: Observable water quality (siltatio	YES	NO or is clear, dis	scolored, oily film, scum, water odor; etc.):
OBSERVED PRESENCE OF SUBS	URFACE I	FLOW:	☐ YES ☑ NO
OBSERVED PRESENCE OF GROU	JNDWAT	ER SEEPS	: YES NO
-			
BANK EROSION: EXTENSIVE	MDD! vads, underc	ut banks, etc	XI LITTLE / NONE (FIRS & +01)
	1	Flad 3	JUTTLE/NONE (Flag 2 to 1)
Average depth of water (feet):			
If flow present, estimate stage			
Water present: NO WATER	, STREAMBE	D DRY	STREAMBED MOIST STANDING WATER FLOWING WATER
FLOW CHARACTERISTICS:			
Ordinary High Water Mark (OH			
			et): Water depth (feet):
AVELAKE DALIK HEIKIIL (1886).			
Average bank height (feet):		.' - at	
Average bank-to-bank width (fe			O TOP OF BANK (ESTIMATE):
- · · · · · · · · · · · · · · · · · · ·			O TOP OF BANK (ESTIMATE):
STREAM CHANNEL PROPERTIES Average bank-to-bank width (fe			O TOP OF BANK (ESTIMATE):
STREAM CHANNEL PROPERTIES Average bank-to-bank width (fe			O TOP OF BANK (ESTIMATE):

DATE: 7-12-16 REVIEWER(S): A TOTAL A T	WEATHER CONDITIONS: Clear / No rain / Last For
STREAM TYPE: PERENNIAL Stream crossed by centerline: Stream crossed by access road:	☐ INTERMITTENT DEPHEMERAL ☐ YES DINO ☐ YES
PHOTOGRAPHS TAKEN: # 48-7 - Upstream Culvert Inflow	# Downstream 5 # Impact Area # Culvert Outflow 9879 RB -> W H 880LB -> £
3. Is connected to its overbank flood4. Has a riparian buffer of at least 255. If stream segment is impacted by	ner by human activities dcutting, incision, or excessive aggradation d plain supporting normal hydrological functions
2. Streams support many, but not al	☐ YES ☐ NO The following are met: ver, system recovery has a moderate probability of occurring naturally I, of the hydraulic and geomorphic functions characteristic of fully functioning streams
 Has been channelized and shows Is levee protected, impounded, or Entrenched or contains active hea Has little or no riparian buffer of c Has banks that are extensively erc 	rartificially constricted adducts deep-rooted vegetation on 1 or both sides of channel odded or unstable, bank sloughing, erosional scars within 0.5 mile upstream of proposed stream impact, and stream impacts individually
GENERAL WATERSHED AND/OR RIGHT BANK: FORESTED WETLAND FARMLAND SCRUB/SHRUB HAYFIELD PRAIRIE INDUSTRIAL HIGH BLUFFS RESIDENTIAL	RIPARIAN AREA CHARACTERISTICS WITHIN 100FT BUFFER LEFT BANK: FORESTED WETLAND SCRUB/SHRUB HAYFIELD PRAIRIE INDUSTRIAL HIGH BLUFFS RESIDENTIAL

OBSERVED PRESENCE OF	GROUNDWATER SEEPS: YES NO
OBSERVED PRESENCE OF	SUBSURFACE FLOW: YES NO
WATER QUALITY CHARA Obvious siltation: Observable water quality	CTERISTICS: YES NO NO NO OO S (stration water color is close, discolored, oily film, scum, water odor; etc.);
Identify specific nellytant	161
identity specific politicant	s, it known:
Identify specific pollutant	
	RIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES
AQUATIC PLANTS: PE	RIPHYTON (brown or yellowish algae on rocks or substrate)

DATE:	MA	=	
GAI STREAM ID: STAIL	022	_	
STREAM CHANNEL PROPERTIES Average bank-to-bank width (fe Average bank height (feet): Bottom width (feet): Ordinary High Water Mark (OH)	eet):; at ; at Water w	centerlir	re (feet): t): Water depth (feet): (<1" ix pool
FLOW CHARACTERISTICS: Water present: NO WATER, If flow present, estimate stage a Average depth of water (feet):	at time of	survey:	STREAMBED MOIST STANDING WATER FLOWING WATER HIGH MEDIUM LOW NO FLOW
BANK EROSION: EXTENSIVE Explain (sloughing banks, exposed root w	MODE	RATE [ut banks, etc.	: Slough banks/undercuts/
OBSERVED PRESENCE OF GROU	INDWATE	ER SEEPS:	YES NO
OBSERVED PRESENCE OF SUBS	URFACE F	LOW:	YES NO
WATER QUALITY CHARACTERIS Obvious siltation: Observable water quality (siltation	YES	NO r is clear, disc	No flow colored, oily film, scum, water odor; etc.):
Identify specific pollutants, if kn	own:		
AQUATIC PLANTS: PERIPHYTO	N (brown o	r yellowish a	algae on rocks or substrate)
WETLAND FRINGE: Describe:	YES	☐ ABUT	TING OF ADJACENT NO
BIOLOGICAL CHARACTERISTICS Macroinvertebrates observed? Fish or wildlife observed? Habitat for: Fish/spawn areas?	: YES YES	NO NO	Describe:
JURISDICTIONAL STATUS: Is this stream jurisdictional?	YES	□ NO	Describe: Convects to NHI)
OTHER OBSERVATIONS AND CO	MMENT:	s: Ir	ih of STLTMAOZZ

DATE: 9-13-2016 REVIEWER(S): 117-7MA WEATHER CONDITIONS: Cloar/Last rain/event 72hrs
STREAM TYPE: PERENNIAL INTERMITTENT EPHEMERAL Stream crossed by centerline: YES Stream crossed by access road: YES
PHOTOGRAPHS TAKEN: # Upstream NW #
FULLY FUNCTIONAL: YES NO Considered fully functional if the following criteria are met: 1. Unaltered in any significant manner by human activities 2. Is stable and does not exhibit headcutting, incision, or excessive aggradation 3. Is connected to its overbank flood plain supporting normal hydrological functions 4. Has a riparian buffer of at least 25 ft in width 5. If stream segment is impacted by a minor structural alteration but otherwise fully functional and does not significantly alter stream segments above and below, then the alteration should be considered separate and moderately functional
MODERATELY FUNCTIONAL: Considered moderately functional if the following are met: 1. Streams have been altered; however, system recovery has a moderate probability of occurring naturally 2. Streams support many, but not all, of the hydraulic and geomorphic functions characteristic of fully functioning streams of similar order in the watershed
FUNCTIONALLY IMPAIRED: NO Considered functionally impaired if the stream has more than one of the following: 1. Has been channelized and shows no evidence of self-recovery 2. Is levee protected, impounded, or artificially constricted 3. Entrenched or contains active headcuts 4. Has little or no riparian buffer of deep-rooted vegetation on 1 or both sides of channel 5. Has banks that are extensively eroded or unstable, bank sloughing, erosional scars 6. Has 4 or greater stream impacts within 0.5 mile upstream of proposed stream impact, and stream impacts individually or cumulatively exceed 100 ft in length
GENERAL WATERSHED AND/OR RIPARIAN AREA CHARACTERISTICS WITHIN 100FT BUFFER RIGHT BANK: FORESTED WETLAND FORESTED WETLAND FORESTED SCRUB/SHRUB HAYFIELD PRAIRIE INDUSTRIAL HIGH BLUFFS RESIDENTIAL RESIDENTIAL

DATE: 9-13-2016	
REVIEWER(S):\\T - T M A	WEATHER CONDITIONS: Clear/Last rainevent
GAI STREAM ID: STY N POZ 3	72 hours
STREAM TYPE: PERENNIAL IN	NTERMITTENT
Stream crossed by centerline:	ES NO
Stream crossed by access road:	ES TNO
PHOTOGRAPHS TAKEN:	091
# 970 - Upstream $92 # 10$	- Downstream Sω # Impact Area
# Culvert Inflow #	- Culvert Outflow 4892 RB > PW/4893 > LB > 55
FULLY FUNCTIONAL:	ES NO
Considered fully functional if the following cr	riteria are met:
1. Unaltered in any significant manner by hu	man activities
2. Is stable and does not exhibit headcutting,	
3. Is connected to its overbank flood plain su	pporting normal hydrological functions
4. Has a riparian buffer of at least 25 ft in wic	
	structural alteration but otherwise fully functional and does not
moderately functional	d below, then the alteration should be considered separate and
moderately functional	
MODERATELY FUNCTIONAL.	
MODERATELY FUNCTIONAL:	fs No
Considered moderately functional if the follo	nwing are met: em recovery has a moderate probability of occurring naturally
	hydraulic and geomorphic functions characteristic of fully functioning streams
of similar order in the watershed	Tydraune and geomorphic functions characteristic of fully functioning streams
FUNCTIONALLY IMPAIRED: YE	ES NO
Considered functionally impaired if the strea	m has more than one of the following:
1. Has been channelized and shows no evide	nce of self-recovery
2. Is levee protected, impounded, or artificial	lly constricted
3. Entrenched or contains active headcuts	
4. Has little or no riparian buffer of deep-roo	ted vegetation on 1 or both sides of channel
5. Has banks that are extensively eroded or u	
	mile upstream of proposed stream impact, and stream impacts individually
or cumulatively exceed 100 ft in length	
	AN AREA CHARACTERISTICS WITHIN 100FT BUFFER
RIGHT BANK:	LEFT BANK:
FORESTED WETLAND	M FORESTED
FARMLAND SCRUB/SHRUB	FARMLAND SCRUB/SHRUB
HAYFIELD PRAIRIE	HAYFIELD PRAIRIE
☐ INDUSTRIAL ☐ HIGH BLUFFS ☐ RESIDENTIAL	☐ INDUSTRIAL ☐ HIGH BLUFFS ☐ RESIDENTIAL
I KENDEMIKE	L RESIDENTIAL

DATE: 9-13-2016
GAI STREAM ID: STUJI POZZ
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet): 8 ; at centerline (feet): Average bank height (feet): 4'; at centerline (feet): Bottom width (feet): 3' Water width (feet): 4' Water depth (feet): 2' Ordinary High Water Mark (OHWM), if observed (feet): 5
FLOW CHARACTERISTICS: Water present: No water, streambed dry Streambed moist Standing water Flowing water If flow present, estimate stage at time of survey: High MEDIUM LOW Average depth of water (feet): 2"
BANK EROSION: EXTENSIVE MODERATE LITTLE / NONE Explain (slowthing banks, exposed root wads, undercut banks, etc.):
OBSERVED PRESENCE OF GROUNDWATER SEEPS:
WATER QUALITY CHARACTERISTICS: Obvious siltation: VES NO Observable water quality (siliation, water color is clear, discolored, oily film, scum, water odor; etc.):
Identify specific pollutants, if known:
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES
WETLAND FRINGE: YES ABUTTING OF ADJACENT NO Describe:
BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed?
JURISDICTIONAL STATUS: Is this stream jurisdictional? NO Describe: NH D
OTHER OBSERVATIONS AND COMMENTS: Trib of STLTMA017

DATE:O REVIEWER(S): GAI STREAM ID		16	WEATHER CO	NDITION	s: (ban/63°F	
	□ PERENNIAL d by centerline: d by access road:	INTERMITTE YES YES	NT □ EPHEN ☑NO ☑NO	1ERAL		
	S TAKEN: - Upstream - Culvert Inflow	# <u>620</u> #	- Downstream Culvert O	W #_ utflow (623 Impact Area N 621-RB→N / 622 LB→	'5
1. Unaltered in a	ONAL: functional if the follo ny significant manne loes not exhibit head	YES wing criteria are r by human activ	NO met: ities			
 Has a riparian If stream segm 	r stream segments ab	ft in width minor structural	alteration but oth	erwise ful	ns ly functional and does not e considered separate and	
 Streams have It Streams suppo 	erately functional if the been altered; howeve ort many, but not all,	he following are i er, system recove	ry has a moderate		ty of occurring naturally naracteristic of fully functioning streams	
of similar order in	n the watershed					
FUNCTIONALLY	/ IMPAIRED:	10 ves	□NO			
	ionally impaired if th		—	following:		
	nelized and shows no			TOTIOWING.	•	
	ted, impounded, or a		•			
	contains active head	•				
4. Has little or no	riparian buffer of de	ep-rooted vegeta	ition on 1 or both	sides of ch	nannel	
5. Has banks that	are extensively erod	ed or unstable, b	ank sloughing, ero	sional sca	rs	
	er stream impacts wit xceed 100 ft in length		ream of proposed	stream im	npact, and stream impacts individually	
GENERAL WATE	ERSHED AND/OR RI	IPARIAN AREA	CHARACTERISTIC	S WITHI	N 100FT BUFFER	
RIGHT BANK:			LEFT BANK:			
FORESTED	☐ WETLAND		FORESTED	☐ WETLA	AND	
FARMLAND	SCRUB/SHRUB		FARMLAND	SCRUB	3/SHRUB	
HAYFIELD	PRAIRIE		HAYFIELD	PRAIRI	IE	
INDUSTRIAL	HIGH BLUFFS		INDUSTRIAL	☐ HIGH I	BLUFFS	
RESIDENTIAL	AIn	rpact ar	RESIDENTIAL	1	L farmfield	

DATE: 10-24-7016 REVIEWER(S): 11P-TMA
GAI STREAM ID: STLDIPIG
Average bank-to-bank width (feet):; at centerline (feet):
Average bank height (feet): 4.5; at centerline (feet):
Bottom width (feet): Water width (feet):
Ordinary High Water Mark (OHWM), if observed (feet):
FLOW CHARACTERISTICS:
Water present: NO WATER, STREAMBED DRY STREAMBED MOIST STANDING WATER FLOWING WATER If flow present, estimate stage at time of survey: HIGH MEDIUM LOW NOW
If flow present, estimate stage at time of survey: HIGH MEDIUM LOW NOVE Average depth of water (feet): NOVE
BANK EROSION: EXTENSIVE MODERATE LITTLE / NONE
Explain (sloughing banks, exposed root wads, undercut banks, etc.):
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES NO
OBSERVED FRESERVE OF GROUNDWATER SEEPS.
OBSERVED PRESENCE OF SUBSURFACE FLOW: YES
WATER QUALITY CHARACTERISTICS:
Obvious siltation:
Observable water quality (siltation, water color is clear, discolored, oily film, scum, water odor; etc.):
Identify specific pollutants, if known:
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES
WETLAND FRINGE: YES ABUTTING OF ADJACENT NO
Describe:
BIOLOGICAL CHARACTERISTICS:
Macroinvertebrates observed?
Fish or wildlife observed?
Habitat for:None
Fish/spawn areas?
URISDICTIONAL STATUS:
s this stream jurisdictional? YES NO Describe:
Stud area
OTHER OBSERVATIONS AND COMMENTS: - Stream bed with clanch water
wear edec of Strole case boundar of
O CONTRACTOR OF THE PROPERTY O

DATE:				
BANK EROSION: EXTENSIVE MODERATE LITTLE / NONE Explain (sloughing banks, exposed root wade, undercut banks, etc.):				
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES O OBSERVED PRESENCE OF SUBSURFACE FLOW: YES NO WATER QUALITY CHARACTERISTICS: Obvious siltation: YES ONO Observable water quality (siltation, water color is cone, discolored, oily film, scum, water odor; etc.):				
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES				
WETLAND FRINGE: YES ABUTTING or ADJACENT NO Describe:				
BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed?				
JURISDICTIONAL STATUS: Is this stream jurisdictional? YES NO Describe:				
OTHER OBSERVATIONS AND COMMENTS: Source agricultural field				

REVIEWER(S): GAI STREAM ID		weather conditions: Clear / 70°F/	No rain
STREAM TYPE: Stream crossed Stream crossed	PERENNIAL by centerline: by access road:	☐ INTERMITTENT EPHEMERAL ☐ YES ☐ YES	
		# Downstream S & # Impact Area # Culvert Outflow 6024 RB -> Sw/60	025LB-1N
1. Unaltered in a	functional if the followny significant manner	☐ YES ving criteria are met: by human activities	
		utting, incision, or excessive aggradation	
	o its overbank flood pi buffer of at least 25 ft	ain supporting normal hydrological functions	
		ninor structural alteration but otherwise fully functional and does not	
_	stream segments abo	ve and below, then the alteration should be considered separate and	
MODERATELY F	HINCTIONAL:	☐ YES ☑NO	
	erately functional if the		
	·	, system recovery has a moderate probability of occurring naturally	
	rt many, but not all, o	f the hydraulic and geomorphic functions characteristic of fully functioning st	treams
FUNCTIONALLY	IMPAIRED:	™ YES NO	
		stream has more than one of the following:	
		evidence of self-recovery	
2. Is levee protect	ted, impounded, or ar	tificially constricted	
3. Entrenched or	contains active headc	uts	
4. Has little or no	riparian buffer of dee	p-rooted vegetation on 1 or both sides of channel	
	•	d or unstable, bank sloughing, erosional scars	
		in 0.5 mile upstream of proposed stream impact, and stream impacts individ	ually
or cumulatively e	xceed 100 ft in length		
GENERAL WATE	ERSHED AND/OR RIF	PARIAN AREA CHARACTERISTICS WITHIN 100FT BUFFER	
RIGHT BANK:		LEFT BANK:	
FORESTED	WETLAND	FORESTED WETLAND	
FARMLAND	SCRUB/SHRUB	☐ FARMLAND ☐ SCRUB/SHRUB	
HAYFIELD	PRAIRIE	☐ HAYFIELD ☐ PRAIRIE	
INDUSTRIAL	HIGH BLUFFS	☐ INDUSTRIAL ☐ HIGH BLUFFS	
RESIDENTIAL		RESIDENTIAL	

DATE: 11-17-2016 REVIEWER(S): JJ P-TM A GAI STREAM ID: STLJJ P126
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet):; at centerline (feet): Average bank height (feet):; at centerline (feet): Bottom width (feet): Water width (feet): Ordinary High Water Mark (OHWM), if observed (feet):
FLOW CHARACTERISTICS: Water present: No water, Streambed DRY Streambed Moist Standing water Flowing water If flow present, estimate stage at time of survey: HIGH MEDIUM LOW NO FLOW Average depth of water (feet):
BANK EROSION: EXTENSIVE MODERATE LITTLE / NONE Explain (sloughing banks, exposed root wads, undercut banks, etc.):
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES NO OBSERVED PRESENCE OF SUBSURFACE FLOW: YES NO WATER QUALITY CHARACTERISTICS: Obvious siltation: YES NO Observable water quality (siltation, water color is clear, discolored, oily film, scum, water odor; etc.):
Identify specific pollutants, if known: Now doctored
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTE WETLAND FRINGE: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTE NO Describe:
BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed?
JURISDICTIONAL STATUS: Is this stream jurisdictional? YES NO Describe: Connects to NHD blue in
other observations and comments: Tr. bylang of STLTMA068

DATE: 2-21-2017 REVIEWER(S): 110- WW GAI STREAM ID: SELMPIYI	WEATHER CONDITIONS: overcast/60°F/Lyll ra
STREAM TYPE: PERENNIAL INTERMIT Stream crossed by centerline: YES Stream crossed by access road: YES	TTENT DEPHEMERAL NO NO
PHOTOGRAPHS TAKEN: # 6816 - Upstream と # 6811 # 680 - Culvert Inflow # 681	(Downstream W # 6817 - Impact Area S - Culvert Outflow 6812 RB -> 16813 LB-> S
FULLY FUNCTIONAL: YES Considered fully functional if the following criteria at 1. Unaltered in any significant manner by human act	are met:
2. Is stable and does not exhibit headcutting, incision3. Is connected to its overbank flood plain supportin4. Has a riparian buffer of at least 25 ft in width	
	ral alteration but otherwise fully functional and does not w, then the alteration should be considered separate and
FUNCTIONALLY IMPAIRED: YES Considered functionally impaired if the stream has m 1. Has been channelized and shows no evidence of so	self-recovery
2. Is levee protected, impounded, or artificially const	tricted
3. Entrenched or contains active headcuts4. Has little or no riparian buffer of deep-rooted vege	retation on 1 or both sides of channel
5. Has banks that are extensively eroded or unstable	
-	pstream of proposed stream impact, and stream impacts individually
or cumulatively exceed 100 ft in length	
GENERAL WATERSHED AND/OR RIPARIAN ARE.	EA CHARACTERISTICS WITHIN 100FT BUFFER
RIGHT BANK:	LEFT BANK:
FORESTED WETLAND	FORESTED WETLAND
FARMLAND SCRUB/SHRUB	FARMLAND SCRUB/SHRUB
HAYFIELD PRAIRIE	☐ HAYFIELD ☐ PRAIRIE
☐ INDUSTRIAL ☐ HIGH BLUFFS ☐ RESIDENTIAL	☐ INDUSTRIAL ☐ HIGH BLUFFS ☐ RESIDENTIAL

Fish or wildlife observed? Habitat for: Fish/spawn areas? JURISDICTIONAL STATUS: Is this stream jurisdictional? YES NO Describe: NO Describe: NO Describe:
Habitat for:
Habitat for:
Macroinvertebrates observed? YES Describe:
BIOLOGICAL CHARACTERISTICS:
Describe: VEM abitting channel, possible source at flow
WETLAND FRINGE: YES ABUTTING OF ADJACENT NO
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES
Identify specific pollutants, if known:
none observed,
Observable water quality (siltation, water color schem, discolored, oily film, scum, water odor; etc.):
Obvious siltation:
WATER QUALITY CHARACTERISTICS:
OBSERVED PRESENCE OF SUBSURFACE FLOW: YES
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES NO
0
(Sloughing dams, extract ballis, etc.).
BANK EROSION: EXTENSIVE MODERATE LITTLE / NONE Explain (sloughing banks, excased root wads, undercut banks, etc.):
PANK EDOSION: TEVTENSIVE TAMODEDATE THE ANOME
Average depth of water (feet):
If flow present, estimate stage at time of survey: HIGH MEDIUM LOW NO F6W
Water present: NO WATER STREAMBED DRY STREAMBED MOIST STANDING WATER
FLOW CHARACTERISTICS:
Ordinary High Water Mark (OHWM), if observed (feet): 5
Bottom width (feet): Water width (feet): Water depth (feet): Ordinary High Water Mark (OHWM), if observed (feet): S
Average bank height (feet):; at centerline (feet): Water width (feet): Water width (feet): Water depth (feet): Ordinary High Water Mark (OHWM), if observed (feet): S
Bottom width (feet): Water width (feet): Water depth (feet): Ordinary High Water Mark (OHWM), if observed (feet): 5
Average bank-to-bank width (feet):; at centerline (feet): Average bank height (feet):; at centerline (feet): Bottom width (feet): Water width (feet): Water depth (feet): Ordinary High Water Mark (OHWM), if observed (feet):
Average bank-to-bank width (feet):; at centerline (feet): Average bank height (feet):; at centerline (feet): Bottom width (feet): Water width (feet): Water depth (feet): Ordinary High Water Mark (OHWM), if observed (feet):
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet):; at centerline (feet): Average bank height (feet):; at centerline (feet): Bottom width (feet): Water width (feet): Ordinary High Water Mark (OHWM), if observed (feet):

DATE: 7-21-7017 REVIEWER(S): 111-WW GAI STREAM ID: 511-WP142 WEATHER CONDITIONS: Ourcast/600F/Lult vaid
STREAM TYPE: PERENNIAL INTERMITTENT EPHEMERAL Stream crossed by centerline: YES NO Stream crossed by access road: YES NO
PHOTOGRAPHS TAKEN: # 6816 - Upstream & # 6817 - Downstream # - Impact Area # 6820 - Culvert Inflow # 6821 - Culvert Outflow 6818 R8 - 16819L8
FULLY FUNCTIONAL: YES Considered fully functional if the following criteria are met: 1. Unaltered in any significant manner by human activities 2. Is stable and does not exhibit headcutting, incision, or excessive aggradation
 3. Is connected to its overbank flood plain supporting normal hydrological functions 4. Has a riparian buffer of at least 25 ft in width 5. If stream segment is impacted by a minor structural alteration but otherwise fully functional and does not significantly alter stream segments above and below, then the alteration should be considered separate and moderately functional
MODERATELY FUNCTIONAL: NO Considered moderately functional if the following are met: 1. Streams have been altered; however, system recovery has a moderate probability of occurring naturally 2. Streams support many, but not all, of the hydraulic and geomorphic functions characteristic of fully functioning streams of similar order in the watershed
FUNCTIONALLY IMPAIRED: YES NO Considered functionally impaired if the stream has more than one of the following: 1. Has been channelized and shows no evidence of self-recovery 2. Is levee protected, impounded, or artificially constricted 3. Entrenched or contains active headcuts 4. Has little or no riparian buffer of deep-rooted vegetation on 1 or both sides of channel 5. Has banks that are extensively eroded or unstable, bank sloughing, erosional scars 6. Has 4 or greater stream impacts within 0.5 mile upstream of proposed stream impact, and stream impacts individually or cumulatively exceed 100 ft in length
GENERAL WATERSHED AND/OR RIPARIAN AREA CHARACTERISTICS WITHIN 100FT BUFFER RIGHT BANK: FORESTED WETLAND FORESTED WETLAND FARMLAND SCRUB/SHRUB FARMLAND SCRUB/SHRUB HAYFIELD PRAIRIE HAYFIELD PRAIRIE INDUSTRIAL HIGH BLUFFS INDUSTRIAL HIGH BLUFFS RESIDENTIAL RESIDENTIAL

