



































































APPENDIX A Wetland Data Forms (Additional Features Only)



WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: 57 L Applicant/Owner: 5 / C	Cit	y/County:		Sampling Date: 3/14
TO / CAY				Sampling Point: PEM
	Se		Range: 2 / 12 L/	
andform (hillslope, terrace, etc.): Do 1/25 io			lef (concave, convex, none)	Concare
lope (%): Lat: 1 O 7 9 O	4 8 Lor	ղը։ <u>~ 90, 3՝</u>	11312	Datum: 1/A 0 83
oil Map Unit Name:			NWI classifi	cation: PUSGA
re climatic / hydrologic conditions on the site typica re Vegetation , Soil , or Hydrology _ re Vegetation , Soil , or Hydrology _	tor,this time of year? significantly dist naturally probles	urbęd? Ar	(If no, explain in f e "Normal Circumstances" needed, explain any answe	present? Yes X No _
UMMARY OF FINDINGS - Attach site	map showing sa	mpling point	locations, transects	, important features, e
lydrophytic Vegetation Present? Yes 📉	No			
lydric Soll Present? Yes	No	is the Sample		/ *
Vetland Hydrology Present? Yes	No	within a Wetla	and? Yes 🔀	No
lementa: PEM frince along many many	1 _ _	Locat	NWI wetla	
			wat metla	nd
Soil and veg. disturbed	by lives	tock		
GETATION - Use scientific names of pl	ants.			
		minant Indicator	Dominance Test works	hash
ee Stratum (Plot size: 30 /	% Cover Spe	cles? Status	Number of Dominant Sp	
Absent		<u> </u>	That Are OBL, FACW, o	r FAC: (A)
			Total Number of Domina Species Across All Strat	nt a: (B)
_		- 4	I comment to the second	(-)
			Percent of Dominant Spe That Are OBL, FACW, or	FAC: 100% (A/B)
alno/Shrub Stratum (Plot size: 15 /	= Tot	al Cover		(10)
Absent	., _		Prevalence Index work	
			Total % Cover of:	
			OBL species	
			FACW species	
			FAC species	
Feet Annual Control of the Control o	O = Tole	100	FACU species	
Stretum (Plot size:)	100	ii Cover		x5=
Ranuncular sceleratus	<u>60 y</u>	OBL	Column Totals:	(A) (B)
Echinochlua crus-salli	30	FACH	Prevalence Index =	B/A =
anicum dichotomiflorum	_ 10 N	FACW	Hydrophytic Vegetation	Indicators:
			Rapid Test for Hyd	Irophytic Vegetation
			2 - Dominance Test is	>50%
			3 - Prevalence Index	s ≤3.0¹
			4 - Morphological Ada	plations' (Provide supporting
			data in Remarks or	on a separate sheet)
			Problematic Hydrophy	tic Vegetation¹ (Explain)
	UO ■ Total		Indicators of hydric soil ar	d wetland hydrology must
v Vine Stratum (Plot size: 30')	Total	Cover	be present, unless disturbe	d or problematic.
Assent			Hydrophytic	
*			Vonetation \	✓ I
	= Total	Cover	Present? Yes	<u> </u>
rise: //echado abada ausad				
rks: (Include photo numbers here or on a separal Fetation grazed b	lives to			

Sampling Point: PEM

Profile Description: (Description: Metroph		Redo	x Feature				***************
(Inches) Color (moist	%_	Color (moist)	- %	Type	Log	Taxture	Remarks
0-7: 2.5 44	1 90	7.54K 16	_6_		194	SCL	
		54R 3/4	4	C	IPL		
7-16 1/ 2.54 4/	1 95	7.57K416	5	<u> </u>	MIPL	501	
		770 115 110					
					_		
			_				
				=			
Type: C=Concentration, D=E	epietion, RM	PReduced Matrix, MS	=Masked	Sand Gra	ains.	² Location: P	L=Pore Lining, M=Matrix.
lydric Soil Indicators:						Indicators for	Problematic Hydric Solis ¹ :
_ Histosol (A1)			leyed Ma	, ,			irle Redox (A16)
_ Hislic Epipedon (A2)		Sandy Re				Dark Surfa	
_ Black Histle (A3)		Stripped	•	•			enese Masses (F12)
_ Hydrogen Sulfide (A4)		Loamy M					ow Dark Surface (TF12)
_ Stratified Layers (A5) _ 2 cm Muck (A10)		Loamy G				Other (Exp	olain In Remarks)
2 cm Muck (A1u) Depleted Below Dark Surf	na /6441	Depleted		•			
_ Depleted Below Dark Surf _ Thick Dark Surface (A12)	ice (ATT)	Redox Da		• •		3	
_ Trick Dark Surface (A12) _ Sandy Mucky Mineral (S1)		Depleted					nydrophytic vegetation and
_ 5 cm Mucky Peat or Peat (Can.	Redox De	pression	9 (FB)			drology must be present,
estrictive Layer (if observed			_			uniess diet	urbed or problematic.
Type:						4	
Type						Hydric Soil Pres	sent? Yes No
D-0-0-1							
Depth (Inches):	d b	y lives	tock			Tryunc don Pres	
marks: Soil disturb	-d b	y lives	tock	:		Tryunc don Pre-	Benti 168 NO
onarks: Soil disturb		y lives	tock	:		Tryunc don Pre-	NO
DROLOGY				:			
DROLOGY Illand Hydrology Indicators mary Indicators (minimum of		ed: check all that apply	0			_ Secondary In	dicators (minimum of two requires
DROLOGY Illand Hydrology Indicators many Indicators (minimum of Surface Water (A1)		ed: check all that apply	n d Leaves			Secondary In	dicators (minimum of two requires
DROLOGY tland Hydrology Indicators mary Indicators (minimum of Surface Water (A1) High Water Table (A2)		ed: check all that acch Water-Staine Aquatic Faun	d Leaves	(B9)		Secondary in Surface S Drainage	dicators (minimum of two require Soil Cracks (B6) Patterns (B10)
DROLOGY Illand Hydrology Indicators mary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3)		ed: check all that apply Water-Staine Aquatic Faun True Aquatic	d Leaves e (B13) Plants (B	(B9)		Secondary in Surface S Drainage Dry-Seas	dicators (minimum of two require Boil Cracks (B6) Patterns (B10) on Water Table (C2)
DROLOGY Illand Hydrology Indicators mary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)		ed: check all that acoh Water-Staine Aquatic Faun True Aquatic Hydrogen Sul	d Leaves e (B13) Plants (B	(B9)		Secondary in Surface S Drainage Dry-Seas Crayfish i	dicators (minimum of two require Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8)
DROLOGY Illand Hydrology Indicators mary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)		ed: check all that apph — Water-Staine — Aquatic Faun — True Aquatic — Hydrogen Sul	d Leaves e (813) Plants (8 lifde Odorosphere:	(B9) 14) r (C1) s on Living	g Roots (C3	Secondary in Surface S Drainage Dry-Seas Crayfish I	dicators (minimum of two requires Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial (magery (C9)
DROLOGY Illand Hydrology Indicators mary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)		ed: check all that apple Water-Staine Aquatic Faun True Aquatic Hydrogen Sul Ozidizad Rhir	d Leaves e (813) Plants (8 lifde Odor rospherer teducari	(B9) 114) r (C1) s on Living fron (C4)		Secondary in Surface S Drainage Dry-Seas Crayfish I Saturation	dicators (minimum of two requires Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) In Visible on Aerial (magery (C9) or Stressed Plants (D1)
DROLOGY Itland Hydrology Indicators mary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)		ed: check all that apply Water-Staine Aquatic Faun True Aquatic Hydrogen Su Oxidized Rhir Presence of F	d Leaves e (B13) Plants (B fide Odor respherer teducad i	(B9) 114) r (C1) s on Living from (C4) In Tilled 5		Secondary in Surface S Drainage Dry-Seas Crayfish I Saturation	dicators (minimum of two require Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial (magery (C9)
DROLOGY Illand Hydrology Indicators mary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	: one la require	ed: check all that apply Water-Staine Aquatic Faun True Aquatic Hydrogen Sul Oxidized Rhin Presence of F Recent Iron R	d Leaves e (813) Plants (8 fide Odor respherer teducad i	(B9) 114) r (C1) s on Living from (C4) In Tilled 5		Secondary in Surface S Drainage Dry-Seas Crayfish I	dicators (minimum of two require Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial (magery (C9) or Stressed Plants (D1)
DROLOGY Illand Hydrology Indicators mary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundetion Visible on Aerial	magery (B7)	Mater-Staine — Water-Staine — Aquatic Faun — True Aquatic — Hydrogen Sul — Oxidized Rhiz — Presence of F — Recent Iron R — Thin Muck Sul	d Leaves e (B13) Plants (B lifide Odor resphere: Reduced i reduction rface (C7 I Data (D	(B9) 14) r (C1) on Living lron (C4) in Tilled S 7)		Secondary in Surface S Drainage Dry-Seas Crayfish I	dicators (minimum of two required Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) In Visible on Aerial (magery (C9) or Stressed Plants (D1) hic Position (D2)
DROLOGY Illand Hydrology Indicators mary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundetion Visible on Aerial Sparsely Vegetated Concav	magery (B7)	ed: check all that apole Water-Staine Aquatic Faun True Aquatic Hydrogen 5ul Oxidized Rhiz Presence of F Recent Iron R Thin Muck Su	d Leaves e (B13) Plants (B lifide Odor resphere: Reduced i reduction rface (C7 I Data (D	(B9) 14) r (C1) on Living lron (C4) in Tilled S 7)		Secondary in Surface S Drainage Dry-Seas Crayfish I	dicators (minimum of two required Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) In Visible on Aerial (magery (C9) or Stressed Plants (D1) hic Position (D2)
DROLOGY Itland Hydrology Indicators mary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundetion Visible on Aerial Sparsely Vegetated Concave d Observations:	magery (B7)	Mater-Staine — Water-Staine — Aquatic Faun — True Aquatic — Hydrogen Sul — Oxidized Rhiz — Presence of F — Recent Iron R — Thin Muck Sul — Gauge or Wel 3) — Other (Explain	d Leaves e (B13) Plants (B lifide Odor respiterer Reduced i reduction rface (C7 Il Data (D	(B9) 14) r (C1) on Living lron (C4) in Titled S 7) 9)		Secondary in Surface S Drainage Dry-Seas Crayfish I	dicators (minimum of two required Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) In Visible on Aerial (magery (C9) or Stressed Plants (D1) hic Position (D2)
DROLOGY Itland Hydrology Indicators mary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundetion Visible on Aerial Sparsely Vegetated Concave d Observations: Face Water Present?	magery (B7)	ed: check all that apph Water-Staine Aquatic Faun True Aquatic Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Thin Muck Su Gauge or Wel Other (Explain	d Leaves e (B13) Plants (B lifide Odorrospherer Reduced in riace (C7 il Data (D n in Rema	(B9) 14) r (C1) on Living lron (C4) in Titled S 7) 9)		Secondary in Surface S Drainage Dry-Seas Crayfish I	dicators (minimum of two required Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) In Visible on Aerial (magery (C9) or Stressed Plants (D1) hic Position (D2)
DROLOGY Itland Hydrology Indicators mary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundetion Visible on Aerial Sparsely Vegetated Concave d Observations: Face Water Present?	magery (B7)	Mater-Staine — Water-Staine — Aquatic Faun — True Aquatic — Hydrogen Sul — Oxidized Rhiz — Presence of F — Recent Iron R — Thin Muck Sul — Gauge or Wel 3) — Other (Explain	d Leaves e (B13) Plants (B lifide Odorrospherer Reduced in riace (C7 il Data (D n in Rema	(B9) 14) r (C1) on Living lron (C4) in Titled S 7) 9)		Secondary in Surface S Drainage Dry-Seas Crayfish I	dicators (minimum of two required Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) In Visible on Aerial (magery (C9) or Stressed Plants (D1) hic Position (D2)
DROLOGY Illand Hydrology Indicators mary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundetion Visible on Aerial Sparsely Vegetated Concave d Observations: face Water Present? er Table Present? yudes capillary fringe)	magery (B7) Surface (B8) es No	ed: check all that apph Water-Staine Aquatic Faun True Aquatic Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Thin Muck Su Gauge or Wel Other (Explair	d Leaves e (B13) Plants (B lifide Odorrospherer Reduced I Remains s):	(B9) 14) r (C1) s on Living fron (C4) In Tilled S 9) arks)	Solis (C6)	Secondary in Surface S Drainage Dry-Seas Crayfish I Saturation Stuntad of Geomorp FAC-Neur	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) trail Test (D5)
DROLOGY Interpretation 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) Inundetion Visible on Aerial Sparsely Vegetated Concavity Interpretations: Interpret	magery (B7) Surface (B8) es No	ed: check all that apph Water-Staine Aquatic Faun True Aquatic Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Thin Muck Su Gauge or Wel Other (Explair	d Leaves e (B13) Plants (B lifide Odorrospherer Reduced I Remains s):	(B9) 14) r (C1) s on Living fron (C4) In Tilled S 9) arks)	Solis (C6)	Secondary in Surface S Drainage Dry-Seas Crayfish I Saturation Stunted o Geomorp FAC-Neur	dicators (minimum of two required Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) in Visible on Aerial (magery (C9) or Stressed Plants (D1) hic Position (D2) trail Test (D5)
DROLOGY Is a standard of the	magery (B7) Surface (B8) es No	ed: check all that apph Water-Staine Aquatic Faun True Aquatic Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Thin Muck Su Gauge or Wel Other (Explair	d Leaves e (B13) Plants (B lifide Odorrospherer Reduced I Remains s):	(B9) 14) r (C1) s on Living fron (C4) In Tilled S 9) arks)	Solis (C6)	Secondary in Surface S Drainage Dry-Seas Crayfish I Saturation Stunted o Geomorp FAC-Neur	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) trail Test (D5)
DROLOGY Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundellon Visible on Aerial Sparsely Vegetated Concavid Observations: face Water Present? Yer Table Present? Yer Table Present? Yer Table Recurded Data (stream	magery (B7) Surface (B6) es No	ed: check all that apph Water-Staine Aquatic Faun True Aquatic Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Thin Muck Su Gauge or Wel Other (Explair	d Leaves e (B13) Plants (B lifide Odorrospherer Reduced I resc (C7 II Data (D n in Rema	(B9) 14) r (C1) s on Living fron (C4) In Titled S 7) 9) arks)	Wettand	Secondary in Surface S Drainage Dry-Seas Crayfish I Saturation Stuntad of Geomorp FAC-Neur	dicators (minimum of two requires Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) in Visible on Aerial (magery (C9) or Stressed Plants (D1) hic Position (D2) trail Test (D5)

pplicant/Owner: Seire Ivestlgator(s): UP/CDK		State: - Sampling Point: Pud
andform (hillstops, terrace, etc.): Depress.	Section, Townshi	ip, Range:> / -\ W / 7 N
lope (%): 41% Lat: 39, 07881	Local	rellef (concave, convex, none):CONCAVE
	Long: _ \ 90	.391476 Datum: NAD83
oil Map Unit Name: Water		NWI classification: 148 Gh
e climatic / hydrologic conditions on the site typical	for this time of year? Yes	No (If no, explain in Remarks.)
e Vegetation	eignificantly disturbance	Are "Normal Circumstances" present? Yes No
e Vegetation N, Soil N, or Hydrology 1		(If needed, explain any enswers in Remarks.)
JMMARY OF FINDINGS - Attach site n	nap showing sampling poi	nt locations, transects, important features, e
ydrophytic Vegetation Present? Yes	_ No	mi locations, transects, important features, e
ydric Soil Present? Yes	No ls the Sam	pled Area
fetland Hydrology Present?	_ No within a We	
emarks:	1 11:00 #	Soil and was, disturbed by
ian - maple impoundment; m	wheel white	soil and was, disturbed by
iestack.		
GETATION – Use scientific names of pla	nts	
	Absolute Dominant Indicate	or Dominance Test worksheet:
Ab sent	% Cover Species? Status	Number of Dominant Species
		That Are OBL, FACW, or FAC:(A)
		Total Number of Dominant
		Species Across All Strata: (B)
		- Percent of Developed Co.
		- That Are OBL, FACW, or FAC: 100% (A/B)
ling/Shrub Stratum (Piot size: 15)	Total Cover	V/
Absent		Prevalence Index worksheet:
		OBL species x 1 = FACW species x 2 =
		FAC species x 3 =
		FACU species x4 =
51-	Total Cover	UPL species x 5 =
Rannenlus sceleratus		Column Totals:
Ranunculus sceleratus	10 Y OBL	
		Prevalence Index = B/A =
		Hydrophytic Vegetation Indicators:
		. 1 - Rapid Test for Hydrophytic Vegetation
		2 - Dominance Test la >50%.
		3 - Prevalence Index is ≤3.01
		4 - Morphological Adaptations* (Provide supporting data in Remarks or on a separate sheet)
		Problematic Hydrophytic Vegetation¹ (Explain)
		- Community of Opiny is Vegetation (Expirin)
301-	Total Cover	Indicators of hydric soil and welland hydrology must
Vine Stratum (Plot size: 30")	- I Offil COARL	be present, unless disturbed or problematic.
Three		Hydrophytic
7,63=		Manager 1
7,01= 1,		
ks: (Include photo numbers here or on a separate	= Total Cover	Present? Yes No

2.

SOIL Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth (inches) Color (moist) Type Loc Taxture 100 Mucky Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. *Location: PL=Pore Lining, M=Matrix. Hydric Sotl Indicators: Indicators for Problematic Hydric Soils3: Histosot (A1) Sandy Gleyed Metrix (S4) Coest Prairie Redox (A16) ___ Histic Epipedon (A2) Sandy Redox (S5) Dark Surface (S7) Black Histic (A3) Stripped Matrix (66) Iron-Mangenese Masses (F12) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) Very Shellow Dark Surface (TF12) Stratified Layers (A5) Loamy Gleved 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. Restrictive Layer (if observed): None Туре: ____ Hydric Soil Present? Depth (inches): Remarks: Soil disturbed by livestocki HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apoly) 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 Marke (B1) _ Hydrogen Sulfide Odor (C1) Crayfieh Burrows (C8) Sediment Deposits (B2) Oxidized Rhizoapheres on Living Roots (C3) ___ Seturation Visible on Aeriel Imagery (C9) **Drift Deposits (B3)** Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Algal Met or Crust (B4) Recent Iron Reduction in Titled Solls (C6) Geomorphic Position (D2) Iron Deposits (85) Thin Muck Surface (C7) FAC-Neutral Test (D5) Inundation Visible on Aeriel Imagery (B7) Gauge or Well Deta (D9) Sparsely Vegetated Concave Surfece (B8) Other (Explain in Remarks) Field Observations: Depth (Inchee): ~ 36 in Surface Water Present? Yes ____ No X Depth (Inches): __ Water Table Present? No X Depth (Inches): Wetland Hydrology Present? Yes No. Saturation Present? (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: NIA Remarks:

Abuts stream (out of study area),

WIL-550-117

	City/County:	Sampling Date: 11-20-2
Applicant/Owner: Sorre		State: Sampling Point
Investigator(s):P -TMA	Section, Township	p, Range: 34 / 10 N 12W
Landform (hillslope, terrace, etc.):	^ Local r	relief (concave, convex, none):
Slope (%): Lat:39,266/8/	Long: 90,41	7681 Datum: 4/4083
Soil Map Unit Name: (279(2) frzetta		
Are climatic / hydrologic conditions on the site typical fo		No (If no, explain in Remarks.)
Are Vegetation N Soil N or Hydrology A		Are "Normal Circumstances" present? YesNo
Are Vegetation N., Soil N., or Hydrology A		(If needed, explain any answers in Remarks.)
		nt locations, transects, important features, etc.
Hydrophytic Vegetation Present?	No	
Hydric Soil Present?	No is the Sam	pled Area
Wetland Hydrology Present?	No within a We	etland? Yes No
- Area sample point For	PEM/Abutting	wetland w.DLJJP117-
- unefland area is about	to NHD she	am
VEGETATION - Use scientific names of plan		
Tree Stratum (Plot size:)	Absolute Dominant Indical	
1	% Cover Species? Statu	That A - ODL SACKS
2		
3		Total Number of Dominant Species Across All Strata:
4 /- 10 SOW		Species Across All Strata: (B)
5		Percent of Dominant Species That Are OBL, FACW, or FAC: //\(\) // (A/B)
151	= Total Cover	That Are OBL, FACW, or FAC:
Seoling/Shrub Stratum (Plot size:15 🔽)		Prevalence Index worksheet:
1,		Total % Cover of: Multioly by:
2		OBL species x1=
1 bsent		FACW species x 2 =
FI 0 30001		FAC species x 3 =
5		FACU species x4=
Herb Stratum (Plot size: 5 'V)	= Total Cover	UPL species x 5 ≠
Poa travalis	40 Y FACE	Column Totals: (A) (B)
Seturia pumila	ZO Y FAC	Prevalence Index = B/A =
Leersia oryzoiles	70 Y 00L	Hydrophytic Vegetation Indicators:
Schodynosowy grundinacea		
Rumex crisms	10 N FAC	2 - Dominance Test is >50%
Carey Frank!	5 1 Obl	74:00 34:00 100,000
		4 - Morphological Adaptations* (Provide supporting
		data in Remarks or on a separate sheet)
		Problematic Hydrophytic Vegetation ¹ (Explain)
0.		-
/oody Vine Stratum (Plot size: 70 7)	105 = Total Cover	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
		Mydenshydie
Absent		Hydrophytic Vegetation
	= Total Cover	Present? Yes V No
emarks: (include photo numbers here or on a separate		
- NM		
120.		1
		· ·