OTHER OBSERVATIONS AND COMMENTS: Tributes of SILWPIY8 Manualin Creek
JURISDICTIONAL STATUS: Is this stream jurisdictional? YES NO Describe:
Fish/spawn areas?
Habitat for:
Fish or wildlife observed? NO Describe: minuous observed in standing water
Macroinvertebrates observed? VES NO Describe:
BIOLOGICAL CHARACTERISTICS:
WETLAND FRINGE: YES ABUTTING OF ADJACENT NO Describe: YES ABUTTING OF ADJACENT NO
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES
Identify specific pollutants, if known:
WATER QUALITY CHARACTERISTICS: Obvious siltation: Observable water quality (siltation, water color is clear, discolored, oily film, scum, water odor; etc.): Standard Color of the color
OBSERVED PRESENCE OF SUBSURFACE FLOW: YES NO
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES NO
BANK EROSION: EXTENSIVE MODERATE SUITLE / NONE Explain (sloughing banks, exposed root wads, undercut banks, etc.):
FLOW CHARACTERISTICS: Water present: No water, streambed dry streambed moist standing water flowing water If flow present, estimate stage at time of survey: HIGH MEDIUM LOW NO FLOW Average depth of water (feet): .5 in Shoot water wear culium in Flow on y
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet):; at centerline (feet): Average bank height (feet):; at centerline (feet): Bottom width (feet): Water width (feet): Ordinary High Water Mark (OHWM), if observed (feet):
GAI STREAM ID: STLJP147

DATE: REVIEWER(S) GAI STREAM	who-ak	43	WEATHER CO	ONDITIONS: _O	uncast/38	30
	E: PERENNIAL ed by centerline: ed by access road:	☐ INTERMITTEN VES ☐ YES	IT EPHEI NO NO	MERAL		
PHOTOGRAPI # 6897 #	HS TAKEN: Upstream いど Culvert Inflow	# <u>6893</u>	- Downstream	ルNW# <u>689</u> utflow G894(<u>ら</u> - Impact Area	5 5LB-3
FULLY FUNCT Considered full 1. Unaltered in		wing criteria are n by human activit	NO net: ies			
3. Is connected4. Has a ripariar5. If stream seg	to its overbank flood p n buffer of at least 25 fi ment is impacted by a er stream segments abo	lain supporting no t in width minor structural a	ormal hydrologio	cal functions nerwise fully functio		
Considered mod 1. Streams have 2. Streams supp	FUNCTIONAL: derately functional if the been altered; however to many, but not all, continued in the watershed	r, system recover	y has a moderate			streams
 Has been change. Is levee protection. Entrenched on notice. Has little or notice. Has banks thange. Has 4 or great. 	Y IMPAIRED: tionally impaired if the nnelized and shows no cted, impounded, or an r contains active headc o riparian buffer of dee t are extensively erode ter stream impacts with exceed 100 ft in length	evidence of self-r tificially constricte uts p-rooted vegetati d or unstable, bai	ecovery ed on on 1 or both nk sloughing, ero	sides of channel osional scars	stream impacts individ	lually
RIGHT BANK:	ERSHED AND/OR RIF		LEFT BANK:	_	BUFFER	
FORESTED FARMLAND HAYFIELD INDUSTRIAL RESIDENTIAL	WETLAND SCRUB/SHRUB PRAIRIE HIGH BLUFFS		FORESTED FARMLAND HAYFIELD INDUSTRIAL RESIDENTIAL	☐ WETLAND ☐ SCRUB/SHRUB ☐ PRAIRIE ☐ HIGH BLUFFS		
Dastur	e					

R	ATE:
A A B	verage bank-to-bank width (feet):; at centerline (feet):; at centerline (feet):; buttom width (feet):; Water width (feet): Water depth (feet): rdinary High Water Mark (OHWM), if observed (feet):
V\ If	OW CHARACTERISTICS: Vater present: No water, streambed dry Streambed moist Standing water flowing water flow present, estimate stage at time of survey: High Medium Low verage depth of water (feet):
B/ Ex	ANK EROSION: EXTENSIVE MODERATE LITTLE / NONE plain (sloughing banks, exposed root wads, undercut banks, etc.):
O	SSERVED PRESENCE OF GROUNDWATER SEEPS: YES INO GILJPOSOA 1050B
OI	SSERVED PRESENCE OF SUBSURFACE FLOW: YES NO
Ok Ok Ide	ATER QUALITY CHARACTERISTICS: ovious siltation:
AC	QUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES
	Scribe: IN active Forested-woodland Plandphin-Pasture
Ma Fis Ha	DLOGICAL CHARACTERISTICS: croinvertebrates observed?
	his stream jurisdictional? NO Describe: NHO Muffed Sheam
от	HER OBSERVATIONS AND COMMENTS:

DATE: 7-74-7017 REVIEWER(S): 119-W1W GAI STREAM ID: STLJJ D144	WEATHER CONDITIONS: Overcast/39°F
STREAM TYPE: PERENNIAL INTERMITTENT Stream crossed by centerline: YES Stream crossed by access road: YES	IND > stream outside current Studi
PHOTOGRAPHS TAKEN: # 688 - Upstream S # - Culvert Inflow # 6883	Downstream W #Impact Area Culvert Dutflow 6890RB > 2 /6891LB > 4
	et: es excessive aggradation
 If stream segment is impacted by a minor structural all significantly alter stream segments above and below, the moderately functional 	•
Considered moderately functional if the following are me 1. Streams have been altered; however, system recovery	
Considered functionally impaired if the stream has more of the stream has been detected as the stream has little or no riparian buffer of deep-rooted vegetations. Has banks that are extensively eroded or unstable, banks.	covery d on on 1 or both sides of channel k sloughing, erosional scars
or cumulatively exceed 100 ft in length GENERAL WATERSHED AND/OR RIPARIAN AREA CH	am of proposed stream impact, and stream impacts individually ARACTERISTICS WITHIN 100FT BUFFER
	FORESTED WETLAND FARMLAND SCRUB/SHRUB HAYFIELD PRAIRIE INDUSTRIAL HIGH BLUFFS RESIDENTIAL

DATE: 7-24-7017 REVIEWER(S): JJP-WJW GAI STREAM ID: SWOJJP144
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet):; at centerline (feet): Average bank height (feet):; at centerline (feet): Bottom width (feet): Water width (feet): Ordinary High Water Mark (OHWM), if observed (feet):
FLOW CHARACTERISTICS: Water present: NO WATER STREAMBED DRY STREAMBED MOIST STANDING WATER FLOWING WATER If flow present, estimate stage at time of survey: HIGH MEDIUM DOW NO FLOW Average depth of water (feet):
BANK EROSION: EXTENSIVE MODERATE LITTLE / NONE Explain (sloughing banks, exposed root wads, undercut banks, etc.):
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES NO OBSERVED PRESENCE OF SUBSURFACE FLOW: YES NO WATER QUALITY CHARACTERISTICS: Obvious siltation: YES NO Observable water quality (siltation, water color is clear, discolored, oily film, scum, water odor; etc.):
Identify specific pollutants, if known:
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES
WETLAND FRINGE: YES ABUTTING OF ADJACENT NO Describe: YES ABUTTING OF ADJACENT NO
BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed?
IS this stream jurisdictional? YES NO Describe: CMWds to NHD sheaven
OTHER OBSERVATIONS AND COMMENTS: Stream channel outside SA

DATE: 2-24-701+	1/2000
REVIEWER(S): JJP-WJW	WEATHER CONDITIONS: Own (ast /38°F
GAI STREAM ID: 51 L	
STREAM TYPE: PERENNIAL INTERMI	TTENT EPHEMERAL
Stream crossed by centerline:	□NO
Stream crossed by access road:	□ NO
PHOTOGRAPHS TAKEN:	
# 6917 - Upstream 52 # 6918	- Downstream WSW # 6971 - Impact Area
# Culvert Inflow #	- Culvert Outflow
FULLY FUNCTIONAL: YES	□ NO
Considered fully functional if the following criteria a	
1. Unaltered in any significant manner by human ac	
2. Is stable and does not exhibit headcutting, incisio	
3. Is connected to its overbank flood plain supporting	ng normal hydrological functions
4. Has a riparian buffer of at least 25 ft in width	
	ral alteration but otherwise fully functional and does not
	v, then the alteration should be considered separate and
moderately functional	
<u> </u>	V
MODERATELY FUNCTIONAL: YES	⊠ NO
Considered moderately functional if the following a	
	overy has a moderate probability of occurring naturally
Streams support many, but not all, of the hydraul of similar order in the watershed	ic and geomorphic functions characteristic of fully functioning streams
or strings of our in the Waterstrea	
FUNCTIONALLY IMPAIRED:	'Am
Considered functionally impaired if the stream has n	note than one of the following:
Has been channelized and shows no evidence of s	
2. Is levee protected, impounded, or artificially const	
3. Entrenched or contains active headcuts	
4. Has little or no riparian buffer of deep-rooted veg	etation on 1 or both sides of channel
5. Has banks that are extensively eroded or unstable	
	ostream of proposed stream impact, and stream impacts individually
or cumulatively exceed 100 ft in length	
GENERAL WATERSHED AND/OR RIPARIAN ARE	A CHARACTERISTICS WITHIN 100FT BUFFFR
RIGHT BANK:	LEFT BANK:
FORESTED WETLAND	FORESTED
FARMLAND SCRUB/SHRUB	☐ FARMLAND ☐ SCHUB/SHRUB
HAYFIELD PRAIRIE	☐ HAYFIELD ☐ PRAIRIE
INDUSTRIAL HIGH BLUFFS	☐ INDUSTRIAL ☐ HIGH BLUFFS
RESIDENTIAL	RESIDENTIAL
	_

AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACRE MACRE METLAND FRINGE: YES ABUTTING or ADJACENT NO Describe: Macroinvertebrates observed? YES Describe Macroinvertebrates observed? YES Describe Macroinvertebrates observed? YES Describe Mabitat for: YES NO Describe Macroinvertebrates observed? YES NO NO Describe Macroinvertebrates observed? YES NO NO NO NO NO NO NO N	_
WETLAND FRINGE: YES ABUTTING or ADJACENT NO Describe: BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed? YES No Describe: Fish or wildlife observed? YES Describe: Habitat for: YES NO Describe: Fish/spawn areas? YES NO Describe:	OPHYTES
WETLAND FRINGE: YES ABUTTING or ADJACENT NO Describe: YES NO Describe: YES NO Describe: YES NO Describe: YES NO Describe: YES NO Describe: YES NO Describe: YES NO Describe: YES NO Describe: YES NO Describe: YES NO Describe: YES NO DESCRIBE: YES NO YES	DPHYTES
WETLAND FRINGE: YES ABUTTING or ADJACENT NO Describe: BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed? YES No Describe: Fish or wildlife observed? YES Describe:	OPHYTES
WETLAND FRINGE: YES ABUTTING or ADJACENT NO Describe: NO BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed? YES NO Describe:	OPHYTES
WETLAND FRINGE: YES ABUTTING OF ADJACENT NO Describe: BIOLOGICAL CHARACTERISTICS:	OPHYTES
WETLAND FRINGE: YES ABUTTING OF ADJACENT NO	OPHYTES
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate)	OPHYTES
Identify specific pollutants, if known:	_
WATER QUALITY CHARACTERISTICS: Obvious siltation: Observable water quality (siltation, water color is clear, discolored, oily film, scum, water odor; etc.):	an.
OBSERVED PRESENCE OF SUBSURFACE FLOW:	
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES NO	
BANK EROSION: EXTENSIVE MODERATE MITTLE / NONE Explain (sloughing banks, exposed root wads, undercut banks, etc.):	_
Average depth of water (feet): HIGH MEDIUM LOW Average depth of water (feet):	
Water present: ☐ NO WATER, STREAMBED DRY ☐ STREAMBED MOIST ☐ STANDING WATER FLOWING FLOWIN	IG WATE
FLOW CHARACTERISTICS:	
Bottom width (feet): Water width (feet): Water depth (feet): S Ordinary High Water Mark (OHWM), if observed (feet): S	
Average bank height (feet):	
Average bank-to-bank width (feet):; at centerline (feet):	
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet): 4 at centerline (feet):	

DATE: 2-24-2017 REVIEWER(S): JJD-WJW GAI STREAM ID: STLIP146 WEATHER CONDITIONS: Ourcast/38°F
STREAM TYPE: PERENNIAL INTERMITTENT EPHEMERAL Stream crossed by centerline: YES Stream crossed by access road: YES
PHOTOGRAPHS TAKEN: #_693/Upstream SE #_6932_Downstream NW #Impact Area #Culvert Inflow #Culvert Outflow 6933R8>N/6934L8>
FULLY FUNCTIONAL: Considered fully functional if the following criteria are met: 1. Unaltered in any significant manner by human activities 2. Is stable and does not exhibit headcutting, incision, or excessive aggradation
 Is connected to its overbank flood plain supporting normal hydrological functions Has a riparian buffer of at least 25 ft in width If stream segment is impacted by a minor structural alteration but otherwise fully functional and does not
significantly alter stream segments above and below, then the alteration should be considered separate and moderately functional MODERATELY FUNCTIONAL: NO
Considered moderately functional if the following are met: 1. Streams have been altered; however, system recovery has a moderate probability of occurring naturally 2. Streams support many, but not all, of the hydraulic and geomorphic functions characteristic of fully functioning streams
of similar order in the watershed FUNCTIONALLY IMPAIRED: NO Considered functionally impaired if the stream has more than one of the following:
 Has been channelized and shows no evidence of self-recovery Is levee protected, impounded, or artificially constricted Entrenched or contains active headcuts Has little or no riparian buffer of deep-rooted vegetation on 1 or both sides of channel
5. Has banks that are extensively eroded or unstable, bank sloughing, erosional scars 5. Has 4 or greater stream impacts within 0.5 mile upstream of proposed stream impact, and stream impacts individually or cumulatively exceed 100 ft in length
GENERAL WATERSHED AND/OR RIPARIAN AREA CHARACTERISTICS WITHIN 100FT BUFFER RIGHT BANK: FORESTED WETLAND FORESTED WETLAND
FARMLAND
RESIDENTIAL RESIDENTIAL

REVIEWER(S): GAI STREAM ID: ST WILLIAM ID: ST WILL
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet):; at centerline (feet): Average bank height (feet):; at centerline (feet): Bottom width (feet): Water width (feet): Ordinary High Water Mark (OHWM), if observed (feet):
FLOW CHARACTERISTICS: Water present:
BANK EROSION: EXTENSIVE MODERATE LITTLE / NONE Explain (sloughing banks, exposed root wads, undercut banks, etc.):
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES YOU
OBSERVED PRESENCE OF SUBSURFACE FLOW: YES NO
WATER QUALITY CHARACTERISTICS: Obvious siltation: YES Observable water quality (siltation, water color a dear, discolored, oily film, scum, water odor; etc.):
Identify specific pollutants, if known:
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES
WETLAND FRINGE: YES ABUTTING OF ADJACENT NO Describe:
BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed?
Fish/spawn areas?
JURISDICTIONAL STATUS: Is this stream jurisdictional? YES NO Describe:
OTHER OBSERVATIONS AND COMMENTS: POSSIBLE SOURCE UPSlope von-off

DATE: 2-25-2017 REVIEWER(S): 111-444 GAI STREAM ID: STLJJP147 WEATHER CONDITIONS: 0441Cast /38°F	2
STREAM TYPE: PERENNIAL INTERMITTENT EPHEMERAL Stream crossed by centerline: No Stream crossed by access road: VES NO	
PHOTOGRAPHS TAKEN: #6945 - Upstream N #6946 - Downstream S #6944 - Impact Area E - Culvert Inflow # - Culvert Outflow 6947 RB - W/69431	~R→S
FULLY FUNCTIONAL: YES Considered fully functional if the following criteria are met: 1. Unaltered in any significant manner by human activities 2. Is stable and does not exhibit headcutting, incision, or excessive aggradation	0 / 2
3. Is connected to its overbank flood plain supporting normal hydrological functions 4. Has a riparian buffer of at least 25 ft in width 5. If stream segment is impacted by a minor structural alteration but otherwise fully functional and does not significantly alter stream segments above and below, then the alteration should be considered separate and moderately functional	
MODERATELY FUNCTIONAL: NO Considered moderately functional if the following are met: 1. Streams have been altered; however, system recovery has a moderate probability of occurring naturally 2. Streams support many, but not all, of the hydraulic and geomorphic functions characteristic of fully functioning streams of similar order in the watershed	
FUNCTIONALLY IMPAIRED: NO Considered functionally impaired if the stream has more than one of the following: 1. Has been channelized and shows no evidence of self-recovery	
 Is levee protected, impounded, or artificially constricted Entrenched or contains active headcuts Has little or no riparian buffer of deep-rooted vegetation on 1 or both sides of channel Has banks that are extensively eroded or unstable, bank sloughing, erosional scars Has 4 or greater stream impacts within 0.5 mile upstream of proposed stream impact, and stream impacts individually or cumulatively exceed 100 ft in length 	
GENERAL WATERSHED AND/OR RIPARIAN AREA CHARACTERISTICS WITHIN 100FT BUFFER RIGHT BANK: LEFT BANK: FORESTED WETLAND	
FARMLAND SCRUB/SHRUB SCRUB/SHRUB SCRUB/SHRUB HAYFIELD PRAIRIE HIGH BLUFFS INDUSTRIAL HIGH BLUFFS RESIDENTIAL RESIDENTIAL RESIDENTIAL	

Fish or wildlife observed?
Fish or wildlife observed? Habitat for: PES NO Describe: Habitat for: Hab
Fish or wildlife observed?
asi onitisi tabiatas obsettati — Maria Describe
Macroinvertebrates observed? YES Describe:
RIOLOGICAL CHARACTERISTICS:
WETLAND FRINGE: YES ABUTTING OF ADJACENT NO Describe: YES ABUTTING OF ADJACENT NO
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES
Identify specific pollutants, if known: Trash in stream channel
Obvious siltation: Observable water quality (siltation, water color is clear, discolored, oily film, scum, water odor; etc.):
WATER QUALITY CHARACTERISTICS:
OBSERVED PRESENCE OF SUBSURFACE FLOW: YES YES
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES NO
Explain (sloughing banks, exposed root wads, undercut banks, etc.):
BANK EROSION: EXTENSIVE MODERATE LITTLE / NONE
Average depth of water (feet):
If flow present, estimate stage at time of survey:
FLOW CHARACTERISTICS: Water present: □ NO WATER, STREAMBED DRY STREAMBED MOIST □ STANDING WATER □ FLOWING WATER
FLOW CHARACTERICTICS
Ordinary High Water Mark (OHWM), if observed (feet):
Bottom width (feet): Water width (feet): Water depth (feet):
Average bank height (feet): at centerline (feet):
Average bank-to-bank width (feet):; at centerline (feet):
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE):
GAI STREAM ID: STEAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE):

DATE: 2-21-7017- REVIEWER(S): 31P-WJW GAI STREAM ID: STUJP148 WEATHER CONDITIONS: Quarast/60'F/lyllt vai
STREAM TYPE: INTERMITENT DEPHEMERAL Stream crossed by centerline: YES DNO Stream crossed by access road: YES NO
PHOTOGRAPHS TAKEN: #_6825 - Upstream NE #_6826 - Downstream SW #_6828 - Impact Area NW #_———————————————————————————————————
FULLY FUNCTIONAL: Considered fully functional if the following criteria are met: 1. Unaltered in any significant manner by human activities 2. Is stable and does not exhibit headcutting, incision, or excessive aggradation 3. Is connected to its overbank flood plain supporting normal hydrological functions 4. Has a riparian buffer of at least 25 ft in width 5. If stream segment is impacted by a minor structural alteration but otherwise fully functional and does not significantly alter stream segments above and below, then the alteration should be considered separate and moderately functional
MODERATELY FUNCTIONAL: YES Considered moderately functional if the following are met: 1. Streams have been altered; however, system recovery has a moderate probability of occurring naturally 2. Streams support many, but not all, of the hydraulic and geomorphic functions characteristic of fully functioning streams of similar order in the watershed
FUNCTIONALLY IMPAIRED: YES Considered functionally impaired if the stream has more than one of the following: 1. Has been channelized and shows no evidence of self-recovery 2. Is levee protected, impounded, or artificially constricted 3. Entrenched or contains active headcuts 4. Has little or no riparian buffer of deep-rooted vegetation on 1 or both sides of channel 5. Has banks that are extensively eroded or unstable, bank sloughing, erosional scars 6. Has 4 or greater stream impacts within 0.5 mile upstream of proposed stream impact, and stream impacts individually or cumulatively exceed 100 ft in length
GENERAL WATERSHED AND/OR RIPARIAN AREA CHARACTERISTICS WITHIN 100FT BUFFER RIGHT BANK: LEFT BANK: FORESTED WETLAND FORESTED SCRUB/SHRUB FARMLAND SCRUB/SHRUB HAYFIELD PRAIRIE INDUSTRIAL HIGH BLUFFS WETLAND PRAIRIE INDUSTRIAL HIGH BLUFFS
☐ RESIDENTIAL ☐ RESIDENTIAL

DATE: 2-21-2017- REVIEWER(S): 1) D-W1W GAI STREAM ID: 5TLN P148
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet): 150; at centerline (feet): 150 Average bank height (feet): 20; at centerline (feet): Water width (feet): Water depth (feet): 150 Ordinary High Water Mark (OHWM), if observed (feet): 150
FLOW CHARACTERISTICS: Water present: No water, streambed dry streambed moist standing water flowing water If flow present, estimate stage at time of survey: high medium low Average depth of water (feet): 4/
BANK EROSION: EXTENSIVE MODERATE LITTLE / NONE Explain (sloughing banks, exceed root wads, undercut banks, etc.):
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES NO OBSERVED PRESENCE OF SUBSURFACE FLOW: YES YES
WATER QUALITY CHARACTERISTICS: Obvious siltation: Observable water quality (siltation water color is clear, discolored, oily film, scum, water odor; etc.): Wa Luc
Identify specific pollutants, if known:
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE
WETLAND FRINGE: YES ABUTTING OF ADJACENT NO Describe:
BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed?
JURISDICTIONAL STATUS: Is this stream jurisdictional? VES NO Describe:
OTHER OBSERVATIONS AND COMMENTS: Majoupin Creek/

DATE: 9/9/2016	
REVIEWER(S): JJP/TMA	WEATHER CONDITIONS: _A.M. RAIN
GAI STREAM ID: SILTMAOO3	
STREAM TYPE: PERENNIAL INTERMI Stream crossed by centerline: YES Stream crossed by access road: YES	TTENT
PHOTOGRAPHS TAKEN:	
# 12040 - Unstream (F) # 12049	7 - Downstream (1) # Impact Area
# - Culvert Inflow #	9 Downstream (w) # Impact Area Culvert Outflow # Acres \$ 5 (§)
"	- Across (5)
FULLY FUNCTIONAL: YES	M NO
Considered fully functional if the following criteria	,
1. Unaltered in any significant manner by human ac	
2. Is stable and does not exhibit headcutting, incision	
3. Is connected to its overbank flood plain supporti	
4. Has a riparian buffer of at least 25 ft in width	
5. If stream segment is impacted by a minor structu	ral alteration but otherwise fully functional and does not
	w, then the alteration should be considered separate and
moderately functional	
MODERATELY FUNCTIONAL: SAYES	□NO
Considered moderately functional if the following a	
	overy has a moderate probability of occurring naturally
	lic and geomorphic functions characteristic of fully functioning streams
of similar order in the watershed	
FUNCTIONALLY IMPAIRED:	₩ NO
Considered functionally impaired if the stream has	NO more than one of the following:
1. Has been channelized and shows no evidence of	-
2. Is levee protected, impounded, or artificially cons	•
3. Entrenched or contains active headcuts	in loca
4. Has little or no riparian buffer of deep-rooted veg	zetation on 1 or both sides of channel
5. Has banks that are extensively eroded or unstable	
	pstream of proposed stream impact, and stream impacts individually
or cumulatively exceed 100 ft in length	,
GENERAL WATERSHED AND/OR RIPARIAN ARI	EA CHARACTERISTICS WITHIN 100FT BUFFER
RIGHT BANK:	LEFT BANK:
Forested	☑ FORESTED ☐ WETLAND
🔀 farmland 🔲 SCRUB/SHRUB	FARMLAND SCRUB/SHRUB
— HAYFIELD ☐ PRAIRIE	HAYFIELD PRAIRIE
☐ INDUSTRIAL ☐ HIGH BLUFFS	☐ INDUSTRIAL ☐ HIGH BLUFFS
RESIDENTIAL	RESIDENTIAL

DATE: 9/9/2016 REVIEWER(S): JJP / 7MA GAI STREAM ID: 5JL TM A 003
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet):
FLOW CHARACTERISTICS: Water present: No water, streambed dry Streambed moist Standing water Flowing water If flow present, estimate stage at time of survey: HIGH MEDIUM LOW Average depth of water (feet): //A
BANK EROSION: EXTENSIVE MODERATE LITTLE / NONE Explain (sloughing banks, exposed root wads, undercut banks, etc.): EXPOSED ROOTS
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES M NO
OBSERVED PRESENCE OF SUBSURFACE FLOW: YES NO
WATER QUALITY CHARACTERISTICS: Obvious siltation: YES NO Observable water quality (siltation, water color is clear, discolored, oily film, scum, water odor; etc.);
Identify specific pollutants, if known:
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES MONE
WETLAND FRINGE: Describe: WETLAND WILTMA OO (REM @ NHD LINE, BELOW STREAM)
BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed?
Fish or wildlife observed?
Fish/spawn areas? ☐ YES ☑ NO
JURISDICTIONAL STATUS: Is this stream jurisdictional? NO Describe:
OTHER OBSERVATIONS AND COMMENTS: AT NHD LINE, AS DICAINAGE

DATE: 9/12/2016 REVIEWER(S): JJP/TM GAI STREAM ID: 5117MA 0	A 13	WEATHER CON	DITIONS: _	SUNNY	UEAR
STREAM TYPE: PERENNIAL Stream crossed by centerline: Stream crossed by access road:		NT ☐ EPHEME ☑ NO ☑ NO	RAL		
PHOTOGRAPHS TAKEN: # Upstream (i) # Culvert Inflow	#	- Downstream (Culvert Out	5) #	- Impa 0138 RB 0139 LB	act Area
FULLY FUNCTIONAL:	YES YES	X NO	객	0179	
Considered fully functional if the follow	wing criteria are	met:			
1. Unaltered in any significant manner	by human activ	ities			
2. Is stable and does not exhibit headc	utting, incision,	or excessive aggrad	ation		
3. Is connected to its overbank flood p	lain supporting	normal hydrologica	I functions		
4. Has a riparian buffer of at least 25 ft	t in width				
5. If stream segment is impacted by a	minor structural	alteration but othe	rwise fully fu	unctional and doe	s not
significantly alter stream segments abo moderately functional	ove and below, t	then the alteration s	should be co	nsidered separate	e and
A COMPATELY FUNCTIONAL.	Dive			-	
MODERATELY FUNCTIONAL:	YES	∐ NO			
Considered moderately functional if the			neahahilitu a	of accurring nature	silv.
 Streams have been altered; howeve Streams support many, but not all, of similar order in the watershed 	-	-	-	_	-
FUNCTIONALLY IMPAIRED:	YES	⊠ NO			
Considered functionally impaired if the	e stream has mo	re than one of the f	following:		
1. Has been channelized and shows no	evidence of self	f-recovery			
2. Is levee protected, impounded, or a	rtificially constri	cted			
3. Entrenched or contains active heads	cuts				
4. Has little or no riparian buffer of dec	ep-rooted veget	ation on 1 or both s	ides of chan	nel	
5. Has banks that are extensively erode					
6. Has 4 or greater stream impacts wit	-	tream of proposed :	stream impa	ct, and stream im	pacts individually
or cumulatively exceed 100 ft in length	ı				
GENERAL WATERSHED AND/OR RI	PARIAN AREA		S WITHIN 1	OOFT BUFFER	
RIGHT BANK:		LEFT BANK:		_	
FORESTED WETLAND		FORESTED	WETLAND		
FARMLAND SCRUB/SHRUB		FARMLAND	SCRUB/SI	HRUB	
HAYFIELD PRAIRIE		HAYFIELD	PRAIRIE		
INDUSTRIAL HIGH BLUFFS		☐ INDUSTRIAL	∐ HIGH BLU	JFFS	
☐ RESIDENTIAL		RESIDENTIAL			

DATE: 9/12/2016				
REVIEWER(S): JJP /	IMA			
GAI STREAM ID: SILTMA	2013			
Average bank-to-bank width (fe Average bank height (feet):	eet): ; at ; at	at centerli vidth (fee	rline (feet): Water depth (feet):	
FLOW CHARACTERISTICS: Water present: NO WATER If flow present, estimate stage Average depth of water (feet):	at time of		STREAMBED MOIST STANDING WATER FLOWING WATER THIGH MEDIUM SLOW	
BANK EROSION: EXTENSIVE Explain (sloughing banks, exposed root v	vads, undercu	RATE \	EXPOSED ROUTS, UNDER CUT BANKS	
OBSERVED PRESENCE OF GROU	JNDWATE	ER SEEPS	PS: ☐ YES ☐ NO	
OBSERVED PRESENCE OF SUBS	URFACE F	LOW:	☐ YES ☑ NO	
WATER QUALITY CHARACTERIS Obvious siltation: Observable water quality (siltatio	YES	NO r is clear, di	oliscolored, oily film, scum, water odor; etc.):	
 Identify specific pollutants, if kr	nown:			
AQUATIC PLANTS: PERIPHYTO	ON (brown o	r yellowish	sh algae on rocks or substrate) \Box FILAMENTOUS ALGAE \Box MACROPHYTES $ ho au$	NE
WETLAND FRINGE: Describe:	YES	ABU	BUTTING OF ADJACENT NO	
BIOLOGICAL CHARACTERISTICS Macroinvertebrates observed? Fish or wildlife observed?			,	
Habitat for: Fish/spawn areas?	YES	No		
		7.110	-	
JURISDICTIONAL STATUS: Is this stream jurisdictional?	¥Z YES	□ NO	Describe: @ NHD LINE	
OTHER OBSERVATIONS AND CO	OMMENT:	S:	TRIBUTARY TO SILJIPOIS CULVERT OUTEALL LOCATED	
BOUNDARY	SOF	16 11 0	CULVERET OUTEALL LOCATED	

DATE: 9/12/2016	- 1			. 1
REVIEWER(S): JTP // GAI STREAM ID: SILTMA		WEATHER CON	IDITIONS: <u>SUNNY</u>	CLEAR
GAI STREAMID. 3767714	01-1			
STREAM TYPE: PERENNIAL	INTERMIT	TENT 🗡 EPHEM	ERAL	
Stream crossed by centerline:	☐ YES	NO		
Stream crossed by access road:	YES	NO		
PHOTOGRAPHS TAKEN:				
#0143 Upstream (W)	# 0144	Downstream (<i>∂</i> #Im	pact Area
# Culvert Inflow	#	Culvert Ou	# 0146	LB (P)
FULLY FUNCTIONAL:	YES	S√No.	\$10146 R	3 (3)
Considered fully functional if the fol	llowing criteria a	re met:		
1. Unaltered in any significant manr	ner by human ac	tivities		
2. Is stable and does not exhibit hea	dcutting, incisio	n, or excessive aggra	dation	
3. Is connected to its overbank floor	d plain supportin	g normal hydrologic	al functions	
4. Has a riparian buffer of at least 25	5 ft in width			
5. If stream segment is impacted by				
significantly alter stream segments	above and below	, then the alteration	should be considered separa	ate and
moderately functional				
MODERATELY FUNCTIONAL:	☑ YES	Mo		
Considered moderately functional if	_	_		
1. Streams have been altered; howe			probability of occurring nat	urally
2. Streams support many, but not a	-		·	=
of similar order in the watershed				-
		_		
FUNCTIONALLY IMPAIRED:	YES	.⊠`no		
Considered functionally impaired if			following:	
1. Has been channelized and shows		•		
2. Is levee protected, impounded, o	r artificially cons	tricted		
Entrenched or contains active hea				
4. Has little or no riparian buffer of o				
5. Has banks that are extensively er				
6. Has 4 or greater stream impacts v		pstream of proposed	stream impact, and stream i	mpacts individually
or cumulatively exceed 100 ft in len	gth			
GENERAL WATERSHED AND/OR	RIPARIAN ARE	A CHARACTERISTIC	CS WITHIN 100FT BUFFER	
RIGHT BANK:		LEFT BANK:		
☑ FORESTED ☐ WETLAND		⊠ FORESTED	WETLAND	
☑ FARMLAND ☐ SCRUB/SHRUB		FARMLAND	SCRUB/SHRUB	
☐ HAYFIELD ☐ PRAIRIE		HAYFIELD	PRAIRIE	
☐ INDUSTRIAL ☐ HIGH BLUFFS		☐ INDUSTRIAL	☐ HIGH BLUFFS	
RESIDENTIAL		RESIDENTIAL		

DATE: 9/12/2016 REVIEWER(S): JJP / TMA		
GAI STREAM ID: SILTMA OIL	U	
STREAM CHANNEL PROPERTIES WITH Average bank-to-bank width (feet):;	RESPECT TO TOP OF BANK (ESTIMATE): ; at centerline (feet): at centerline (feet): width (feet): Water depth (feet):	
FLOW CHARACTERISTICS: Water present: NO WATER, STREAM If flow present, estimate stage at time Average depth of water (feet):	of survey: HIGH MEDIUM LOW	
BANK EROSION: EXTENSIVE MO MO Explain (sloughing banks, exposed root wads, unde	PDERATE LITTLE / NONE Prout banks, etc.): (EXPOSED ROOTS	
OBSERVED PRESENCE OF GROUNDWA	TER SEEPS: YES NO	
OBSERVED PRESENCE OF SUBSURFACE	FLOW: YES 💆 NO	
WATER QUALITY CHARACTERISTICS: Obvious siltation: YES Observable water quality (siltation, water co	Dolor is clear, discolored, oily film, scum, water odor; etc.):	
Identify specific pollutants, if known:		
AQUATIC PLANTS: PERIPHYTON (brown	n or yellowish algae on rocks or substrate) \Box FILAMENTOUS ALGAE \Box MACROPHYTES $oldsymbol{arRed}$	NE
WETLAND FRINGE: YES Describe:	☐ ABUTTING OF ☐ ADJACENT ☐ NO	
BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed? YES Fish or wildlife observed? YES		
Habitat for: YES		
JURISDICTIONAL STATUS: Is this stream jurisdictional?		
OTHER OBSERVATIONS AND COMMEN	TRIBUTARY TO SILTMA 013	

DATE:	13/2016 JJP / T : SILTMA	mA 017	WEATHER COM	NDITIONS:	SUNNY,	CLEAR
STREAM TYPE: Stream crossed Stream crossed	PERENNIAL by centerline: by access road:	☐ INTERMITTE ☐ YES ☐ YES	ENT DEPHEM NO NO	ERAL		
PHOTOGRAPHS # <u>0154</u> #	S TAKEN: - Upstream (5 w) - Culvert Inflow	#	Downstream (Culvert Ou	(ヘビ) # itflow -4/	- Impac	t Area
1. Unaltered in an 2. Is stable and do 3. Is connected to 4. Has a riparian 5. If stream segm	functional if the follo ny significant mannel oes not exhibit head o its overbank flood p buffer of at least 25 f nent is impacted by a stream segments ab	r by human action cutting, incision, plain supporting ft in width minor structura	vities or excessive aggra normal hydrological l alteration but oth	al functions erwise fully fu		
1. Streams have b	erately functional if to been altered; howeve ort many, but not all,	er, system recov	ery has a moderate			
 Has been chan Is levee protec Entrenched or Has little or no Has banks that Has 4 or greate 	IMPAIRED: donally impaired if the inelized and shows not ted, impounded, or a contains active head or riparian buffer of detains actively eroder stream impacts with exceed 100 ft in length	o evidence of se artificially constr lcuts eep-rooted vege led or unstable, thin 0.5 mile ups	lf-recovery icted tation on 1 or both bank sloughing, ero	sides of chanr osional scars		acts individually
FORESTED FARMLAND HAYFIELD INDUSTRIAL	ERSHED AND/OR R WETLAND SCRUB/SHRUB PRAIRIE HIGH BLUFFS	IPARIAN AREA	LEFT BANK: FORESTED FARMLAND HAYFIELD INDUSTRIAL	CS WITHIN 10 WETLAND SCRUB/SH PRAIRIE HIGH BLUI	IRUB	
RESIDENTIAL			RESIDENTIAL			

DATE: 9/13/2016 REVIEWER(S): JIP/1 GAI STREAM ID: 5147 M	MA 013	- 7		
STREAM CHANNEL PROPERTIES Average bank-to-bank width (fe Average bank height (feet):	S WITH RE	at ocenterling idth (fee	t centerline (feet):A line (feet): Water depth (feet): N/A	
FLOW CHARACTERISTICS: Water present: NO WATER, If flow present, estimate stage a Average depth of water (feet):	at time of		STREAMBED MOIST STANDING WATER FLOWING WATER HIGH MEDIUM LOW	
BANK EROSION: EXTENSIVE Explain (sloughing banks, exposed root v	MODE wads, undercu	RATE [ut banks, etc.	LITTLE / NONE tc.): VANDERCUT VE	
OBSERVED PRESENCE OF GROU	JNDWATE	R SEEPS:	S: YES NO	
OBSERVED PRESENCE OF SUBS	URFACE F	LOW:	YES NO	
WATER QUALITY CHARACTERIS Obvious siltation: Observable water quality (siltation	YES	NO is clear, disc	liscolored, oily film, scum, water odor; etc.):	
Identify specific pollutants, if kr	nown:			
AQUATIC PLANTS: PERIPHYTO	N (brown o	r yellowish a	h algae on rocks or substrate) 🔲 FILAMENTOUS ALGAE 🔲 MACROPHYTES 🥕	אנדט באנדט
WETLAND FRINGE: Describe:	YES	☐ ABUT	JITTING OF ADJACENT	
BIOLOGICAL CHARACTERISTICS Macroinvertebrates observed? Fish or wildlife observed? Habitat for:	: YES YES	□ NO	Describe:	
Fish/spawn areas?	YES	NO		
JURISDICTIONAL STATUS: Is this stream jurisdictional?	☐ YES	□ NO	Describe: DIRAINS TO NHI) FEATURET	
OTHER OBSERVATIONS AND CO	OMMENT:	S:	SILJJPO22 IS A TRIBUTARY	

DATE: 9/14/20 REVIEWER(S): 5 GAI STREAM ID: 5	16 16/TMA 167MA 020	WEATHER CONI	DITIONS: SUNWY, CLEHR
STREAM TYPE:	,	ENT	ZAL
PHOTOGRAPHS TAKEN # Upstre # Culver		- Downstream (Culvert Out	シ # <u>0216</u> -Impact Area (50) (SLOUGHII flow # 0220 ACROSS (3)
 Unaltered in any signifi Is stable and does not e Is connected to its over Has a riparian buffer of If stream segment is im 	al if the following criteria are icant manner by human active whibit headcutting, incision, rbank flood plain supporting fat least 25 ft in width upacted by a minor structura	vities , or excessive aggrada , normal hydrological , alteration but othe	
1. Streams have been alte	unctional if the following are ered; however, system recov , but not all, of the hydraulic	ery has a moderate ¡	probability of occurring naturally actions characteristic of fully functioning streams
 Has been channelized a Is levee protected, imposite protected. Entrenched or contains Has little or no riparian Has banks that are external 	mpaired if the stream has mo and shows no evidence of se ounded, or artificially constr active headcuts buffer of deep-rooted veget ensively eroded or unstable, a impacts within 0.5 mile ups	If-recovery icted tation on 1 or both si bank sloughing, eros	ides of channel
RIGHT BANK: ☑ FORESTED ☐ WETI ☐ FARMLAND ☐ SCRU ☑ HAYFIELD ☐ PRAI	AND/OR RIPARIAN AREA LAND JB/SHRUB RIE H BLUFFS	CHARACTERISTICS LEFT BANK: FORESTED FARMLAND HAYFIELD INDUSTRIAL RESIDENTIAL	S WITHIN 100FT BUFFER WETLAND SCRUB/SHRUB PRAIRIE HIGH BLUFFS

DATE: 9/14/2019 REVIEWER(S): JTP / GAI STREAM ID: SILTM	TMA AOZO					
Average bank height (feet): Bottom width (feet): Ordinary High Water Mark (OH)	eet): <u> </u>	centerline (fe le (feet): t):	et): <u>26</u> 5 Water depth		<u>,</u>	
FLOW CHARACTERISTICS: Water present: NO WATER, If flow present, estimate stage a Average depth of water (feet):		STREAMBE		TANDING WATER	FLOWING WATER	र
BANK EROSION: EXTENSIVE Explain (steephing banks, exposed root w	vads, undertut banks, etc.	LITTLE/NON): SLO	OGHING	n Exeo	TED ROSTI	
OBSERVED PRESENCE OF GROU	INDWATER SEEPS:	YES [NO			
OBSERVED PRESENCE OF SUBS	URFACE FLOW:	☐ YES ∫	≥ %o			
WATER QUALITY CHARACTERIS Obvious siltation: Observable water quality (siltation) Identify specific pollutants, if kn	YES NO	colored, oily film,	scum, water odor; e	tc.):	2131741	
AQUATIC PLANTS: PERIPHYTO	N (brown or yellowish a	algae on rocks o	r substrate)	FILAMENTOUS ALC	GAE MACROPHYTES	, NONE
WETLAND FRINGE: Describe: WITHIN	NYES □ ABUTT	ΠNG or □ AD	IACENT ZEAM	NO CHANNE		
BIOLOGICAL CHARACTERISTICS Macroinvertebrates observed? Fish or wildlife observed? Habitat for:	: VES NO NO	Describe: _	Mighbo	ν×ς		
Fish/spawn areas?	☐ YES 🔀 NO			+		
JURISDICTIONAL STATUS: Is this stream jurisdictional?	☑ YES □ NO	Describe: _	NHO	LINE		
OTHER OBSERVATIONS AND CO	OMMENTS:					

DATE: 9/16/2016	
REVIEWER(S) JJP / TA	WEATHER CONDITIONS: ZAIN
GAI STREAM ID: SILTMAO	25
STREAM TYPE: PERENNIAL	☐ INTERMITTENT ☐ EPHEMERAL
Stream crossed by centerline:	☐ YES ☐ NO
Stream crossed by access road:	□ yes □no
PHOTOGRAPHS TAKEN:	
# Culvert Inflow	
FULLY FUNCTIONAL:	□ yes ☑′no
Considered fully functional if the follow	ing criteria are met:
1. Unaltered in any significant manner	y human activities
	tting, incision, or excessive aggradation
	in supporting normal hydrological functions
4. Has a riparian buffer of at least 25 ft	
5. If stream segment is impacted by a r	inor structural alteration but otherwise fully functional and does not
significantly alter stream segments abo	e and below, then the alteration should be considered separate and
moderately functional	
MODERATELY FUNCTIONAL:	NO NO
Considered moderately functional if th	following are met:
1. Streams have been altered; howeve	system recovery has a moderate probability of occurring naturally
2. Streams support many, but not all, o	the hydraulic and geomorphic functions characteristic of fully functioning streams
of similar order in the watershed	
FUNCTIONALLY IMPAIRED:	YES NO
	stream has more than one of the following:
1. Has been channelized and shows no	evidence of self-recovery
2. Is levee protected, impounded, or a	•
3. Entrenched or contains active heads	
· · · · · · · · · · · · · · · · · · ·	p-rooted vegetation on 1 or both sides of channel
	d or unstable, bank sloughing, erosional scars
	n 0.5 mile upstream of proposed stream impact, and stream impacts individually
or cumulatively exceed 100 ft in length	
GENERAL WATERSHED AND/OR RE	ARIAN AREA CHARACTERISTICS WITHIN 100FT BUFFER
RIGHT BANK:	LEFT BANK:
FORESTED WETLAND	□ FORESTED □ WETLAND
FARMLAND SCRUB/SHRUB	□ SCRUB/SHRUB
HAYFIELD PRAIRIE	☐ HAYFIELD ☐ PRAIRIE
☐ INDUSTRIAL ☐ HIGH BLUFFS	☐ INDUSTRIAL ☐ HIGH BLUFFS
RESIDENTIAL	RESIDENTIAL

DATE: 10/22/2016	WEATHER CONDITIONS: 50NNY 450
REVIEWER(S): JJP / 7M4	WEATHER CONDITIONS: 50NNY 450
GAI STREAM ID: SILTMA 02/8	,
STREAM TYPE: PERENNIAL PINTERMIT Stream crossed by centerline: YES Stream crossed by access road: YES	TTEN T EPHEMERAL
PHOTOGRAPHS TAKEN:	
	- Downstroam - # / Impact Area
# - Culvert Inflow #	Downstream & # Impact Area Culvert Outflow # Across \$
"	Curvert Outriow # 1/1 Acress \$
FULLY FUNCTIONAL: TYES	57/no
FULLY FUNCTIONAL: YES Considered fully functional if the following criteria a	are met:
1. Unaltered in any significant manner by human act	
2. Is stable and does not exhibit headcutting, incision	on, or excessive aggradation
3. Is connected to its overbank flood plain supporting	
4. Has a riparian buffer of at least 25 ft in width	
	ral alteration but otherwise fully functional and does not
	w, then the alteration should be considered separate and
moderately functional	
	☐ NO re met: pvery has a moderate probability of occurring naturally lic and geomorphic functions characteristic of fully functioning streams
FUNCTIONALLY INCOME.	
FUNCTIONALLY IMPAIRED: YES Considered functionally impaired if the stream has m	NO the fill of the
 Has been channelized and shows no evidence of si 	
2. Is levee protected, impounded, or artificially const	
3. Entrenched or contains active headcuts	tricted
4. Has little or no riparian buffer of deep-rooted vege	retation on 1 or both sides of channel
5. Has banks that are extensively eroded or unstable	
	pstream of proposed stream impact, and stream impacts individually
or cumulatively exceed 100 ft in length	, , , , , , , , , , , , , , , , , , , ,
GENERAL WATERSHED AND/OR RIPARIAN AREA	A CHARACTERISTICS WITHIN 100FT BUFFER
RIGHT BANK:	LEFT BANK:
FORESTED WETLAND	FORESTED WETLAND
FARMLAND SCRUB/SHRUB	FARMLAND SCRUB/SHRUB
☐ HAYFIELD \ ☐ PRAIRIE	HAYFIELD PRAIRIE
☐ INDUSTRIAL ☐ HIGH BLUFFS	☐ INDUSTRIAL ☐ HIGH BLUFFS
RESIDENTIAL	RESIDENTIAL
PATTLE PASTURE	
FATTLE PROJECT	

	RIPHYTON (brown or yellowish algae on rocks or substrate)
AQUATIC PLANTS: PER WETLAND FRINGE: Describe: BIOLOGICAL CHARACTERI Macroinvertebrates observed? Habitat for: Fish/spawn areas?	RIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES PILAMENTOUS ALGAE PILAMENTOUS ALGAE PILAMENTOUS ALGAE MACROPHYTES PILAMENTOUS ALGAE PILAMENTOUS ALGAE
AQUATIC PLANTS: PER WETLAND FRINGE: Describe: BIOLOGICAL CHARACTERI Macroinvertebrates observed? Habitat for:	RIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES PILAMENTOUS ALGAE PILAMENTOUS ALGAE PILAMENTOUS ALGAE MACROPHYTES PILAMENTOUS ALGAE PILAMENTOUS ALGAE
AQUATIC PLANTS: PER WETLAND FRINGE: Describe: BIOLOGICAL CHARACTERI Macroinvertebrates obser Fish or wildlife observed?	RIPHYTON (brown or yellowish algae on rocks or substrate)
AQUATIC PLANTS: PER WETLAND FRINGE: Describe: BIOLOGICAL CHARACTERI	RIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES A
AQUATIC PLANTS: PER	RIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES
AQUATIC PLANTS: PER	
Identify specific pollutant	ts, if known:
Obvious siltation: Observable water quality	YES NO (siltation, water color is clear, discolored, oily film, scum, water odor; etc.): TURBID (PSOL
WATER QUALITY CHARA	CTERISTICS:
OBSERVED PRESENCE OF	F SUBSURFACE FLOW: YES KNO
OBSERVED PRESENCE O	F GROUNDWATER SEEPS:
Explain (sloughing banks, expo	sed root wads, undercut banks, etc.):
BANK EROSION: TEX	TENSIVE MODERATE LITTLE / NONE
Average depth of water	O WATER, STREAMBED DRY STANDING WATER ☐ FLOWING WATER ☐ LOW ☐ (feet):
Water present: No	O WATER, STREAMBED DRY STREAMBED MOIST STANDING WATER FLOWING WATER
FLOW CHARACTERISTIC	CS:
Ordinary High Water M	Water width (feet): N/A Water depth (feet): N/A Wark (OHWM), if observed (feet): $6-9$ (where 6)
Bottom width (feet)	eet): 3.5; at centerline (feet): AA
	width (feet): 9; at centerline (feet): 4/4
Average bank-to-bank	withhelp (E)
Average bank-to-bank	OPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE):
STREAM CHANNEL PRO	OPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE).
Average bank-to-bank	OPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE).