WILJP117
Sampling Point WHOULD

	etric		Features			
(inches) Color (m)		Color (moist)		vpe' Loc	Texture	Remarks
0-3 10 y R 3/	2 25	101H 4/2	10 1	2 m	SCL	
2 1 2 - 11	7 ===	2 AK 3/A	5	MIPL		
3-6 451	12 85	1.518 74	5-1	_M/L	SCL	
		2.57820/	5			
		10YA4/2	5	M		
0-17 574/1	_85	7.51A3/4	10 0	MIPL	SLL	
		5-1A3/4	5 6	- m		
ype: C=Concentration, D	=Depletion, RM	=Reduced Matrix, MS	=Masked Sar	nd Grains.	2Lucation:	PL=Pore Lining, M=Matrix.
ydric Soil Indicators:					Indicators f	or Problematic Hydric Solis ³ :
_ Histosol (A1)			leyed Matrix ((S4)		rairie Redox (A16)
Histic Epipedon (A2)			edox (S5)			rface (S7)
_ Black Histic (A3) _ Hydrogen Sulfide (A4)			Matrix (S6)			iganese Masses (F12)
Stratified Layers (A5)			ucky Mineral leyed Matrix (• '		allow Dark Surface (TF12)
_ 2 cm Muck (A10)			Matrix (F3)	(FZ)	Other (E	xplain in Remarks)
Depleted Below Dark S	urface (A11)		ark Surface (F	F6)		
Thick Dark Surface (A1:			Dark Surface		³ Indicators o	f hydrophytic vegetation and
Sandy Mucky Mineral (5		Redox De	pressions (F	8)	wetland i	ydrology must be present,
5 cm Mucky Peat or Pea	# A 12 F					sturbed or problematic.
strictive Layer (if obser	20.70					
Type:	4	_			Hydric Soil Pi	resent? YesNo
Depth (inches):		_			rijane son Fi	eseur, les MO
marks: Port						
PROLOGY	ora;					
PROLOGY tland Hydrology Indicate		d; check all that apply	3		Secondary	indicators (minimum of two mention
PROLOGY		Children A. C. Commission and C.	i) d Leaves (89)		
PROLOGY Itland Hydrology Indicate hery Indicators (minimum Surface Water (A1) High Water Table (A2)		Children A. C. Commission and C.	d Leaves (89)	Surface	Soil Cracks (86)
DROLOGY Idend Hydrology Indicate hery Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3)		Water-Staine	d Leaves (69 a (613))	Surface	Soil Cracks (B6) e Patterna (B10)
PROLOGY Idend Hydrology Indicate thery Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)		Water-Staine Aquatic Faun True Aquatic Hydrogen Sul	d Leaves (B9 a (B13) Plants (B14) fide Odor (C1)	Surface Drainag Dry-Sea Crayfish	Soil Cracks (86)
PROLOGY Illand Hydrology Indicate thery Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)		Water-Staine Aquatic Faun True Aquatic	d Leaves (B9 a (B13) Plants (B14) fide Odor (C1)	Surface Drainag Dry-Sea Crayfish	Soil Cracks (86) e Patterna (810) son Water Table (C2)
PROLOGY Illand Hydrology Indicate the Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)		Water-Staine Aquatic Faunt True Aquatic Hydrogen Sul Oxidized Rhiz Presence of R	d Leaves (89 a (813) Plants (814) fide Odor (C1 cospheras on teduced fron () Living Roots (C (C4)	Surface Drainag Dry-Sez Crayflat 3) Saturati	Soil Cracks (86) e Patterna (810) son Water Table (C2) Burrows (C8)
PROLOGY Illand Hydrology 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-Staine Aquatic Faunt True Aquatic Hydrogen Sul Oxidized Rhiz Presence of R	d Leaves (89 a (813) Plants (814) fide Odor (C1 coapheres on laduced fron (aduction in Ti) Living Roots (C	Surface Drainag Dry-Sea Crayfiah Saturati Stunted	Soil Cracks (86) te Patterna (810) teon Water Table (C2) teurrows (C8) on Visible on Aerial Imagery (C9)
DROLOGY Itland Hydrology Indicate the 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 require	Water-Staine Aquatic Faunt True Aquatic Hydrogen Sul Oxidized Rhiz Presence of R Recent Iron R Thin Muck Su	d Leaves (89 a (813) Plants (814) fide Odor (C1 cospheras on teduced from aduction in Ti rface (C7)) Living Roots (C (C4)	Surface Drainag Dry-Sez Crayfish Saturated Stunted Second	Soil Cracks (86) te Patterns (810) te Patterns (810) teon Water Table (C2) te Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1)
DROLOGY Itland Hydrology Indicators Indicators Imminum 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 Aeri	of one is require	Water-Staine Aquatic Faun True Aquatic Hydrogen Sul Duddized Rhiz Presence of R Recent from R Thin Muck Sun Gauge or Wel	d Leaves (89 a (813) Plants (814) fide Odor (C1 cospheres on teduced from aduction in Ti rface (C7) I Data (D9)	Living Roofs (C (C4) illed Soils (C6)	Surface Drainag Dry-Sez Crayfish Saturated Stunted Second	Soil Cracks (86) te Patterns (810) te Patterns (810) te Patterns (810) te Surrows (C8) to Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
DROLOGY Itland Hydrology Indicate hary 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 Aeri Sparsely Vegetated Conc	of one is require	Water-Staine Aquatic Faunt True Aquatic Hydrogen Sul Oxidized Rhiz Presence of R Recent Iron R Thin Muck Sul Gauge or Wel	d Leaves (89 a (813) Plants (814) fide Odor (C1 cospheres on teduced from aduction in Ti rface (C7) I Data (D9)	Living Roofs (C (C4) illed Soils (C6)	Surface Drainag Dry-Sez Crayfish Saturated Stunted Second	Soil Cracks (86) te Patterns (810) te Patterns (810) te Patterns (810) te Surrows (C8) to Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
DROLOGY Itland Hydrology Indicate pary 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 Aeri Sparsely Vegetated Conciliobservations:	al imagery (B7)	Water-Staine Aquatic Faunt True Aquatic Hydrogen Sul Oxidized Rhiz Presence of R Recent fron R Thin Muck Sul Gauge or Wel Other (Explain	d Leaves (89 a (813) Plants (814) fide Odor (C1 cospheres on leduced from aduction in Ti rface (C7) I Data (D9) in Remarks)	Living Roofs (C (C4) illed Soils (C6)	Surface Drainag Dry-Sez Crayfish Saturated Stunted Second	e Patterns (B10) sson Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
DROLOGY Illand Hydrology Indicate many 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 Aeri Sparsely Vegetated Concil Observations: ace Water Present?	of one is require	Water-Staine Aquatic Faunt True Aquatic Hydrogen Sul Oxidized Rhiz Presence of R Recent fron R Thin Muck Sul Gauge or Wel Other (Explain	d Leaves (89 a (813) Plants (814) fide Odor (C1 coapheras on teduced from aduction in Ti rface (C7) I Data (D9) in Remarks)	Living Roofs (C (C4) illed Soils (C6)	Surface Drainag Dry-Sez Crayfish Saturated Stunted Second	Soil Cracks (86) te Patterns (810) te Patterns (810) teon Water Table (C2) te Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
DROLOGY Illand Hydrology Indicate the Indicators (minimum) Surface Water (A1) High Water Table (A2) Saturation (A3) Weter Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aeri Sparsely Vegetated Concil Observations: the Water Present? In Table Present? Intervation Present?	al imagery (B7)	Water-Staine Aquatic Faunt True Aquatic Hydrogen Sul Oxidized Rhiz Presence of R Recent from R Thin Muck Sul Gauge or Wel Other (Explain	d Leaves (89 a (813) Plants (814) fide Odor (C1 cospheres on teduced from (aduction in Ti rface (C7) I Data (D9) in Remarks)	Living Roofs (C (C4) illed Soils (C5)	Surface Drainag Dry-Sez Crayfish Stunted Stunted FAC-Ne	Soil Cracks (86) te Patterns (810) te Patterns (810) teon Water Table (C2) te Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
DROLOGY Itland Hydrology Indicate hary 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 Aeri Sparsely Vegetated Conc Tobervations: Table Present? Table Present?	al Imagery (B7) ave Surface (B8 Yes No Yes No	Water-Staine Aquatic Faunt True Aquatic Hydrogen Sul Decided Rhiz Presence of Recent from R Thin Muck Sul Gauge or Wel Other (Explain Depth (Inches	d Leaves (89 a (813) Plants (814) fide Odor (C1 cospheres on leduced from eduction in Ti rface (C7) I Data (D9) in Remarks) b):	Living Roofs (C: (C4) illed Soils (C6)	Surface Drainag Dry-Sez Crayfish 3) Saturati Stunted FAC-Ne	Soil Cracks (88) te Patterna (810) te Patterna (810) te Patterna (810) te Patterna (810) te Surrows (C8) to Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D6)
DROLOGY Itland Hydrology Indicate hydrology Indicate hydrology Indicate hydrology Indicate hydrology Indicate hydrology Indicate 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 Aeri Sparsely Vegetated Concil Observations: https://doi.org/10.1006/1	al imagery (B7) ave Surface (B8 Yes No Yes No Yes No im gauge, monito	Water-Staine Aquatic Faunt True Aquatic Hydrogen Sul Diddized Rhiz Presence of R Recent fron R Thin Muck Sul Gauge or Wel Other (Explain Depth (Inches	d Leaves (89 a (813) Plants (814) fide Odor (C1 cospheras on teducad from aduction in Ti rface (C7) I Data (D9) in Remarks) 3): 25, previous in	Living Roots (C: (C4) illed Soils (C6) Wetland	Surface Drainag Dry-Sez Crayfish 3) Saturati Stunted FAC-Ne	Soil Cracks (86) te Patterns (810) te Patterns (810) te Patterns (810) te Patterns (82) te Burrows (C8) to Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D6)
DROLOGY Illand Hydrology Indicators Indicators Indicators Information 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 Aeri Sparsely Vegetated Concilionary Table Present? Table Present? Table Present? Tatlon Present? Table Recorded Data (sires)	al imagery (B7) ave Surface (B8 Yes No Yes No Yes No im gauge, monito	Water-Staine Aquatic Faunt True Aquatic Hydrogen Sul Diddized Rhiz Presence of R Recent fron R Thin Muck Sul Gauge or Wel Other (Explain Depth (Inches	d Leaves (89 a (813) Plants (814) fide Odor (C1 cospheras on teducad from aduction in Ti rface (C7) I Data (D9) in Remarks) 3): 25, previous in	Living Roots (C: (C4) illed Soils (C6) Wetland	Surface Drainag Dry-Sez Crayfish 3) Saturati Stunted FAC-Ne	Soil Cracks (86) te Patterna (810) to Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D6)

Project/Site: STL / Principia	City/County:	5 150/ CO Sampling Date: 6:5-201
Applicant/Owner: 5511		State, TL Sampling Point: WEHand
Investigator(s): JJP-WJW	Section, Township, R	-//
Landform (hillslope, terrace, etc.): Flood plain		ef (concave, convex, none): (on (a \wd
Slope (%): 47 Lat: 39,156,941	Long: - 40.373	
		64 64
Soil Map Unit Neme: (34754) 15 15ah 900	1	requestry MINION classification: N/A
Are climatic / hydrologic conditions on the site typical for this	*	(If no, explain in Remarks.)
Are Vegetation Soil, or Hydrology s		e "Normel Circumstances" present? Yes No
Are Vegetation Soil, or Hydrology n	eturelly problematic? (If r	needed, explain any answers in Remerks.)
SUMMARY OF FINDINGS - Attach site map	showing sampling point	locations, transects, important features, etc.
Hydrophylic Vegetation Present? Yes N	o	
	o is the Sample	
	within a Weth	V V
Avece somple point for PFO,	Abutting wetton	A WILTIPHS
- civea subjected to high	occurences of	deposition from streams an
VEGETATION – Use scientific names of plants.		
Tree Stratum (Plot size: 30'v)	Absolute Dominant Indicator % Cover Section Status	
(Celties Generala	60 Y FACU	. I Mounted of Downlant Species /
2 Platanus occidentalis	10 N FACW	
3 Diospytos vivintana	· S P FAI	Total Number of Dominant Species Across All Streta: (B)
4.	·	· · · · ·
5.		Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)
	75 = Total Cover	
Sapling/Shrub Stratum (Plot size: 15 V)	C V DA	Prevalence Index worksheet:
1 Asimina triloba		Total % Cover of: Multioly by:
2. Drospyros virginiana	- FAC	OBL species x1 =
3		FACW species x2=
5		FACU species x4 =
o	1 0 = Total Cover	UPL species x5-
Herb Stratum (Flot size:)		Column Totals: (A) (B)
1 Saurorus Cernuus	15 1 OBL	
2 haported canadansis	15 Y FACU	Prevalence index = B/A =
a Biospyros virgintana	10 Y FAC	Hydrophytic Vegetation Indicators:
4 Devision to hydropiperoides	ST / OBL	1 - Rapid Test for Hydrophytic Vegetetion
5 Menisperma canadensis	_ ST_N FAC	2 - Dominance Test is >50%
6.		3 - Prevalence Index is ≤3.0'
7		4 - Morphological Adaptations¹ (Provide supporting deta in Remarks or on e separate sheet)
8		Problematic Hydrophytic Vegetation (Explain)
9		
Woody Vine Stratum (Plot size: 15'v.)	50 = Total Cover	¹ Indicators of hydric soit and wetland hydrology must be present, unless disturbed or problematic.
vyoody Vine Stratum (Plot size: \(\) \(\) \(\)		
2. Absent		Hydrophytic Vegetation
- 17 35001	= Total Cover	Present? Yes No
Remarks: (include photo numbers here or on a separate si		
- Nort		

SOIL

WILWP148
Sampling Point: wethound

Profile Description: (Describe to the depth r	naeded to document the indicator or confl	rm the absence of indicators.)
Depth Matrix	Redox Features	- '
(Inches) Coor (moist) %	Color (molat) % Type Lec	Texture Remarks
0-7 104872 9+ 1	071 74 5 C M	310-
9-17- 10413/2 60 1	10/R3/4 BS C M	SICL saturated
12	7.54P4 5 1 M	
	1 10/6	
Type: CaCapantalian Departation BMsBa	dynamic Markey MC-Markey and Contra	2) continue Di - Doro f intro Manhartino
Type: C=Concentration, D=Deptetion, RM=Red Tydric Sott Indicators:	duced Mainx, MS=Masked Sand Grains.	² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Sotis ³ :
•	Condu Cloued Matrix (C4)	•
Histôsol (A1) Histic Epipedon (A2)	Sandy Gleyed Matrix (S4)	Coast Prairie Redox (A16)
Plack Histic (A3)	Sandy Redox (S5) 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)	Depleted Matrix (F3)	— Office (rybiani in t/guigus)
Depleted Below Dark Surface (A11)	Redox Dark Surface (F6)	*
Thick Dark Surface (A12)	Depleted Dark Surface (F7)	³ Indicators of hydrophyllc vegetation and
Sendy 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):		
Type: NOW		
Depth (Inches):		Hydric Soll Present? Yes No
		A CONTRACTOR OF THE PARTY OF TH
- Area of test pit u mississippi rium ba	within Moodplain ck wash rausing t	of perennial strong on ane Request deposition in
- Area of test pit u mississippi river bo wetland area. His	within Floodplain ck wash rausing the h organic matter	of perennial scheam are Frequent deposition in m surface in methanda
- Area of lest pit u mississippi riven ba wetland area. His YDROLOGY	within Floodplain ck wash rausing the h organic matter	of perennial strong un and Frequent deposition in m surface in methoda
- Area of test pit u Mississippirium ba wetland area. His YDROLOGY Velland Hydrology Indicators:	h organic matter	m surface in wetlanda
- Area of test pit of Mississippi river bar wetland area. His	h organic matter of	Secondary Indicators (minimum of two required)
Area of test pit of Mississippi river bar wetland area. His YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one is required to Surface Water (A1)	h organic matter	Secondary Indicators (minimum of two required) _ Surface Soil Cracks (B6)
Area of test pit of Mississippi river bar wetland area. His YDROLOGY Vetland Hydrology Indicators: Timory Indicators (minimum of one is required to Surface Water (A1) High Water Table (A2)	h organic matter of	Secondary Indicators (minimum of two required)
Area of test pit of Mississippi river bar wetland area. His YDROLOGY Vettand Hydrology Indicators: Primary Indicators (minimum of one is required to Surface Water (A1) High Water Table (A2) Saturation (A3)	check all the Lapply) Water-Stained Leaves (B9)	Secondary Indicators (minimum of two required _ Surface Soit Cracks (B6)
Mississippirium ba wetland area. His DROLOGY Jetland Hydrology Indicators: finary 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)	Secondary Indicators (minimum of two required) Surface Soil Cracks (B6) Drainage Patterns (B10)
Mississippirium ba wetland area. His DROLOGY Jetland Hydrology Indicators: finary 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 Pients (B14)	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
Mississippirium ba wetland area. His /DROLOGY /etland Hydrology Indicators: rimary 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 Pients (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)
Mississippirium bar wettand area. His /DROLOGY /ettand Hydrology Indicators: mary Indicators (minimum of one is required; Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	check all that anow) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plents (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) (C3) Saturation Visible on Aerial Imagery (C9) Stunded or Stressed Plants (D1)
Mississip a river ba wettand area. His TOROLOGY Vettand Hydrology Indicators: Thimary Indicators (minimum of one is required in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plents (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots 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) (C3) Saturation Visible on Aerial Imagery (C9) Stunded or Stressed Plants (D1)
Mississippirium ba wettand area. His YDROLOGY Vettand Hydrology Indicators: Immary Indicators (minimum of one is required in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Edition Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	check all thet apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plents (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 required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) (C3) Saturation Visible on Aerial Imagery (C9) Studed or Stressed Plants (D1) Geomorphic Position (D2)
Mississip a river ba wettand area. His formary Indicators: rimary Indicators (minimum of one is required a 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)	check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plents (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Titled Solls (C	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) (C3) Saturation Visible on Aerial Imagery (C9) Studed or Stressed Plants (D1) Geomorphic Position (D2)
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Absolute Stratum (Plot size: 15 /) Salima (Plo	Project/Site:		City/County:	Range: 36/120	Sampling Date: 3-16 Sampling Point: WC+
Total Number of Dominant Species Free Stratum (Plot size: 5 / 2 / 2 / 2 / 2 / 2 / 2 / 2 / 2 / 2 /	andform (hillslope, terrace, etc.): Dp (155 - 174 lope (%): Lat: 31, 092, 07	2 A FLO	Long: - 90.	lief (concave, convex, none ろとんりく	A CALL SALE SALE SALES
re climatic / hydrologic conditions on the site typical for this time of year? Yes No (if no, explain in Remarks.) Are "Normal Circumstances" present? Yes yeary or Hydrology / Assignificantly disturbed? Are "Normal Circumstances" present? Yes (if needed, explain any answers in Ramarks.) Are "Normal Circumstances" present? Yes (if needed, explain any answers in Ramarks.) Are "Normal Circumstances" present? Yes (if needed, explain any answers in Ramarks.) Are Normal Circumstances present? Yes (if needed, explain any answers in Ramarks.) Are Normal Circumstances present? Yes (if needed, explain any answers in Ramarks.) Are Normal Circumstances present? Yes (if needed, explain any answers in Ramarks.) Are Normal Circumstances present? Yes (if needed, explain any answers in Ramarks.) Are Normal Circumstances present? Yes (if needed, explain any answers in Ramarks.) Are Normal Circumstances present? Yes (if needed, explain any answers in Ramarks.) Are Normal Circumstances present? Yes (if needed, explain any answers in Ramarks.) Are Normal Circumstances present? Yes (if needed, explain any answers in Ramarks.) Are Normal Circumstances present? Yes (if needed, explain any answers in Ramarks.) Are Normal Circumstances present? Yes (if needed, explain any answers in Ramarks.) Are Normal Circumstances present? Yes (if needed, explain any answers in Ramarks.) Are Normal Circumstances present? Yes (if needed, explain any answers in Ramarks.) Are Normal Circumstances present? Yes (if needed, explain any answers in Ramarks of on a separate sheet) Problematic Hydrology Multiple Vegetation (Explain) (Explain) Indicators of hydric soil and welfand hydrology multiple present. unless disturbed or problematic. Hydrological Adaptations (Provide suppodatia in Ramarks of on a separate sheet) Problematic Hydrology multiple present. Unless disturbed or problematic. Hydrological Adaptations (Provide suppodatia in Ramarks of on a separate sheet) Problematic Hydrology multiple present. Unless disturbed or problemati	oil Map Unit Name: Blyton 5:14 loan	0-1%			
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No list the Sampled Area within a Wetland? Yes No within a Wetland? Yes	UMMARY OF FINDINGS - Attach site	map showing	sampling point	t locations, transects	s, important features.
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GETATION - Use scientific names of plants. Absolute Dominant Indicator Number of Dominant Species That Are OBL, FACW, or FAC Total Number of Dominant	etland Hydrology Present? Yes	∠ No	within a Weti	land? Yes 🔼	No
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4 - Morphological Adaptations' (Provide support data in Remarks or on a separate sheet) — Problematic Hydrophytic Vegetation' (Explain) 1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Wester in				2. 21. 22. 22. 22. 22. 22. 22. 22. 22. 2	
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Problematic Hydrophytic Vegetation¹ (Explain) 1 Indicators of hydric soil and wedland hydrology must be present, unless disturbed or problematic. Hydrophytic Wegetation¹ (Explain)				4 - Morphological Ada	splations' (Provide supporting
Vine Stratum (Plot size: 30'r) Total Cover Indicators of hydric soil and wetland hydrology mu be present, unless disturbed or problematic. Hydrophytic Venetation					
Vine Stratum (Plot size: 30 r) Total Cover be present, unless disturbed or problematic. Hydrophytic Venetation				Fromematic Hydrophy	yuc vegetation (Explain)
A 6 Se ut				Indicators of builds	
A 6 Se vit	ty Vine Stratum (Plot size: 30 7		Total Cover	be present, unless disturb	no wedand hydrology must ed or problematic
Venetation /	A /		ł	, , , , , , , , , , , , , , , , , , , ,	Filesconnegge
Vegetation	Absent				
A) _ Present? Vac (ai _	/ 1 7 7 70			Vegetation Present? Yes	V No
rks: (Include photo numbers here or on a separate sheet.)	ulin: (Inchedo photo sumbos have		otal Cover		NO