DATE:	10/22/2016 5):			
REVIEWER(S	5):	v A	WEATHER (CONDITIONS: SUNPY 45°
GAI STREAM		49		
	PE: PERENNIAL sed by centerline: sed by access road:	YES	TENT	EMERAL
PHOTOGRAI	PHS TAKEN:			
# 202	Upstream N v	#_ 204	Downstrean	n らビ # Impact Area
#	Culvert Inflow (w	# 20	- Culvert	Outflow W #206 A A CROSS
FULLY FUNC		YES		
	lly functional if the follo			
	n any significant manne			
	d does not exhibit head			radation
3. Is connected	d to its overbank flood p	olain supporting	g normal hydrolog	ical functions
Has a riparia	in buffer of at least 25 f	t in width		
5. If stream seg	gment is impacted by a	minor structura	al alteration but o	therwise fully functional and does not
significantly all	ter stream segments ab	ove and below	then the alteration	on should be considered separate and
moderately fur	nctional			
MODERATELY	/ FUNCTIONAL.		News	
	FUNCTIONAL: Independent of the second	YES		
				and the second
2. Streams supi	port many, but not all o	of the hydraulic	ery has a modera	te probability of occurring naturally functioning streams
of similar order	in the watershed	, and mydrading	and geomorphic	runctions characteristic of fully functioning streams
FUNCTIONALI	Y IMPAIRED:	YES	☐ NO	
Considered fund	ctionally impaired if the	stream has mo		e following:
1. Has been cha	nnelized and shows no	evidence of se	f-recovery	
	cted, impounded, or ar		cted	
	r contains active heado			
4. Has little or n	o riparian buffer of dee	p-rooted veget	ation on 1 or both	sides of channel
5. Has banks tha	at are extensively erode	d or unstable, I	oank sloughing, er	osional scars
or cumulatively	ter stream impacts with exceed 100 ft in length	in 0.5 mile ups	tream of proposed	stream impact, and stream impacts individually
or cumulatively	exceed 100 it in length			
GENERAL WAT	FRSHED AND/OR PIE	ADIAN ADEA	CHADACTERICT	CS WITHIN 100FT BUFFER
RIGHT BANK:	ENDINES AND/ON KIP	WINN AUCH	LEFT BANK:	CS WITHIN 100FT BUFFER
FORESTED	WETLAND		FORESTED	CI WET AND
FARMLAND	SCRUB/SHRUB		FARMLAND	☐ WETLAND ☐ SCRUB/SHRUB
HAYFIELD	PRAIRIE		HAYFIELD	PRAIRIE
INDUSTRIAL	HIGH BLUFFS		INDUSTRIAL	HIGH BLUFFS
RESIDENTIAL			RESIDENTIAL	LIZGI DLOFF3
	VILE PASTUCE			
	LIE PENT			

Identify specific pollutants, i	if known: HYTON (brown or yellowish algae on rocks or substrate)
Identify specific pollutants, in AQUATIC PLANTS: PERIPH WETLAND FRINGE: Describe: BIOLOGICAL CHARACTERISTI Macroinvertebrates observed? Habitat for: Fish/spawn areas?	if known: HYTON (brown or yellowish algae on rocks or substrate)
Identify specific pollutants, in AQUATIC PLANTS: PERIPH WETLAND FRINGE: Describe: BIOLOGICAL CHARACTERISTI Macroinvertebrates observed Plants or wildlife observed? Habitat for:	if known: HYTON (brown or yellowish algae on rocks or substrate)
Identify specific pollutants, i AQUATIC PLANTS: PERIPH WETLAND FRINGE: Describe: BIOLOGICAL CHARACTERISTI Macroinvertebrates observed	if known: HYTON (brown or yellowish algae on rocks or substrate)
Identify specific pollutants, i AQUATIC PLANTS: PERIPH WETLAND FRINGE:	if known: HYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES
Identify specific pollutants, i	#TEK if known:
CO POOLED (M)	ATER
WATER QUALITY CHARACTI Obvious siltation: Observable water quality (silt	YES NO
OBSERVED PRESENCE OF SU	
OBSERVED PRESENCE OF G	GROUNDWATER SEEPS: YES NO
BANK EROSION: EXTEN	NSIVE SMODERATE LITTLE / NONE I root wads, undercut banks, etc.): CATTLE DISTURBANCE
	tage at time of survey: THIGH TMFDILM TOW
FLOW CHARACTERISTICS: Water present: No w	
Ordinary High Water Mark	Water width (feet): 1.5 Water depth (feet): 0.25 (pooled) k (OHWM), if observed (feet): 3.5
Average bank height (feet)	:): 2.5; at centerline (feet): NA
Average bank-to-bank wid	ERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): dth (feet):; at centerline (feet):/
Average bank-to-bank wid	ERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE):

DATE: REVIEWER(S): GAI STREAM ID	11/17/2016 5TP/TM 0: 51L TM AOG		WEATHER CO	DINDITIONS: SUNNY 55"
	PERENNIAL d by centerline: d by access road:		EPHEN NO NO	MERAL
PHOTOGRAPH #23 #	S TAKEN: - Upstream SE # - Culvert Inflow	#	Downstream Culvert O	NN # 25 - Impact Area NE outflow
 Unaltered in a Is stable and a Is connected t Has a riparian If stream segn 	functional if the follow my significant manner la does not exhibit headcu to its overbank flood pla buffer of at least 25 ft ment is impacted by a man r stream segments about	ring criteria are me by human activitie atting, incision, or ain supporting nor in width ninor structural alt	s excessive aggra mal hydrologic eration but oth	
1. Streams have	erately functional if the been altered; however, ort many, but not all, of	following are me , system recovery	has a moderate	te probability of occurring naturally functioning streams
 Has been chan Is levee protec Entrenched or Has little or no Has banks that Has 4 or greate 	tionally impaired if the inelized and shows no e ited, impounded, or art contains active headcu ir riparian buffer of deep t are extensively eroded	evidence of self-re ifficially constricted its o-rooted vegetation d or unstable, ban	than one of the covery d on on 1 or both k sloughing, ere	n sides of channel
	ERSHED AND/OR RIP			ICS WITHIN 100FT BUFFER
RIGHT BANK:	□ WET! AND	L	EFT BANK:	
FORESTED	☐ WETLAND	L	FORESTED	WETLAND
FARMLAND	SCRUB/SHRUB PRAIRIE	2	FARMLAND	SCRUB/SHRUB
☐ HAYFIELD ☐ INDUSTRIAL	100000000000000000000000000000000000000	L	_ HAYFIELD INDUSTRIAL	☐ PRAIRIE
RESIDENTIAL	HIGH BLUFFS		RESIDENTIAL	☐ HIGH BLUFFS
TO SERVICE SERVICE STORES OF SERVICE STORES	AG			AG

DATE:
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet):; at centerline (feet):/ Average bank height (feet):; at centerline (feet):/ Bottom width (feet): Water width (feet):/ Ordinary High Water Mark (OHWM), if observed (feet):
FLOW CHARACTERISTICS: Water present: NO WATER, STREAMBED DRY STREAMBED MOIST STANDING WATER FLOWING WATER If flow present, estimate stage at time of survey: HIGH MEDIUM LOW Average depth of water (feet): < 0.25
BANK EROSION: EXTENSIVE MODERATE LITTLE / NONE Explain (sloughing banks, exposed root wads, undercut banks, etc.):
OBSERVED PRESENCE OF GROUNDWATER SEEPS:
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES MA
BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed?
JURISDICTIONAL STATUS: Is this stream jurisdictional? TO NHD TO NHD
OTHER OBSERVATIONS AND COMMENTS:AG LICLD DRAINAGE

DATE:	WEATHER CONDITIONS:SUNTY 580
GAI STREAM ID: SILTIMA OGS	
STREAM TYPE: PERENNIAL INTERMIT	
Stream crossed by centerline:	NO
Stream crossed by access road:	D NO
PHOTOGRAPHS TAKEN:	200
#	Downstream NW #28 Impact Area t
# Culvert Inflow #	- Culvert Outflow
FULLY FUNCTIONAL:	₽NO
Considered fully functional if the following criteria ar	re met:
1. Unaltered in any significant manner by human act	ivities
2. Is stable and does not exhibit headcutting, incision	n, or excessive aggradation
3. Is connected to its overbank flood plain supporting	g normal hydrological functions
4. Has a riparian buffer of at least 25 ft in width	
5. If stream segment is impacted by a minor structur	al alteration but otherwise fully functional and does not
그러나 박물 그는 이 사이는 이 살아왔다니까 이 모든 사람이 있는 것도 생각하다면서 하나 사람이 되어 하는데 나를 하는데 나를 하다면 하다.	, then the alteration should be considered separate and
moderately functional	
MODERATELY FUNCTIONAL: YES	□ NO
Considered moderately functional if the following are	e met:
1. Streams have been altered; however, system reco	very has a moderate probability of occurring naturally
2. Streams support many, but not all, of the hydrauli	c and geomorphic functions characteristic of fully functioning streams
of similar order in the watershed	
FUNCTIONALLY IMPAIRED: YES	₩ NO
Considered functionally impaired if the stream has m	94
1. Has been channelized and shows no evidence of se	12 No. 12
2. Is levee protected, impounded, or artificially const	Secretary States and Secretary Secre
3. Entrenched or contains active headcuts	
4. Has little or no riparian buffer of deep-rooted vege	etation on 1 or both sides of channel
5. Has banks that are extensively eroded or unstable,	
	stream of proposed stream impact, and stream impacts individually
or cumulatively exceed 100 ft in length	
GENERAL WATERSHED AND/OR RIPARIAN AREA	A CHARACTERISTICS WITHIN 100FT BUFFER
RIGHT BANK:	LEFT BANK:
FORESTED WETLAND	FORESTED WETLAND
FARMLAND SCRUB/SHRUB	FARMLAND SCRUB/SHRUB
☐ HAYFIELD ☐ PRAIRIE	☐ HAYFIELD ☐ PRAIRIE
☐ INDUSTRIAL ☐ HIGH BLUFFS	☐ INDUSTRIAL ☐ HIGH BLUFFS
RESIDENTIAL	RESIDENTIAL

DATE:				
REVIEWER(S): JTO / Tait				
GAI STREAM ID: SILTMAOGS				
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet):				
FLOW CHARACTERISTICS: Water present: No water, streambed dry Streambed moist Standing water Flowing water If flow present, estimate stage at time of survey: HIGH MEDIUM CLOW Average depth of water (feet):				
BANK EROSION: EXTENSIVE MODERATE LITTLE / NONE Explain (sloughing banks, exposed root wads, undercut banks, etc.): Scook / INUSED				
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES NO				
OBSERVED PRESENCE OF SUBSURFACE FLOW: YES NO				
WATER QUALITY CHARACTERISTICS: Obvious siltation: YES NO Observable water quality (siltation, water color is clear, discolored, oily film, scum, water odor; etc.):				
Identify specific pollutants, if known:				
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES NONE				
WETLAND FRINGE: YES D'ABUTTING OF ADJACENT NO Describe: YES STOLEAM				
BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed?				
Fish/spawn areas?				
JURISDICTIONAL STATUS: Is this stream jurisdictional? VES NO Describe: LEADS TO NHD				
OTHER OBSERVATIONS AND COMMENTS:				

DATE:	
REVIEWER(S): JJP/ TMA	WEATHER CONDITIONS: SUMMY 65"
GAI STREAM ID: SILTMA 069	
/	
STREAM TYPE: PERENNIAL INTERMITT	ENT EPHEMERAL
Stream crossed by centerline:	⊠ NO
Stream crossed by access road: YES	Z NO
Stream crossed by access road.	≥ NO
PHOTOGRAPHS TAKEN:	
in the ingregation or transmit of	- Downstream 5 # 40 - Impact Area E
	- Culvert Outflow
# Culvert Inflow #	Culvert Outflow
FILLY FUNCTIONAL.	- Cara
FULLY FUNCTIONAL: YES	₩NO
Considered fully functional if the following criteria are	
1. Unaltered in any significant manner by human acti	
2. Is stable and does not exhibit headcutting, incision	
3. Is connected to its overbank flood plain supporting	normal hydrological functions
4. Has a riparian buffer of at least 25 ft in width	
If stream segment is impacted by a minor structural	l alteration but otherwise fully functional and does not
	then the alteration should be considered separate and
moderately functional	
MODERATELY FUNCTIONAL: YES	□ NO
Considered moderately functional if the following are	met:
1. Streams have been altered; however, system recov	
	and geomorphic functions characteristic of fully functioning streams
of similar order in the watershed	0
FUNCTIONALLY IMPAIRED: YES	₽no
Considered functionally impaired if the stream has mo	/~
Has been channelized and shows no evidence of se	
	10.10 P 5550 P 10.10
Is levee protected, impounded, or artificially constr Betrenched or contains active headcuts	icted
4. Has little or no riparian buffer of deep-rooted veget	
5. Has banks that are extensively eroded or unstable,	
	tream of proposed stream impact, and stream impacts individually
or cumulatively exceed 100 ft in length	
GENERAL WATERSHED AND/OR RIPARIAN AREA	CHARACTERISTICS WITHIN 100FT BUFFER
RIGHT BANK:	LEFT BANK:
FORESTED WETLAND	FORESTED WETLAND
☐ FARMLAND ☐ SCRUB/SHRUB	☐ FARMLAND ☐ SCRUB/SHRUB
☐ HAYFIELD ☐ PRAIRIE	☐ HAYFIELD ☐ PRAIRIE
☐ INDUSTRIAL ☐ HIGH BLUFFS	☐ INDUSTRIAL ☐ HIGH BLUFFS
RESIDENTIAL	□ RESIDENTIAL

DATE: 11/17/2016		
REVIEWER(S): JJP/7		
GAI STREAM ID:	4069	
	ES WITH RESPECT TO TOP OF BANK (ESTIMATE):	
	feet):; at centerline (feet):/A	
	Water width (feet): _ M/A Water depth (feet): _ N/A	
	WMM), if observed (feet): 4	
orania / mgm mater man (or	with a baseline freedy.	
FLOW CHARACTERISTICS:		
Water present:	R, STREAMBED DRY 💹 STREAMBED MOIST 🗌 STANDING WATER 🔲 FLOWING	G WATER
If flow present, estimate stage		
Average depth of water (feet):	"	
BANK FROSION.	MODERATE DUTTIE (NONE	
	MODERATE LITTLE / NONE wads, undercut banks, etc.):SWORMG /BANKS	
Explain (sloughing banks, expused root)	waus, undercut banks, etc.).	_
OBSERVED PRESENCE OF GROU	UNDWATER SEEPS: YES NO	
OBSERVED PRESENCE OF SUBS	SURFACE FLOW: YES NO	
WATER CHALITY CHARACTERS	CTION.	
WATER QUALITY CHARACTERIS Obvious siltation:		
	YES NO in, water color is clear, discolored, oily film, scum, water odor; etc.):	
observable water quarry (small)	n, water color is clear, discolored, only limit, scuril, water odor, etc.).	
Identify specific pollutants, if kr	nown:	
AQUATIC PLANTS: PERIPHYTO	ON (brown or yellowish algae on rocks or substrate) 🔲 FILAMENTOUS ALGAE 🔲 MACRO	PHYTES NONE
WETLAND EDINGE		
WETLAND FRINGE: Describe:	YES ABUTTING OF ADJACENT NO	
Describe.		- n
BIOLOGICAL CHARACTERISTICS	:	
Macroinvertebrates observed?	YES NO Describe:	
Fish or wildlife observed?	☐ YES ⋈ NO Describe:	
Habitat for:		
Fish/spawn areas?	☐ YES Ø NO	
WIRESISTICALLY STATUS		
JURISDICTIONAL STATUS:		
Is this stream jurisdictional?	YES NO Describe: TRIB, TO NHD STREAM SILTM	40 GF.
OTHER OBSERVATIONS AND CO	DMMENTS:	
11		

). John Whelter, Jr.;		WEATHER CO	NDITIONS: Clear to partly cloudy, 915
GAI STREAM ID:	SIL-WIW-C	001		• 0
STREAM TYPE:	PERENNIAL	X INTERMITTE	NT EPHEM	MERAL
Stream crossed	by centerline:	YES	X NO	
Stream crossed	by access road:	YES	X NO	
PHOTOGRAPHS	TAKEN:			
#P923 0099 -	Upstream	#P9230100	- Downstream	# Impact Area
	Culvert Inflow	#	Culvert Οι	
FULLY FUNCTIO	NAL:	YES	☐ NO	
Considered fully for	unctional if the follo	wing criteria are	met:	
1. Unaltered in an	y significant manner	r by human activi	ties	
2. Is stable and do	es not exhibit head	cutting, incision,	or excessive aggra	dation
3. Is connected to	its overbank flood p	olain supporting r	normal hydrologic	al functions
4. Has a riparian b	uffer of at least 25 f	t in width		
				erwise fully functional and does not
significantly alter s moderately function		ove and below, t	hen the alteration	should be considered separate and
MODERATELY FU	JNCTIONAL:	X YES [□NO	
Considered moder	rately functional if th	•	net:	
		_		probability of occurring naturally
	t many, but not all, o		ind geomorphic fu	inctions characteristic of fully functioning streams
FUNCTIONALLY I	MPAIRED:	YES	□ NO	
Considered functio	onally impaired if the	stream has mor	e than one of the	following:
1. Has been chann	elized and shows no	evidence of self-	-recovery	
2. Is levee protecte	ed, impounded, or a	rtificially constric	ted	
3. Entrenched or co	ontains active heado	cuts		
4. Has little or no r	iparian buffer of dee	ep-rooted vegeta	tion on 1 or both	sides of channel
	re extensively erode			
				stream impact, and stream impacts individually
	ceed 100 ft in length			
GENERAL WATER	RSHED AND/OR RI	PARIAN AREA (CHARACTERISTIC	CS WITHIN 100FT BUFFER
RIGHT BANK:			LEFT BANK:	
FORESTED	X WETLAND		▼ FORESTED	₩ WETLAND
FARMLAND [SCRUB/SHRUB		FARMLAND	SCRUB/SHRUB
HAYFIELD [PRAIRIE		HAYFIELD	PRAIRIE
] INDUSTRIAL	HIGH BLUFFS		INDUSTRIAL	☐ HIGH BLUFFS
RESIDENTIAL			RESIDENTIAL	

DATE: 9/23/2016 REVIEWER(S): W. John Wackter, Jr Tacob Robash GAI STREAM ID: STL-WIW-06
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet):; at centerline (feet): Average bank height (feet):; at centerline (feet): Bottom width (feet): Water width (feet): Ordinary High Water Mark (OHWM), if observed (feet):
FLOW CHARACTERISTICS: Water present: NO WATER, STREAMBED DRY STREAMBED MOIST STANDING WATER FLOWING WATER If flow present, estimate stage at time of survey: HIGH MEDIUM LOW Average depth of water (feet):
BANK EROSION: EXTENSIVE MODERATE LITTLE/NONE Explain (sloughing banks, exposed root wads, undercut banks, etc.): Deeply incised; some undercutting; possible flashy drainage from adjacent agricultural fields and field drains
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES NO
OBSERVED PRESENCE OF SUBSURFACE FLOW: YES X NO
WATER QUALITY CHARACTERISTICS: Obvious siltation: YES NO Observable water quality (siltation, water color is clear, discolored, oily film, scum, water odor; etc.):
Identify specific pollutants, if known:
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES
WETLAND FRINGE: YES ABUTTING OF ADJACENT NO Describe: PEM in old pond bed
BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed?
URISDICTIONAL STATUS:
s this stream jurisdictional? X YES NO Describe: Gvessing RPW
OTHER OBSERVATIONS AND COMMENTS: Head of stream is outlet of field drain.

DATE:	7/11/2017		8 g	
REVIEWER(S	10: SMO- JJP	WEATHER (CONDITIONS: 50, Sunny	
	PE: PERENNIAL ped by centerline: ed by access road:		HEMERAL JUST MISSES	
 Unaltered in Is stable and Is connected Has a riparia 	Upstream N Culvert Inflow TONAL: Iy functional if the followany significant manner does not exhibit headout to its overbank flood p n buffer of at least 25 file	by human activities cutting, incision, or excessive age lain supporting normal hydrolog tin width	Outflow	6583-RB W 6584-LB E
MODERATELY Considered mo 1. Streams have	er stream segments about the stream segments are stream segments as segmen	EXYES NO e following are met: r, system recovery has a modera	on should be considered separate and ite probability of occurring naturally—five functions characteristic of fully functioning s	ald drain ortlet, streams some entrench
 Has been cha Is levee prote Entrenched of Has little or no Has banks tha Has 4 or great 	ctionally impaired if the nnelized and shows no cted, impounded, or an r contains active headcu o riparian buffer of dee t are extensively erode	uts p-rooted vegetation on 1 or botl d or unstable, bank sloughing, e	h sides of channel	Jually
RIGHT BANK:		PARIAN AREA CHARACTERIST LEFT BANK:	ICS WITHIN 100FT BUFFER	
FORESTED	WETLAND	FORESTED	WETLAND	
FARMLAND	SCRUB/SHRUB	□ FARMLAND	☐ SCRUB/SHRUB	
☐ HAYFIELD☐ INDUSTRIAL	☐ PRAIRIE☐ HIGH BLUFFS	☐ HAYFIELD	☐ PRAIRIE	
RESIDENTIAL	☐ UIGH BLUFFS	☐ INDUSTRIAL ☐ RESIDENTIAL	HIGH BLUFFS	
_		LI MESIE ENTIAL		

	YES	NO Describe:	HYTES
WETLAND FRINGE: Describe: BIOLOGICAL CHARACTERISTI Macroinvertebrates observed Fish or wildlife observed? Habitat for:	YES A	ABUTTING or ADJACENT NO NO Describe: NO Describe:	HYTES
AQUATIC PLANTS: PERIPH WETLAND FRINGE: Describe: BIOLOGICAL CHARACTERISTI Macroinvertebrates observed Fish or wildlife observed?	YES	ABUTTING or ADJACENT NO	HYTES —
AQUATIC PLANTS: PERIPH WETLAND FRINGE: Describe: BIOLOGICAL CHARACTERISTI Macroinvertebrates observed	☐ YES ☐ A	ABUTTING or ADJACENT NO	HYTES
AQUATIC PLANTS: PERIPH WETLAND FRINGE: Describe: BIOLOGICAL CHARACTERISTI	YES A	ABUTTING OF ADJACENT NO	HYTES
AQUATIC PLANTS: PERIPH WETLAND FRINGE:	_		HYTES
	YTON (brown or yellov	wish algae on rocks or substrate)	HYTES
identity specific politicants, if			
Identify specific pollutants is	f known:	None observed	
WATER QUALITY CHARACTE Obvious siltation: Observable water quality (silt	🗌 YES 🔀 r	NO ar, discolored, oily film, scum, water odor; etc.):No Flow W	
OBSERVED PRESENCE OF SU			
BANK EROSION: EXTEN:	SIVE MODERATE	E UTTLE/NONE nks, etc.): Lux posed root wats, undercit banks	
If flow present, estimate sta Average depth of water (fee		rvey: HIGH MEDIUM LOW	
	ATER, STREAMBED DR	- I I EOMING	WATER
FLOW CHARACTERISTICS:			
Average bank height (feet) Bottom width (feet): 1.5 Ordinary High Water Mark	Water width	h (feet): None Water depth (feet): None	
		_; at centerline (feet):	
Average bank-to-bank widt	th (feet): <i>(</i>	TO TOT OF BRITISH (ESTINATE).	
Average bank-to-bank widt	th (feet): <i>(</i>	PECT TO TOP OF BANK (ESTIMATE):	
Average bank-to-bank widt	RTIES WITH RESPI	PECT TO TOP OF BANK (ESTIMATE):	