WILWPIYSA
ampling Point UNHAY

Depth	Matrix		oth needed to docum	x Feature		-	u.e au		,
(inches)	Color (moist)	_ %_	Color (moist)	96	Type	Loc2	Text	ure	Remarks
1-3	10 YR4/3	100	_		_	-	Sci		CARTINGUA
3-17-	IN YP 4/	60	INVRYI	10	_	-	SCI		
	1111111	- 400	701011	70		<u>m</u>	200		
			7.57R4/6	10		<u>M</u>			
			104 83/1	20	<u> D</u>	M			
							-		
							_		
				-					
ydric Soil In	ndicators:	etion, RM=	Reduced Matrix, MS	=Masked	Sand Gr	ains.	Loc	ation: PL=Pore	Lining, M=Matrix.
_ Histosol (ACCOUNT OF THE PERSON OF THE P	11.	04-0						matic Hydric Solis*:
	pedon (A2)			leyed Mat edox (S5)				oast Prairie Red	
_ Black Hist				Matrix (S				ark Surface (S7)	
	Sulfide (A4)			lucky Min	•			on-Manganese M	riasses (F12) : Surface (TF12)
_ Stratified L	Layers (A5)		4 / 436 / 4 / 4	leyed Ma				ther (Explain in f	
2 cm Muc				Matrix (F	The second second		•	(Evhigh) (I) I	winding)
	Below Dark Surface	(A11)		ark Surfac					
	(Surface (A12)			Dark Sur	,		3Indic	ators of hydrophy	tic vegetation and
	cky Mineral (S1)		Redox Do	epression:	s (F8)		We	tland hydrology	must be present,
	y Peat or Peat (S3)						uri	less disturbed or	problematic.
	yer (if abserved):								
Туре:	navo							D-11 D-1 - 10	
Depth (Inche	98):						Hyanc:	Soil Present?	Yes _ No
-nam							:+:		and y
							*		444
DROLOGY	•						:+:		and the
DROLOGY	logy Indicators:						*		
DROLOGY	logy Indicators: rs (minimum of one	is requires	t: check all that soot				Seco	ndary Indicators	(minimum of two require
DROLOGY tland Hydro mary Indicato Surface Wa	f logy Indicators: rs (minimum of one ter (A1)	ia requires	Water-Staine	d Leaves	(B9)		-5	surface Soil Crac	ks (B6)
DROLOGY Itland Hydro mary Indicato Surface Wa High Water	fogy Indicators: ers (minimum of one ter (A1) Table (A2)	is required	Water-Staine Aquatic Faun	d Leaves a (B13)			7	jurface Soil Crac Trainage Patterns	ks (86) s (810)
DROLOGY Itland Hydro mary Indicato Surface Wa High Water Saturation (fogy Indicators: ors (minimum of one ter (A1) Table (A2) A3)	is required	Water-Staine Aquatic Faun True Aquatic	d Leaves a (B13) Pients (B	14)		2	Surface Soil Crac Prainage Patterns Pry-Season Wate	ks (B6) i (B10) r Table (C2)
DROLOGY Mand Hydro mary Indicate Surface Wai High Water Saturation (/ Water Marke	fogy Indicators: ors (minimum of one ter (A1) Table (A2) A3) s (B1)	ia requires	Water-Staine — Aquatic Faun — True Aquatic — Hydrogen Su	d Leaves a (B13) Plants (B fide Odor	14) (C1)			jurace Soil Crac trainage Pattern try-Season Wate trayfish Burrows	ks (B6) r (B10) r Table (C2) (C8)
DROLOGY Mand Hydro mary Indicate Surface Wai High Water Saturation (/ Water Marks Sediment De	fogy Indicators: rs (minimum of one ter (A1) Table (A2) A3) s (B1) sposits (B2)	ia requires	Water-Staine Aquatic Faun True Aquatic Hydrogen Sul Oxidized Rhiz	d Leaves a (B13) Plants (B fide Odor cospheres	14) (C1) on Living	y Roots (C		ymace Soil Crac trainage Patterni try-Season Wate trayfish Burrows aturation Visible	ks (B6) r (B10) r Table (C2) (C8) on Aerial Imagery (C9)
DROLOGY tland Hydro mary Indicate Surface Wa High Water Saturation (A Water Market Sediment De Drift Deposit	fogy Indicators: rs (minimum of one ter (A1) Table (A2) A3) s (B1) sposits (B2) ts (B3)	ia requires	Water-Staine Aquatic Faun True Aquatic Hydrogen Sui Oxidized Rhiz Presence of F	d Leaves a (B13) Plants (B fide Odor cospheres Reduced la	14) (C1) on Living ron (C4)		3) _ s	jurace Soil Crac trainage Patterns try-Season Wate trayfish Burrows aturation Visible tunted or Stress	ks (B6) • (B10) r Table (C2) (C8) on Aerial Imagery (C9) ed Plants (D1)
DROLOGY tiand Hydro mary indicate Surface Wa High Water Saturation (/ Water Marke Sediment De Drift Deposit Algal Mat or	fogy Indicators: rs (minimum of one ter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) Crust (B4)	is required	Water-Staine Aquatic Faun True Aquatic Hydrogen Sul Oxidized Rhiz Presence of F	d Leaves a (B13) Plants (Bifide Odor coepheres Reduced la eduction	14) (C1) on Living ron (C4) in Tilled S		3) _ 8	juriace Soil Crac trainage Patterns try-Season Wate trayfish Burrows aturation Visible tunted or Stress eomorphic Posit	ks (B6) • (B10) r Table (C2) (C8) on Aerial Imagery (C9) ed Plants (D1) ion (D2)
DROLOGY tland Hydro mary Indicate Surface Wa High Water Saturation (/ Water Marke Sediment De Drift Deposit Algal Mat or Iron Deposit	fogy Indicators: rs (minimum of one ter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) Crust (B4) s (B5)		Water-Staine Aquatic Faun True Aquatic Hydrogen Sui Oxidized Rhiz Presence of F Recent Iron R Thin Muck Su	d Leaves a (B13) Plants (B: lifide Odor cospheres Reduced II reduction riace (C7)	14) (C1) on Living ron (C4) in Tilled S		3) _ 8	jurace Soil Crac trainage Patterns try-Season Wate trayfish Burrows aturation Visible tunted or Stress	ks (B6) • (B10) r Table (C2) (C8) on Aerial Imagery (C9) ed Plants (D1) ion (D2)
DROLOGY tland Hydro nary Indicato Surface Wal High Water Saturation (Water Marke Sediment De Drift Deposit Algal Mat or Iron Deposit Inundation V	fogy Indicators: rs (minimum of one ter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) Crust (B4) s (B5)	gery (87)	Water-Staine Aquatic Faun True Aquatic Hydrogen Su Oxidized Rhiz Presence of F Recent iron R Thin Muck Su Gauge or Wel	d Leaves a (B13) Plants (B' fide Odor cospheres Reduced In reduction in	14) (C1) on Living ron (C4) in Tilled S)		3) _ S	juriace Soil Crac trainage Patterns try-Season Wate trayfish Burrows aturation Visible tunted or Stress eomorphic Posit	ks (B6) • (B10) r Table (C2) (C8) on Aerial Imagery (C9) ed Plants (D1) lon (D2)
DROLOGY tland Hydro surface Wal High Water Saturation (/ Water Marke Sediment De Drift Deposit Algal Mat or Iron Deposit Inundation V Sparsely Veg	fogy Indicators: rs (minimum of one ter (A1) Table (A2) A3) a (B1) eposits (B2) ts (B3) Crust (B4) s (B5) risible on Aerial Imagetated Concave Su	gery (87)	Water-Staine Aquatic Faun True Aquatic Hydrogen Sui Oxidized Rhiz Presence of F Recent Iron R Thin Muck Su	d Leaves a (B13) Plants (B' fide Odor cospheres Reduced In reduction in	14) (C1) on Living ron (C4) in Tilled S)		3) _ S	juriace Soil Crac trainage Patterns try-Season Wate trayfish Burrows aturation Visible tunted or Stress eomorphic Posit	ks (B6) • (B10) r Table (C2) (C8) on Aerial Imagery (C9) ed Plants (D1) lon (D2)
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DROLOGY Itland Hydro mary Indicate Surface Wai High Water Saturation (/ Water Marks Sediment De Drift Deposit Algal Mat or Iron Deposit Inundation V Sparsely Veg d Observatio ace Water Pr	fogy Indicators: res (minimum of one ter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) Crust (B4) s (B5) Tisible on Aerial Imagetated Concave Superiors: resent? Yes	gery (87) urface (88)	Water-Staine Aquatic Faun True Aquatic Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Thin Muck Sul Gauge or Wel Other (Explain	d Leaves a (B13) Plants (B: Ifide Odor cospheres Reduced la Reduced (C7; I Data (D6) i in Remai	14) (C1) on Living ron (C4) in Tilled S)		3) _ S	juriace Soil Crac trainage Patterns try-Season Wate trayfish Burrows aturation Visible tunted or Stress eomorphic Posit	ks (B6) • (B10) r Table (C2) (C8) on Aerial Imagery (C9) ed Plants (D1) ion (D2)
DROLOGY Itland Hydro Surface Water Saturation (/ Water Market Sediment De Drift Deposit Algal Mat or Iron Deposit Inundation V Sparsely Veg d Observation ace Water Preser Table Preservation	fogy Indicators: rs (minimum of one ter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) Crust (B4) s (B5) fisible on Aerial Imagestated Concave Superstated Concave Su	gery (87) urface (88) No	Water-Staine Aquatic Faum True Aquatic Hydrogen Sul Oxidized Rhiz Presence of F Recent iron R Thin Muck Su Gauge or Wel Other (Explain	d Leaves a (B13) Plants (B' lifide Odor coepheres Reduced la reduction risce (C7) I Data (D6) in Remail	14) (C1) on Living ron (C4) in Tilled S)	iolis (C6)	3) _ 8 _ 6 _ F	jurface Soil Crac trainage Patterns try-Season Wate trayfish Burrows aturation Visible tunted or Stress aumorphic Posit AC-Neutral Test	ks (B6) a (B10) r Table (C2) (C8) on Aerial Imagery (C9) ad Plants (D1) ion (D2) (D5)
DROLOGY Itland Hydro mary Indicate Surface Wai High Water Saturation (/ Water Marks Sediment De Drift Deposit Algal Mat or Iron Deposit Inundation V Sparsely Veg d Observatio ace Water Preservation Preservation	fogy Indicators: rs (minimum of one ter (A1) Table (A2) A3) s (B1) sposits (B2) ts (B3) Crust (B4) s (B5) Table on Aerial Imagetated Concave Superated Conca	gery (87) urface (88) No	Water-Staine Aquatic Faum True Aquatic Hydrogen Sul Oxidized Rhiz Presence of F Recent iron R Thin Muck Su Gauge or Wel Other (Explain	d Leaves a (B13) Plants (B' lifide Odor coepheres Reduced la reduction risce (C7) I Data (D6) in Remail	14) (C1) on Living ron (C4) in Tilled S)	iolis (C6)	3) _ 8 _ 6 _ F	jurface Soil Crac trainage Patterns try-Season Wate trayfish Burrows aturation Visible tunted or Stress aumorphic Posit AC-Neutral Test	ks (B6) • (B10) r Table (C2) (C8) on Aerial Imagery (C9) ed Plants (D1) ion (D2)
DROLOGY Itland Hydro mary Indicato Surface Wai High Water Saturation (i) Water Marks Sediment De Drift Deposit Algal Mat or Iron Deposit Inundation V Sparsely Veg d Observatio ace Water Preservation Preservation	fogy Indicators: rs (minimum of one ter (A1) Table (A2) A3) s (B1) sposits (B2) ts (B3) Crust (B4) s (B5) faible on Aerial Imagetated Concave Successives: resent? Yes_ sent? Yes_ y fringe)	gery (87) urface (88) No No	Water-Staine Aquatic Faum True Aquatic Hydrogen Sul Oxidized Rhiz Presence of F Recent iron R Thin Muck Su Gauge or Wel Other (Explain	d Leaves a (813) Plants (8: Ifide Odor cospheres Reduced It reduction or face (C7) I Data (D8) in Rema	(C1) on Living ron (C4) in Tilled S) rks)	Wetland	3) _ 8 _ 5 _ 6 _ F	jurface Soil Crac trainage Patterns try-Season Wate trayfish Burrows aturation Visible tunted or Stress aumorphic Posit AC-Neutral Test	ks (B6) a (B10) r Table (C2) (C8) on Aerial Imagery (C9) ad Plants (D1) ion (D2) (D5)
DROLOGY Itland Hydro mary Indicato Surface Wai High Water Saturation (i) Water Marks Sediment De Drift Deposit Algal Mat or Iron Deposit Inundation V Sparsely Veg d Observatio ace Water Preservation Preservation	fogy Indicators: rs (minimum of one ter (A1) Table (A2) A3) s (B1) sposits (B2) ts (B3) Crust (B4) s (B5) faible on Aerial Imagetated Concave Successives: resent? Yes_ sent? Yes_ y fringe)	gery (87) urface (88) No No	Water-Staine Aquatic Faun True Aquatic Hydrogen Su Oxidized Rhiz Presence of F Recent iron R Thin Muck Su Gauge or Wel Other (Explain Depth (Inches	d Leaves a (813) Plants (8: Ifide Odor cospheres Reduced It reduction or face (C7) I Data (D8) in Rema	(C1) on Living ron (C4) in Tilled S) rks)	Wetland	3) _ 8 _ 5 _ 6 _ F	jurface Soil Crac trainage Patterns try-Season Wate trayfish Burrows aturation Visible tunted or Stress aumorphic Posit AC-Neutral Test	ks (B6) a (B10) r Table (C2) (C8) on Aerial Imagery (C9) ad Plants (D1) ion (D2) (D5)
DROLOGY Itland Hydro mary Indicato Surface Wat High Water Saturation (/ Water Marks Sediment De Drift Deposit Algal Mat or Iron Deposit Inundation V Sparsely Veg d Observatio ace Water Preser Table Preser action Preser	fogy Indicators: rs (minimum of one ter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) Crust (B4) s (B5) fisible on Aerial Imagestated Concave Superial Yes _ sent? Yes _ y fringe) ed Data (stream gau	gery (B7) urface (B8) No No No	Water-Staine Aquatic Faun True Aquatic Hydrogen Su Oxidized Rhiz Presence of F Recent iron R Thin Muck Su Gauge or Wel Other (Explain Depth (Inches	d Leaves a (B13) Plants (B: ifide Odor cospheres Reduced la deduction i rface (C7; I Data (D6) in Remai	(C1) on Living ron (C4) in Tilled S) rks)	Wetland	3) _ 8 _ 5 _ 6 _ F	jurface Soil Crac trainage Patterns try-Season Wate trayfish Burrows aturation Visible tunted or Stress aumorphic Posit AC-Neutral Test	ks (B6) a (B10) r Table (C2) (C8) on Aerial Imagery (C9) ad Plants (D1) ion (D2) (D5)

WX2-550-149

Project/Site:ST_L Applicant/Owner:SP1P	City	//County: <u>Je t</u>	
_			State: Sampling Point: wettan
Investigator(s): A			
Landform (hillslope, terrace, etc.):			
Slope (%): 3 Lat: 39, 697207			
Soil Map Unit Name: (902) Hickory >	It looner	10-13% 3	W cleseification:
Are climatic / hydrologic conditions on the site typical for			
Are Vegetation <u>N</u> . Soil <u>N</u> , or Hydrology <u>P</u>			"Normal Circumstances" present? Yes No
Are Vagetation V. Soil V or Hydrology			needed, explain any answers in Remarks.)
			locations, transects, important features, etc.
Hydrophytic Vegetation Present?	No		/ '
Hydric Soil Present?	No	is the Sample	d Area
Wetland Hydrology Present?	No	within a Wetla	nd? Yes No
Remarks:		3 ()	
- Area sample point for	15M/40	The LAN	wetland WILLJUPITY
- wetland runs along roa	dide d	Ich and	ox lends in acris 1 - lal
VEGETATION - Use scientific names of plant	4=		14 47 VIC.71 PIO
VEGETATION - Use scientific names of plan			
Tree Stratum (Plot size: 30' r		minant Indicator ocies? Status	Dominance Test worksheet:
1.	<u> </u>	Otatus	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2.	_,,		I nat Are OBL, FACW, or FAC: (A)
3.			Total Number of Dominant
4 HOSENOT			Species Across All Strata: (B)
5.			Percent of Dominant Species That Are ORL FACW or FAC: / W
, , , , , ,	(⁄) ≈ To	otal Cover	That Are OBL, FACW, or FAC:/ (A/B)
Sapling/Shrub Stratum (Plot size: 15'v)			Prevalence Index worksheet:
1			
2.			OBL species x 1 =
3.			FACW species x 2 =
4. HOSEN			FAC species x3 =
5	- 		FACU species x 4 =
Herb Stratum (Plot size: 5 '~)	= To	tal Cover	UPL species x 5 =
1. Scirous atrovirens	us V	-01	Column Totals: (A) (B)
/ 1	- 20 Y	- OBL	Beaustones today - B/A -
2. Schedonary archineses	20 Y	FACL	Prevalence Index = B/A =
Echinachlas cirus calli	10	J OVEL	1 - Rapid Test for Hydrophytic Vegetation
	-40-	FACW	
Symphoto Lance alatum		1 upl	2 - Dominance Test is >60% 3 - Prevalence Index is ≤3.0¹
Rumex objusifalias			
ADMAX DOTOSITALES		FAC	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
).].			Problematic Hydrophytic Vegetation1 (Explain)
Voody Vine Stratum (Plot size: 30'V)	180 = Tota	al Cover	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Abust			Moderatists
74 3783			Hydrophytic Vegetation
	(7) = Total	al Cover	Present? Yes No
Remarks: (Include photo numbers here or on a separate		ai COAGI	
- 4 ave			
1016			1

Depth Matrix	Redo	E Feature	15				
	% Color (moist)	- 95	Type	Loc	Text	ire .	Remarks
0-4 104R4/3 91	2.5YR46	10		PL-M	Sic	L	
4-17 2514/1	7.5184/6	10	\overline{c}	PL-M			
	54R3/4	5		m	<u> </u>		
				<u> </u>	-		
						_	
							*
Type: C=Concentration, D=Depletion	. RM=Reduced Matrix, MS	=Masked	Sand Gr	ains.	² Lnc	afion:	PL=Pore Lining, M=Matrix.
lydric Soil Indicators:							r Problematic Hydric Solls ¹ :
Histosol (A1)	Sandy G	leyed Ma	atrix (S4)		c	oast Pr	airie Redox (A16)
_ Histic Epipedon (A2)	Sandy R	edox (S5	5)				face (S7)
Black Histic (A3)	Stripped	Matrix (S	86)		In	on-Men	ganese Masses (F12)
Hydrogen Sulfide (A4)			neral (F1)				llow Dark Surface (TF12)
_ Stratified Layers (A5)		leyed Ma	STATE OF THE PARTY		_ 0	ther (Ex	rplain in Remarks)
2 cm Muck (A10)	∠ Depleted						
 Depleted Below Dark Surface (A11 Thick Derk Surface (A12) 		ark Surfa	ice (F6) rface (F7)		31		decoderate at a comment of the comme
_ Sandy Mucky Mineral (S1)		apression					hydrophytic vegetation and ydrology must be prasent.
5 cm Mucky Peat or Peat (S3)		api essioi	13 (1 0)				sturbed or problematic.
sstrictive Layer (if observed):						necoo di	raised of problemate.
Typa: NM							_
Depth (Inches):					Hydric	Soil Pr	esent? Yes No
V	¥				+		
nave	¥				+		
DROLOGY	*				+		
DROLOGY etland Hydrology Indicators:	equired; check all that app	(v)			Sec	ondary (ndicators (minimum of two require
DROLOGY etland Hydrology Indicators:			s (B9)				
DROLOGY etland Hydrology Indicators: many Indicators (minimum of one is n	Weter-Stain	ed Leave	s (B9)			Surface	Soil Cracks (B6)
DROLOGY atland Hydrology Indicators: mary Indicators (minimum of one is m _ Surface Water (A1)	Weter-Staine Aquatic Fau	ed Leave na (B13)	, ,		<u></u>	Surface Drainag	Soil Cracks (B6) e Patterns (B10)
DROLOGY Itland Hydrology Indicators: mary Indicators (minimum of one is m Surface Water (A1) High Water Table (A2)	Weter-Staine Aquatic Faul True Aquatic	ed Leave na (B13) : Plants (I	B14)		<u></u>	Surface Drainag Dry-Sea	Soil Cracks (66) e Patterns (610) son Watar Table (C2)
DROLOGY etland Hydrology Indicators: imery Indicators (minimum of one is m Surface Water (A1) High Water Table (A2) Saturation (A3)	Weter-Staine Aquatic Fau True Aquatic Hydrogen St	ed Leave na (B13) Plants (I ulfide Odd	B14) or (C1)	a Roots (C		Surface Drainag Dry-Sea Crayfish	Soil Cracks (B6) e Patterns (B10) ison Watar Table (C2) i Burrows (C8)
DROLOGY etland Hydrology Indicators: imery Indicators (minimum of one is re _ Surface Water (A1) _ High Water Table (A2) _ Saturation (A3) _ Water Marks (B1)	Weter-Staine Aquatic Faur True Aquatic Hydrogen St	ed Leave na (B13) Plants (I ulfide Ock izosphare	B14) or (C1) as on Livin			Surface Drainag Dry-Ses Crayfish Saturati	Soil Cracks (B6) e Patterns (B10) son Watar Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9)
DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one is not suffice Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Weter-Staine Aquatic Fau True Aquatic Hydrogen St Oxidized Rhi Presence of	ed Leave na (B13) Plants (I ulfide Odd izoaphare Reduced	B14) or (C1) as on Livin I Iron (C4)		- 1 - 3) _ 3	Surface Drainag Dry-Sea Crayfish Saturation	Soil Cracks (B6) e Patterns (B10) son Watar Table (C2) a Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1)
DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one is m Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Daposits (B3)	Weter-Staine Aquatic Faur True Aquatic Hydrogen St	ed Leave. na (B13) : Plants (I ulfide Odd izoaphare Reduced	B14) or (C1) as on Livin I fron (C4) a in Tilled		3) _ 3	Surface Drainag Dry-Ses Crayfish Saturati Stunted Geomor	Soil Cracks (B6) e Patterns (B10) son Watar Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9)
DROLOGY etland Hydrology Indicators: many Indicators (minimum of one is re Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Daposits (B3) Algal Mat or Crust (B4)	Weter-Staine Aquatlc Fau True Aquatlc Hydrogen St Oxidized Rhi Presence of Recent Iron Thin Muck St	ed Leave. na (B13) c Plants (I ulfide Odd izosphare Reduced Reduction urface (C	B14) or (C1) as on Livin Iron (C4) in In Tilled		3) _ 3	Surface Drainag Dry-Ses Crayfish Saturati Stunted 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)
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Applicant/Owner: Series Sample of Point Series Sample of Point Series Investigator(s): Investiga	Project/Site: 5TL	City/County:	ersey Co Sampling Date: 3/14
Section, Township, Range: 12 to 74		onyroddiny	
Landtom thildops, terrace, atc): Per testing on floodylon. Local relief (concave, convex, none): Concerns (convex, none): Convex (conve	Investigator(s): JJf / CDK	Section Townshir	
Slope (N): Unit Name: (1) 1/2 1/4 1/4 1/4 1/4 1/4 1/4 1/4 1/4 1/4 1/4	Landform (hillslope, terrace, etc.): De pression	en fluodolain Locale	relief (contrary convey party)
Soil Map Unit Name: Blyton Silf (and O) Slopes tree, Flood NM cleasification: Management of Name (Protein) and the State of Name (Protein) and the Name (P	Slope (%): 0% Lat: 39. 07/147	1000 - 90	39 1714
Are condition in Remarks. No (If no. explain in Remarks.) Are Vegetation \(\) Soil \(\) or Hydrology \(\) significantly disturbed? Are Vegetation \(\) Soil \(\) or Hydrology \(\) naturally problematic? Are Nomal Circumstances' present? Yes \(\) No (if needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transacts, important features, et hydrophytic Vegetation Present? Yes \(\) No \(\) Is the Sampled Area within a Westland? Yes \(\) No \(\) Is the Sampled Area within a Westland? Yes \(\) No \(\) Is the Sampled Area within a Westland? Per \(\) Finding \(\) Fem \(\) Let \(\) \	01 11 1		Datum: VAD 83
Are Vegetation Sell Y or hydrology Analysis of problematic? Are Normal Circumstances' present? Yes No (freeded, explain any answers in Remarka.) SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, et hydrophytic Vegetation Present? Yes No (set the Sampled Area within a Wethand?) Wetland Hydrology Present? Yes No (within a Wetland?) Wetland Hydrology Present? Yes No (within a Wetland?) Per Statum (Plot laze: 30') Absolute Substitute Deprison of Dening Species That Are OBL, FACW, or FAC: (A) Total Number of Dominant Species That Are OBL, FACW, or FAC: (A) Total Number of Dominant Species That Are OBL, FACW, or FAC: (A) Total Number of Dominant Species That Are OBL, FACW, or FAC: (A) Total Number of Dominant Species That Are OBL, FACW, or FAC: (A) Total Number of Dominant Species That Are OBL, FACW, or FAC: (A) Total Number of Dominant Species That Are OBL, FACW, or FAC: (A) Total Number of Dominant Species That Are OBL, FACW, or FAC: (A) Total Number of Dominant Species That Are OBL, FACW, or FAC: (A) Total Number of Dominant Species That Are OBL, FACW, or FAC: (A) Total Number of Dominant Species That Are OBL, FACW, or FAC: (A) Total Number of Dominant Species That Are OBL, FACW, or FAC: (A) Total Number of Dominant Species That Are OBL, FACW, or FAC: (B) Prevalence Index worksheet: Total Scorer of Multibot by: (B) FAC species Total Cover Prevalence Index = B/A = 2.5 % FACW species Total Cover Prevalence Index = SAO: (A) 1-60 (B) Prevalence Index = SAO: (this time of years No.	NWI classification:
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SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, et hydrophytic vegetation present? Hydrophytic Vegetation present? Yes No			
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Wetland Hydrology Present? Wes No within a Wetland? Wes No	I		
Remarks: Depressional PEM wetland. Area clisturbed! uneven tergraphy, Possibly old fallow field. Regetation - Use scientific names of plants. Incestratum (Plot size: 30'/) Absolute Species? Remarks: Dominant Indicator Species That Are OSL, FACW, or FAC: Number of Dominant Species That Are OSL, FACW, or FAC: Number of Dominant Species That Are OSL, FACW, or FAC: Not Prevalence Indicator Species Across All Stratus. Remarks: Dominance Test worksheet: Number of Dominant Species That Are OSL, FACW, or FAC: Number of Dominant Species That Are OSL, FACW, or FAC: Not Prevalence Indicator Species Across All Stratus. Remarks: Dominance Test worksheet: Number of Dominant Species That Are OSL, FACW, or FAC: Not Prevalence Indicator Species Across All Stratus. Repeated That Are OSL, FACW, or FAC: Not Prevalence Indicator Species Across All Stratus. Prevalence Indicator Multitory by: OSL species 10 x3 = 30 FACW species 10 x3 = 10 FACW	144-4		
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Tices Stratum (Pipt size: 30') Absolute Species? Status Absolute Stratum (Pipt size: 30') Absolute Species? Status	ald Cill Sold	7124 Cisthr 3201	. Areven leregraphy, Possibly
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Number of Dominant Species Composition	Tree Stratum (Plot size: 30 //	Absolute Deminant Indicate % Cover Species? Status	3
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Prevalence Index = B/A = 2.88 Contains h.//shta 10		to Y FACE	Column Totals: 90 (A) 260 (B)
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Americant has tuberculatus Americ			
Americant has Tuberculatus		5 N 4PL	4 - Morphological Adaptations' (Provide supporting
1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 1 Indicators of hydric soil and wetland hydrology must be present. 1 Indicators of hydric soil and wetland hydrology must be present. 1 Indicators of hydric soil and wetland hydrology must be present. 1 Indicators of hydric soil and wetland hydrology must be present. 1 Indicators of hydric soil and wetland hydrology must be present. 1 Indicators of hydric soil and wetland hydrology must be present. 1 Indicators of hydric soil and wetland hydrology must be present. 1 Indicators of hydric soil and wetland hydrology must be present. 1 Indicators of hydric soil and wetland hydrology must be present. 1 Indicators of hydric soil and wetland hydrology must be present. 1 Indicators of hydric soil and wetland hydrology must be present. 1 Indicators of hydric soil and wetland hydrology must be present. 1 Indicators of hydric soil and wetland hydrology must be present. 1 Indicators of hydric soil and wetland hydrology must be present. 1 Indicators of hydric soil and wetland hydrology must be present. 1 Indicators of hydric soil and wetland hydrology must be present. 1 Indicators of hydric soil and wetland hydrology must be present. 1 Indicators of hydric soil and wetland hydrology must be present. 1 Indicators of hydric soil and wetland hydrology must be present. 1 Indicators of hydric soil and wetland hydrology must be present. 1 Indicators of hydric soil and wetland hydrology must be present. 1 Indicators of hydric soil and	Americathus Tuberculatus	5 N OBL	data in Remarks or on a separate sheet)
1 1 1 1 1 1 1 1 1 1			- Problematic Hydrophytic Vegetation' (Explain)
be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes No			1-martine of the first
Absent Hydrophytic Vegetation Present? Yes No	ody Vine Stratum (Plot size: 307	10 = Total Cover	be present, unless disturbed or problematic.
Vegetation Present? Yes No	(C)	- \ -	
Total Cover Present? Yes No			
marks: (include photo numbers here or on a separate sheet.)		= Total Cover	
	marks: (include photo numbers here or on a separate sh	loot.)	/

WIL-JJP-151

Onother)	ription: (Describe Matrix		Redo	x Feature				
(Inches)	Color (moint)	_%_	Color (moist)	_%_	Type	Loc	Texture	Remarks
		98	10443/4	7		M	SICL	
4-17"	104R4/2	90	7.5484/6	_5_		MIPL	SCL	
			7.5483/4	5	(MA		
		_						
ydric Soll Ind Histosol (A Histic Epipe Black Histic Hydrogen & Stratified La 2 cm Muck	:Ilcators: 1) edon (A2) : (A3) Sulfide (A4) ayers (A5)		Sandy Re Stripped Loamy M	leyed Mat edox (S5) Matrix (S6 ucky Mine leyed Mat Matrix (F6	Irix (S4) 3) eral (F1) Irik (F2)	ains.	indicators for Coast Program Dark Sure Iron-Man	PL=Pore Lining, M=Matrix. Problematic Hydric Soile ³ : airle Redox (A16) face (S7) ganese Messes (F12) flow Dark Surface (TF12) cplain in Remarks)
_ Thick Dark : _ Sandy Muck	Surface (A12) (y Mineral (S1)			Dark Surf	ace (F7)		3indicators of wetland h	hydrophytic vegetation and ydrology must be present,
The second second second	Peat or Peat (53)						unless die	durbed or problematic.
	or (if observed):							
· MPARY	/ UNK						Hydric Soll Pro	X
Depth (inches			_				nydric soil Ph	esent? Yes No
Depth (inches	None		+				nydric Soil Ph	reent? Yes No
Depth (inches marks: DROLOGY tland Hydrolo	None		+				nydric Soil Ph	reent? Yes No
Depth (inches marks: DROLOGY tland Hydroid mary indicators	Monse	is required	: check all that apply					
DROLOGY Cland Hydrolomery Indicators Surface Water High Water To Saturation (A: Water Marks Sediment Deposits Algal Mat or Clinon Deposits Inundation Visit	ogy Indicators: s (minimum of one or (A1) able (A2) 3) (B1) costs (B2) (B3) Crust (B4)	jery (B7)	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sull Oxidized Rhim Presence of R Recent Iron Re Thin Muck Sur Gauge or Well	d Leaves (a (B13) Plents (B1 Ide Odor ophens educed in eduction in face (C7) Data (D9)	(C1) on Living on (C4) n Tilled S		Secondary in Surface Drainage Crayfish Saturation Stunted of	ndicators (minimum of two requires Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) In Stressed Plants (D1) Inc Position (D2) Itral Test (D5)
Depth (inches marks: DROLOGY Hand Hydrold mary Indicators Surface Water High Water To Saturation (A: Water Marks Sediment Deposits Algal Mat or Colron Deposits Inundation Vis Sparsely Vege	ogy Indicators: (minimum of one or (A1) able (A2) 3) (B1) costs (B2) (B3) Crust (B4) (B5) ible on Aerial Imagrated Concave Su	jery (B7)	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sull Oxidized Phila Presence of R Recent Iron Re Thin Muck Sur	d Leaves (a (B13) Plents (B1 Ide Odor ophens educed in eduction in face (C7) Data (D9)	(C1) on Living on (C4) n Tilled S		Secondary in Surface Drainage Crayfish Saturation Stunted of	ndicators (minimum of two requires Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1)
Depth (inches marks: DROLOGY Identify Indicators Surface Water High Water To Saturation (A: Water Marks Sediment Deposits Aigal Mat or Colon Deposits Inundation Vis Sparsely Veget Observation	ogy Indicators: s (minimum of one or (A1) able (A2) 33) (B1) cosits (B2) (B3) crust (B4) (B5) dible on Aerial Imagestated Concave Sures:	jery (B7)	Water-Stained Aquatic Fauna True Aquatic I Hydrogen Sult Oxidized Rhize Presence of R Recent Iron Re Thin Muck Sur Gauge or Well Other (Explain	d Leaves (a (B13) Plants (B1 fide Oder (cophenes educed in eduction in face (C7) Data (D9) in Reman	(C1) on Living on (C4) n Tilled S		Secondary in Surface Drainage Crayfish Saturation Stunted of	ndicators (minimum of two requires Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1)
Depth (inches marks: DROLOGY tland Hydroid mary indicators Surface Water High Water To Saturation (A: Water Marks Sediment Deposits Algai Mat or Clron Deposits Inundation Vis Sparsely Vege 1 Observation ace Water Pre-	ogy Indicators: is (minimum of one or (A1) able (A2) 3) (B1) costs (B2) (B3) crust (B4) (B5) ible on Aerial Imag	jery (B7) rface (B8)	Water-Stained Aquatic Fauna True Aquatic I Hydrogen Sult Oxidized Rhin Presence of R Recent Iron Ro Thin Muck Sur Gauge or Well Other (Explain	d Leaves (a (B13) Plants (B1 fide Odor ophens educed in eduction in face (C7) Data (D9) in Reman	(C1) on Living on (C4) n Tilled S		Secondary in Surface Drainage Crayfish Saturation Stunted of	ndicators (minimum of two requires Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1)
Depth (inches marks: DROLOGY Identify Indicators Surface Water High Water To Saturation (A: Water Marks of Sediment Deposits Aigal Mat or Colon Deposits Inundation Vis Sparsely Veget Observation ace Water Preser Table Preser Table Preser	ogy Indicators: s (minimum of one or (A1) able (A2) 3) (B1) cosits (B2) (B3) crust (B4) (B5) c	No No No	Water-Stained Aquatic Fauna True Aquatic I Hydrogen Sulf 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 ophens educed in eduction ir face (C7) Data (D9 in Reman	(C1) on Living on (C4) n Tilled S	oils (C6) Wetland	Secondary In Surface Drainage Dry-Sea Crayfish Saturatio Stunted of Geomory FAC-Neu	ndicators (minimum of two requires Soil Cracks (B6): Patterns (B10): Son Water Table (C2): Burrows (C8): In Visible on Aerial Imagery (C9): Stressed Plants (D1): thic Position (D2): trail Test (D5)
Depth (inches marks: DROLOGY Itland Hydrolog mary Indicators Surface Water To Saturation (A. Water Marks Sediment Deposits Inundation Vis Sparsely Vege dobervation ace Water Preser Table Preser radion Present udes capitary I	ogy Indicators: s (minimum of one or (A1) able (A2) 3) (B1) cosits (B2) (B3) crust (B4) (B5) c	No No No	Water-Stained Aquatic Fauna True Aquatic I Hydrogen Sulf Oxidized Rhin Presence of R Recent Iron Re Thin Muck Sur Gauge or Well Other (Explain	d Leaves (a (B13) Plants (B1 fide Odor ophens educed in eduction ir face (C7) Data (D9 in Reman	(C1) on Living on (C4) n Tilled S	oils (C6) Wetland	Secondary In Surface Drainage Dry-Sea Crayfish Saturatio Stunted of Geomory FAC-Neu	ndicators (minimum of two requires Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) In Stressed Plants (D1) Inc Position (D2) trai Test (D5)

WMO-JJP-126

WETLAND DETERMINATION DATA FORM - Midwest Region NCF City/County: St. Lonis Co Sampling Date: 3/15/17 Project/Site: Applicant/Owner: State: MD Sampling Point Voting Investigator(s): JJf / C) k Section, Township, Range: 15/76 Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): CANCAVA Long: - 90,02084 Datum: NADE3 0-2% slopes, free flooded NWI classification: Nune Soil Map Unit Name: W. bur Silt loan Are climatic / hydrologic conditions on the site typical for this time of year? Yes No_____ (If no, explain in Remarks.) 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 ~ Hydric Soll Present? is the Sampled Area Wetland Hydrology Present? within a Wetland? No Ramarka: Depressional PEM situated lawn. VEGETATION - Use scientific names of plants. Absolute Dominant Indicator Dominance Test worksheet: Tree Stratum (Plot size: 30'/ % 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 001/ (A/B) That Are OBL, FACW, or FAC __ = Total Cover Saoling/Shrub Stratum, (Plot size: 151/ Prevalence Index worksheet: Total % Cover of: Multioly by: _____ x1=____ FACW species _____ x 2 = _ FAC species FACU species Herb Stratum (Plot size: 5 // UPL species Column Totals: __ (A) _____ 1. Lysimachia nymma 2 Schedonorus anndinge ous Prevalence Index = B/A = 3. Echinochlog cras-sall Hydrophytic Vagetation Indicators: 4 Aster Sp. 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) Indicators 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.) * Species not identified beyond genus been level prevalence index calculations