REVIEWER(S): 11 P- W1W GAI STREAM ID: SMOJJPOOS	WEATHER CONDITIONS: Clour/60F/No vain last
STREAM TYPE: PERENNIAL INTER Stream crossed by centerline: YES Stream crossed by access road: YES	RMITTENT EPHEMERAL
PHOTOGRAPHS TAKEN: #6589 - Upstream SSW #659 # - Culvert Inflow #_	- Culvert Outflow 659/RB - SE/6592 LB - NO
FULLY FUNCTIONAL: Considered fully functional if the following criter 1. Unaltered in any significant manner by human 2. Is stable and does not exhibit headcutting, inci 3. Is connected to its overbank flood plain suppo	ria are met n activities rision, or excessive aggradation
4. Has a riparian buffer of at least 25 ft in width5. If stream segment is impacted by a minor structure	ctural alteration but otherwise fully functional and does not elow, then the alteration should be considered separate and
MODERATELY FUNCTIONAL: Considered moderately functional if the following 1. Streams have been altered; however, system ro 2. Streams support many, but not all, of the hydra of similar order in the watershed	☐ NO g are met: ecovery has a moderate probability of occurring naturally aulic and geomorphic functions characteristic of fully functioning streams
FUNCTIONALLY IMPAIRED: Considered functionally impaired if the stream ha 1. Has been channelized and shows no evidence of 1. Is levee protected, impounded, or artificially co 1. Entrenched or contains active headcuts	of self-recovery
4. Has little or no riparian buffer of deep-rooted vi 5. Has banks that are extensively eroded or unstal	
GENERAL WATERSHED AND/OR RIPARIAN AND RIGHT BANK: FORESTED WETLAND FARMLAND SCRUB/SHRUB HAYFIELD PRAIRIE INDUSTRIAL HIGH BLUFFS RESIDENTIAL	REA CHARACTERISTICS WITHIN 100FT BUFFER LEFT BANK: FORESTED WETLAND SCRUB/SHRUB HAYFIELD PRAIRIE INDUSTRIAL HIGH BLUFFS RESIDENTIAL

DATE: 7-16-7017 REVIEWER(S): 110- WW GAI STREAM ID: SMALL FOR		10 vain las
STREAM TYPE: PERENNIAL Stream crossed by centerline: Stream crossed by access road:	VES NO	, wrs
# 4 5 93 - Upstream S W - Culvert Inflow	# 6594 - Downstream N & # 6597 - Impact Area # - Culvert Outflow 6595 RB -> 5 / 65	N - 96 LR -> N
FULLY FUNCTIONAL: Considered fully functional if the follow 1. Unaltered in any significant manner 2. Is stable and does not exhibit heado 3. Is connected to its overbank flood pi 4. Has a riparian buffer of at least 25 ft 5. If stream segment is impacted by a riparian buffer.	YES NO wing criteria are met: r by human activities cutting, incision, or excessive aggradation plain supporting normal hydrological functions	
MODERATELY FUNCTIONAL: Considered moderately functional if the 1. Streams have been altered; however 2. Streams support many, but not all, or of similar order in the watershed	YES NO ne following are met: r, system recovery has a moderate probability of occurring naturally of the hydraulic and geomorphic functions characteristic of fully functioning	streams
 Has been channelized and shows noted Is levee protected, impounded, or art Entrenched or contains active headou Has little or no riparian buffer of deep Has banks that are extensively eroded 	tificially constricted	dually
GENERAL WATERSHED AND/OR RIP. RIGHT BANK: FORESTED WETLAND FARMLAND SCRUB/SHRUB HAYFIELD PRAIRIE INDUSTRIAL HIGH BLUFFS RESIDENTIAL	PARIAN AREA CHARACTERISTICS WITHIN 100FT BUFFER LEFT BANK: FORESTED WETLAND SCRUB/SHRUB HAYFIELD PRAIRIE INDUSTRIAL HIGH BLUFFS RESIDENTIAL	

Observable water quality (siltation, water color idear, discolored, oily film, scum, water odor; etc.): Do Flow	HYTES
Observable water quality (siltation, water color is clear, discolored, oily film, scum, water odor; etc.): No + Co w	_
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES OBSERVED PRESENCE OF SUBSURFACE FLOW: YES WATER QUALITY CHARACTERISTICS:	
Water present: NO WATER STREAMBED DRY STREAMBED MOIST STANDING WATER FLOWING If flow present, estimate stage at time of survey: HIGH MEDIUM LOW NO FOR STANDING WATER FLOWING Average depth of water (feet): BANK EROSION: EXTENSIVE MODERATE LUTTLE / NONE Explain (sloughing banks, exposed root wads, undercut banks, etc.):	
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet):	

DATE: <u>7-16-2017</u>	_	
REVIEWER(S): UP-WIW	WEATHER CONDITIONS: Clan /60°F/NO TO 10	last
GAI STREAM ID: SMO-JUPO 10	WEATHER CONDITIONS: Clear / 60°F/NO rain	(0/2)
	-	
STREAM TYPE: PERENNIAL INT	ITERMITTENT V EPHEMERAL	
Stream crossed by centerline: YES	s XINO	
Stream crossed by access road:		
PHOTOGRAPHS TAKEN:		
# 6598 - Upstream 5 £ # 65	- Impact Area	
# Culvert Inflow #	- Culvert Outflow	
	-Culvert Outflow 6600 RB -> NE/6601 LB	->> W
FULLY FUNCTIONAL: YES	5 1/20	
Considered fully functional if the following crite	71	
Unaltered in any significant manner by huma		
2. Is stable and does not exhibit headcutting, in		
3. Is connected to its overbank flood plain supp		
4. Has a riparian buffer of at least 25 ft in width		
	ructural alteration but otherwise fully functional and does not	
significantly alter stream segments above and b	below, then the alteration should be considered separate and	
moderately functional	, salar and salar and salar and salar and	
MODERATELY FUNCTIONAL: YES	□NO	
Considered moderately functional if the followi	_	
	n recovery has a moderate probability of occurring naturally	
2. Streams support many, but not all, of the hyd	draulic and geomorphic functions characteristic of fully functioning streams	
of similar order in the watershed	and an arrangement of the formal streams and determine of the formal streams	
FUNCTIONALLY IMPAIRED:	Пио	
Considered functionally impaired if the stream i	_	
1. Has been channelized and shows no evidence	5	
2. Is levee protected, impounded, or artificially o	·	
3. Entrenched or contains active headcuts		
4. Has little or no riparian buffer of deep-rooted	vegetation on 1 or both sides of channel	
5. Has banks that are extensively eroded or unst		
5. Has 4 or greater stream impacts within 0.5 mi	ile upstream of proposed stream impact, and stream impacts individually	
or cumulatively exceed 100 ft in length	and stream in proposed stream impact, and stream impacts individually	
•		
GENERAL WATERSHED AND/OR RIPARIAN	AREA CHARACTERISTICS WITHIN 100FT BUFFER	
RIGHT BANK:	LEFT BANK:	
FORESTED WETLAND	FORESTED WETLAND	
FARMLAND SCRUB/SHRUB		
HAYFIELD PRAIRIE		
INDUSTRIAL HIGH BLUFFS	HAYFIELD TO PRAIRIE	
☐ RESIDENTIAL ☐ HIGH BEUFFS	☐ INDUSTRIAL ☐ HIGH BLUFFS	
	RESIDENTIAL	

REVIEWER(S): JAP-WJW GAI STREAM ID: SMOJJPO IO
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet):; at centerline (feet): Average bank height (feet):; at centerline (feet): Bottom width (feet): Water width (feet): Ordinary High Water Mark (OHWM), if observed (feet):
FLOW CHARACTERISTICS: Water present: NO WATER, STREAMBED DRY STREAMBED MOIST STANDING WATER FLOWING WATER If flow present, estimate stage at time of survey: HIGH MEDIUM LOW NO FLOW Average depth of water (feet):
BANK EROSION: EXTENSIVE MODERATE MITTLE / NONE Explain (sloughing banks, exposed root wads, undercut banks, etc.):
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES NO OBSERVED PRESENCE OF SUBSURFACE FLOW: YES NO WATER QUALITY CHARACTERISTICS: Obvious siltation: YES NO Observable water quality (siltation, water color is clear, discolored, oily film, from water odor; rise):
dentify specific pollutants, if known:
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES WETLAND FRINGE: YES ABUTTING or ADJACENT NO Describe:
Acroinvertebrates observed? YES Describe: Sish or wildlife observed? YES Describe: Sish or wildlife observed? YES NO Describe: Sish/spawn areas? YES NO
URISDICTIONAL STATUS: s this stream jurisdictional? YES NO Describe:
THER OBSERVATIONS AND COMMENTS: Tributon of SMON POOP

DATE: 2-16-2017			
REVIEWER(S): JIP-WJW	WEATHER C	ONDITIONS: Clary /	600E/ 110 10 1 1 1
GAI STREAM ID: SMOJJPOIL	WEATHER C	ONDITIONSC BEAT /	60°F/ No vain last
3/10/01/			29 NV 3
STREAM TYPE:	ITTENT EPHE	EMERAL	
Stream crossed by centerline: YES	MNO		
Stream crossed by access road:	NO		
.,	7		
PHOTOGRAPHS TAKEN:			
# 6607 - Upstream SW # 6603	- Downstream	NE # -Ir	mnact Area
# - Culvert Inflow #	- Culvert (Outflow (COCCO)	SI III
# GOOT - Culvert Inflow # GOOT		6604 KB=	702 16602 LB-> NW
FULLY FUNCTIONAL: YES	NO NO		
Considered fully functional if the following criteria			
1. Unaltered in any significant manner by human a			
2. Is stable and does not exhibit headcutting, incision		radation	
3. Is connected to its overbank flood plain supporti			
4. Has a riparian buffer of at least 25 ft in width			
5. If stream segment is impacted by a minor structu	ural alteration but of	herwise fully functional and d	loes not
significantly alter stream segments above and belo	w, then the alteratio	n should be considered separ	rate and
moderately functional			
MODERATELY FUNCTIONAL: Y YES	□NO		,
Considered moderately functional if the following a	ire met:		
1. Streams have been altered; however, system rec		e probability of occurring nat	urally
2. Streams support many, but not all, of the hydrau			
of similar order in the watershed		'	,
FUNCTIONALLY IMPAIRED: X YES	□ NO		
Considered functionally impaired if the stream has i	more than one of the	e following:	
L. Has been channelized and shows no evidence of	self-recovery	J	
2. Is levee protected, impounded, or artificially cons	tricted		
3. Entrenched or contains active headcuts			
l. Has little or no riparian buffer of deep-rooted veg	etation on 1 or both	sides of channel	
i. Has banks that are extensively eroded or unstable			
. Has 4 or greater stream impacts within 0.5 mile u			mpacts individually
r cumulatively exceed 100 ft in length		•	
GENERAL WATERSHED AND/OR RIPARIAN ARE	A CHARACTERISTI	CS WITHIN 100FT BUFFER	
EIGHT BANK:	LEFT BANK:		
FORESTED WETLAND	FORESTED	WETLAND	
FARMLAND SCRUB/SHRUB	FARMLAND	SCRUB/SHRUB	
HAYFIELD PRAIRIE	HAYFIELD	PRAIRIE	
INDUSTRIAL HIGH BLUFFS	☐ INDUSTRIAL	HIGH BLUFFS	
RESIDENTIAL	RESIDENTIAL		

REVIEWER(S): WP-WW GAI STREAM ID: SMOW POIL
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet):; at centerline (feet): Average bank height (feet):; at centerline (feet): Bottom width (feet): Water width (feet): Ordinary High Water Mark (OHWM), if observed (feet):
FLOW CHARACTERISTICS: Water present: NO WATER, STREAMBED DRY STREAMBED MOIST STANDING WATER FLOWING WATER If flow present, estimate stage at time of survey: HIGH MEDIUM LOW NO FLOW Average depth of water (feet):
BANK EROSION: EXTENSIVE MODERATE LITTLE / NONE Explain (sloughing banks, exposed root wads, undercut banks, etc.):
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES NO
OBSERVED PRESENCE OF SUBSURFACE FLOW: YES NO
WATER QUALITY CHARACTERISTICS: Obvious siltation:
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES
WETLAND FRINGE: YES ABUTTING OF ADJACENT NO Describe:
BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed?
URISDICTIONAL STATUS:
s this stream jurisdictional? YES NO Describe:
head-cut area of smosspag/channel filled

DATE: 2-16-2017 REVIEWER(S): UP-WWW WEATHER CONDITIONS: (Low / 60°F/ No vain la 24 hrs
STREAM TYPE: PERENNIAL INTERMITTENT EPHEMERAL Stream crossed by centerline: VES NO Stream crossed by access road: YES NO
PHOTOGRAPHS TAKEN: #
FULLY FUNCTIONAL: Onsidered fully functional if the following criteria are met: 1. Unaltered in any significant manner by human activities 2. Is stable and does not exhibit headcutting, incision, or excessive aggradation 3. Is connected to its overbank flood plain supporting normal hydrological functions 4. Has a riparian buffer of at least 25 ft in width 5. If stream segment is impacted by a minor structural alteration but otherwise fully functional and does not
significantly alter stream segments above and below, then the alteration should be considered separate and moderately functional MODERATELY FUNCTIONAL: NO Considered moderately functional if the following are met: 1. Streams have been altered; however, system recovery has a moderate probability of occurring naturally 2. Streams support many, but not all, of the hydraulic and geomorphic functions characteristic of fully functioning streams
of similar order in the watershed FUNCTIONALLY IMPAIRED: YES Considered functionally impaired if the stream has more than one of the following:
L. Has been channelized and shows no evidence of self-recovery L. Is levee protected, impounded, or artificially constricted E. Entrenched or contains active headcuts L. Has little or no riparian buffer of deep-rooted vegetation on 1 or both sides of channel L. Has banks that are extensively eroded or unstable, bank sloughing, erosional scars L. Has 4 or greater stream impacts within 0.5 mile upstream of proposed stream impact, and stream impacts individually
SENERAL WATERSHED AND/OR RIPARIAN AREA CHARACTERISTICS WITHIN 100FT BUFFER LIGHT BANK: FORESTED WETLAND FARMLAND SCRUB/SHRUB FARMLAND SCRUB/SHRUB
HAYFIELD PRAIRIE HAYFIELD PRAIRIE INDUSTRIAL HIGH BLUFFS INDUSTRIAL HIGH BLUFFS RESIDENTIAL RESIDENTIAL

DATE: 2-16-2017
REVIEWER(S): JJ P-WJ W
GAI STREAM ID: 6 MOJJPO12
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE):
Average bank-to-bank width (feet): 30 ; at centerline (feet): 30
Average bank height (feet): /8; at centerline (feet): /8
Bottom width (feet): 5 Water width (feet): 5 Water depth (feet): 5
Ordinary High Water Mark (OHWM), if observed (feet):
FLOW CHARACTERISTICS:
Water present: ☐ NO WATER, STREAMBED DRY ☐ STREAMBED MOIST ☐ STANDING WATER ☐ FLOWING WATER
If flow present, estimate stage at time of survey: HIGH MEDIUM XLOW
Average depth of water (feet):
BANK EROSION: EXTENSIVE MODERATE LITTLE / NONE
BANK EROSION: EXTENSIVE MODERATE LITTLE / NONE Explain (sloughing banks, exposed root wads, undercut banks, etc.): Sloughing banks / root wads /
Under cots
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES NO GMOULPOOL
OBSERVED PRESENCE OF SUBSURFACE FLOW: YES NO
<u> </u>
WATER QUALITY CHARACTERISTICS:
Obvious siltation:
Observable water quality (siltation, water color is clear, discolored, oily film, scum, water odor; etc.):
Identify specific pollutants, if known: Nove alse med
identity specific politicalits, il kilowii.
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES
WETLAND FRINGE: YES ABUTTING OF ADJACENT NO
Describe: steep banks/upland forest butter
BIOLOGICAL CHARACTERICTICS
BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed?
Fish or wildlife observed? YES NO Describe:
Fish/spawn areas?
IURISDICTIONAL STATUS:
s this stream jurisdictional? YES NO Describe:
2 S. A
OTHER OBSERVATIONS AND COMMENTS: Slopes unstable along banks/
Slides and sloughs observed/channel is within
deep varing

DATE: Z-(6-2017 REVIEWER(S): D-WJW GAI STREAM ID: SWUJJO13	WEATHER CONDITIONS: Llean /60°F/	vo rain le
Stream crossed by centerline:	INTERMITTENT EPHEMERAL YES YES	
# Culvert Inflow	16/3 - Downstream 5 # Impact Area # Culvert Outflow	615 LB->S
Considered fully functional if the following of a Unaltered in any significant manner by hu 2. Is stable and does not exhibit headcutting, 3. Is connected to its overbank flood plain su 4. Has a riparian buffer of at least 25 ft in wid 5. If stream segment is impacted by a minor state.	riteria are met: uman activities g, incision, or excessive aggradation upporting normal hydrological functions	
moderately functional MODERATELY FUNCTIONAL: Considered moderately functional if the fallo Streams have been altered; however, systematically functional in the fallo MODERATELY FUNCTIONAL:	E5 NO	treams
FUNCTIONALLY IMPAIRED: Considered functionally impaired if the stream Has been channelized and shows no eviden In the stream In the strea	m has more than one of the following: nce of self-recovery lly constricted ted vegetation on 1 or both sides of channel	ually
GENERAL WATERSHED AND/OR RIPARIAN RIGHT BANK: FORESTED WETLAND SCRUB/SHRUB HAYFIELD PRAIRIE INDUSTRIAL HIGH BLUFFS RESIDENTIAL	N AREA CHARACTERISTICS WITHIN 100FT BUFFER LEFT BANK: FORESTED WETLAND SCRUB/SHRUB HAYFIELD PRAIRIE INDUSTRIAL HIGH BLUFFS RESIDENTIAL	

WETLAND FRINGE:
WETLAND FRINGE:
WETLAND FRINGE: YES ABUTTING or ADJACENT NO Describe: NO
WETLAND FRINGE: YES ABUTTING or ADJACENT NO Describe: Macroinvertebrates observed? YES NO Describe: Fish or wildlife observed? YES Describe:
WETLAND FRINGE: YES ABUTTING OF ADJACENT NO BIOLOGICAL CHARACTERISTICS:
WETLAND FRINGE: YES ABUTTING OF ADJACENT NO Describe:
WETLAND FRINGE:
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate)
Identify specific pollutants, if known:
Obvious siltation: YES YES Observable water quality (siltation, water color is described, oily film, water odor; etc.):
OBSERVED PRESENCE OF SUBSURFACE FLOW: YES YES WATER QUALITY CHARACTERISTICS:
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES NO
BANK EROSION: EXTENSIVE MODERATE LITTLE / NONE Explain (sloupping banks, exposed root wads, undercut banks, etc.):
Average depth of water (feet):
Water present: NO WATER STREAMBED DRY STREAMBED MOIST STANDING WATER FLOWING WATER
FLOW CHARACTERISTICS:
Bottom width (feet): Water width (feet): Water depth (feet): Ordinary High Water Mark (OHWM), if observed (feet):
Average bank height (feet):; at centerline (feet): Average bank height (feet):; at centerline (feet):
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet):; at centerline (feet):
GAI STREAM ID: SWOJJ PO (3) STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank to bank width (foot).

DATE: 2-16-2017 REVIEWER(S): 118-414 GAI STREAM ID: SMOSSPOLY WEATHER CONDITIONS: Clear/60°F/NO vain las Zyhrs
STREAM TYPE: PERENNIAL INTERMITTENT PEPHEMERAL Stream crossed by centerline: YES NO Stream crossed by access road: YES NO
PHOTOGRAPHS TAKEN: # Upstream \(\omega \cdot \beta \) # Culvert Inflow # Culvert Outflow #
FULLY FUNCTIONAL: Onsidered fully functional if the following criteria are met: 1. Unaltered in any significant manner by human activities 2. Is stable and does not exhibit headcutting, incision, or excessive aggradation 3. Is connected to its overbank flood plain supporting normal hydrological functions 4. Has a riparian buffer of at least 25 ft in width
5. If stream segment is impacted by a minor structural alteration but otherwise fully functional and does not significantly alter stream segments above and below, then the alteration should be considered separate and moderately functional MODERATELY FUNCTIONAL:
Considered moderately functional if the following are met: 1. Streams have been altered; however, system recovery has a moderate probability of occurring naturally 2. Streams support many, but not all, of the hydraulic and geomorphic functions characteristic of fully functioning streams of similar order in the watershed
FUNCTIONALLY IMPAIRED: YES Considered functionally impaired if the stream has more than one of the following: 1. Has been channelized and shows no evidence of self-recovery
2. Is levee protected, impounded, or artificially constricted 3. Entrenched or contains active headcuts 4. Has little or no riparian buffer of deep-rooted vegetation on 1 or both sides of channel 5. Has banks that are extensively eroded or unstable, bank sloughing, erosional scars
5. Has 4 or greater stream impacts within 0.5 mile upstream of proposed stream impact, and stream impacts individually or cumulatively exceed 100 ft in length GENERAL WATERSHED AND/OR RIPARIAN AREA CHARACTERISTICS WITHIN 100FT BUFFER RIGHT BANK: LEFT BANK:
FORESTED WETLAND FORESTED WETLAND SCRUB/SHRUB FAIMLAND SCRUB/SHRUB HAYFIELD PRAIRIE HIGH BLUFFS INDUSTRIAL HIGH BLUFFS RESIDENTIAL RESIDENTIAL

Observable water quality (siltation, water color is clear, discolored, oily film, scum, water odor; etc.): Identify specific pollutants, if known: AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES WETLAND FRINGE: YES ABUTTING or ADJACENT NO Describe: BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed? YES NO Describe: Fish or wildlife observed? YES NO Describe: Habitat for: Fish/spawn areas? YES NO DESCRIBE: JURISDICTIONAL STATUS:
Identify specific pollutants, if known: AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES WETLAND FRINGE: PYES ABUTTING or ADJACENT NO BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed? PYES NO Describe: Fish or wildlife observed? PYES NO Describe: Habitat for:
Identify specific pollutants, if known AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES WETLAND FRINGE: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES WETLAND FRINGE: PES ABUTTING or ADJACENT NO BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed? PES No Describe: Fish or wildlife observed? PES No Describe:
Identify specific pollutants, if known AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES WETLAND FRINGE: PYES ABUTTING or ADJACENT NO BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed? PYES Describe:
Identify specific pollutants, if known: AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES WETLAND FRINGE: YES ABUTTING or ADJACENT NO BIOLOGICAL CHARACTERISTICS:
Identify specific pollutants, if known: AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES WETLAND FRINGE: YES ABUTTING or ADJACENT NO
Identify specific pollutants, if known: AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES
None absenced
Nove absenued
Observable water quality (sitation, water color is their illiscolored, only film, scum, water odor: etc.):
Obvious siltation: YES XNO
WATER QUALITY CHARACTERISTICS:
OBSERVED PRESENCE OF SUBSURFACE FLOW: YES NO
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES NO
BANK EROSION: EXTENSIVE MODERATE LITTLE / NONE Explain (sloughing banks, exposed root walls, undercut banks, etc.):
Average depth of water (feet): 100 +600
Water present: NO WATER, STREAMBED DRY STREAMBED MOIST STANDING WATER FLOWING WATER If flow present, estimate stage at time of survey: HIGH MEDIUM LOW
FLOW CHARACTERISTICS: Water present: NO WATER, STREAMBED DRY STREAMBED MOIST STANDING WATER FLOWING WATER
Bottom width (feet): Water width (feet): Water depth (feet): Ordinary High Water Mark (OHWM), if observed (feet):
Average bank height (feet):; at centerline (feet):
Average hank-to-hank width (feet): / : at centerline (feet):
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet):; at centerline (feet):;
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE):