Sampling Point_Wetland

Depth (Inches) (Matrix Color (moist)	-%	Co(or (moist)	Feature		Loc	Texture	
0-17"	5 14/	_		-%_	Type			Remarks
0-17	11. 10.	40	7.54846				Sich_	
			7.54R 74	_5_	<u> </u>	MIPL		
		*						
ype: C=Concent	ration, D=Deple	ion, RM	Fleduced Matrix, MS	-Masked	Sand Gr	ains.	² Location: F	PL=Pore Lining, M=Matrix.
Histosol (A1)			9		W. 154			r Problematic Hydric Soils ³ :
Histic Epipedo	1 (A2)		Sandy GI Sandy Re	-				irie Redox (A16)
Black Histic (A			Stripped I				Dark Surf	, , ,
Hydrogen Sulfi	•		Loamy M	•	•			ganese Masses (F12) llow Dark Surface (TF12)
Stratified Layer			Libamy GI					plain in Remarks)
2 cm Muck (A1	,		≥ Depleted		W.C.0-1			present in internation/
Depleted Below		A11)	Redox Da	rk Surfac	∞ (F6)			
Thick Dark Surl			Depleted				³ Indicators of	hydrophytic vegetation and
Sandy Mucky M			Redox De	pression	s (F8)		wetland hy	drology must be present,
5 cm Mucky Pe			- E				unless dis	turbed or problemetic.
trictive Layer (i								
Гуре:			_			- 1	Hydric Soil Pre	sent? Yes No
leath (inches)								
Depth (inches): _ narks:			_				+	ANTI- TOS Z NO
narios:			_				+	NO
ROLOGY							+	TOS Z NO
ROLOGY	Indicators:	e required	t check all that apoly)			+	
ROLOGY land Hydrology ary Indicators (m	Indicators:	s required			(B9)		Secondary in	dicators (minimum of two require
ROLOGY land Hydrology arv Indicators (m Surface Water (A	Indicators: Inimum of one i	a required	t: check all that apply Water-Stained	Leaves	(B9)		Secondary in	dicators (minimum of two require
ROLOGY and Hydrology arv Indicators (m Surface Water (A High Water Table	Indicators: Inimum of one i	a required	Water-Stained	Leaves (B13)			Secondary In Surface S Orainage	dicators (minimum of two require Soil Cracks (B6) Patterns (B10)
ROLOGY and Hydrology arv Indicators (m Surface Water (A High Water Table Seturation (A3)	Indicators: Inimum of one i 11) a (A2)	a required	Water-Stained	i Leaves a (B13) Plants (B	14)		Secondary in Surface S Orainage Dry-Seas	dicators (minimum of two require Soil Cracks (B6) Patterns (B10) on Water Table (C2)
ROLOGY land Hydrology arv Indicators (m Surface Water (A High Water Table Seturation (A3) Water Marks (B1	Indicators; Inimum of one i 11) a (A2)	a required	Water-Stained Aquatic Faund True Aquatic I Hydrogen Sut	Leaves a (B13) Plants (B lide Odor	14) (C1)	g Roots (C3	Secondary in Surface S Drainage Dry-Seas Crayfish	dicators (minimum of two require Soil Cracks (B6) Patterns (B10) Ion Water Table (C2) Burrows (C8)
ROLOGY Ind Hydrology arv Indicators (m Surface Water (A High Water Table Seturation (A3) Water Marks (B1 Sediment Depos	Indicators: Inimum of one i (1) (A2) (A2) (bs (B2)	s required	Water-Stained Aquatic Faura True Aquatic Hydrogen Sul	Leaves a (B13) Plants (B lide Odor ospheres	14) (C1) on Living	g Roots (C3	Secondary in Surface S Drainage Dry-Seas Crayfish S Saturation	dicators (minimum of two require Soil Cracks (B6) : Patterns (B10) ion Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9)
ROLOGY Ind Hydrology arv Indicators (m Surface Water (A High Water Table Seturation (A3) Nater Marks (B1 Sediment Deposits (B3	indicators: inimum of one i (1) (A2) (b) (b) (b) (b) (b)	s required	Water-Stained Aquatic Fauru True Aquatic Hydrogen Sult Osidized Rhiz Presence of R	d Leaves a (B13) Plants (B lide Odor ospheres educed i	14) (C1) on Living ron (C4)		Secondary in Surface S Drainage Dry-Seas Crayfish Seturation Stunted of	dicators (minimum of two require Soil Cracks (B6) Patterns (B10) Ion Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) or Stressed Plants (D1)
ROLOGY and Hydrology arv Indicators (m Surface Water (A High Water Table Saturation (A3) Nater Marks (B1 Sediment Deposi Orift Deposits (B3	indicators: inimum of one i (1) (A2) (b) (b) (B2) (b) (t (B4)	s required	Water-Stained Aquatic Faund True Aquatic Hydrogen Sult Oxidized Rhiz Presence of R Recent fron R	d Leaves a (B13) Plants (B lide Odor ospheres educed in	14) (C1) on Living ron (C4) In Tilled S		Secondary In Surface S Drainage Crayfish Saturation Stunted of Geomorp	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) thic Position (D2)
ROLOGY and Hydrology ary Indicators (m Surface Water (A High Water Table Saturation (A3) Nater Marks (B1 Sediment Deposi Orift Deposits (B3 Nal or Cruston Deposits (B5 Nal or Deposits (B5	indicators: inimum of one i it) a (A2) bs (B2) b) tt (B4)		Water-Stained Aquatic Fauru True Aquatic Hydrogen Sult Osidized Rhiz Presence of R	d Leaves a (B13) Plants (B fide Odor copheres educed in eduction face (C7)	14) (C1) on Living ron (C4) In Tilled 5		Secondary In Surface S Drainage Crayfish Saturation Stunted of Geomorp	dicators (minimum of two require Soil Cracks (B6) Patterns (B10) Ion Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) or Stressed Plants (D1)
ROLOGY and Hydrology arv Indicators (m Surface Water (A High Water Table Seturation (A3) Nater Marks (B1 Sediment Deposits (B3 Ligal Mat or Crus ron Deposits (B5 nundation Visible	Indicators: inimum of one i (1) (A2) (b) (b) (b) (c) (d) (d) (d) (d) (d) (d) (d) (d) (d) (d	ary (B7)	Water-Stained Aquatic Fauna True Aquatic Hydrogen Sul Oxidized Rhiz Presence of R Recent Iron Ro Thin Muck Sul	d Leaves a (B13) Plants (B ide Odor cospheres educed in eduction face (C7) Data (Di	14) (C1) on Living ron (C4) In Tilled 5)		Secondary In Surface S Drainage Crayfish Saturation Stunted of Geomorp	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) thic Position (D2)
ROLOGY Isnd Hydrology arv Indicators (m Surface Water (A High Water Table Saturation (A3) Water Marks (B1 Sediment Deposits (B5 Algal Mat or Crus ron Deposits (B5 nundation Visible Sparsely Vegetat	Indicators: inimum of one i (1) (A2) (b) (b) (b) (c) (d) (d) (d) (d) (d) (d) (d) (d) (d) (d	ary (B7)	Water-Stained Aquatic Faura True Aquatic i Hydrogen Sult Osidized Rhiz Presence of R Recent Iron R Thin Muck Sur Gauge or Well	d Leaves a (B13) Plants (B ide Odor cospheres educed in eduction face (C7) Data (Di	14) (C1) on Living ron (C4) In Tilled 5)		Secondary In Surface S Drainage Crayfish Saturation Stunted of Geomorp	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) thic Position (D2)
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PROLOGY Ind Hydrology Parv Indicators (m. Surface Water (A. High Water Table Saturation (A.3) Water Marks (B.1) Sediment Deposits (B.5) Algal Mat or Crus Fron Deposits (B.5) Fron Deposits (B.	indicators: inimum of one in	ery (B7) face (B8)	Water-Stained Aquatic Fauna True Aquatic i Hydrogen Sulf Oxidized Rhaz Presence of R Recent fron R Thin Muck Sur Gauge or Well Other (Explain Depth (Inches	I Leaves a (B13) Plants (B ide Odor copheres educed is eduction face (C7 Data (Di in Rema	(C1) (C1) on Living ron (C4) In Tilled 5) rks)	Soils (C6)	Secondary In Surface 3 Drainage Dry-Seas Crayfish 3 Saturation Stunted of Geomorp FAC-Neu	dicators (minimum of two require Soil Cracks (B6) Patterns (B10) Ion Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) or Stressed Plants (D1) thic Position (D2) trail Test (D5)
ROLOGY Ind Hydrology eary Indicators (m Surface Water (A High Water Table Saturation (A3) Water Marks (B1 Sediment Deposits (B5 Algal Mat or Crus ron Deposits (B5 nundation Visible Spersely Vegetate Observations: ce Water Present? des capillary fine	indicators: inimum of one i i1) i (A2) its (B2) it (B4) i on Aerial Image ed Concave Sur it? Yes Yes	ery (B7) face (B8) No.	Water-Stained Aquatic Fauna True Aquatic Fauna True Aquatic Fauna Hydrogen Sult Osidized Rhiz Presence of R Recent Iron R Thin Muck Sult Gauge or Well Other (Explain Depth (Inches Depth (Inches	i Leaves a (B13) Plants (B ide Odor copheres educed in eduction face (C7) Data (D8 in Rema	(C1) (C1) on Living ron (C4) In Tilled S) rks)	Soils (C6) Wetland	Secondary in Surface S Drainage Dry-Seas Crayfish Saturatio Stunted of Geomorp FAC-Neu	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) thic Position (D2) tral Test (D5)
ROLOGY Ind Hydrology arv Indicators (m Surface Water (A High Water Table Seturation (A3) Water Marks (B1 Sediment Deposits (B3 Algal Mat or Crus ron Deposits (B5 nundation Visible Sparsely Vegetat Observations: Ce Water Present? des capillary fing the Recorded De	indicators: inimum of one i i1) i (A2) its (B2) it (B4) i on Aerial Image ed Concave Sur it? Yes Yes	ery (B7) face (B8) No.	Water-Stained Aquatic Fauna True Aquatic i Hydrogen Sulf Oxidized Rhaz Presence of R Recent fron R Thin Muck Sur Gauge or Well Other (Explain Depth (Inches	i Leaves a (B13) Plants (B ide Odor copheres educed in eduction face (C7) Data (D8 in Rema	(C1) (C1) on Living ron (C4) In Tilled S) rks)	Soils (C6) Wetland	Secondary in Surface S Drainage Dry-Seas Crayfish Saturatio Stunted of Geomorp FAC-Neu	dicators (minimum of two require Soil Cracks (B6) Patterns (B10) Ion Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) or Stressed Plants (D1) thic Position (D2) trail Test (D5)
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Applicant/Owner: Splice		City/County:	t. Louis Co. Sampling Date: 3/1.
Trecon			State: MO Sampling Point: Let
		Section, Township	o, Range: 15/75 / 47 A
Landform (hillslope, terrace, etc.)		Local re	elief (concave, convax, none):
Slope (%): 0% Lat: 38. 8/440		Long:90,	219947 Datum: NAD83
Soil Map Unit Name:	1,0-2	slupes, fre	Tooded NWI classification:
Are climatic / hydrologic conditions on the site typical fo	or this time of u	age? Van X	lo (if no, explsin in Remarks.)
se vagetation	🖊 significanti	/ disturbed?	Are "Normal Circumstances" present? Yes No
Ara Vagetation, Soil, or Hydrology	naturelly pr		If needed, explain any answars in Remarks.)
SUMMARY OF FINDINGS - Attach site m	ap showing	Samplina poir	nt locations, transects, important features,
nydrophytic Vegetation Present? Yes	No		in toutions, transects, important leatures,
Hydric Soll Present? Yes	No	Is the Samp	
Wetland Hydrology Present? Yes	No	within a War	tland? Yes No No
Depressional PEM situated	in q	resident	ial lawn; soil + very distan
EGETATION – Use scientific names of plan	ts.		
ree Stratum (Plot alza: 30'/)	Absolute % Cover	Dominant Indicato Species? Status	
Absent	70 0000	Status Status	14Uniber of Dominant Spaces
	7		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: 1001, (A/I
nellna/Shrub Stratum (Plot size: 15 /)	_0_=	Total Cover	(AVI
Absent)	-	_	Prevalence Index worksheet:
			Total % Cover of: Multiply by:
			OBL species x1 =
			FAC species x 2 =
			FACIL species x3 =
51/	$\overline{\circ}$	Total Cover	FACU species x 4 = UPL species x 5 =
Lysimachia Mamphacia		V 6	(Column Totale:
Pop Pratonsis	- 70 -	YHACH	(B)
Rumex crispus	- 30 -	Y JAC	Prevalence Index = B/A =
Schedenorus protensis	<u> 10</u> _	N FAC	Hydrophytic Vegetation Indicators:
Projection projection (10	N FACY	1 - Rapid Test for Hydrophytic Vegetation
			2 - Dominance Test is >50%
			3 - Prevalence Index is s3,01
			4 - Morphological Adaptations* (Provide supporting data in Remarks or on a separate sheet)
			Problematic Hydrophytic Vegetation1 (Explain)
dv Vino Stratum (Pipt, alza: 30')	1(0 = T	otal Covar	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
153807			Hydrophytic
			Vegetation
+	0	otal Cover	Present? Yes No

WMU-JJY-127

Profile Description: (Describe to t Depth Matrix	Redux Feet			n maisatore.,
(Inches) Color (moist)	% Color (moist) %	Type Loc	Texture	Remarks
0-17" 101R3/2 "	70 104R3/4 1	c m/		TUSTILLING
ype: C=Concentration, D=Depleto	n, RM=Reduced Matrix, MS=Mask	ed Sand Grains.	² Location:	PL=Pore Lining, M=Matrix.
ydric Soll Indicators:			Indicators fo	r Problematic Hydric Solls ¹ :
Histosol (A1)	Sandy Gleyed I	Matrix (S4)		alrie Redox (A16)
_ Histic Epipedon (A2)	Sandy Redox (S5)	Dark Sur	face (S7)
_ Black Histic (A3)	Stripped Matrix	•		ganese Masses (F12)
_ Hydrogen Sulfide (A4)	Loamy Mucky N			llow Dark Surface (TF12)
_ Stratified Layers (A5)	Loamy Gleyed I	Matrix (F2)		plain in Remarks)
_ 2 cm Muck (A10)	Depleted Matrix			
_ Depleted Below Dark Surface (A1				
_ Thick Dark Surface (A12) _ Sandy Mucky Mineral (S1)	Depleted Dark S			hydrophytic vegetation and
_ Sandy Mucky Mineral (S1) _ 5 cm Mucky Peat or Peat (S3)	Redox Depressi	ons (F8)		drology must be present,
estrictive Layer (if observed):			unless dia	turbed or problematic.
Type:				
			444.4	
Depth (inches).			I nyanc Soil Pre	ISONTY YES / \ No
Depth (Inches):			Hydric Soil Pre	esent? Yes No
marke:		* .	nyanc soll Pre	sent? Yes No
	4	•	nyanc soll Pre	sent? Yes <u>/ \</u> No
DROLOGY tland Hydrology Indicators:	equired: check all that apply)	÷ .		
DROLOGY tland Hydrology Indicators: nery Indicators (minimum of one is n		no (PD)	Secondary Ir	ndicators (minimum of two require
DROLOGY tland Hydrology Indicators: nery Indicators (minimum of one is n Surface Water (A1)	Water-Stained Leav		Secondary Ir	ndicators (minimum of two require Soil Cracks (86)
DROLOGY tland Hydrology Indicators: nery Indicators (minimum of one is not surface Water (A1) bligh Water Table (A2)	Water-Stained Leav — Aquatic Fauna (B13)	Secondary Ir Surface Drainage	ndkators (minimum of two require Soil Cracks (86) e Patterns (810)
DROLOGY Itland Hydrology Indicators: nery Indicators (minimum of one is n Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Stained Leav — Aquatic Fauna (B13 — True Aquatic Plants) (B14)	Secondary in Surface Drainage Dry-Sea	ndicators (minimum of two require Soil Cracks (B6) e Patterns (B10) son Water Table (C2)
DROLOGY Itland Hydrology Indicators: nerv Indicators (minimum of one is n Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Stained Leav — Aquatic Fauna (B13 — True Aquatic Plants — Hydrogen Sulfide O) (B14) for (C1)	Secondary in Surface Drainage Dry-Sea Crayfish	ndicators (minimum of two require Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8)
DROLOGY Itland Hydrology Indicators: nery Indicators (minimum of one is no Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Stained Leav Aquatic Fauna (B13 True Aquatic Plants Historgen Sulfide O) (B14) dor (C1) res on Living Roots	Secondary in Surface Drainage Dry-Sea Crayfish (C3) Saturation	ndicators (minimum of two require Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9)
DROLOGY Itland Hydrology Indicators: nery Indicators (minimum of one is no surface Water (A1) Ligh Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Water-Stained Leav Aquatic Fauna (B13 True Aquatic Plants Hudrogen Sulfide O Oxidized Rhizosphe Presence of Reduce) (B14) for (C1) res on Living Roots d iron (C4)	Secondary in Surface Drainage Dry-Sea Crayfish (C3) Saturation Stunted	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 Planta (D1)
DROLOGY Itland Hydrology Indicators: nery Indicators (minimum of one is no surface Water (A1) Ligh Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	Water-Stained Leav Aquatic Fauna (B13 True Aquatic Plants Hydrogen Sulfide O Oxidized Rhizoaphe Presence of Reduce Recent Iron Reduction) (B14) dor (C1) me on Living Roots d iron (C4) on in Tilled Solis (C	Secondary in Surface Drainage Dry-Sea Crayfish (C3) Saturation Stunted	ndicators (minimum of two require Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9)
DROLOGY Itland Hydrology Indicators: nery Indicators (minimum of one is no surface Water (A1) Ligh Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	Water-Stained Leav Aquatic Fauna (B13 True Aquatic Plants Hydrogen Sulfide O Oxidized Rhizosphe Presence of Reduce Recent Iron Reducti) (B14) dor (C1) me on Living Roots d Iron (C4) on in Tilled Solls (C	Secondary in Surface Drainage Crayfish (C3) Saturation Stunted (C6) Geomory	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 Planta (D1)
DROLOGY Itland Hydrology Indicators: nery Indicators (minimum of one is no Surface Water (A1) Ligh 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	Water-Stained Leav Aquatic Fauna (B13 True Aquatic Plants Hudrogen Sulfide O Oxidized Rhizosphe Presence of Reduce Recent Iron Reductle Thin Muck Surface () (B14) dor (C1) me on Living Roots d Iron (C4) on in Tilled Solls (C	Secondary in Surface Drainage Crayfish (C3) Saturation Stunted (C6) Geomory	ndicators (minimum of two require Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) in Visible on Aerial Imagery (C9) or Stressed Planta (D1)
DROLOGY Itland Hydrology Indicators: nery Indicators (minimum of one is no Surface Water (A1) Ligh 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 Sparsely Vegetated Concave Surface	Water-Stained Leav Aquatic Fauna (B13 True Aquatic Plants Hudrogen Sulfide O Oxidized Rhizosphe Presence of Reduce Recent Iron Reductle Thin Muck Surface () (B14) dor (C1) me on Living Roots d Iron (C4) on in Tilled Solis (C C7) (D9)	Secondary in Surface Drainage Crayfish (C3) Saturation Stunted (C6) Geomory	ndicators (minimum of two require Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) in Visible on Aerial Imagery (C9) or Stressed Planta (D1)
DROLOGY Itland Hydrology Indicators: Description of one is not in the second of the	Water-Stained Leav Aquatic Fauna (B13 — True Aquatic Plants — Hudrogen Sulfide O Oxidized Rhizoapha — Presence of Reducel — Recent Iron Reductl — Thin Muck Surface ((B7) — Gauge or Well Data ce (B8) — Other (Explain in Re) (B14) dor (C1) me on Living Roots d Iron (C4) on in Tilled Solis (C C7) (D9)	Secondary in Surface Drainage Crayfish (C3) Saturation Stunted (C6) Geomory	ndicators (minimum of two require Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) in Visible on Aerial Imagery (C9) or Stressed Planta (D1)
DROLOGY Itland Hydrology Indicators: nery Indicators (minimum of one is no Surface Water (A1) Ligh 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 Sparsely Vegetated Concave Surface	Water-Stained Leav Aquatic Fauna (B13 — True Aquatic Plants — Hidrogen Sulfide O Oxidized Rhizoaphe — Presence of Reducel — Recent Iron Reductl — Thin Muck Surface ((B7) — Gauge or Well Data ce (B8) — Other (Explain in Re) (B14) (B14) dor (C1) res on Living Roots d iron (C4) on in Tilled Solis (C C7) (D9) marks)	Secondary in Surface Drainage Crayfish (C3) Saturation Stunted (C6) Geomory	ndicators (minimum of two require Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) in Visible on Aerial Imagery (C9) or Stressed Planta (D1)
DROLOGY Itland Hydrology Indicators: Description of one is not in the second of the	Water-Stained Leav Aquatic Fauna (B13 — True Aquatic Plants — Hidrogen Sulfide O Oxidized Rhizoaphe — Presence of Reducel — Recent Iron Reductl — Thin Muck Surface ((B7) — Gauge or Well Data ce (B8) — Other (Explain in Re) (B14) dor (C1) me on Living Roots d Iron (C4) on in Tilled Solis (C C7) (D9)	Secondary in Surface Drainage Crayfish (C3) Saturation Stunted (C6) Geomory	ndicators (minimum of two require Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) in Visible on Aerial Imagery (C9) or Stressed Planta (D1)
DROLOGY Itend Hydrology Indicators: nery Indicators (minimum of one is not indicators) Surface Water (A1) Ligh 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 Sparsely Vegetated Concave Surface I Observations: ace Water Present? Yes Table Present?	Water-Stained Leav Aquatic Fauna (B13 True Aquatic Plants Hudrogen Sulfide O Oxidized Rhizosphe Presence of Reduce Recent Iron Reducti Thin Muck Surface ((B7) Gauge or Well Data ce (B8) Other (Explain in Re	(B14) (B14) dor (C1) res on Living Roots d iron (C4) on in Tilled Solis (C C7) (D9) marks)	Secondary in Surface Drainage Dry-Sea Crayfish (C3) Saturatio Stunted (6) Geomory FAC-Neu	ndicators (minimum of two requires Soil Cracks (B6) a Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Planta (D1) ohic Position (D2) strail Test (D5)
DROLOGY Itland Hydrology Indicators: Description of one is a 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 Sparsely Vegetated Concave Surface I Observations: Ince Water Present? Table Present? Table Present? Tatlon Present?	Water-Stained Leav Aquatic Fauna (B13) True Aquatic Plants Hidrogen Sulfide O Oxidized Rhizoapha Presence of Reducel Recent Iron Reductli Thin Muck Surface (Gauge or Well Data ce (B8) Other (Explain in Re No Depth (Inches): No Depth (inches):	(B14) (B14) dor (C1) me on Living Roots d Iron (C4) on in Tilled Solis (C C7) (D9) marks) Wet	Secondary In Surface Drainage Dry-Sea Crayfish Stunted of Stunted of FAC-Neu	ndicators (minimum of two requires Soil Cracks (B6) a Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Planta (D1) ohic Position (D2) strail Test (D5)
DROLOGY Itend Hydrology Indicators: nery Indicators (minimum of one is not indicators) Surface Water (A1) Ligh 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 Sparsely Vegetated Concave Surface I Observations: ace Water Present? Yes Table Present?	Water-Stained Leav Aquatic Fauna (B13) True Aquatic Plants Hidrogen Sulfide O Oxidized Rhizoapha Presence of Reducel Recent Iron Reductli Thin Muck Surface (Gauge or Well Data ce (B8) Other (Explain in Re No Depth (Inches): No Depth (inches):	(B14) (B14) dor (C1) me on Living Roots d Iron (C4) on in Tilled Solis (C C7) (D9) marks) Wet	Secondary In Surface Drainage Dry-Sea Crayfish Stunted of Stunted of FAC-Neu	ndicators (minimum of two requires Soil Cracks (B6) a Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Planta (D1) ohic Position (D2) strail Test (D5)
DROLOGY Itland Hydrology Indicators: Description of one is a 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 Sparsely Vegetated Concave Surface I Observations: Ince Water Present? Table Present? Table Present? Tatlon Present?	Water-Stained Leav Aquatic Fauna (B13) True Aquatic Plants Hidrogen Sulfide O Oxidized Rhizoapha Presence of Reducel Recent Iron Reductli Thin Muck Surface (Gauge or Well Data ce (B8) Other (Explain in Re No Depth (Inches): No Depth (inches):	(B14) (B14) dor (C1) me on Living Roots d Iron (C4) on in Tilled Solis (C C7) (D9) marks) Wet	Secondary In Surface Drainage Dry-Sea Crayfish Stunted of Stunted of FAC-Neu	ndicators (minimum of two requires Soil Cracks (B6) a Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Planta (D1) ohic Position (D2) strail Test (D5)
DROLOGY Itland Hydrology Indicators: nery Indicators (minimum of one is no surface Water (A1) Ligh 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 Sparsely Vegetated Concave Surface In Observations: Ince Water Present? In Table	Water-Stained Leav Aquatic Fauna (B13) True Aquatic Plants Hidrogen Sulfide O Oxidized Rhizoapha Presence of Reducel Recent Iron Reductli Thin Muck Surface (Gauge or Well Data ce (B8) Other (Explain in Re No Depth (Inches): No Depth (inches):	(B14) (B14) dor (C1) me on Living Roots d Iron (C4) on in Tilled Solis (C C7) (D9) marks) Wet	Secondary In Surface Drainage Dry-Sea Crayfish Stunted of Stunted of FAC-Neu	ndicators (minimum of two requires Soil Cracks (B6) a Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Planta (D1) ohic Position (D2) strail Test (D5)

Investigator(s): IJP CDK Section, Township, Range: YU O Landform (nitislope, terrace, etc.): Locustrine Fringe Local relief (concave, convex, none): Mone Stope (%): Or Let: 38,77% Local relief (concave, convex, none): Mone Stope (%): Or Let: 38,77% Local relief (concave, convex, none): Mone Stope (%): Or Let: 38,77% Local relief (concave, convex, none): Mone Stope (%): Or Let: 38,77% Local relief (concave, convex, none): Mone Stope (%): Or Let: 38,77% Local relief (concave, convex, none): Mone Stope (%): Or Let: 38,77% Local relief (concave, convex, none): Mone Stope (%): Or Let: 38,77% Local relief (concave, convex, none): Mone Stope (%): Or Let: 38,77% Local relief (concave, convex, none): Mone Stope (%): Or Local relief (%)	Project/Site: S7L NCE Applicent/Owner: Spi/4		_ CrysCounty: _ C	m -	Sampling Date: 3/16/
Landform (hilistope, terrace, etc.) Landform (hilistope, terrace, etc.) Long: QO, 193 71 Deturn MADS Stope (N): Ov. Lat 38 79 9 6 Local reflections on convex, none): None Stope (N): Ov. Lat 38 79 9 6 Local reflections on the site bytical for this time of year? Yes No. (If no, explain in Remarks.) Long: QO, 193 71 Deturn MADS Stope (N): Ov. 193 71 Deturn MADS Stope (N): Over Vegetation of the site byte of the site med year? Yes No. (If no, explain any answers in Remarks.) LUMMARY OF FINDINGS – Attach site map showing sampling point locations, transacts, important features, hydrophytic Vegetation Present? Yes No. Is the Sampled Area within a Wetland? Yes No. (If needed, explain any answers in Remarks.) LUMMARY OF FINDINGS – Attach site map showing sampling point locations, transacts, important features, hydrophytic Vegetation Present? Yes No. Is the Sampled Area within a Wetland? Yes No. Is the Sampled Area within a Wetland? Yes No. Is the Sampled Area within a Wetland? Yes No. Is the Sampled Area within a Wetland? Yes No. Is the Sampled Area within a Wetland? Yes No. Is the Sampled Area within a Wetland? Yes No. Is the Sampled Area within a Wetland? Yes No. Is the Sampled Area within a Wetland? Yes No. Is the Sampled Area within a Wetland? Yes No. Is the Sampled Area within a Wetland? Yes No. In the Sampled Area within a Wetland? Yes No. In the Sampled Area within a Wetland? Yes No. In the Sampled Area within a Wetland? Yes No. In the Sampled Area within a Wetland? Yes No. In the Sampled Area within a Wetland? Yes No. In the Sampled Area within a Wetland? Yes No. In the Sampled Area within a Wetland? Yes No. In the Sampled Area within a Wetland? Yes No. In the Sampled Area within a Wetland? Yes No. In the Sampled Area within a Wetland? Yes No. In the Sampled Area within a Wetland? Yes Sampled Area within a Wetland? Yes Sampled Area within a Wetland? Yes Sampl			44-49-2	State: /10	_ Sampling Point _ PS_S
Slope (%): Dec. Lat. 3 {		C	_ Section, Township,	Range: / Y40	
Dotton John John John John John John John Jo			Local rel	lief (concave, convex, non	ex None
Control of the cont			Long: 90,	193171	Datum: NA-DS-3
we created in the site typical for this time of year? Yes No (If no, explain in Remarks.) When Vegetation Soil or Hydrology asignificantly disturbed? Are "Normal Circumstances" present? Yes No asignificantly disturbed? Are "Normal Circumstances" present? Yes No naturally problematic? (If needed, explain any answars in Remarks.) WHMARY OF FINDINGS - Attach site map showing sampling point locations, transacts, important features, Hydrophytic Vegetation Present? Yes No Is the Sampled Ares within a Wetland? Yes No No Is the Sampled Ares within a Wetland? Yes No No Is the Sampled Ares within a Wetland? Yes No No Is the Sampled Ares within a Wetland? Yes No No Is the Sampled Ares within a Wetland? Yes No No Is the Sampled Ares within a Wetland? Yes No No Is the Sampled Ares within a Wetland? Yes No No Is the Sampled Ares within a Wetland? Yes No No Is the Sampled Ares within a Wetland? Yes No No Is the Sampled Ares within a Wetland? Yes No No Is the Sampled Ares within a Wetland? Yes No Is the Sample			9-35% 51	woes NWI class	Firsting PURCL
Soil	re climatic / hydrologic conditions on the site typics	of for this time of y	ear? Yes N	/if no evolain in	Pamarka \
Total Number of Dominant Species Total Cover Definition (Plot size: 5) D	re Vegetation Soil or Hydrology	A significantly			
UMMARY OF FINDINGS — Attach site map showing sampling point locations, transacts, important features, hydrophytic Vegetation Present? Yes No Is the Sampled Area within a Wetland? Yes No Is the Sampled Area wi	re Vegetation / , Soil / , or Hydrology	N naturally of			
Section Present Pres				needed, explain any enev	rers in Remarks.)
te the Sampled Area within a Wetland? Yes No within a Wetland Present? Yes No wi	The state of the s		g sampling point	l locations, transect	s, Important features,
Welland Hydrology Present? Yes No Within a Welland? Yes No				+	
Possible around lake. No sell date due to leadowner leavest. GETATION - Use scientific names of plants. The Stratum (Plot size: 30') Solver Besclest Status LO Y BELL Number of Dominant Species That Are OBL, FACW, or FAC: 5 Total Number of Dominant Species That Are OBL, FACW, or FAC: 5 Total Number of Dominant Species That Are OBL, FACW, or FAC: 5 Total Number of Dominant Species That Are OBL, FACW, or FAC: 5 Total Number of Dominant Species That Are OBL, FACW, or FAC: 5 Total Number of Dominant Species That Are OBL, FACW, or FAC: 6 By Prevalence Index Species That Are OBL FACW, or FAC: 5 Total Number of Dominant Species That Are OBL, FACW, or FAC: 6 Total Number of Dominant Species That Are OBL, FACW, or FAC: 6 Total Number of Dominant Species That Are OBL, FACW, or FAC: 7 OBL species x 1 = 7 FACW species x 2 = 7 FACW species x 2 = 7 FACW species x 3 = 7 FACW species x 4 = 1 UPL species x 3 = 7 FACW species x 3 = 7 FACW species x 4 = 1 UPL species x 4 = 1 UPL species x 4 = 1 UPL species x 3 = 7 FACW species x 3 = 7 FACW species x 3 = 7 FACW species x 4 = 1 UPL species x 3 = 7 FACW species x 3 = 7				od Area	(+
Prevalence Index Species Prevalence Indicator Prevalence Index Species Prevalence Indicator Prevalence I		No	within a Weti	and? Yes	No
Total Screen (Plot size: 5 /) Total Cover (Particular (Plot size: 5 /) Total Cover (Plot					
Test Stratum (Plot size: 30') Absolute Species? Absolute Species That Are OBL, FAGW, or FAC: (A Total Number of Dominant Species That Are OBL, FAGW, or FAC: (A Total Numbe	TOUND IGICE.				
Absolute Species? Sistus Dominant Indicator Species? Sistus Number of Dominant Species That Are OBL, FACW, or FAC: Species? Sistus That Are OBL, FACW, or FAC: Species Across All Strate: (B) Central Number of Dominant Species That Are OBL, FACW, or FAC: Species Across All Strate: (B) Central Number of Dominant Species That Are OBL, FACW, or FAC: Species Across All Strate: (B) Percent of Dominant Species That Are OBL, FACW, or FAC: Species Across All Strate: (B) Central Number of Dominant Species That Are OBL, FACW, or FAC: Species Across All Strate: (B) Percent of Dominant Species That Are OBL, FACW, or FAC: Species Across All Strate: (B) Total Number of Dominant Species That Are OBL, FACW, or FAC: Species That Are OBL, FACW or FAC: Species That Are OBL, FACW, or FAC: Sp	TO SOIL OTTE ONE TO	landown	er regnest		
Total Number of Dominant Species Total Number of Dominant Species Total Number of Dominant Species Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: Stratum (Plot size: S	:GETATION – Use scientific names of pl	ants.	V		
Total Number of Dominant Species Total Number of Dominant Species Total Number of Dominant Species Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: Stratum (Plot size: S	tee Stretum (Plot eign: 30'				sheet
Total Number of Dominant Species Across All Strate: College	T-1	% Cover	Species? Status	Number of Dominant S	
Total Number of Dominant Species Across All Strate: Delinaishrub Stratum (Plot size: 15	- Alle		OBL	That Are OBL, FACW,	or FAC:(A)
Species Across All Strate: (B) Percent of Dominant Species That Are OBL, FACW, or FAC: \$3.3 × (A) Prevalence index worksheet: Total **Cover of the Across All Strate: (B) Prevalence index worksheet: Total **Cover of the Across All Strate: Total **Cover of the Across All Strate: (B) Prevalence index worksheet: Total **Cover of the Across All Strate: (B) **Species Across All Strate: (B) Prevalence index worksheet: Total **Cover of the Across All Strate: (B) **Species Across All Strate: (B) **Prevalence index worksheet: Total **Cover of the Across All Strate: (B) **Species Across All Strate: (B) **Prevalence index worksheet: Total **Cover of the Across All Strate: (B) **Species Across All Strate: (B) **Prevalence index worksheet: Total **Cover of the Across All Strate: (B) **Species Across All Strate: (B) **Prevalence index worksheet: Total **Cover of the Across All Strate: (B) **Species Across All Strate: (B) **Prevalence index worksheet: Total **Cover of the Across All Strate: (B) **Species Across All Strate: (B) **Prevalence index worksheet: Total **Cover of the Across All Strate: (B) **Prevalence index worksheet: Total **Cover of the Across All Strate: (A) **Prevalence index worksheet: Total **Cover of the Across All Strate: (B) **Prevalence index worksheet: Total **Cover of the Across All Strate: (B) **Prevalence index worksheet: Total **Cover of the Across All Strate: Total **Cover of the Across All				Total Number of Domin	ant C
Delinoishrub Stratum (Plot size: 15 10 = Total Cover That Are OBL, FACW, or FAC: 83.3% (A)				Species Across All Stra	ita: (B)
Delinoishrub Stratum Plot size: S Delinoishrub Stratum Provided supporting data in Remarks or on a separate sheet)				Percent of Dominant St	
Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species				That Are OBL, FACW,	FAC: 83.3% (A/I
Total % Cover of: Multiply by: Juplans Nicol S	olno/Shrub Stratum (Plot size: 15 /	, <u>// -</u> -	Total Cover	+	
Syphalaris armatin cea Symptom Syphalaris Symptom Syphalaris Symptom Symp	Cephalan thus occiden	talis 5	Y DAL		
FACW species					
FAC species x3 = FACU species x4 = UPL species x5 = Column Totals: (A) (B) Prevelence index = B/A = Hydrophytic Vegetation indicators: 1. Rapid Test for Hydrophytic Vegetation 2. Dominance Test is >50% 3. Prevalence Index is \$3.0' 4. Morphological Adaptations! (Provide supporting data in Flemarks or on a separate sheet) Problematic Hydrophytic Vegetation? (Explain) To x = Total Cover Hydrophytic Light Significant of the soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes No					
FACU species					
### Stratum (Plot size: Phalaris armatinacea					
Phalaris arandinacea 35 Y FACU Cinna arandinacea 15 Y FACU List Y FACU Prevelence Index = B/A = Hydrophytic Vegetation Indicators: 1- Rapid Test for Hydrophytic Vegetation 2- Dominance Test is >50% 3- Prevalence Index is <3.0° 4- Morphological Adaptations (Provide supporting data in Flemarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) **Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation **Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation **Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation **Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation **Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. **Indicators of hydric soil and wetland hydrology must be present?** **Indicators of hydric soil and wetland hydrology must be present?** **Indicators of hydric soil and wetland hydrology must be present?** **Indicators of hydric soil and wetland hydrology must be present?** **Indicators of hydric soil and wetland hydrology must be present?** **Indicators of hydric soil and wetland hydrology must be present?** **Indicators of hydric soil and wetland hydrology must be present?** **Indicators of hydric soil and wetland hydrology must be present?** **Indicators of hydric soil and wetland hydrology must be present?** **Indicators of hydric soil and wetland hydrology must be present?** **Indicators of hydric soil and wetland hydrology must be present?** **Indicators of hydric soil and wetland hydrology must be present?** **Indicators of hydric soil and wetland hydrology must be present?** **Indicators of hydric soil and wetland hydrology must be present?** **Indicators of hydric soil and wetland hydrology must be present?** **Indicators of hydric s		10=	Total Cover		
Prevelence Index = B/A = Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation Dominance Test is >50% 3 - Prevalence Index is \$3.0° 4 - Morphological Attaptations' (Provide supporting data in Flemarks or on a separate sheet) Problematic Hydrophytic Vegetation' (Explain) To * = Total Cover Prevelence Index = B/A = Hydrophytic Vegetation indicators: Rapid Test for Hydrophytic Vegetation A to Hydrophytic Vegetation indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Prevelence Index = B/A = Hydrophytic Vegetation indicators: Provide supporting data in Flemarks or on a separate sheet) Problematic Hydrophytic Vegetation indicators: Prevelence Index = B/A = Prevelence Index = B/A = Hydrophytic Vegetation indicators: Provide supporting data in Flemarks or on a separate sheet) Provide supporting data in Flemarks or on a separate sheet) Provide supporting data in Flemarks or on a separate sheet) Prevelence Index = B/A = Hydrophytic Vegetation Provide supporting data in Flemarks or on a separate sheet) Provide supporting data in Flemarks or on a separate sheet) Prevelence Index = B/A = Hydrophytic Vegetation Prevelence Index = B/A = Hydrophytic Vegetation			Total Cover		
Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation		35_	Y FACW	Column Totals.	(A) (B)
Hydrophytic Vegetation Indicators: 1 Rapid Test for Hydrophytic Vegetation 2 Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Attaplations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) 1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation 1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes No	The state of the s	15	Y FACL	Prevalence Index	■ B/A =
2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Attaplations¹ (Provide supporting data in Flemenks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) 1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes No	Elymns Virginicus		Y FACE		
3 - Prevalence Index is ≤3.0° 4 - Morphological Attaplations' (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation' (Explain) 4 - Morphological Attaplations' (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes No	THE TAL H	<u> </u>	* *	Rapid Test for Hy	drophytic Vegetation
data in Flemarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? No				3 - Prevalence Index	is ≤3.0¹
Problematic Hydrophytic Vegetation¹ (Explain) 1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes No				4 - Morphological Atl	aplations' (Provide supporting
1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes No				cinca in riemarks (or on a separate sheet)
1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Also f			,	Problematic Hydroph	ytic Vegetation¹ (Explain)
Hydrophytic Vegetation Present? Yes No No				1. (1981) (1981) (1982)	
Hydrophytic Vegetation Present? Yes No No	dy Vine Stratum (Plot size: 30 /	10 # = T	Total Cover	Indicators of hydric soil a	nd wetland hydrology must
Hydrophytic Vegetation Present? Yes No No	Assent			or product, comess pistuit	eu or procematic.
irks: (Include photo numbers here or on a seconds about)					
irks: (Include photo numbers here or on a securate sheet.)				Vegetation Present?	X ,,,
peries not identified beyond genul level have been a 41		∪ ₌T	otal Cover	Tes.	NO
	irks: (Include photo numbers here or on a second	a sheet \			

*

WMO-JJP-129 EX71

the second secon	
needed to document the indicator or confin	m the absence of indicators.)
Redox Features Color (moist) % Type Loc	<u>Texture</u> Remarks
educed Matrix, MS=Masked Sand Grains.	² Location: PL=Pore Lining, M=Matrix.
	Indicators for Problematic Hydric Solle:
Sandy Gleyed Matrix (S4)	Coast Prairie Redox (A16)
Sandy Redox (S5)	Dark Surface (S7)
 	Iron-Manganese Masses (F12)
	Very Shallow Dark Surface (TF12)
	Other (Explain in Remarks)
<u> </u>	
	Indicators of hydrophytic vegetation and
 · · · · · · ·	wetland hydrology must be present,
_ ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	unless disturbed or problematic.
_	×
	Hydric Soli Present? Yes No
hydrici lake for	golf course.
70.10.1	,0,
check all that apoly)	Secondary Indicators (minimum of two required
~ /	Surface Soil Cracks (B6)
	Oralnage Patterns (B10)
The state of the s	Dry-Season Water Table (C2)
HWITAGON SUITING DAGE (C1)	Constant Discourse (CO)
Hydrogen Sulfide Odor (C1) Ovidized Phizospheres on Living Roots (C)	Crayfish Burrows (C8)
Oxidized Rhizosphares on Living Roots (C	3) Saturation Visible on Aerial Imagery (C9)
Oxidized Rhizoephares on Living Roots (C Presence of Reduced Iron (C4)	 Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)
Oxidized Rhizospheres on Living Roots (C Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solls (C6)	Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
Oxidized Rhizosphares on Living Roots (C Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solls (C6) Thin Muck Surface (C7)	 Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)
Oxidized Rhizoephares on Living Roots (C Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solls (C6) Thin Muck Surfece (C7) Geuge or Well Deta (D9)	Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
Oxidized Rhizosphares on Living Roots (C Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solls (C6) Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
Oxidized Rhizoephares on Living Roots (C Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solls (C6) Thin Muck Surfece (C7) Geuge or Well Deta (D9) Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
Oxidized Rhizoephares on Living Roots (C Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solls (C6) Thin Muck Surfece (C7) Geuge or Well Deta (D9) Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
Oxidized Rhizosphares on Living Roots (C. Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solls (C6) Thin Muck Surfece (C7) Geuge or Well Deta (D9) Other (Explain in Remarks) Dapth (Inches):	Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
Oxidized Rhizosphares on Living Roots (C. Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solls (C6) Thin Muck Surfece (C7) Geuge or Well Deta (D9) Other (Explain in Remarks) Dapth (Inches):	Saturation Visible on Aerial Imagery (CB) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Teat (D5)
Oxidized Rhizoephares on Living Roots (C) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solls (C6) Thin Muck Surfece (C7) Geuge or Well Deta (D9) Other (Explain in Remarks) Depth (Inches): Depth (Inches):	C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Teat (D5) d Hydrology Present? Yes No
Oxidized Rhizoephares on Living Roots (C) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solls (C6) Thin Muck Surfece (C7) Geuge or Well Deta (D9) Other (Explain in Remarks) Depth (Inches): Depth (Inches):	C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Teat (D5) d Hydrology Present? Yes No
Oxidized Rhizoephares on Living Roots (C) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solls (C6) Thin Muck Surfece (C7) Geuge or Well Deta (D9) Other (Explain in Remarks) Depth (Inches): Depth (Inches):	C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Teat (D5) d Hydrology Present? Yes No
Oxidized Rhizoephares on Living Roots (C) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solls (C6) Thin Muck Surfece (C7) Geuge or Well Deta (D9) Other (Explain in Remarks) Depth (Inches): Depth (Inches):	Saturation Visible on Aerial Imagery (CB) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Teat (D5)
	Color (moist)

S=1 11 =	_	
Project/Site:/VCF	City/County:	f, Louis Co. Sampling Date: 3/16/17
Applicant/Owner:		State: MO Sampling Point: 1946
Investigator(s):	Section, Township	Range: 1640
Landform (hilisiope, terrace, etc.): Lacustriac	rince Local m	elief (concave, convex, none): A/co.
Slope (%): 2%. Lat: 38.799949	Long: - 90.	19 2 73 4 Datum: NAD 83
Soil Map Unit Name: Menfro 5:11 loom,		NW classification: Pub Gh
Are climatic / hydrologic conditions on the site typical for t		NVVI cassancation: PVIBGH
Are Vegetation Soil N, or Hydrology N		
Are Vegetation 7 + Soil 1 or Hydrology 1		re "Normal Circumstances" present? Yes No
		f needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing sampling poin	it locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes	No	
14/-4/111-1-1	No is the Samp	
Homorkay	No within a Wet	
PuB around fringe of last	to NWI W	et-land
* No Soil data due		or regnest (solf course).
VEGETATION - Use scientific names of plants		, ,
Tree Stratum (Plot size: 30')	Absolute Dominant Indicato	Dominance Test worksheet:
1. Absent	Status	
1		That Are OBL, FACW, or FAC:(A)
3.		Total Number of Dominant
4.		Species Across All Strata: (B)
5,		Percent of Dominant Species
Saoling/Shrub Stratum (Plot size: 15'/	= Total Cover	That Are OBL, FACW, or FAC: (A/B)
1. Assent		Prevalence Index worksheet:
2.		Total % Cover of: Multiply by:
3.		OBL species x 1 =
4		FACW species x 2 =
5.		FAC species x 3 = FACU species x 4 =
-1-	O = Total Cover	UPL species x5=
Herb Stretum (Plot size: 3)		Column Totals: (A) (B)
- Absent		(B)
		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 Vegetation* (Explain)
0		
30/6	C = Total Cover	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Voody Vine Stratum (Plot size: 30'/)		the present, unless disturbed or problematic.
		Hydrophytic
	Ø = Total Caver	Vegetation Present? Yes No
emarks: (include photo numbers here or on a separate she		100
	0.25	area assumed to
,	, ,	
have hydrophytic vegetat	ion present	during The growing season
		0