DATE: 2-16-2017	
DATE.	4 1
REVIEWER(S): JJP-WJW WEATHER CONDITIONS: Class 600 F/NO VO	2111
REVIEWER(S): JJP-WJW WEATHER CONDITIONS: Class/60°F/NO VO	hre
` /	. 4. 1
STREAM TYPE: PERENNIAL INTERMITTENT EPHEMERAL	
Stream crossed by centerline: YES NO	
Stream crossed by access road:	
PHOTOGRAPHS TAKEN:	
# (ala 2) Upstream W # (ala 22 - Downstream & # 6625 - Impact Area N	
# 6621 Upstream W # 6622 Downstream £ # 6625 Impact Area N # Culvert Inflow # - Culvert Outflow 6623 RB > 5/6624 L	
6623 KB 75/16741	R->N
FULLY FUNCTIONAL: NO	.0
Considered fully functional if the following criteria are met:	
1. Unaltered in any significant manner by human activities	
2. Is stable and does not exhibit headcutting, incision, or excessive aggradation	
3. Is connected to its overbank flood plain supporting normal hydrological functions	
4. Has a riparian buffer of at least 25 ft in width	
5. If stream segment is impacted by a minor structural alteration but otherwise fully functional and does not	
significantly alter stream segments above and below, then the alteration should be considered separate and	
moderately functional	
	4
MODERATELY FUNCTIONAL: NO NO	
Considered moderately functional if the following are met:	
1. Streams have been altered; however, system recovery has a moderate probability of occurring naturally	
2. Streams support many, but not all, of the hydraulic and geomorphic functions characteristic of fully functioning streams	
of similar order in the watershed	
FUNCTIONALLY IMPAIRED: Tyes Tyo	
Considered functionally impaired if the stream has more than one of the following:	
L. Has been channelized and shows no evidence of self-recovery	
·	
2. Is levee protected, impounded, or artificially constricted	
B. Entrenched or contains active headcuts	
. Has little or no riparian buffer of deep-rooted vegetation on 1 or both sides of channel	
. Has banks that are extensively eroded or unstable, bank sloughing, erosional scars	
. Has 4 or greater stream impacts within 0.5 mile upstream of proposed stream impact, and stream impacts individually	
r cumulatively exceed 100 ft in length	
ENERAL WATERSHED AND/OR RIPARIAN AREA CHARACTERISTICS WITHIN 100FT BUFFER	4
IGHT BANK: LEFT BANK:	
FORESTED WETLAND FORESTED WETLAND	
FARMLAND SCRUB/SHRUB SCRUB/SHRUB	
Servery since	
RESIDENTIAL RESIDENTIAL	

DATE: 7-16-7017 REVIEWER(S): 129-W1W GAI STREAM ID: 500 12 PO 15
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet):; at centerline (feet): Average bank height (feet):; at centerline (feet): Bottom width (feet): Water width (feet): Ordinary High Water Mark (OHWM), if observed (feet):
FLOW CHARACTERISTICS: Water present: No water, Streambed DRY STREAMBED MOIST STANDING WATER If flow present, estimate stage at time of survey: HIGH MEDIUM LOW Average depth of water (feet): 411
BANK EROSION: EXTENSIVE MODERATE LITTLE / NONE Explain (sloughing banks, exposed root wads, undercut banks, etc.):
WATER QUALITY CHARACTERISTICS: Obvious siltation:
Describe:upland forested bottomland
BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed?
JURISDICTIONAL STATUS: Is this stream jurisdictional? NO Describe:
OTHER OBSERVATIONS AND COMMENTS:

REVIEWER(S):	WEATHER CONDITIONS: Clean / 600=/ No vain 24 hrs
STREAM TYPE: PERENNIAL INTERMITTER Stream crossed by centerline: YES Stream crossed by access road: YES	NT
PHOTOGRAPHS TAKEN: #_6626 - Upstream N #_6627 # Culvert Inflow #	
FULLY FUNCTIONAL: Considered fully functional if the following criteria are r 1. Unaltered in any significant manner by human activit 2. Is stable and does not exhibit headcutting, incision, o 3. Is connected to its overbank flood plain supporting not 4. Has a riparian buffer of at least 25 ft in width 5. If stream segment is impacted by a minor structural a significantly alter stream segments above and below, the moderately functional	ties or excessive aggradation ormal hydrological functions alteration but otherwise fully functional and does not
Considered moderately functional if the following are m 1. Streams have been altered; however, system recovery	
FUNCTIONALLY IMPAIRED: Considered functionally impaired if the stream has more 1. Has been channelized and shows no evidence of self-r 2. Is levee protected, impounded, or artificially constricted. 3. Entrenched or contains active headcuts 4. Has little or no riparian buffer of deep-rooted vegetation. 5. Has banks that are extensively eroded or unstable, bar 6. Has 4 or greater stream impacts within 0.5 mile upstream cumulatively exceed 100 ft in length	ecovery ed fon on 1 or both sides of channel
GENERAL WATERSHED AND/OR RIPARIAN AREA CHRIGHT BANK: FORESTED WETLAND SCRUB/SHRUB HAYFIELD PRAIRIE INDUSTRIAL HIGH BLUFFS RESIDENTIAL	HARACTERISTICS WITHIN 100FT BUFFER LEFT BANK: FORESTED

DATE: 7-16-2017 REVIEWER(S): 119-414 GAI STREAM ID: 5-4000 SPO(6)
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet):/7; at centerline (feet):
FLOW CHARACTERISTICS: Water present: No water, streambed dry Streambed moist Standing water flowing water if flow present, estimate stage at time of survey: HIGH MEDIUM LOW Average depth of water (feet): MODERATE STREAMBED MOIST STANDING WATER FLOWING F
BANK EROSION: EXTENSIVE MODERATE UTILE / NONE Explain (sloughing banks, exposed root wads, undercut banks, exc 5 CO U V
OBSERVED PRESENCE OF SUBSURFACE FLOW: YES NO WATER QUALITY CHARACTERISTICS: Obvious siltation: YES NO Observable water quality (siltation, water color dear, discretered, oily fim, scum, water odor; etc.): Identify specific pollutants, if known: AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES WETLAND FRINGE: HES ABUTTING or ADJACENT NO Describe:
BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed?
JURISDICTIONAL STATUS: Is this stream jurisdictional?
OTHER OBSERVATIONS AND COMMENTS:

REVIEWER(S): JJP-WJW GAI STREAM ID: SMOJJP017	WEATHER CONDITIONS:	Clear /650F/No rain las
STREAM TYPE: PERENNIAL INTE Stream crossed by centerline: YES Stream crossed by access road: YES	RMITTENT EPHEMERAL	
PHOTOGRAPHS TAKEN: #_(。らる(Upstream いと #_(。63 #Culvert Inflow #	32 - Downstream 5W # Culvert Outflow (6	-Impact Area 633 RB→NW/6634LB→SE
FULLY FUNCTIONAL: YES Considered fully functional if the following criter 1. Unaltered in any significant manner by human	ria are met: n activities	
 2. Is stable and does not exhibit headcutting, inc 3. Is connected to its overbank flood plain support 4. Has a riparian buffer of at least 25 ft in width 5. If stream segment is impacted by a minor stru significantly alter stream segments above and be 	orting normal hydrological functions ctural alteration but otherwise fully fi	unctional and does not onsidered separate and
MODERATELY FUNCTIONAL: YES Considered moderately functional if the following 1. Streams have been altered; however, system r		of occurring naturally
2. Streams support many, but not all, of the hydr of similar order in the watershed FUNCTIONALLY IMPAIRED: YES	aulic and geomorphic functions chara	cteristic of fully functioning streams
Considered functionally impaired if the stream ha 1. Has been channelized and shows no evidence o 2. Is levee protected, impounded, or artificially co 3. Entrenched or contains active headcuts	as more than one of the following: of self-recovery onstricted	
 Has little or no riparian buffer of deep-rooted v Has banks that are extensively eroded or unsta Has 4 or greater stream impacts within 0.5 mile or cumulatively exceed 100 ft in length 	ble, bank sloughing, erosional scars	
GENERAL WATERSHED AND/OR RIPARIAN AND RIGHT BANK: FORESTED WETLAND SCRUB/SHRUB HAYFIELD PRAIRIE INDUSTRIAL HIGH BLUFFS RESIDENTIAL	REA CHARACTERISTICS WITHIN 10 LEFT BANK: FORESTED WETLAND FARMLAND SCRUB/SHI HAYFIELD PRAIRIE INDUSTRIAL HIGH BLUF RESIDENTIAL	RUB

REVIEWER(S): 110-110 GAI STREAM ID: 6 MO 11017
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet):; at centerline (feet): Average bank height (feet):; at centerline (feet): Bottom width (feet): Water width (feet): Ordinary High Water Mark (OHWM), if observed (feet):
FLOW CHARACTERISTICS: Water present: NO WATER, STREAMBED DRY If flow present, estimate stage at time of survey: Average depth of water (feet):
BANK EROSION: EXTENSIVE MODERATE LITTLE / NONE Explain (sloughing banks, exposed root wads, undercut banks, etc.):
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES NO
OBSERVED PRESENCE OF SUBSURFACE FLOW: TYES TO NO
WATER QUALITY CHARACTERISTICS: Obvious siltation: YES NO Observable water quality (siltation, water color is clear, ascelared, oily film, scum, water odor; etc.): NO
Identify specific pollutants, if known: Trash in Sheam Channel
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES
WETLAND FRINGE: YES ABUTTING OF ADJACENT NO Describe:
BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed?
ish/spawn areas?
URISDICTIONAL STATUS: s this stream jurisdictional? NO Describe:
THER OBSERVATIONS AND COMMENTS: Head out present/source upslage

REVIEWER(S): 117-W1W GAI STREAM ID: 6W011019	WEATHER CONDITIONS: Clean/65°F/ NO vain las
STREAM TYPE: PERENNIAL INTER Stream crossed by centerline: YES Stream crossed by access road: YES	RMITTENT EPHEMERAL NO NO NO
PHOTOGRAPHS TAKEN: #_6655 - Upstream 5 #_6655 - Culvert Inflow #_	$\frac{56 - Downstream }{- Culvert Outflow} # 6659 - Impact Area & 6657 RB \rightarrow £ / 6659 LB \rightarrow C$
FULLY FUNCTIONAL: YES Considered fully functional if the following criter 1. Unaltered in any significant manner by human	activities
2. Is stable and does not exhibit headcutting, inc3. Is connected to its overbank flood plain support	
4. Has a riparian buffer of at least 25 ft in width	
	ctural alteration but otherwise fully functional and does not
	elow, then the alteration should be considered separate and
moderately functional	
MODERATELY FUNCTIONAL: YES	Žίνο
Considered moderately functional if the following	g are met:
1. Streams have been altered; however, system r	ecovery has a moderate probability of occurring naturally
2. Streams support many, but not all, of the hydr of similar order in the watershed	aulic and geomorphic functions characteristic of fully functioning streams
FUNCTIONALLY IMPAIRED: YES	□NO
Considered functionally impaired if the stream ha	
Has been channelized and shows no evidence	. 9
2. Is levee protected, impounded, or artificially co	·
Entrenched or contains active headcuts	, in the contract of the contr
4. Has little or no riparian buffer of deep-rooted	vegetation on 1 or both sides of channel
5. Has banks that are extensively eroded or unsta	
	e upstream of proposed stream impact, and stream impacts individually
or cumulatively exceed 100 ft in length	
GENERAL WATERSHED AND/OR RIPARIAN A	REA CHARACTERISTICS WITHIN 100FT BUFFER
RIGHT BANK:	LEFT BANK:
FORESTED WETLAND	FORESTED WETLAND
☐ FARMLAND ☐ SCRUB/SHRUB	FARMLAND SCRUB/SHRUB
HAYFIELD PRAIRIE	☐ HAYFIELD ☐ PRAIRIE
☐ INDUSTRIAL ☐ HIGH BLUFFS	☐ INDUSTRIAL ☐ HIGH BLUFFS
RESIDENTIAL	RESIDENTIAL

DATE: 2-17-2017 REVIEWER(S): JSP-WJW GAI STREAM ID: SMOJSPO19
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet):/; at centerline (feet):/ Average bank height (feet):; at centerline (feet): Bottom width (feet): Water width (feet): Ordinary High Water Mark (OHWM), if observed (feet):
FLOW CHARACTERISTICS: Water present: NO WATER, STREAMBED DRY STREAMBED MOIST STANDING WATER FLOWING WATER If flow present, estimate stage at time of survey: HIGH MEDIUM LOW NO FLOW Average depth of water (feet):
BANK EROSION: EXTENSIVE MODERATE DITTLE / NONE Explain (sloughing banks, exposed root wads, undercut banks, etc.): No vegetation along banks with the same banks and banks.
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES NO OBSERVED PRESENCE OF SUBSURFACE FLOW: YES NO WATER QUALITY CHARACTERISTICS: Obvious siltation: YES NO
Observable water quality (siltation, water color is clear, discolored, pily film, scum, water odor; etc.): Identify specific pollutants, if known:
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES
WETLAND FRINGE: YES ABUTTING OF ADJACENT AND Describe: RB is composed of exposed bedrock face/LB Forest
BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed?
JURISDICTIONAL STATUS: Is this stream jurisdictional? NO Describe:
other observations and comments: - channel is possible an ex bow from cold water curek/ channel abuts Bedrack bluff

DATE: 2-17-2017 REVIEWER(S): 119-1111 GAI STREAM ID: SMOLLDOZO WEATHER CONDITIONS: Closer/650F/No vain la 48hrs	S
STREAM TYPE: PERENNIAL INTERMITTENT EPHEMERAL Stream crossed by centerline: YES NO Stream crossed by access road: YES NO	
PHOTOGRAPHS TAKEN: # (6663 - Upstream SW # 6667 - Impact Area & # Culvert Inflow # - Culvert Outflow 6665 RB> E/6666LB -> W	J
FULLY FUNCTIONAL: Considered fully functional if the following criteria are met: 1. Unaltered in any significant manner by human activities 2. Is stable and does not exhibit headcutting, incision, or excessive aggradation	
 3. Is connected to its overbank flood plain supporting normal hydrological functions 4. Has a riparian buffer of at least 25 ft in width 5. If stream segment is impacted by a minor structural alteration but otherwise fully functional and does not significantly alter stream segments above and below, then the alteration should be considered separate and moderately functional 	
MODERATELY FUNCTIONAL: NO Considered moderately functional if the following are met: 1. Streams have been altered; however, system recovery has a moderate probability of occurring naturally 2. Streams support many, but not all, of the hydraulic and geomorphic functions characteristic of fully functioning streams of similar order in the watershed	
FUNCTIONALLY IMPAIRED: YES Considered functionally impaired if the stream has more than one of the following: 1. Has been channelized and shows no evidence of self-recovery 2. Is levee protected, impounded, or artificially constricted 3. Entrenched or contains active headcuts 4. Has little or no riparian buffer of deep-rooted vegetation on 1 or both sides of channel 5. Has banks that are extensively eroded or unstable, bank sloughing, erosional scars 6. Has 4 or greater stream impacts within 0.5 mile upstream of proposed stream impact, and stream impacts individually or cumulatively exceed 100 ft in length	
GENERAL WATERSHED AND/OR RIPARIAN AREA CHARACTERISTICS WITHIN 100FT BUFFER RIGHT BANK: FORESTED WETLAND FORESTED SCRUB/SHRUB HAYFIELD PRAIRIE HAYFIELD PRAIRIE HIGH BLUFFS GENERAL WATERSHED AND/OR RIPARIAN AREA CHARACTERISTICS WITHIN 100FT BUFFER WETLAND SCRUB/SHRUB PRAIRIE HAYFIELD PRAIRIE INDUSTRIAL HIGH BLUFFS	
RESIDENTIAL RESIDENTIAL	

REVIEWER(S): JJP-WW GAI STREAM ID: SMOJJPOZO
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet): 125; at centerline (feet): 125 Average bank height (feet): 3; at centerline (feet): 4 Bottom width (feet): Water width (feet): 4 Ordinary High Water Mark (OHWM), if observed (feet): 5
FLOW CHARACTERISTICS: Water present: No water, streambed dry Streambed moist Standing water Flowing water If flow present, estimate stage at time of survey: HIGH MEDIUM LOW Average depth of water (feet): 2
BANK EROSION: EXTENSIVE MODERATE LITTLE / NONE Explain (sloughing banks, exposed root wads, undercut banks, etc.): SCOUV / Sloughing banks, exposed root wads, undercut banks, etc.):
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES NO
OBSERVED PRESENCE OF SUBSURFACE FLOW: YES NO
WATER QUALITY CHARACTERISTICS: Obvious siltation: YES NO Observable water quality (siltation, water color is clear, discolored, oily film, scum, water odor; etc.):
Identify specific pollutants, if known: NOVE Observed
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES WETLAND FRINGE: YES ABUTTING OF ADJACENT NO Describe: Paud for Macrophytes
BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed?
Fish/spawn areas? JURISDICTIONAL STATUS: Is this stream jurisdictional? VES NO Describe:
other OBSERVATIONS AND COMMENTS: LB lived with rig-rap. / Cold Water Creek
6669 752 6670 7NW OCL 6661 UPStrm 75 LB avea 6671 7NE 6662 dwnstm 7N LB avea

DATE: 2-17-2017 REVIEWER(S): 110-1111 GAI STREAM ID: SMOJJVOZI WEATHER CONDITIONS: 48 days
STREAM TYPE: PERENNIAL INTERMITTENT PERENNIAL Stream crossed by centerline: YES NO Stream crossed by access road: YES NO
PHOTOGRAPHS TAKEN: #
MODERATELY FUNCTIONAL: YES Considered moderately functional if the following are met 1. Streams have been altered; however, system recovery has a moderate probability of occurring naturally 2. Streams support many, but not all, of the hydraulic and geomorphic functions characteristic of fully functioning streams of similar order in the watershed
FUNCTIONALLY IMPAIRED: Onsidered functionally impaired if the stream has more than one of the following: Has been channelized and shows no evidence of self-recovery Is levee protected, impounded, or artificially constricted Entrenched or contains active headcuts Has little or no riparian buffer of deep-rooted vegetation on 1 or both sides of channel Has banks that are extensively eroded or unstable, bank sloughing, erosional scars Has 4 or greater stream impacts within 0.5 mile upstream of proposed stream impact, and stream impacts individually or cumulatively exceed 100 ft in length
GENERAL WATERSHED AND/OR RIPARIAN AREA CHARACTERISTICS WITHIN 100FT BUFFER RIGHT BANK: FORESTED WETLAND FORESTED WETLAND FAIIMLAND SCRUB/SHRUB FAIMLAND SCRUB/SHRUB HAVEIELD PRAIRIE HAVEIELD PRAIRIE INDUSTRIAL HIGH BLUFFS INDUSTRIAL HIGH BLUFFS RESIDENTIAL RESIDENTIAL RESIDENTIAL

DATE: 2-17-2017 REVIEWER(S): JUDIU GAI STREAM ID: SWOJJ PO 21
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet):; at centerline (feet): Average bank height (feet):; at centerline (feet): Bottom width (feet): Water width (feet): Ordinary High Water Mark (OHWM), if observed (feet):
FLOW CHARACTERISTICS: Water present: NO WATER, STREAMBED DRY STREAMBED MOIST STANDING WATER FLOWING WATER If flow present, estimate stage at time of survey: HIGH MEDIUM LOW Average depth of water (feet):
BANK EROSION: EXTENSIVE MODERATE LITTLE / NONE Explain (sloughing banks, exposed root wads, undercut banks, etc.):
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES NO OBSERVED PRESENCE OF SUBSURFACE FLOW: YES NO
WATER QUALITY CHARACTERISTICS: Obvious siltation: YES NO Observable water quality (siltation, water color is clear, discolored, oily film, scum, water odor; etc.):
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES
WETLAND FRINGE: YES ABUTTING OF ADJACENT NO Describe: Volume Scrub Slavub anda
BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed?
JURISDICTIONAL STATUS: Is this stream jurisdictional? NO Describe:
other observations and comments: channel trils of smollpozo/source is pstone run-off/channel originates of cultural outflow/approx. 301 stream appears as our sround surface sheet flow, no defined hannel in the sheet flow area/

DATE:
STREAM TYPE: PERENNIAL INTERMITTENT EPHEMERAL Stream crossed by centerline: PES NO Stream crossed by access road: PES NO
PHOTOGRAPHS TAKEN: #_669 7 - Upstream 1 4688 - Downstream 55 #_669/ - Impact Area A/A/5 #_669 7 - Culvert Inflow #_669 - Culvert Outflow
FULLY FUNCTIONAL: Considered fully functional if the following criteria are met: 1. Unaltered in any significant manner by human activities
 Is stable and does not exhibit headcutting, incision, or excessive aggradation Is connected to its overbank flood plain supporting normal hydrological functions Has a riparian buffer of at least 25 ft in width If stream segment is impacted by a minor structural alteration but otherwise fully functional and does not
significantly alter stream segments above and below, then the alteration should be considered separate and moderately functional
MODERATELY FUNCTIONAL: VES NO Considered moderately functional if the following are met: 1. Streams have been altered; however, system recovery has a moderate probability of occurring naturally 2. Streams support many, but not all, of the hydraulic and geomorphic functions characteristic of fully functioning streams of similar order in the watershed
FUNCTIONALLY IMPAIRED: YES Considered functionally impaired if the stream has more than one of the following:
 Has been channelized and shows no evidence of self-recovery Is levee protected, impounded, or artificially constricted Entrenched or contains active headcuts
4. Has little or no riparian buffer of deep-rooted vegetation on 1 or both sides of channel
 Has banks that are extensively eroded or unstable, bank sloughing, erosional scars Has 4 or greater stream impacts within 0.5 mile upstream of proposed stream impact, and stream impacts individually or cumulatively exceed 100 ft in length
GENERAL WATERSHED AND/OR RIPARIAN AREA CHARACTERISTICS WITHIN 100FT BUFFER
RIGHT BANK: FORESTED WETLAND FORESTED WETLAND FORESTED WETLAND SCRUB/SHRUB FARMLAND SCRUB/SHRUB HAYFIELD PRAIRIE INDUSTRIAL HIGH BLUFFS RESIDENTIAL RESIDENTIAL

AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate)
WETLAND FRINGE: YES ABUTTING or ADJACENT NO Describe: BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed? YES Describe: Fish or wildlife observed? YES Describe: Habitat for: YES NO Fish/spawn areas?
WETLAND FRINGE: YES ABUTTING or ADJACENT NO Describe: SIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed? YES Describe: Sish or wildlife observed? YES Describe: Habitat for: Acros
WETLAND FRINGE:
WETLAND FRINGE: YES ABUTTING or ADJACENT NO Describe: SIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed? YES Describe: SIOLOGICAL CHARACTERISTICS:
WETLAND FRINGE: YES ABUTTING OF ADJACENT NO Describe: SIOLOGICAL CHARACTERISTICS:
WETLAND FRINGE: YES ABUTTING or ADJACENT NO Describe:
WETLAND FRINGE: YES ABUTTING OF ADJACENT NO
Identify specific pollutants, if known:
Observable water quality (station water color is clear, discolored, oily film, scum, water odor; etc.):
WATER QUALITY CHARACTERISTICS: Obvious siltation: VES NO
WATER CHARLETY CHARACTERISTICS
OBSERVED PRESENCE OF SUBSURFACE FLOW: YES NO
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES NO
1.0
Explain (sloughing banks, exposed root wads, undercut banks, etc.):
BANK EROSION: EXTENSIVE MODERATE MUTILE / NONE
Average depth of water (feet):
If flow present, estimate stage at time of survey:
Water present: No water, streambed dry Streambed moist Standing water Flowing water
FLOW CHARACTERISTICS:
Ordinary High Water Mark (OHWM), if observed (feet):
Bottom width (feet): Water width (feet): Water depth (feet):
Average bank height (feet):; at centerline (feet):
Average bank-to-bank width (feet):; at centerline (feet):
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet):; at centerline (feet):
Average bank-to-bank width (feet):; at centerline (feet):

DATE: 7-18-2017 REVIEWER(S): 13P-W3W GAI STREAM ID: 5W0 11P023	ATHER CONDITIONS: Quercast/60°F/NO vain
STREAM TYPE: PERENNIAL INTERMITTENT Stream crossed by centerline: YES Stream crossed by access road: YES	EPHEMERAL
	nstream ル # Impact Area Culvert Outflow ゆるテケト B ラミ/ G G 75 LB ラ W
FULLY FUNCTIONAL: Considered fully functional if the following criteria are met: 1. Unaltered in any significant manner by human activities 2. Is stable and does not exhibit headcutting, incision, or excess	
Is connected to its overbank flood plain supporting normal	
4. Has a riparian buffer of at least 25 ft in width	
 If stream segment is impacted by a minor structural alterations significantly alter stream segments above and below, then the moderately functional 	
MODERATELY FUNCTIONAL: YES NO Considered moderately functional if the following are met:	
1. Streams have been altered; however, system recovery has a	moderate probability of occurring naturally
2. Streams support many, but not all, of the hydraulic and geo of similar order in the watershed	morphic functions characteristic of fully functioning streams
FUNCTIONALLY IMPAIRED: YES NO	
FUNCTIONALLY IMPAIRED: VES NO Considered functionally impaired if the stream has more than	one of the following:
Has been channelized and shows no evidence of self-recove	
2. Is levee protected, impounded, or artificially constricted	,
3. Entrenched or contains active headcuts	
4. Has little or no riparian buffer of deep-rooted vegetation on	1 or both sides of channel
5. Has banks that are extensively eroded or unstable, bank slow	
Has 4 or greater stream impacts within 0.5 mile upstream of or cumulatively exceed 100 ft in length	proposed stream impact, and stream impacts individually
GENERAL WATERSHED AND/OR RIPARIAN AREA CHARA	CTERISTICS WITHIN 100FT BUFFER
RIGHT BANK: LEFT I	BANK:
FORESTED WETLAND	RESTED WETLAND
	RMLAND SCRUB/SHRUB
	YFIELD PRAIRIE
	DUSTRIAL HIGH BLUFFS SIDENTIAL

Identify specific pollutants, if known: AQUATIC PLANTS:
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTE WETLAND FRINGE: YES ABUTTING or ADJACENT NO Describe: BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed? YES Describe: Fish or wildlife observed? YES Describe: Habitat for Describe: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTE
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTE WETLAND FRINGE: YES ABUTTING or ADJACENT NO Describe: BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed? YES Describe: PES Describe: PES Describe: PES Describe: PES Describe: PES PES
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTIC WETLAND FRINGE: YES ABUTTING or ADJACENT NO Describe: BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed? YES Describe:
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTE WETLAND FRINGE: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTE Describe: MACROPHYTE BIOLOGICAL CHARACTERISTICS:
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTE WETLAND FRINGE: YES ABUTTING or ADJACENT
Identify specific pollutants, if known:
Obvious siltation: YES NO Observable water quality (siltation, water color is dear, discolored, only film, scum, water color etc.)
WATER QUALITY CHARACTERISTICS: Obvious siltation:
OBSERVED PRESENCE OF SUBSURFACE FLOW:
OBSERVED PRESENCE OF GROUNDWATER SEEPS: TYES NO
BANK EROSION: EXTENSIVE MODERATE ITTLE / NONE Explain (sloughing banks, exposed root wads, undercut banks, etc.):
If flow present, estimate stage at time of survey: HIGH MEDIUM LOW NO FLOW Average depth of water (feet):
FLOW CHARACTERISTICS: Water present: No water, streambed dry Streambed moist Standing water Flowing water
Bottom width (feet): Water width (feet): Water depth (feet): Ordinary High Water Mark (OHWM), if observed (feet):
Average bank height (feet): at centerline (feet):
Average bank-to-bank width (feet): at centerline (feet):
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet):
Average bank-to-bank width (feet): at centerline (feet):

REVIEWER(S): JAP - WALL GAI STREAM ID: SIMOJA	WEAT	HER CONDITIONS: Par	4 Cloudy /70"=
STREAM TYPE: PERENNIAL Stream crossed by centerline: Stream crossed by access road:	YES NO	EPHEMERAL	
PHOTOGRAPHS TAKEN: # <u>()-() </u>	# Downs # Cu	stream $\mathcal{E} = \# G717$	Impact Area
FULLY FUNCTIONAL: Considered fully functional if the form of the f	YES Dillowing criteria are metainer by human activities adcutting, incision, or excession plain supporting normal hy 5 ft in width y a minor structural alteration	ive aggradation ydrological functions n but otherwise fully functional	and does not
MODERATELY FUNCTIONAL: Considered moderately functional 1. Streams have been altered; how 2. Streams support many, but not a of similar order in the watershed	ever, system recovery has a n		-
FUNCTIONALLY IMPAIRED: Considered functionally impaired if 1. Has been channelized and shows 2. Is levee protected, impounded, o 3. Entrenched or contains active he 4. Has little or no riparian buffer of 5. Has banks that are extensively es 6. Has 4 or greater stream impacts or cumulatively exceed 100 ft in ler	s no evidence of self-recovery or artificially constricted eadcuts deep-rooted vegetation on 1 roded or unstable, bank sloug within 0.5 mile upstream of p	or both sides of channel scars	ream impacts individually
GENERAL WATERSHED AND/OF RIGHT BANK: FORESTED WETLAND FARMLAND SCRUB/SHRUB HAYFIELD PRAIRIE INDUSTRIAL HIGH BLUFFS	FORE HAYE	ANK: ESTED	FFER
RESIDENTIAL		DENTIAL	

OTHER OBSERVATIONS AND COMMENTS: Tribute of SMONPOZZ
JURISDICTIONAL STATUS: Is this stream jurisdictional? NO Describe:
Fish/spawn areas?
Habitat for:
Fish or wildlife observed?
Macroinvertebrates observed? PES Describe: D
BIOLOGICAL CHARACTERISTICS:
WETLAND FRINGE: YES ABUTTING OF ADJACENT NO Describe:
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTE
Identify specific pollutants, if known:
WATER QUALITY CHARACTERISTICS: Obvious siltation: YES Observable water quality (siltation, water color in clear, discolored, oily film, scum, water odor; etc.):
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES NO OBSERVED PRESENCE OF SUBSURFACE FLOW: YES NO
BANK EROSION: EXTENSIVE MODERATE NONE Explain (sloughing banks, exposed root wads, undercut banks, explain (sloughing banks))
FLOW CHARACTERISTICS: Water present:
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet):; at centerline (feet): Average bank height (feet):; at centerline (feet): Bottom width (feet): Water width (feet): Ordinary High Water Mark (OHWM), if observed (feet):
REVIEWER(S): 119-w3w GAI STREAM ID: 5M0339D2Y

DATE: REVIEWER(S): GAI STREAM ID		025	WEATHER CO	ONDITIONS:	partly Cla	oudy /70 "/	
STREAM TYPE: Stream crossed Stream crossed	PERENNIAL by centerline: by access road:	☐ INTERMITTE ☐ YES ☐ YES	ENT EPHE	MERAL			
PHOTOGRAPHS # 671		#6718	- Downstream - Culvert O	\$ # outflow 6	——-Impact	Area /67-20 LB ->	→ .
 Unaltered in ar Is stable and do Is connected to 	functional if the follow ny significant manner pes not exhibit heado nits overbank flood p	by human activi utting, incision, lain supporting r	met: ities or excessive aggra	adation			
5. If stream segme	stream segments abo	minor structural			unctional and does no insidered separate an		
1. Streams have be	rately functional if th een altered; however t many, but not all, o	r, system recove	ry has a moderate		of occurring naturally acteristic of fully funct	tioning streams	
 Has been channe Is levee protected Entrenched or color Has little or no row Has banks that a Has 4 or greater 	onally impaired if the elized and shows no ed; impounded, or ar ontains active headcriparian buffer of dee are extensively erode	evidence of self- tificially constricuts p-rooted vegeta d or unstable, ba	recovery ted tion on 1 or both ank sloughing, ero	sides of chanr osional scars	nel ct, and stream impact	s individually	
GENERAL WATER RIGHT BANK: FORESTED FARMLAND HAYFIELD	RSHED AND/OR RIP WETLAND SCRUB/SHRUB PRAIRIE	PARIAN AREA C	CHARACTERISTIC LEFT BANK: FORESTED FARMLAND HAYFIELD	WETLAND SCRUB/SH PRAIRIE			
INDUSTRIAL [⊒HIGHBLUFFS Roadside Row		☐ INDUSTRIAL ☐ RESIDENTIAL	HIGH BLUF	FFS &		

REVIEWER(S): 130-W3W GAI STREAM ID: 4MOJJPO 25
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet):; at centerline (feet): Average bank height (feet):; at centerline (feet): Bottom width (feet): Water width (feet): Ordinary High Water Mark (OHWM), if observed (feet):
FLOW CHARACTERISTICS: Water present: No water, Streambed DRY STREAMBED MOIST STANDING WATER FLOWING WATER If flow present, estimate stage at time of survey: HIGH MEDIUM LOW NO FLOW Average depth of water (feet):
BANK EROSION: EXTENSIVE MODERATE MUTTLE / NONE Explain (sloughing banks, exposed root wads, undercut banks, etc.):
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES NO
OBSERVED PRESENCE OF SUBSURFACE FLOW: YES NO
WATER QUALITY CHARACTERISTICS: Obvious siltation: YES NO Observable water quality (siltation, water color is clear, discolored, oily film, scum, water odor; etc.):
Identify specific pollutants, if known:
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES
WETLAND FRINGE: YES ABUTTING OF ADJACENT NO Describe: YES ABUTTING OF ADJACENT NO COACLE ILLE ROW
BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed?
JURISDICTIONAL STATUS: Is this stream jurisdictional? VES NO Describe: Tribular of mapped NHL Shear M.
OTHER OBSERVATIONS AND COMMENTS: Tributeum of smodypozy

	20-2017 : 110-w31 : 5mo2100		WEATHER CO	ONDITIONS:	H Cloudy/2017
	PERENNIAL ed by centerline: ed by access road:	☐ INTERMITTEI ☐ YES ☐ YES	NT ⊠ EPHE □ NO ☑ NO	MERAL	
PHOTOGRAPI #_6730 #	HS TAKEN: Upstream U Suu Culvert Inflow	# 673/	- Downstream Culvert C	ENE #6731	Impact Area SW Rβ→5 /4733 Lβ→
 Unaltered in Is stable and Is connected Has a riparian 	IONAL: y functional if the follo any significant manne does not exhibit head to its overbank flood p n buffer of at least 25 t ment is impacted by a	☐ YES wing criteria are if r by human activit cutting, incision, co plain supporting no if in width	net: ties or excessive aggr ormal hydrologi	adation cal functions	
significantly alte moderately fun	er stream segments ab				
 Streams have Streams supp 	derately functional if the been altered; however out many, but not all, in the watershed	er, system recover	y has a moderat		rring naturally cic of fully functioning streams
1. Has been char 2. Is levee prote 3. Entrenched or 4. Has little or no 5. Has banks tha 6. Has 4 or great	ctionally impaired if the nnelized and shows no cted, impounded, or a r contains active head o riparian buffer of de ot are extensively erode	e stream has more e evidence of self- rtificially constrict cuts ep-rooted vegetat ed or unstable, ba hin 0.5 mile upstre	recovery ed ion on 1 or both nk sloughing, er	sides of channel osional scars	stream impacts individually
GENERAL WAT RIGHT BANK: FORESTED FARMLAND	ERSHED AND/OR RI	PARIAN AREA C	LEFT BANK:	WETLAND	UFFER
HAYFIELD INDUSTRIAL RESIDENTIAL	PRAIRIE HIGH BLUFFS		☐ FARMLAND ☐ HAYFIELD ☐ INDUSTRIAL ☐ RESIDENTIAL	SCRUB/SHRUB PRAIRIE HIGH BLUFFS	

REVIEWER(S): WID-WIW GAI STREAM ID: SMOJIPOZO
Average bank-to-bank width (feet):; at centerline (feet): Average bank height (feet):; at centerline (feet): Bottom width (feet): Water width (feet): Water depth (feet): Ordinary High Water Mark (OHWM), if observed (feet):
FLOW CHARACTERISTICS: Water present: No water, Streambed DRY STREAMBED MOIST STANDING WATER FLOWING WATER If flow present, estimate stage at time of survey: HIGH MEDIUM LOW NO FLOW Average depth of water (feet):
BANK EROSION: EXTENSIVE MODERATE UTTLE / NONE Explain (sloughing banks, exposed root wads, undercut banks, etc.): SCOUV - Under cuts - Voot wad
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES NO
OBSERVED PRESENCE OF SUBSURFACE FLOW: YES NO
WATER QUALITY CHARACTERISTICS: Obvious siltation: YES NO Observable water quality (siltation, water color is clear, discolored, oily film, scum, water odor; etc.):
Identify specific pollutants, if known:
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES
WETLAND FRINGE: YES ABUTTING OF ADJACENT NO Describe: Upland Scrub Should
BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed?
JURISDICTIONAL STATUS: Is this stream jurisdictional? YES NO Describe: Thibulay of NHD stream
Possible source hybriday Amore

REVIEWER(S): W GAI STREAM ID: 5 M O 1) PO27	WEATHER CONDITIONS: Park	& Cloudy /70:F
STREAM TYPE: PERENNIAL Stream crossed by centerline: Stream crossed by access road:	MITTENT	
PHOTOGRAPHS TAKEN: #	26 - Downstream = #672 - Culvert Outflow 6728	<u>そ</u> - Impact Area
FULLY FUNCTIONAL: Considered fully functional if the following criteria 1. Unaltered in any significant manner by human a 2. Is stable and does not exhibit headcutting, incisi 3. Is connected to its overbank flood plain support 4. Has a riparian buffer of at least 25 ft in width 5. If stream segment is impacted by a minor struct significantly alter stream segments above and below	are mechactivities ion, or excessive aggradation ting normal hydrological functions ural alteration but otherwise fully function	al and does not
moderately functional MODERATELY FUNCTIONAL: YES Considered moderately functional if the following a		
 Streams have been altered; however, system red Streams support many, but not all, of the hydrau of similar order in the watershed 		
FUNCTIONALLY IMPAIRED: Considered functionally impaired if the stream has 1. Has been channelized and shows no evidence of 2. Is levee protected, impounded, or artificially con 3. Entrenched or contains active headcuts 4. Has little or no riparian buffer of deep-rooted ver 5. Has banks that are extensively eroded or unstable 6. Has 4 or greater stream impacts within 0.5 mile upper cumulatively exceed 100 ft in length	self-recovery stricted getation on 1 or both sides of channel le, bank sloughing, erosional scars	stream impacts individually
GENERAL WATERSHED AND/OR RIPARIAN AR RIGHT BANK:	EA CHARACTERISTICS WITHIN 100FT B LEFT BANK:	UFFER
FORESTED WETLAND FARMLAND SCRUB/SHRUB HAYFIELD PRAIFIE INDUSTRIAL HIGH BLUFFS RESIDENTIAL	FORESTED WETLAND FARMLAND SCRUB/SHRUB HAYFIELD PRAIRIE INDUSTRIAL HIGH BLUFFS RESIDENTIAL	

DATE:
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet):; at centerline (feet): Average bank height (feet):; at centerline (feet): Bottom width (feet): Water width (feet): Ordinary High Water Mark (OHWM), if observed (feet):
FLOW CHARACTERISTICS: Water present: No water streambed dry Streambed moist Standing water flowing water if flow present, estimate stage at time of survey: HIGH MEDIUM LOW Average depth of water (feet): 1
BANK EROSION: EXTENSIVE MODERATE MUTTE/NONE Explain (sloughing banks, exposed root wads, undercut banks, etc.): 50000
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES NO OBSERVED PRESENCE OF SUBSURFACE FLOW: YES NO
WATER QUALITY CHARACTERISTICS: Obvious siltation: YES Observable water quality (siltation, water color is clear, discolored, oily film, scum, water odor; etc.):
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES
WETLAND FRINGE: YES ABUTTING or ADJACENT Describe:
BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed?
Fish/spawn areas? PYES NO
JURISDICTIONAL STATUS: Is this stream jurisdictional? YES NO Describe: Tributan of PHO Steam
OTHER OBSERVATIONS AND COMMENTS: Tibuteng of SMOSSPOZZEST

DATE: 2-20-2017 REVIEWER(S): 119-W1W GAI STREAM ID: 100-2017	WEATHER CONDITIONS: Party Cloud /200F
STREAM TYPE: PERENNIAL INTERM Stream crossed by centerline: YES Stream crossed by access road: YES	EPHEMERAL NO
PHOTOGRAPHS TAKEN: # Upstream \(\mu \) #	O - Downstream S # Impact Area Culvert Outflow 6751RB→w /6752LB→s
FULLY FUNCTIONAL: YES Considered fully functional if the following criteria 1. Unaltered in any significant manner by human a	are met:
2. Is stable and does not exhibit headcutting, incision3. Is connected to its overbank flood plain supportion	on, or excessive aggradation
4. Has a riparian buffer of at least 25 ft in width 5. If stream segment is impacted by a minor structusing significantly alter stream segments above and below moderately functional	ural alteration but otherwise fully functional and does not w, then the alteration should be considered separate and
MODERATELY FUNCTIONAL: Considered moderately functional if the following a 1. Streams have been altered; however, system rec 2. Streams support many, but not all, of the hydrau of similar order in the watershed	☐ NO Ire met: overy has a moderate probability of occurring naturally lic and geomorphic functions characteristic of fully functioning streams
FUNCTIONALLY IMPAIRED: Considered functionally impaired if the stream has a Has been channelized and shows no evidence of the	
 Is levee protected, impounded, or artificially cons Entrenched or contains active headcuts Has little or no riparian buffer of deep-rooted veg 	
5. Has banks that are extensively eroded or unstable	
GENERAL WATERSHED AND/OR RIPARIAN ARE	A CHARACTERISTICS WITHIN 100FT BUFFER LEFT BANK:
FORESTED WETLAND	
FARMLAND SCRUB/SHRUB	
HAYFIELD PRAIRIE	FARMLAND SCRUB/SHRUB
INDUSTRIAL HIGH BLUFFS	☐ HAYFIELD ☐ PRAIRIE ☐ INDUSTRIAL ☐ HIGH BLUFFS
RESIDENTIAL HIGH BLOFFS	☐ INDUSTRIAL ☐ HIGH BLUFFS ☐ RESIDENTIAL

REVIEWER(S): JJP-WJW GAI STREAM ID: SMOJJP028
Average bank-to-bank width (feet):; at centerline (feet): Average bank height (feet):; at centerline (feet): Bottom width (feet): Water width (feet): Ordinary High Water Mark (OHWM), if observed (feet):
FLOW CHARACTERISTICS: Water present: No water, Streambed DRY Streambed Moist Streambed Moist Standing water Flowing water If flow present, estimate stage at time of survey: Average depth of water (feet): NOW
BANK EROSION: EXTENSIVE MODERATE LITTLE / NONE Explain (sloughing banks, exposed root wads, undercut banks, etc.):
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES NO
OBSERVED PRESENCE OF SUBSURFACE FLOW: YES YOU
WATER QUALITY CHARACTERISTICS: Obvious siltation: YES NO Observable water quality (siltation, water color is clear, discolored, oily film, scum, water odor; etc.):
Identify specific pollutants, if known:
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES
Describe: YES _ ABUTTING OF _ ADJACENT NO ADJACENT NO
BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed?
URISDICTIONAL STATUS: s this stream jurisdictional? YES NO Describe: Tr. bule of NHD Sheam
OTHER OBSERVATIONS AND COMMENTS: Tribulay of SMOUDPOZZ ext/
O

DATE: 2-20-2017 REVIEWER(S): JIP-WJW GAI STREAM ID: SMO SIPO 29 WEATHER CONDITIONS: Park Cloudy /70°F
STREAM TYPE: PERENNIAL INTERMITTENT EPHEMERAL Stream crossed by centerline: YES YNO Stream crossed by access road: YES YNO
PHOTOGRAPHS TAKEN: # Upstream SW # Downstream N & # Impact Area # Culvert Inflow # Culvert Outflow 6755 R R -> 5/6756 L R ->
FULLY FUNCTIONAL: Considered fully functional if the following criteria are met: 1. Unaltered in any significant manner by human activities 2. Is stable and does not exhibit headcutting, incision, or excessive aggradation 3. Is connected to its overbank flood plain supporting normal hydrological functions
4. Has a riparian buffer of at least 25 ft in width 5. If stream segment is impacted by a minor structural alteration but otherwise fully functional and does not significantly alter stream segments above and below, then the alteration should be considered separate and moderately functional
MODERATELY FUNCTIONAL: YES Considered moderately functional if the following are met Streams have been altered; however, system recovery has a moderate probability of occurring naturally Streams support many, but not all, of the hydraulic and geomorphic functions characteristic of fully functioning streams of similar order in the watershed
FUNCTIONALLY IMPAIRED: NO Considered functionally impaired if the stream has more than one of the following: L. Has been channelized and shows no evidence of self-recovery L. Is levee protected, impounded, or artificially constricted B. Entrenched or contains active headcuts L. Has little or no riparian buffer of deep-rooted vegetation on 1 or both sides of channel E. Has banks that are extensively eroded or unstable, bank sloughing, erosional scars
i. Has 4 or greater stream impacts within 0.5 mile upstream of proposed stream impact, and stream impacts individually or cumulatively exceed 100 ft in length GENERAL WATERSHED AND/OR RIPARIAN AREA CHARACTERISTICS WITHIN 100FT BUFFER
ILEFT BANK: FORESTED WETLAND FORESTED WETLAND FARMLAND SCRUB/SHRUB FARMLAND SCRUB/SHRUB HAYFIELD PRAIRIE HAYFIELD PRAIRIE INDUSTRIAL HIGH BLUFFS INDUSTRIAL HIGH BLUFFS RESIDENTIAL RESIDENTIAL

DATE:
GAI STREAM ID: SMOJJ POZ9
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet):
FLOW CHARACTERISTICS: Water present: NO WATER, STREAMBED DRY STREAMBED MOIST STANDING WATER FLOWING WATER If flow present, estimate stage at time of survey: HIGH MEDIUM LOW NO FLOW Average depth of water (feet):
BANK EROSION: EXTENSIVE MODERATE LITTLE / NONE Explain (sloughing banks, exposed root wads, undercut banks, etc.):
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES YOUNDWATER SEEPS:
OBSERVED PRESENCE OF SUBSURFACE FLOW: YES NO
WATER QUALITY CHARACTERISTICS: Obvious siltation: YES NO Observable water quality (siltation, water color is clear, discolored, oily film, scum, water odor; etc.):
Identify specific pollutants, if known:
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES
WETLAND FRINGE: YES ABUTTING OF ADJACENT KNO Describe: Vpland woodland Buttonland
BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed?
JURISDICTIONAL STATUS: Is this stream jurisdictional? YES NO Describe: Thulw of NHD Sheam
OTHER OBSERVATIONS AND COMMENTS: Tribulan of SMOJJPOZZEX+

DATE: 2-72-2017 REVIEWER(S): JNP-WW WEATHER CONDITIONS: Ouncast/65°F/ Luly sain GAI STREAM ID: 500 11 POZ 9
STREAM TYPE: PERENNIAL INTERMITTENT PEPHEMERAL Stream crossed by centerline: YES NO Crosses Wississippi river pull back Stream crossed by access road: YES NO
PHOTOGRAPHS TAKEN: # Upstream S #
Considered fully functional if the following criteria are met 1. Unaltered in any significant manner by human activities 2. Is stable and does not exhibit headcutting, incision, or excessive aggradation 3. Is connected to its overbank flood plain supporting normal hydrological functions 4. Has a riparian buffer of at least 25 ft in width 5. If stream segment is impacted by a minor structural alteration but otherwise fully functional and does not significantly alter stream segments above and below, then the alteration should be considered separate and moderately functional
MODERATELY FUNCTIONAL: YES Considered moderately functional if the following are met: 1. Streams have been altered; however, system recovery has a moderate probability of occurring naturally 2. Streams support many, but not all, of the hydraulic and geomorphic functions characteristic of fully functioning streams of similar order in the watershed
FUNCTIONALLY IMPAIRED: NO Considered functionally impaired if the stream has more than one of the following: 1. Has been channelized and shows no evidence of self-recovery 2. Is levee protected, impounded, or artificially constricted 3. Entrenched or contains active headcuts 4. Has little or no riparian buffer of deep-rooted vegetation on 1 or both sides of channel 5. Has banks that are extensively eroded or unstable, bank sloughing, erosional scars 6. Has 4 or greater stream impacts within 0.5 mile upstream of proposed stream impact, and stream impacts individually or cumulatively exceed 100 ft in length
GENERAL WATERSHED AND/OR RIPARIAN AREA CHARACTERISTICS WITHIN 100FT BUFFER RIGHT BANK: FORESTED WETLAND FORESTED WETLAND FARMLAND SCRUB/SHRUB FARMLAND SCRUB/SHRUB HAYTELD PRAIRIE HAYTELD PRAIRIE INDUSTRIAL HIGH BLUFFS INDUSTRIAL HIGH BLUFFS RESIDENTIAL RESIDENTIAL

REVIEWER(S): WP-UUU GAI STREAM ID: SMON POZ9
Average bank-to-bank width (feet):; at centerline (feet): Average bank height (feet):; at centerline (feet): Bottom width (feet): Water width (feet): Water depth (feet): Ordinary High Water Mark (OHWM), if observed (feet):
FLOW CHARACTERISTICS: Water present: NO WATER, STREAMBED DRY STREAMBED MOIST STANDING WATER FLOWING WATER If flow present, estimate stage at time of survey: HIGH MEDIUM LOW NO FLOW Average depth of water (feet): NO WATER STREAMBED MOIST STANDING WATER STANDI
BANK EROSION: EXTENSIVE MODERATE LITTLE / NONE Explain (sloughing banks, exposed root wads, undercut banks, etc.):
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES NO
OBSERVED PRESENCE OF SUBSURFACE FLOW: YES NO
WATER QUALITY CHARACTERISTICS: Obvious siltation: YES NO Observable water quality (siltation, water color is clear, discolored, oily film, scum, water odor; etc.): Identify specific pollutants, if known:
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES
WETLAND FRINGE: YES ABUTTING OF ADJACENT NO Describe: Value according to the second s
BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed?
JURISDICTIONAL STATUS: Is this stream jurisdictional? NO Describe: Pessible convects an
OTHER OBSERVATIONS AND COMMENTS: - channel possible agricultural