VMO-JJP-129+130

Profile Description: (Describe to the	depth needed to document the indicator or con	from the absence of local cottons
Depth Metrix	Redox Features	in the absence of indicators.)
(inches) Color (malst) %	Golor (moist) % Type Loc	
No Dat		TOALUTE Remarks
	9	
Type: C=Concentration, D=Depletion	RM=Reduced Matrix, MS=Masked Sand Grains.	It continue Disables (table 14 and 15
lydric Soit Indicators:	THE TREADERS MEETIN, MICHIESTED CALLE CHAIRS.	*Location: PL=Pore Lining, M=Matrix,
Histosol (A1)	G	Indicators for Problematic Hydric Solls ³ :
_	Sandy Gleyed Matrix (S4)	Coast Prairie Redox (A16)
_ Histic Epipedon (A2)	Sandy Redox (\$5)	Dark Surface (S7)
_ Black Histic (A3)	Stripped Matrix (S6)	Iron-Manganese Masses (F12)
_ Hydrogan Suifide (A4)	Loamy Mucky Mineral (F1)	Vary Shallow Dark Surface (TF12)
_ Stratified Layers (A5)	Loamy Gleyed Matrix (F2)	Othar (Explain In Remarks)
_ 2 cm Muck (A10)	Depleted Matrix (F3)	
_ Depleted Below Dark Surface (A11)		
_ 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):		The state of the s
Тура:		
Depth (Inches):		Hydric Soil Present? Yes No
Depar (Inches).		100
No soil data du	he to landowner regularity fringe of	est: golf course.
No soil data du Assumed to be	he to landowner regularity fringe of	est: golf course. lake,
No soil data du Assumed to be DROLOGY	he to landowner regularity fringe of	est: golf course. lake,
No soil data du Assumed to be DROLOGY	hydric: fringe of	est: golf course. lake,
Mo soil data du Assumed to be DROLOGY utland Hydrology Indicators:	hydric: fringe of	lake,
Assumed to be DROLOGY Itland Hydrology Indicators:	hydric: fringe of ulred: check all that apoly)	Secondary Indicators (minimum of two requi
Assumed to be DROLOGY Itland Hydrology Indicators: mary Indicators (minimum of one is reg	hydric: fringe of wired: check all that apply) Water-Stained Leaves (B9)	Surface Soil Cracks (B6)
Mb Soil data du Assumed to be DROLOGY Itland Hydrology Indicators: mary Indicators (minimum of one is reg Surface Water (A1) High Water Table (A2)	hydric: fringe of wired: check all that apoly) Water-Stained Leaves (B9) Aquatic Fauna (B13)	Surface Soil Cracks (B6) Drainaga Pattarns (B10)
Assumed to be DROLOGY Itland Hydrology Indicators: mary indicators (minimum of one is reg Surface Water (A1) High Water Table (A2) Saturation (A3)	hydric: fringe of wired: check all that apoly) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14)	Secondary Indicators (minimum of two requi Surface Soil Cracks (B6) Drainaga Pattarns (B10) Dry-Season Water Table (C2)
Assumed to be DROLOGY Itland Hydrology Indicators: mary Indicators (minimum of one is real Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marka (B1)	hydric: fringe of wired: check all that apoly) 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) Drainaga Pattarns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
Assumed to be DROLOGY Itland Hydrology Indicators: mary Indicators (minimum of one is reg Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marka (B1) Sediment Deposits (B2)	hydric: fringe of wired: check all that apoly) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14)	Surface Soil Cracks (B6) Drainaga Pattarns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
Assumed to be DROLOGY Itland Hydrology Indicators: mary Indicators (minimum of one is reg Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marka (B1) Sediment Deposits (B2) Drift Daposits (B3)	hydric: fringe of wired: check all that apoly) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1)	Secondary Indicators (minimum of two regules Surface Soil Cracks (B6) Drainaga Pattarns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) (C3) Saturation Visible on Aerial Imagery (C9)
Assumed to be 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)	hydric: fringe of 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 regules Surface Soil Cracks (B6) Drainaga Pattarns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)
Assumed to be 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 Daposits (B3)	hydric: fringe of 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 Solia (C6)	Surface Soil Cracks (B6) Drainaga Pattarns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Gaomorphic Position (D2)
DROLOGY Itland Hydrology Indicators: mary Indicators (minimum of one is reg Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marka (B1) Sediment Deposits (B2) Drift Daposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	hydric. fringe of 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 regules Surface Soil Cracks (B6) Drainaga Pattarns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted 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 Marka (B1) Sediment Deposits (B2) Drift Daposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Viaible on Aerial Imagery (B	hydric. fringe of 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 Solle (C6) Thin Muck Surface (C7) Gauge or Well Data (D9)	Surface Soil Cracks (B6) Drainaga Pattarns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Gaomorphic Position (D2)
DROLOGY Itland Hydrology Indicators: mary Indicators (minimum of one is reg Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marka (B1) Sediment Deposits (B2) Drift Daposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Viaible on Aerial Imagery (B Sparsely Vegetated Concave Surface	water-Stained Leaves (B9) Aquatic Faune (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solia (C6) Thin Muck Surface (C7) Gauge or Well Data (D9)	Surface Soil Cracks (B6) Drainaga Pattarns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Gaomorphic Position (D2)
DROLOGY Itland Hydrology Indicators: mary Indicators (minimum of one is reg Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marka (B1) Sediment Deposits (B2) Drift Daposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B Sparsely Vagetated Concave Surface d Observations:	wired: check all that apoly) 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 Solia (C6) Thin Muck Surface (C7) 37) Gauge or Well Data (D9) (B8) Other (Explain in Remarks)	Surface Soil Cracks (B6) Drainaga Pattarns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Gaomorphic Position (D2)
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Assumed to be DROLOGY Interpolation of the interp	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 Solla (C6) Thin Muck Surface (C7) Gauge or Well Data (D9) (B8) Other (Explain in Ramarks) No Dapth (Inchas): No Depth (Inchas): Wetia	Surface Soil Cracks (B6) Drainaga Pattarns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aeriat Imagery (C9) Stunted or Stressed Plants (D1) Gaomorphic Position (D2) FAC-Neutral Test (D5)

Project/Site:		City/County:	f. Laris Co. Sampling Date: 3/17/
Applicant/Owner:		*	State: Mo Sampling Point: Vella
Investigator(s): JJP/CDK		Section, Township	D. Ranger 1738
Landform (hillstope, terrace, etc.): Depression	on pla	Local r	ellef (concave, convax, none). Concave.
Slope (%):		Lange - 90.	7(7CA) - +CANCO
Soil Map Unit Name: Sans Dessein 5	ilty cla	x 5-0 - x	5 lupes NWI classification: None
Are climatic / hydrologic conditions on the sile typical fo	this time of w	ears van 3	NAVI Classification: 700
Are Vegetation Y Soil Y or Hydrology N	significantly		
are Vegetation Scil, or Hydrology	- agrantanny		Are "Normal Circumstances" present? Yes No
		THE RESERVE OF THE PERSON NAMED IN COLUMN 1	lf naeded, explain any answers in Remarks.) nt locations, transects, important features, e
Hydrophytic Vagetation Present? Yes			me te de la company de la comp
Hydric Soil Present?	No	is the Samp	oled Area
Wetland Hydrology Present?	No	within a Wa	itland? Yes No
Remarks:		0 11	
PEM Situated in an agri	icul thrul	treld	depression. Soil + veg distur
EGETATION – Use scientific names of plan	 ts.		
ree Stratum (Plot size: 30')	Absolute	Dominant Indicate	or Deminance Test worksheet:
Absent	% Cover	Species7 Status	Number of Dominant Species ?
7403661			That Are OBL, FACW, or FAC:(A)
			Total Number of Dominant
+	-		Species Across All Strata:
			Percent of Dominant Species
15.1		Total Cover	That Are OBL, FACW, or FAC: 100% (A/B)
nolina/Shrub Stratum (Plot size: (5)		- TOTAL COVAL	Prevalence Index worksheet:
Absent			Total % Cover of: Multiply by:
			OBL species x 1 =
			FACW species x 2 =
			FAC apecles x 3 =
			FACU species x 4 =
rb Stratum (Plot size:)	<u> </u>	Total Cover	UPL species x 5 =
Anmonia coccinea	5	Y 68L	Column Totals: (A) (B)
Runex crispus		¥ ===	Prevalence Index = B/A =
Ameranthus tuberculatus	5	Y UBL	Hydrophytic Vegetation Indicators:
	_		1 - Rapid Test for Hydrophytic Vegetation
			2 - Dominance Test is >50%.
			3 - Prevalence Index is ≤3.01
			4 - Morphological Adaptations* (Provide supports
			data in Remarks or on a separate sheet)
			Problematic Hydrophytic Vegetation* (Explain)
ndy Vine Stratum (Plot size: 30')	=T	otal Cover	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
V 3.7		-	
Absent	-		Hydrophytic
1 3 par			Hydrophytic Vegetation Present? Yes No

•	_		
9		ш	

Sampling Point: PEM

(inches)	Color (moist)	- %	Color (moist)	x Feature	Type	Loc	Texture	Remarks
0-6"	104R 3/1	98	10783/4	2_		M	SL	Kamanka
6-17"	104R3/1	85	104/3/4	15		M	SCL	
				_	_			
ydric Soll In _ Histosol (/ _ Histic Epip _ Black Histi _ Hydrogen	dicators: A1) Dedon (A2) Ic (A3) Sulfide (A4) ayers (A5)	eletion, RM=	Sandy F Stripped Loamy M Loamy C	Gleyed Ma Redox (S5) Mairix (S Mucky Min Gleyed Ma	utrix (S4)) 66) paral (F1) Hrix (F2)	ains.	Indicators fo Coast Pro Dark Surf Iron-Mang Very Shal	PL=Fore Lining, M=Mairix, r Problematic Hydric Solle*: airie Redox (A16) face (S7) ganese Messes (F12) flow Dark Surface (TF12) rpisin in Remarks)
Depleted E Thick Dark Sandy Muck 5 cm Muck	((A10) Below Dark Surface : Surface (A12) :ky Mineral (S1) y Peat or Peat (S3	·)	Redox D Depleted		ce (F6) face (F7)		wetland hy	hydrophytic vegetation and ydrology must be present, turbed or problamatic.
	yer (ir observed):	_						~
Typa: Depth (Inche							Hydric Soil Pre	esent? Yes No
Depth (Inches marks:	s):		-		• .		Hydric Soil Pre	esent? Yes A. No
Depth (Inches marks: DROLOGY	logy indicators:	a le raquita	t chart all that and		• .			
Depth (Inches marks: DROLOGY stland Hydromary Indicato Surface Wal High Water	logy Indicators: rs (minimum of onder (A1) Table (A2)	e is required	t: check all that and Water-Stains Aquatic Fau	ed Leaves na (B13)	• •		Secondary in Surface	ndicators (minimum of two require Soil Cracks (86) e Pattems (810)
DROLOGY atland Hydro mary Indicato Surface Wat High Water Saturation (A	logy Indicators: rs (minimum of onder (A1) Table (A2)	e is required	Water-Staine Aquatic Faul	ed Leaves na (B13) : Plants (B	314)		Secondary in Surface Drainage Dry-Sea	ndicators (minimum of two require Soil Cracks (B6) e Pattems (B10) son Water Table (C2)
DROLOGY Indicate Surface Wai High Water Saturation (/	logy Indicators: rs (minimum of onler (A1) Table (A2) A3) a (B1)	e is required	Water-Staine Aquatic Faul True Aquatic Hydrogen St	ed Leaves na (B13) : Plants (B ulfide Odo	314) r (C1)		<u>Secondary in</u> Surface Dry-Sear Crayfish	ndicators (minimum of two require Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8)
DROLOGY Itland Hydro Burface Wal High Water Saturation (/ Water Marks Sediment De	logy Indicators: rs (minimum of one ler (A1) Table (A2) A3) a (B1) eposits (B2)	e is required	Water-Stains Aquatic Faul True Aquatic Hydrogen St	ed Leaves na (B13) : Plants (B ulfide Odol izoapherei	314) r (C1) s on Living	Roots (C	Gecondary in Surface Drainage Dry-Seau Crayfish Saturatio	ndicalors (minimum of two require Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9)
DROLOGY Itland Hydro Surface Wal High Water Saturation (/ Water Marks Sediment De	logy Indicators: rs (minimum of one ler (A1) Table (A2) A3) a (B1) eposits (B2) s (B3)	e is required	Water-Stains Aquatic Faul True Aquatic Hydrogen Stains Oxidized Rhi	ed Leaves na (B13) : Plants (B ulfide Odor izoapherer Reduced	314) r (C1) s on Living Iron (C4)		Gecondary in Surface Drainage Dry-Seau Crayfish Saturatio Stunted of	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)
DROLOGY Itland Hydro Burface Wal High Water Saturation (/ Water Marks Sediment De	logy indicators: rs (minimum of one ter (A1) Table (A2) A3) a (B1) a (B1) a (B3) Crust (B4)	e is required	Water-Stains Aquatic Faus True Aquatic Hydrogen Stain Oxidized Rhi Presence of Recent Iron I	ed Leaves na (B13) Plants (B ulfide Odor zoapherer Reduced	314) r (C1) s on Living Iron (C4) In Tilled S		Drainage Dry-Seau Crayfish Saturatio Slunted of	ndicators (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)
Depth (Inchesemarks: DROLOGY Itland Hydro Burface Wal High Water Saturation (/ Water Marke Sediment Deposit Algal Mat or Iron Deposits Inundation V	logy indicators: rs (minimum of onder (A1) Table (A2) A3) a (B1) eposits (B2) s (B3) Crust (B4) s (B5) Isible on Aerial Imi	agery (B7)	Water-Stains Aquatic Faus True Aquatic Hydrogen Stains Oxidized Rhi Presence of Recent Iron I Thin Muck Stains	ed Leaves na (B13) c Plants (B ulfide Odor izoapherer Reduced Reduction urface (C7	314) r (C1) s on Living lron (C4) In Tilled S 7)		Drainage Dry-Seau Crayfish Saturatio Slunted of	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)
Depth (Inches marks: DROLOGY etland Hydromery Indicator Surface Walter Saturation (/ Water Marks Sediment Deposits Algal Mat or Iron Deposits Inundation V Sparsely Veg	logy Indicators: rs (minimum of onder (A1) Table (A2) A3) a (B1) eposits (B2) s (B3) Crust (B4) s (B5) Isible on Aerial Imagelated Concave S	agery (B7)	Water-Stains Aquatic Faus True Aquatic Hydrogen Stains Oxidized Rhi Presence of Recent Iron I Thin Muck Stains	ed Leaves na (B13) c Plants (B ulfide Odor izoapherer Reduced Reduction urface (C7	314) r (C1) s on Living lron (C4) In Tilled S 7)		Drainage Dry-Seau Crayfish Saturatio Slunted of	ndicators (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)
Depth (Inches marks: DROLOGY Itland Hydro mary Indicate Surface Wait High Water Saturation (/ Water Marks Sediment Deposits Apal Mat or Iron Deposits Inundation V Sparsely Veg d Observation	iogy Indicators: rs (minimum of onder (A1) Table (A2) A3) a (B1) eposits (B2) s (B3) Crust (B4) s (B5) Isible on Aerial Imagelated Concave Sens:	agery (B7) surface (B8)	Water-Stains Aquatic Faul True Aquatic Hydrogen Stains Oxidized Rhi Presence of Recent Iron I Thin Muck Stains Gauge or We	ed Leaves na (B13) : Plants (B :Ifide Odor :zoapherer Reduced Reduction urface (C7 ell Data (D in in Rema	314) r (C1) s on Living lron (C4) In Tilled S 7)		Drainage Dry-Seau Crayfish Saturatio Slunted of	ndicators (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)
DROLOGY etiand Hydro many Indicate Surface Wai High Water Saturation (/ Water Marks Sediment De Drift Deposits Inundation V Sparsely Veg Id Observation	logy Indicators: rs (minimum of onder (A1) Table (A2) A3) a (B1) eposits (B2) s (B3) Crust (B4) s (B5) lisible on Aerial Imagelated Concave Sons: essent? Yes	agery (B7) surface (B8) No	Water-Stains Aquatic Faus True Aquatic Hydrogen Stains Oxidized Rhi Presence of Recent Iron I Thin Muck Stains Gauge or We Other (Explains	ed Leaves na (B13) Plants (B lifide Odor Izospherer Reduced Reduction urface (C7 eli Data (D in in Rema	314) r (C1) s on Living lron (C4) In Tilled S 7)		Drainage Dry-Seau Crayfish Saturatio Slunted of	ndicators (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)
DROLOGY Itiand Hydro Transport Indicate Surface Wal High Water Saturation (/ Water Marks Sediment De Drift Deposits Inundation V Sparsely Veg Id Observation face Water Preservation Preservation Preservation Preservation	logy Indicators: rs (minimum of onder (A1) Table (A2) A3) a (B1) eposits (B2) s (B3) Crust (B4) s (B5) disible on Aerial Imagelated Concave Sons: esent? yes ent? yes	agery (B7) iurface (B8) No No	Water-Stains Aquatic Faus True Aquatic Hydrogen Stains Oxidized Rhi Presence of Recent Iron I Thin Muck Stains Gauge or We Other (Explains	ed Leaves na (B13) Plants (B lifide Odor izospherer Reduced Reduction urface (C7 eli Data (D in in Rema	314) r (C1) s on Living lron (C4) In Tilled S 7)	folis (C6)	Drainage Dry-Seau Crayfish Saturatio Slunted of	ndicators (minimum of two requires Soil Cracks (B6) as Patterns (B10) as on Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) ohic Position (D2) strail Test (D5)
DROLOGY Indicate Surface Wait High Water Saturation (/ Water Marks Sediment Deposits Inundation V Sparsely Veg Indicate Water Preservation Preservation Preservation Preservation Capital Preservation	iogy Indicators: rs (minimum of onder (A1) Table (A2) A3) a (B1) eposits (B2) s (B3) Crust (B4) s (B5) Isible on Aerial Imagetated Concave Sons: esent? Yes ent? Yes off (Prince)	agery (B7) surface (B8) No No	Water-Stains Aquatic Faus True Aquatic Hydrogen Stains Oxidized Rhi Presence of Recent Iron in Thin Muck Stains Gauge or We Other (Explains) Depth (Inches	ed Leaves na (B13) Plants (B lifide Odor zospherer Reduced Reduction urface (C7 ell Data (D in in Remains):	314) r (C1) s on Living lron (C4) In Tilled S 7) 99)	Golls (C6)	Secondary in Surface Dry-Sens Crayfish Siunted of Geomory FAC-Neu	ndicators (minimum of two remula Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) ohic Position (D2) utral Test (D5)
DROLOGY Indicate Surface Wait High Water Saturation (/ Water Marks Sediment Deposits Inundation V Sparsely Veg Indicate Water Preservation Preservation Preservation Preservation Capital Preservation	iogy Indicators: rs (minimum of onder (A1) Table (A2) A3) a (B1) eposits (B2) s (B3) Crust (B4) s (B5) Isible on Aerial Imagetated Concave Sons: esent? Yes ent? Yes off (Prince)	agery (B7) surface (B8) No No	Water-Stains Aquatic Faus True Aquatic Hydrogen Stains Oxidized Rhi Presence of Recent Iron I Thin Muck Stains Gauge or We Other (Explains Depth (Inches	ed Leaves na (B13) Plants (B lifide Odor zospherer Reduced Reduction urface (C7 ell Data (D in in Remains):	314) r (C1) s on Living lron (C4) In Tilled S 7) 99)	Golls (C6)	Secondary in Surface Dry-Sens Crayfish Siunted of Geomory FAC-Neu	ndicators (minimum of two requires Soil Cracks (B6) a Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) ohic Position (D2) strail Test (D5)

Applicant/Owner: Spire nvestlgator(s): JJ/ / c D/K			State: MO	
andform (hillslope, terrace, etc.):	N.	_ Section, Township	, Range: <u>0155</u>	
Slone (%):	Tring 4	Local	tilaf (concave, convex, none)	Concave
Lat Lat.	1	Long: - 70.	176121	Datum: + ZAACA
oil Map Unit Name: Menfre 5.17 Loan	n Karst	9-35% 51	MWI classifi	cation: L2UAH
re climatic / hydrologic conditions on the site typical for	this time of y	ear? Yes X	lo (If no, explain in F	Remarks.)
re Vegetation, Soil, or Hydrology	significanti	y disturbed? A	re "Normal Circumstances"	present? Yes X
re Vegetation Soil er Hydrology N	_ naturally pr	oblematic?	f needed, explain any answe	ors in Remarke.)
UMMARY OF FINDINGS - Attach site ma	p showing	sampling poin	it locations, transacte	important feeture
Hydrophytic Vegetation Present?	No			, important leatures,
	No	is the Samp	ied Area	
	No	within a Wes	tland? Yes_X	No
Remarks:				
PUB situated on the fring	د دا	a lake		
EGETATION – Use scientific names of plant	s.			
	Absolute		Dominance Test works	haet
ree Stratum (Plot size: 30')		Species? Status	- Number of Dominant Sp	ecies 7
			That Are OBL, FACW, o	FAC: (A
			Total Number of Domina	m 2
			Species Across All Strate	
			Percent of Dominant Spe	ocies (C 7
- Y-		= Tolal Cover	That Are OBL, FACW, or	FAC: 66.7% (A
pling/Shrub Stratum (Plot size: 15 7			Prevalence Index works	iheet:
Cephalanthus occidentalis	72	Y OBL	Total % Cover of:	and the second s
			OBL species	
			FACW species	x 2 =
			FAC species	
	- 10-		FACU species	× 4 =
to Stratum (Plot aize: 5)	35	Total Cover		x5=
Scirpus experinus	40	Y OBL	Column Totals:	(A) (B
Lonicara japonica	20	FACH	Prevalence index =	B/A ■
			Hydrophytic Vegetation	
		<u> </u>	1 - Rapid Test for Hyd	Implication Vocatelies
			2 - Dominance Test le	>60%
			3 - Prevalence Index i	s ≤3,0¹
			4 - Morphological Ada	ptations' (Provide supportin
			data in Remarks or	on a separate sheet)
,			Problematic Hydrophy	tic Vegetation' (Explain)
			Indicators of husbin action	Amadian di Lorenza
dy Vine Stretum (Flot size: 30'/	_60_=	Total Cover	Indicators of hydric soil an be present, unless disturbe	u weusnu hydrology must id or problematic.
Assert	-			
			Hydrophytic Vegetation	
			Present? Yes	
arks: (include photo numbers here or on a separate sh	<u></u> ≥1	Total Cover	Les 7	No