DATE: 7-73-7017 REVIEWER(S): 11P-111 WEAT GAI STREAM ID: 11P-030	ther conditions: Overcast to purely cloudy/
STREAM TYPE: PERENNIAL INTERMITTENT Stream crossed by centerline: YES NO Stream crossed by access road: YES NO	EPHEMERAL Crosses CL 2X
# 6855 - Upstream PE # 6856 - Down # - Culvert Inflow	nivert Ontflow 6827 KB→275
FULLY FUNCTIONAL: Considered fully functional if the following criteria are met: 1. Unaltered in any significant manner by human activities 2. Is stable and does not exhibit headcutting, incision, or excess 3. Is connected to its overbank flood plain supporting normal hy 4. Has a riparian buffer of at least 25 ft in width	
5. If stream segment is impacted by a minor structural alteration significantly alter stream segments above and below, then the a moderately functional	
Considered moderately functional if the following are met: 1. Streams have been altered; however, system recovery has a r 2. Streams support many, but not all, of the hydraulic and geom of similar order in the watershed	
FUNCTIONALLY IMPAIRED: YES NO Considered functionally impaired if the stream has more than or 1. Has been channelized and shows no evidence of self-recovery 2. Is levee protected, impounded, or artificially constricted	
 Entrenched or contains active headcuts Has little or no riparian buffer of deep-rooted vegetation on 1 Has banks that are extensively eroded or unstable, bank sloug Has 4 or greater stream impacts within 0.5 mile upstream of por cumulatively exceed 100 ft in length 	thing, erosional scars
FARMLAND SCRUB/SHRUB FARM HAYFIELD PRAIRIE HAYF INDUSTRIAL HIGH BLUFFS INDU	ANK: ESTED WETLAND SCRUB/SHRUB

REVIEWER(S): JAP-WJW GAI STREAM ID: SMOJJP030
Average bank-to-bank width (feet):; at centerline (feet): Average bank height (feet):; at centerline (feet): Bottom width (feet): Water width (feet): Water depth (feet): Ordinary High Water Mark (OHWM), if observed (feet):
FLOW CHARACTERISTICS: Water present: No water, Streambed Dry Streambed Moist Standing water If flow present, estimate stage at time of survey: HIGH MEDIUM COW Average depth of water (feet): 3
BANK EROSION: DEXTENSIVE DODERATE DUTILE/NONE Explain (sloughing banks, exposed root wads, under out hanks, etc.):
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES NO
OBSERVED PRESENCE OF SUBSURFACE FLOW: YES
WATER QUALITY CHARACTERISTICS: Obvious siltation: Observable water quality (siltation, water color is clear, discolored, oily film, scum, water odor; etc.):
Identify specific pollutants, if known:
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) TILAMENTOUS ALGAE MACROPHYTES
WETLAND FRINGE: YES ABUTTING OF ADJACENT DNO Describe:
BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed?
JURISDICTIONAL STATUS: Is this stream jurisdictional? YES NO Describe:
other observations and comments: Stream aliment positioned

DATE: 2-25-7017 REVIEWER(S): JJP-WW GAI STREAM ID: 5M0JJP032	WEATHER CONDITIONS: Partly Cloudy /40°F
Stream crossed by centerline: YES Stream crossed by access road: YES	ERMITTENT
# 6968 - Upstream 5 # 69 # Culvert Inflow #_	
	Intum section G974 upstm > 5 & on activities cision, or excessive aggradation orting normal hydrological functions Tutum section G974 upstm > 5 & G975 dunstrn > 00 G976 RB > N / G977 LB > 5
moderately functional MODERATELY FUNCTIONAL: Considered moderately functional if the following the following streams have been altered; however, system 2. Streams support many, but not all, of the hydrogen support many s	□NO
FUNCTIONALLY IMPAIRED: Considered functionally impaired if the stream has been channelized and shows no evidence in the stream has been channelized and shows no evidence in the stream has been channelized and shows no evidence in the stream has been channelized and shows no evidence in the stream has been channelized and shows no evidence in the stream in the str	of self-recovery constricted vegetation on 1 or both sides of channel able, bank sloughing, erosional scars
or cumulatively exceed 100 ft in length	AREA CHARACTERISTICS WITHIN 100FT BUFFER LEFT BANK: FORESTED WETLAND FARMLAND SCRUB/SHRUB HAYFIELD PRAIRIE INDUSTRIAL HIGH BLUFFS
RESIDENTIAL	RESIDENTIAL -also riprap along some secti

DATE: 2-25-2017 REVIEWER(S): WP-WW GAI STREAM ID: SMONPO32
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet):; at centerline (feet): Average bank height (feet):; at centerline (feet): Bottom width (feet): Water width (feet): Ordinary High Water Mark (OHWM), if observed (feet):
FLOW CHARACTERISTICS: Water present: No water, streambed dry If flow present, estimate stage at time of survey: HIGH MEDIUM LOW Average depth of water (feet): Average depth of water (feet): Average depth of water (feet): No water wat
BANK EROSION: EXTENSIVE MODERATE LITTLE / NONE Explain (sloughing banks, exposed root wads, undercut banks, etc.):
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES NO OBSERVED PRESENCE OF SUBSURFACE FLOW: YES NO
WATER QUALITY CHARACTERISTICS: Obvious siltation: YES NO Observable water quality (siltation, water color is clear, discolored, oily film, scum, water odor; etc.): Water Clear
Identify specific pollutants, if known: <u>some</u> treish in stream Channel
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES
WETLAND FRINGE: YES ABUTTING OF ADJACENT NO Describe: VES ABUTTING OF ADJACENT NO
BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed?
JURISDICTIONAL STATUS: Is this stream jurisdictional? VES NO Describe: Tributary to NHD Sheam
other observations and comments: Bedvock substate and some area of Rt. bank/tributen of cold water creek/Bedrock substrate plange-pool 6979/

DATE: WEATHER GAI STREAM ID:	R CONDITIONS: partly Cloudy 140° =
STREAM TYPE: PERENNIAL INTERMITTENT Stream crossed by centerline: YES Stream crossed by access road: YES	PHEMERAL
PHOTOGRAPHS TAKEN: # Upstream NW # Downstree # Culvert Inflow # Culve	ram SE #Impact Area rt Outflow $697RR \rightarrow W/698LB \rightarrow E$
FULLY FUNCTIONAL: Considered fully functional if the following criteria are met: 1. Unaltered in any significant manner by human activities 2. Is stable and does not exhibit headquitting insistence or expension.	
2. Is stable and does not exhibit headcutting, incision, or excessive a3. Is connected to its overbank flood plain supporting normal hydro	
 Has a riparian buffer of at least 25 ft in width If stream segment is impacted by a minor structural alteration bu significantly alter stream segments above and below, then the alter moderately functional 	
MODERATELY FUNCTIONAL: YES NO Considered moderately functional if the following are met:	
 Streams have been altered; however, system recovery has a mod Streams support many, but not all, of the hydraulic and geomorphof similar order in the watershed 	
FUNCTIONALLY IMPAIRED: NO Considered functionally impaired if the stream has more than one o 1. Has been channelized and shows no evidence of self-recovery	f the following:
2. Is levee protected, impounded, or artificially constricted	
 Entrenched or contains active headcuts Has little or no riparian buffer of deep-rooted vegetation on 1 or be 	poth sides of channel
5. Has banks that are extensively eroded or unstable, bank sloughing	
6. Has 4 or greater stream impacts within 0.5 mile upstream of propi	
or cumulatively exceed 100 ft in length	
GENERAL WATERSHED AND/OR RIPARIAN AREA CHARACTER	ISTICS WITHIN 100FT BUFFER
RIGHT BANK: LEFT BANK	:
FORESTED WETLAND	WETLAND
FARMLAND SCRUB/SHRUB	D SCRUB/SHRUB
HAYFIELD PRAIRIE HAYFIELD	
☐ INDUSTRIAL ☐ HIGH BLUFFS ☐ INDUSTRI	
RESIDENTIAL RESIDENT	íAL

WETLAND FRINGE:
WETLAND FRINGE:
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTE
Identify specific pollutants, if known:
WATER QUALITY CHARACTERISTICS: Obvious siltation: YES NO Observable water quality (siltation, water color in clear, discolored, oily film, scum, water odor; etc.):
OBSERVED PRESENCE OF SUBSURFACE FLOW: YES NO
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES NO
BANK EROSION: DEXTENSIVE MODERATE LITTLE / NONE Explain (sloughing banks, exposed root wads, undercut banks, etc.): 5 (00)
Average depth of water (feet):
If flow present, estimate stage at time of survey: HIGH MEDIUM LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW LOW
Water present: NO WATER, STREAMBED DRY STREAMBED MOIST STANDING WATER FLOWING WATER
FLOW CHARACTERISTICS:
Ordinary High Water Mark (OHWM), if observed (feet):
Bottom width (feet): Water width (feet): Water depth (feet):
Average bank height (feet): at centerline (feet):
Average bank-to-bank width (feet): 8 ; at centerline (feet):
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet):; at centerline (feet):
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet):; at centerline (feet):
Average bank-to-bank width (feet): 8 ; at centerline (feet):

DATE: 2-25-2016 REVIEWER(S): 110-1111111111111111111111111111111111	WEATHER CONDITIONS: Partly Cloud /40°F	11
STREAM TYPE: PERENNIAL INTERMITTENT Stream crossed by centerline: YES Stream crossed by access road: YES	IT EPHEMERAL NO NO	
# 6983 - Upstream NNW# 6982 - Culvert Inflow #	- Downstream SE # Impact Area Culvert Outflow 698 4 R B > SW /6985 LB ->	1
FULLY FUNCTIONAL: Considered fully functional if the following criteria are made of the fully functional if the following criteria are made of the full year. 1. Unaltered in any significant manner by human activities and does not exhibit headcutting, incision, or	net net net ies r excessive aggradation ormal hydrological functions literation but otherwise fully functional and does not	
MODERATELY FUNCTIONAL: Considered moderately functional if the following are me 1. Streams have been altered; however, system recovery 2. Streams support many, but not all, of the hydraulic and of similar order in the watershed		
Considered functionally impaired if the stream has more in 1. Has been channelized and shows no evidence of self-re 2. Is levee protected, impounded, or artificially constricted 3. Entrenched or contains active headcuts 4. Has little or no riparian buffer of deep-rooted vegetation 5. Has banks that are extensively eroded or unstable, banks	ecovery ed on on 1 or both sides of channel	
GENERAL WATERSHED AND/OR RIPARIAN AREA CHRIGHT BANK: FORESTED WETLAND FARMLAND SCRUB/SHRUB HAYFIELD PRAIRIE INDUSTRIAL HIGH BLUFFS RESIDENTIAL	HARACTERISTICS WITHIN 100FT BUFFER LEFT BANK: LEFT BANK: LEFT BANK: LEFT BANK: WETLAND SCRUB/SHRUB HAYFIELD PRAIRIE INDUSTRIAL HIGH BLUFFS RESIDENTIAL	

REVIEWER(S): JUP-WJW GAI STREAM ID: SMWJP034
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet):; at centerline (feet): Average bank height (feet):; at centerline (feet): Bottom width (feet): Water width (feet): Ordinary High Water Mark (OHWM), if observed (feet):
FLOW CHARACTERISTICS: Water present: NO WATER, STREAMBED DRY STREAMBED MOIST STANDING WATER FLOWING WATER If flow present, estimate stage at time of survey: HIGH MEDIUM LOW NO COMMAND Average depth of water (feet):
BANK EROSION: EXTENSIVE MODERATE LITTLE / NONE Explain (sloughing banks, exposed root wads, undercut banks, etc.): 5000/ Unducuts
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES NO OBSERVED PRESENCE OF SUBSURFACE FLOW: YES NO
WATER QUALITY CHARACTERISTICS: Obvious siltation:
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES
WETLAND FRINGE: YES ABUTTING OF ADJACENT NO Describe:
BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed?
JURISDICTIONAL STATUS: Is this stream jurisdictional? YES NO Describe: This of NHD Sheam
OTHER OBSERVATIONS AND COMMENTS: Tributary of SMOJJP012 ext

DATE: 25-2017 REVIEWER(S): 11 P-WJW GAI STREAM ID: 5MOJJ PO35	WEATHER CONDITIONS: Partly Cloudy /400/=
STREAM TYPE: PERENNIAL PINTERMIT	TTENT EPHEMERAL
Stream crossed by centerline:	X440
Stream crossed by access road:	No
PHOTOGRAPHS TAKEN:	
#6997 - Upstream NW #6998	- Downstream SE # Impact Area
# Culvert Inflow #	- Downstream Sを # Impact Area - Culvert Outflow 6999RB→ル/アののしB→S
FULLY FUNCTIONAL: YES	Ø NO
Considered fully functional if the following criteria a	
 Unaltered in any significant manner by human act 	tivities
Is stable and does not exhibit headcutting, incision	
3. Is connected to its overbank flood plain supporting	g normal hydrological functions
4. Has a riparian buffer of at least 25 ft in width	
5. If stream segment is impacted by a minor structur	al alteration but otherwise fully functional and does not
	, then the alteration should be considered separate and
moderately functional	
V/	
MODERATELY FUNCTIONAL:	□NO
Considered moderately functional if the following are	
1. Streams have been altered; however, system reco	very has a moderate probability of occurring naturally
Streams support many, but not all, of the hydraulic of similar order in the watershed	c and geomorphic functions characteristic of fully functioning streams
. /	
FUNCTIONALLY IMPAIRED:	□NO
Considered functionally impaired if the stream has m	ore than one of the following:
1. Has been channelized and shows no evidence of se	elf-recovery
2. Is levee protected, impounded, or artificially constr	ricted
3. Entrenched or contains active headcuts	14
4. Has little or no riparian buffer of deep-rooted vege	tation on 1 or both sides of channel
5. Has banks that are extensively eroded or unstable,	bank sloughing, erosional scars
	stream of proposed stream impact, and stream impacts individually
or cumulatively exceed 100 ft in length	
GENERAL WATERSHED AND/OR RIPARIAN AREA	CHARACTERISTICS WITHIN 100FT BUFFER
RIGHT BANK:	LEET BANK:
FORESTED WETLAND	EORESTED WETLAND
FARMLAND SCRUB/SHRUB	FARMLAND SCRUB/SHRUB
☐ HAYFIELD ☐ PRAIRIE	HAYFIELD PRAIRIE
INDUSTRIAL HIGH BLUFFS	☐ INDUSTRIAL ☐ HIGH BLUFFS
RESIDENTIAL	RESIDENTIAL

REVIEWER(S): JJP-WJW GAI STREAM ID: 5 MOJJPO35
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet):; at centerline (feet): Average bank height (feet):; at centerline (feet): Bottom width (feet): Water width (feet): Ordinary High Water Mark (OHWM), if observed (feet):
FLOW CHARACTERISTICS: Water present: NO WATER, STREAMBED DRY STREAMBED MOIST STANDING WATER FLOWING WATER If flow present, estimate stage at time of survey: HIGH MEDIUM LOW Average depth of water (feet): LOW
BANK EROSION: EXTENSIVE MODERATE LITTLE / NONE Explain (sloughing banks, exposed root wads, undercut banks, etc.): SCOUV ~ Undercut S
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES NO OBSERVED PRESENCE OF SUBSURFACE FLOW: YES NO
WATER QUALITY CHARACTERISTICS: Obvious siltation: YES NO Observable water quality (siltation, water color is clear, discolored, oily film, scum, water odor; etc.):
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES
WETLAND FRINGE: YES ABUTTING OF ADJACENT NO Describe: YES ABUTTING OF ADJACENT NO
BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed?
IURISDICTIONAL STATUS: Is this stream jurisdictional? YES NO Describe: Trib of NHD stream
OTHER OBSERVATIONS AND COMMENTS: TV. 6 of SMOJJPO12 ext/

REVIEWER(S): 11 - 11 - 11 - 11 - 11 - 11 - 11 - 11	WEATHER CONDITIONS: Partly Cloudy 40°F
STREAM TYPE: PERENNIAL INTERMITTENT Stream crossed by centerline: YES Stream crossed by access road: YES	EPHEMERAL NO
# Culvert Inflow #	Downstream \mathcal{E} #Impact Area Culvert Outflow $6995RB \rightarrow S/6996LB \rightarrow A$
FULLY FUNCTIONAL: Considered fully functional if the following criteria are m 1. Unaltered in any significant manner by human activities	et:
 2. Is stable and does not exhibit headcutting, incision, or 3. Is connected to its overbank flood plain supporting no 4. Has a riparian buffer of at least 25 ft in width 5. If stream segment is impacted by a minor structural al significantly alter stream segments above and below, the moderately functional 	rmal hydrological functions teration but otherwise fully functional and does not
Considered moderately functional if the following are me 1. Streams have been altered; however, system recovery	
FUNCTIONALLY IMPAIRED: YES Considered functionally impaired if the stream has more 1. Has been channelized and shows no evidence of self-re 2. Is levee protected, impounded, or artificially constricted. 3. Entrenched or contains active headcuts 4. Has little or no riparian buffer of deep-rooted vegetatines. Has banks that are extensively eroded or unstable, bare 6. Has 4 or greater stream impacts within 0.5 mile upstream or cumulatively exceed 100 ft in length	ecovery ed on on 1 or both sides of channel
GENERAL WATERSHED AND/OR RIPARIAN AREA CHRIGHT BANK: FORESTED WETLAND FARMLAND SCRUB/SHRUB HAYFIELD PRAIRIE INDUSTRIAL HIGH BLUFFS RESIDENTIAL	HARACTERISTICS WITHIN 100FT BUFFER LEFT BANK: FORESTED WETLAND FARMLAND SCRUB/SHRUB HAYFIELD PRAIRIE INDUSTRIAL HIGH BLUFFS RESIDENTIAL

DATE: 7-25-2017 REVIEWER(S): JSP-WJW GAI STREAM ID: SMOJSP037 WEATHER CONDITIONS: Party Claudy 140°F
STREAM TYPE: PERENNIAL INTERMITTENT PEPHEMERAL Stream crossed by centerline: YES NO Stream crossed by access road: YES NO
PHOTOGRAPHS TAKEN: # Upstream #
Considered fully functional if the following criteria are met: 1. Unaltered in any significant manner by human activities 2. Is stable and does not exhibit headcutting, incision, or excessive aggradation 3. Is connected to its overbank flood plain supporting normal hydrological functions 4. Has a riparian buffer of at least 25 ft in width 5. If stream segment is impacted by a minor structural alteration but otherwise fully functional and does not significantly alter stream segments above and below, then the alteration should be considered separate and moderately functional
MODERATELY FUNCTIONAL: NO Considered moderately functional if the following are met: 1. Streams have been altered; however, system recovery has a moderate probability of occurring naturally 2. Streams support many, but not all, of the hydraulic and geomorphic functions characteristic of fully functioning streams of similar order in the watershed
FUNCTIONALLY IMPAIRED: YES Considered functionally impaired if the stream has more than one of the following: 1. Has been channelized and shows no evidence of self-recovery 2. Is levee protected, impounded, or artificially constricted 3. Entrenched or contains active headcuts 4. Has little or no riparian buffer of deep-rooted vegetation on 1 or both sides of channel 5. Has banks that are extensively eroded or unstable, bank sloughing, erosional scars 6. Has 4 or greater stream impacts within 0.5 mile upstream of proposed stream impact, and stream impacts individually or cumulatively exceed 100 ft in length
GENERAL WATERSHED AND/OR RIPARIAN AREA CHARACTERISTICS WITHIN 100FT BUFFER RIGHT BANK: FORESTED WETLAND FARMLAND SCRUB/SHRUB HAYFIELD PRAIRIE INDUSTRIAL HIGH BLUFFS RESIDENTIAL RESIDENTIAL

OTHER OBSERVATIONS AND COMMENTS: Tributan of SmullPol2 ext
JURISDICTIONAL STATUS: Is this stream jurisdictional? NO Describe: Tib at NHO stream
BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed?
WETLAND FRINGE: YES ABUTTING OF ADJACENT NO Describe: YES ABUTTING OF ADJACENT NO
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTE
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES NO OBSERVED PRESENCE OF SUBSURFACE FLOW: YES NO WATER QUALITY CHARACTERISTICS: Obvious siltation: YES NO Observable water quality (siltation, water color is clear, discolored, oily film, scum, water odor; etc.):
BANK EROSION: EXTENSIVE MODERATE LITTLE / NONE Explain (sloughing banks, exposed root wads, undercut banks, etc.):
FLOW CHARACTERISTICS: Water present: NO WATER, STREAMBED DRY STREAMBED MOIST STANDING WATER FLOWING WATER If flow present, estimate stage at time of survey: HIGH MEDIUM LOW Average depth of water (feet):
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet):; at centerline (feet): Average bank height (feet):; at centerline (feet): Bottom width (feet): Water width (feet): Water depth (feet): Ordinary High Water Mark (OHWM), if observed (feet):
GAI STREAM ID: 5 MO 11 PO37

DATE: 2-25-0 REVIEWER(S): 110-0 GAI STREAM ID: SM (1017 WW 111038	WEATHER C	ONDITIONS: Pan	& Cloudy	140°F
STREAM TYPE: PER Stream crossed by center Stream crossed by access		TENT EPHE	MERAL		
# 700 S - Upstrear # Culvert II	n NW # 700 C	2 - Downstream - Culvert C	SE #	Impact Area R → SW / 7-e	708LB→N
FULLY FUNCTIONAL: Considered fully functional i 1. Unaltered in any significat 2. Is stable and does not exh 3. Is connected to its overba 4. Has a riparian buffer of at 5. If stream segment is impasignificantly alter stream segmoderately functional	☐ YES If the following criteria and the following criteria and the following criteria and the following criterians are supported to the flood plain supporting least 25 ft in width cted by a minor structural.	ivities or excessive agging normal hydrological alteration but of	radation cal functions herwise fully functional	and does not	
MODERATELY FUNCTIONAL Considered moderately functions 1. Streams have been altered 2. Streams support many, but of similar order in the waters	tional if the following are i; however, system recov t not all, of the hydraulic	ery has a moderat	e probability of occurri unctions characteristic	ng naturally of fully functioning stre	eams
FUNCTIONALLY IMPAIRED Considered functionally impa 1. Has been channelized and 2. Is levee protected, impoun 3. Entrenched or contains act 4. Has little or no riparian buf 5. Has banks that are extensiv 6. Has 4 or greater stream imp	ired if the stream has mo shows no evidence of sel ded, or artificially constri ive headcuts fer of deep-rooted veget rely eroded or unstable, b	If-recovery icted cation on 1 or both bank sloughing, en	sides of channel osional scars	eam impacts individua	llv.
GENERAL WATERSHED AN RIGHT BANK: FORESTED WETLAND FARMLAND SCRUB/SH HAYFIELD PRAIRIE INDUSTRIAL HIGH BLU RESIDENTIAL	in length D/OR RIPARIAN AREA D HRUB	CHARACTERISTIC LEFT BANK: FORESTED FARMLAND HAYFIELD INDUSTRIAL			ıy
T VESIDEIATAE		RESIDENTIAL			

REVIEWER(S): USP-WSW GAI STREAM ID: 6MOSPOSE
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet):; at centerline (feet): Average bank height (feet):; at centerline (feet): Bottom width (feet):/ Water width (feet): Ordinary High Water Mark (OHWM), if observed (feet):
FLOW CHARACTERISTICS: Water present: NO WATER, STREAMBED DRY STREAMBED MOIST STANDING WATER FLOWING WATER If flow present, estimate stage at time of survey: HIGH MEDIUM LOW NO FLOW Average depth of water (feet):
BANK EROSION: EXTENSIVE MODERATE LITTLE / NONE Explain (sloughing banks, exposed root wads, undercut banks, etc.): S (0 U V
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES NO
OBSERVED PRESENCE OF SUBSURFACE FLOW: YES NO
WATER QUALITY CHARACTERISTICS: Obvious siltation: YES NO Observable water quality (siltation, water color is clear, discolored, oily film, scum, water odor; etc.):
Identify specific pollutants, if known: Nove observed
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES
WETLAND FRINGE: YES ABUTTING OF ADJACENT NO Describe: Upland woodled S6
BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed?
URISDICTIONAL STATUS: s this stream jurisdictional? A YES NO Describe: To be A NH D Sheam
OTHER OBSERVATIONS AND COMMENTS: Tributan of SMOJJP038