e	0	11	

Sampling Point: Puß

Depth Metris_ (inches) Color (moist)	% .	Color (moist)	x Feature		Lee	Tenhan	Remarks
O-3" OYR 42	95	7.546 4/6	5	_Type'	MIPL	SCL	Neimerks
3-17" 2,545%	85	IOYR Y/G	10	_	MIPL	SCL	
		7.548416	+5		MIPL		
	=	7.576 (16					
Type: C=Concentration, D=Dep ydric Soll Indicators: Histosol (A1)	eletion, RM		=Masked		mains.	Indicators fo	PL=Pore Lining, M=Matrix, or Problematic Hydric Soils ³ : raide Redox (A16)
_ Histic Epipedon (A2)			edox (S5)				face (S7)
Black Histic (A3)			Matrix (S				igenese Masses (F12)
Hydrogen Sulfide (A4)		*	lucky Min	•			llow Dark Surface (TF12)
_ Stratifiad Layers (A5)		Loamy G	leyed Ma	truc (F2)			xplain in Ramarks)
 2 cm Muck (A10) Depleted Below Derk Surface Thick Dark Surface (A12) Sendy Mucky Mineral (S1) 5 cm Mucky Peat or Paet (S3 	3)	Redox D	Matrix (F erk Surfac Dark Sur epression	ce (F6) face (F7)		wetland h	f hydrophytic vegetation and sydrology must be present, sturbed or problamatic.
estrictive Layer (if observed):							
Type: None							>
Type:/Vont							
Depth (inches):						Hydric Soll Pr	esent? Yes No
Depth (inches): emerks:		_				Hydric Soll Pr	esent? Yes No
Depth (inches):emarks;				* .		Hydric Soll Pr	esent? Yes No
Depth (inches): emarks: DROLOGY etiand Hydrology Indicators:	e la require	nd: check all that app	w)				
Depth (inches): emarks: DROLOGY etland Hydrology Indicators: mary Indicators (minimum of on	e is require	10		ı (B9)		Secondary	Indicators (minimum of two require
Depth (inches): emerks: DROLOGY etland Hydrology Indicators: mary Indicators (minimum of on Surface Water (A1)	e is require	Water-Stain	ed Leaves	ı (B9)		Secondary Surface	Indicators (minimum of two require Soil Cracks (86)
Depth (inches): emarks: DROLOGY etland Hydrology Indicators: mary Indicators (minimum of on	e is require	Water-Staine Aquatic Fau	ed Leaves na (B13)	, ,		Secondary Surface Drainag	Indicators (minimum of two require Soil Cracks (86) le Patterns (810)
Depth (inches): emerks: DROLOGY etland Hydrology Indicators: mary Indicators (minimum of on Surface Water (A1) High Water Table (A2)	e is require	Water-Staine Aquatic Fau True Aquatic	ed Leaves na (B13) : Plants (B	314)		Secondary Surface Drainag Dry-Sea	Indicators (minimum of two require Soil Cracks (86)
Depth (inches): emarks: DROLOGY etiand Hydrology Indicators: imary Indicators (minimum of on Surface Water (A1) High Water Table (A2) Saturation (A3)	e is require	Water-Staine Aquatic Fau	ed Leaves na (B13) : Plants (B ulfide Odo	314) r (C1)	ng Roots (C	Secondary Surface Drainag Dry-Sea	Indicators (minimum of two requires Soil Cracks (86) ge Patterns (810) ason Water Table (C2) in Burrows (C8)
Depth (inches): emarks: DROLOGY etiand Hydrology Indicators: imary Indicators (minimum of on Surface Water (A1) High Water Table (A2) Saturation (A3) Water Merke (B1)	e is require	Water-Staind Aquatic Faul True Aquatic Hydrogen St	ed Leaves na (B13) : Plants (B ulfide Odo izosphera	314) r (C1) s on Livin	•	Secondary Surface Drainag Dry-Sec Crayfisi	Indicators (minimum of two requires Soil Cracks (86) ge Pattems (810) ason Water Table (C2)
Depth (inches): emarks: DROLOGY etiand Hydrology Indicators: imary Indicators (minimum of on _ Surface Water (A1) High Water Table (A2) Saturation (A3) , Water Merke (B1) , Sediment Deposits (B2)	e is require	Water-Stains Aquatic Faus True Aquatic Hydrogen St	ed Leaves na (B13) : Plents (B ulfide Odo irosphera Reduced	314) r (C1) s on Livin iron (C4)	•	Secondary Surface Drainag Dry-Sec Crayfisi Saturati Stunted	Indicators (minimum of two requires Soil Cracks (86) pe Patterns (810) pason Water Table (C2) pe Burrows (C8) per Visible on Aerial Imagery (C8)
Depth (inches): emarks: DROLOGY etiand Hydrology Indicators: [mary Indicators (minimum of on Surface Water (A1) High Water Table (A2) Saturation (A3) Water Merke (B1) Sediment Deposits (B2) Drift Deposits (B3) Aigal Mat or Crust (B4) Iron Deposits (B5)		Water-Stains Aquatic Faus True Aquatic Hydrogen St Oxidized Rhi	ed Leaves na (B13) Plants (B ulfide Odo izesphere Reduced Reduction	314) r (C1) s on Livin Iron (C4) In Tilled	•	Surface Drainag Dry-Sea Crayfal Saturated Geomo	Indicators (minimum of two requires of Soil Cracks (86) (Pe Patterns (810) (Reson Water Table (C2) (Reson Water Table (C2) (Reson Water Table (C3) (Re
Depth (inches): emarks: DROLOGY etiand Hydrology Indicators: mary Indicators (minimum of on Surface Water (A1) High Weter Table (A2) Saturation (A3) Water Merke (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Im	agary (B7)	Water-Staine Aquatic Faur True Aquatic Hydrogen St Oxidized Rhi Presence of Recent Iron Thin Muck S Gauge or We	ed Leaves na (B13) : Plents (B ulfide Odo trosphere Reduced Reduction urface (C7	314) r (C1) 5 on Livin Iron (C4) In Tilled	•	Surface Drainag Dry-Sea Crayfal Saturated Geomo	Indicators (minimum of two requires a Soil Cracks (86) ge Patterns (810) gason Water Table (C2) gason Water Table (C2) gason Visible on Aerial Imagery (C8) or Stressed Plants (D1) gable Position (D2)
Depth (inches): emarks: DROLOGY etiand Hydrology Indicators: mary Indicators (minimum of on Surface Water (A1) High Water Table (A2) Saturation (A3) Water Merke (B1) Sediment Deposits (B2) Drift Deposits (B3) Aigal Mat or Crust (B4) Iron Deposits (B6) Inundation Visible on Aerial Im Sparsely Vegetated Concave 8	agary (B7)	Water-Staine Aquatic Faur True Aquatic Hydrogen St Oxidized Rhi Presence of Recent Iron Thin Muck S Gauge or We	ed Leaves na (B13) : Plants (B ulfide Odo izosphere Reducad Reduction urface (C7	314) r (C1) s on Livin lron (C4) ln Tilled 7)	•	Surface Drainag Dry-Sea Crayfal Saturated Geomo	Indicators (minimum of two requires a Soil Cracks (86) ge Patterns (810) gason Water Table (C2) gason Water Table (C2) gason Visible on Aerial Imagery (C8) or Stressed Plants (D1) gable Position (D2)
Depth (inches): emarks: DROLOGY etland Hydrology Indicators: imary Indicators (minimum of on Surface Water (A1) High Water Table (A2) Saturation (A3) Water Merke (B1) Sediment Deposits (B2) Drift Deposits (B3) Aigal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Im Sparsely Vegetated Concave S Id Observations:	agary (B7) Surfaca (B8	Water-Stains Aquatic Faus True Aquatic Hydragen St Oxidized Rh Presence of Recent Iron Thin Muck S Gauge or We Other (Expla	ed Leaves na (B13) : Plents (B ulfide Odo izesphere Reduced Reduction urface (C7 ell Data (D in in Reme	314) r (C1) s on Livin lron (C4) ln Tilled 7)	•	Surface Drainag Dry-Sea Crayfal Saturated Geomo	Indicators (minimum of two requires a Soil Cracks (86) ge Patterns (810) gason Water Table (C2) gason Water Table (C2) gason Visible on Aerial Imagery (C8) or Stressed Plants (D1) gable Position (D2)
Depth (inches): emarks: DROLOGY etland Hydrology Indicators: imary Indicators (minimum of on 5urface Water (A1) High Water Table (A2) Saturation (A3) Water Merke (B1) Sediment Deposits (B2) Drift Deposits (B3) Aigal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Im Sparsely Vegetated Concave 8 Id Observations: Iface Water Present?	agary (B7) Surfaca (B8	Water-Stains Aquatic Faus True Aquatic Hydragen St Oxidized Rhi Presence of Recent Iron Thin Muck St Gauge or We Other (Explains) Depth (Inches	ed Leaves na (B13) Plents (B elfide Odo iresphere Reduced Reduction urface (C7 elf Data (D in in Reme	314) r (C1) s on Livin lron (C4) ln Tilled 7)	•	Surface Drainag Dry-Sea Crayfal Saturated Geomo	Indicators (minimum of two requires a Soil Cracks (86) ge Patterns (810) gason Water Table (C2) gason Water Table (C2) gason Visible on Aerial Imagery (C8) or Stressed Plants (D1) gable Position (D2)
Depth (inches): emarks: DROLOGY etiand Hydrology Indicators: imary Indicators (minimum of on 5urface Water (A1) High Water Table (A2) Saturation (A3) Water Merke (B1) Sediment Deposits (B2) Drift Deposits (B3) Aigal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Im Sparsely Vegetated Concave 8 Id Observations: face Water Present?	agary (B7) Surfaca (B8	Water-Stains Aquatic Faus Aquatic Faus True Aquatic Hydrogen St Oxidized Rhi Presence of Recent Iron Thin Muck S Gauge or We Other (Explain) Depth (Inches	ed Leaves na (B13) : Plents (B ulfide Odo iresphere Reduced Reduction urface (C7 ell Data (D in in Remo	814) r (C1) s on Livin fron (C4) in Tilled f7) erks)	Soils (C6)	Secondary Surface Drainag Dry-Sea Crayfal Stunted Geomo	Indicators (minimum of two requires a Soil Cracks (86) ge Patterns (810) gason Water Table (C2) gason Water Table (C2) gason Water Table (C3) go Visible on Aerial Imagery (C9) or Stressed Plants (D1) graphic Position (D2) gutral Test (D5)
Depth (inches): emarks: DROLOGY etland Hydrology Indicators: imary Indicators (minimum of on 5urface Water (A1) High Water Table (A2) Saturation (A3) Water Merke (B1) Sediment Deposits (B2) Drift Deposits (B3) Aigal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Im Sparsely Vegetated Concave 8 Id Observations: iface Water Present? Vesturation Present?	agary (B7) Surfaca (B8	Water-Stains Aquatic Faus True Aquatic Hydrogen St Oxidized Rhi Presence of Recent Iron Thin Muck St Gauge or We Other (Expla	ed Leaves na (B13) : Plents (B ulfide Odo iresphere Reduced Reduction urface (C7 ell Data (D in in Remo	814) r (C1) s on Livin fron (C4) in Tilled f7) erks)	Soils (C6)	Surface Drainag Dry-Sea Crayfal Saturated Geomo	Indicators (minimum of two requires a Soil Cracks (86) ge Patterns (810) gason Water Table (C2) gason Water Table (C2) gason Visible on Aerial Imagery (C9) or Stressed Plants (D1) graphic Position (D2) gatral Test (D5)
Depth (inches): emarks: DROLOGY ettand Hydrology Indicators: imary Indicators (minimum of on Surface Water (A1) High Water Table (A2) Saturation (A3) Water Merke (B1) Sediment Deposits (B2) Drift Deposits (B3) Aigal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Im Sparsely Vegetated Concave S Id Observations: face Water Present? Vesturation Present? Vesturation Present? Vesturation Present?	agary (B7) Surfaca (B8 3 No	Water-Stains Aquatic Faus True Aquatic Hydrogen St Oxidized Rh Presence of Recent Iron Thin Muck S Gauge or We Other (Explain Depth (Inches	ed Leaves na (B13) : Plents (B ulfide Odo tresphere Reduced Reduction urface (C7 all Data (D in in Remo	814) r (C1) s on Livin lron (C4) In Tilled r) erks)	Soils (C6)	Secondary Surface Drainag Dry-Sea Crayfal Saturat Stunted FAC-Ne	Indicators (minimum of two requires a Soil Cracks (86) ge Patterns (810) gason Water Table (C2) gason Water Table (C2) gason Water Table (C3) go Visible on Aerial Imagery (C9) or Stressed Plants (D1) graphic Position (D2) gutral Test (D5)
Depth (inches): emarks: DROLOGY etland Hydrology Indicators: imary Indicators (minimum of on 5 urface Water (A1) High Water Table (A2) Saturation (A3) Water Merke (B1) Sediment Deposits (B2) Drift Deposits (B3) Aigal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Im Sparsely Vegetated Concave S Id Observations: Iface Water Present? Yes Iter Table Present?	agary (B7) Surfaca (B8 3 No	Water-Stains Aquatic Faus True Aquatic Hydrogen St Oxidized Rh Presence of Recent Iron Thin Muck S Gauge or We Other (Explain Depth (Inches	ed Leaves na (B13) : Plents (B ulfide Odo tresphere Reduced Reduction urface (C7 all Data (D in in Remo	814) r (C1) s on Livin lron (C4) In Tilled r) erks)	Soils (C6)	Secondary Surface Drainag Dry-Sea Crayfal Saturat Stunted FAC-Ne	Indicators (minimum of two requires a Soil Cracks (86) ge Patterns (810) gason Water Table (C2) gason Water Table (C2) gason Water Table (C3) go Visible on Aerial Imagery (C9) or Stressed Plants (D1) graphic Position (D2) gutral Test (D5)

WMO-JJP - 133

Project/Site: STL NCE		_ City/County:	57. Louis Co. Sampling Date: 3/17/
Applicant/Owner:			State: MD Sampling Point: PS
Investigator(s): TTP/ CDK		O	
Lendform (hillstope, terrace, etc.):	frier r	Land	allaf (a
Siche (%) 67. Lat: 30, 101 (76		1000 - 90.	199097
Soil Map Unit Name: Man Pro Sill Inna	14-20	y shore	Coded NW claseification: L148 H
Are climatic / hydrologic conditions on the site typical fo	or this time of a	mary year X	No. (15 and 15 a
Are Vegetation Soil or Hydrology	significanti		
Are Vegetalian M., Soll M., or Hydrology N	nah wallu n		Are "Normal Circumstances" present? Yes No
SUMMARY OF FINDINGS - Attach site -	an abauda	Community	(If needed, explain any answers in Remerka.)
Hydrophytic Vegetation Present?	ah anowini	a sampling boli	nt locations, transects, important features, e
Hydric Soll Present?	No	In the Same	pled Area
	No	within a We	otland? Yes No
Remarks:			
PSS situated on the	fringe.	ot a	lake. NUI vetland.
	14.		
EGETATION - Use scientific names of plan	ts.		
Tree Stratum (Plot size: 30',	Absolute		Dominance Test worksheet:
1. Absent	70 C/OVE	Species? Statue	NUMBER OF LIGHTHAM TENDECHER
			That Are OBL, FACW, or FAC:(A)
			Total Number of Dominant
		-	Species Across Ali Strata; (B)
			Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
aolino/Shrub Stratum (Plot size: 15')	_0_:	= Total Cover	
C 1 1 1 1	35	N/ 001	Prevalence Index worksheet:
Salix piera	37		THE WAY OF
Ulmas americana		1/ FACW	OBL species 45 x1= 45 FACW species 20 x2= 40
			W 470 W
			FACU species 40 x3= 0
arb Stratum (Plot aize: 5')	45-	Total Cover	UPL species O x5= O
erb Stratum (Plot size:)			Column Totals: 105 (a) 245
Arthuren hispidus	40	Y FACH	(0)
Corex tribuloides	10	N FACE	
Importions copensis		N OBL	Hydrophytic Vegetation Indicators:
varietis capensis		N FALV	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
			2 - Dominanca Test is >50% 3 - Prevalence Index is ≤3,0
	-		 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
			Problematic Hydrophytic Vegetation¹ (Explain)
			(Lapany)
ASsent	60 =	Total Cover	¹ Indicators of hydric soil and watland hydrology must be present, unless disturbed or problematic.
- 1938A7			Hydrophytic
			Vegetation
+	0 -	otal Cover	Present? Yes No

2.

	a to min debr	h neaded to docun	nent the indi	cator or confin	n the absence	of indicators.)
Depth <u>Matrix</u>	All All Property and the second		x Features			or intercentary
(Inches) Color (moist)	%	Color (moist)		vpe' Loc'	Texture	Remarks
0-3" 101/4/2	80	7.54R46	20	C M/PL	SL	
3-17" 2.574/1	70	104R 3/4	10	- M	SCL	
		7.5484/6	20 (MIPL		
		149 [14 16	<u></u>	- ////		
						+
Type: C=Concentration, D=Dej	pletion, RM=R	leduced Matrix, MS	=Masked Sar	nd Grains.	³ Location:	PL=Pore Lining, M=Matrix.
Hydric Soil Indicators:						for Problematic Hydric Solls ¹ :
Histosoi (A1)			leyed Matrix ((S4)		Prairie Redox (A16)
Histic Epipedon (A2)		Sandy Re			_	ırface (S7)
Black His/Ic (A3)			Matrix (S6)		_	nganese Masses (F12)
Hydrogan Sulfide (A4) Stratified Layars (A5)			ucky Mineral	• •		allow Dark Surface (TF12)
3trauneu Layars (A5) 2 cm Muck (A10)			leyed Matrix Matrix (F3)	(F2)	Otnar (c	Explain in Ramarks)
_ Depleted Below Dark Surfac	:a (A11)		ark Surface (F	FR)		+
Thick Dark Surface (A12)	· (,		Dark Surface		3Indicators o	of hydrophytic vegatation and
Sandy Mucky Mineral (S1)			pressions (F			hydrology must be present.
_ 5 cm Mucky Peat or Peat (5:				•		listurbed or problematic.
estrictive Layer (if observed):						
Typa: A/UA !		_				\checkmark
Depth (Inches):					Hydric Soil P	resant? Yes No
DROLOGY Strand Hydrology Indicators:	ve la requirert	check all that anni-	a		Saccidani	
etland Hydrology Indicators: Imary Indicators (minimum of or	se is required:					Indicators (minimum of two required
etland Hydrology Indicators: imary Indicators (minimum of on Surface Water (A1)	se la required;	Water-Staine	d Leaves (BS	1)	Surfac	e Soil Cracks (B6)
etland Hydrology Indicators: imary Indicators (minimum of or Surface Water (A1) High Water Table (A2)	se is required:	Water-Staine Aquatic Faun	d Leaves (89 a (813)) -	Surfac Draina	e Soil Cracks (B6) ge Pattarns (B10)
etland Hydrology Indicators: imary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Seturation (A3)	se is required:	Water-Stainer Aquatic Faun True Aquatic	d Leaves (85 a (813) Piants (814)		Surfac Draina Dry-Se	e Soil Cracks (B6) ge Pattarns (B10) sason Water Table (C2)
etland Hydrology Indicators: imary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Seturation (A3) Water Marks (B1)	se is required:	Water Stains Aquatic Faun True Aquatic Hydrogen Sul	d Leaves (85 a (813) Plants (814) liide Odor (C	1)	Surfac Draina Dry-Se Crayfia	e Soil Cracks (86) ge Pattams (B10) ason Water Table (C2) th Burrows (C8)
etland Hydrology Indicators: fmary Indicators (minimum of on Surface Water (A1) High Water Table (A2) Seturation (A3) Water Marks (B1) Sediment Daposits (B2)	se is required:	Water-Staine Aquatic Faun True Aquatic Hydrogen Sul Oxidized Rhiz	d Leaves (BS a (B13) Plants (B14) Inde Odor (C toepheres on	1) Living Roots (C	Surfac Draina Dry-Se Crayfia 3) Satura	e Soil Cracks (86) ge Pattarns (810) eason Water Table (C2) th Burrows (C6) tion Visible on Aerial Imagery (C9)
etland Hydrology Indicators: imary Indicators (minimum of on Surface Water (A1) High Water Table (A2) Seturation (A3) Water Marks (B1) Sediment Daposits (B2) Drift Deposits (B3)	se is required:	Water Staine Aquatic Faun True Aquatic Hydrogen Sul Oxidized Rhiz	d Leaves (BS a (B13) Plants (B14) Inde Odor (C toaphares on Reduced Iron	1) Living Roots (C (C4)	Surfac Draina Dry-Se Crayfia Satura Sluntac	e Soil Cracks (86) ge Pattarns (B10) pason Water Table (C2) th Burrows (C8) tion Visible on Asrial Imagery (C9) d or Stressed Plants (D1)
etland Hydrology Indicators: imary Indicators (minimum of on Surface Water (A1) High Water Table (A2) Seturation (A3) Water Marks (B1) Sediment Daposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	se is required:	Water-Staine Aquatic Faun True Aquatic Hydrogen Sul Oxidized Rhiz Prasance of F	d Leaves (BS a (B13) Piants (B14) Inde Odor (C toapheres on Reduced Iron teduction in 1	1) Living Roots (C	Surfac Draina Dry-Se Crayfin 3) Satura Sluntac	e Soil Cracks (86) ge Pattarns (B10) pason Water Table (C2) th Burrows (C6) tion Visible on Asrial Imagery (C9) d or Stressed Plants (D1) popular Position (D2)
etland Hydrology Indicators: imary Indicators (minimum of on Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Daposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)		Water-Stainer Aquatic Faun True Aquatic Hydrogen Sul Oxidized Rhiz Prasance of F	d Leaves (BE a (B13) Plants (B14) Inde Odor (Ci coapheres on Reduced iron reduction in T	1) Living Roots (C (C4)	Surfac Draina Dry-Se Crayfin 3) Satura Sluntac	e Soil Cracks (86) ge Pattarns (810) pason Water Table (C2) th Burrows (C6) tion Visible on Asrial Imagery (C9) d or Stressed Plants (D1)
etland Hydrology Indicators: imary Indicators (minimum of on Surface Water (A1) High Water Table (A2) Seturation (A3) Water Marks (B1) Sediment Daposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	nagery (B7)	Water-Stainer Aquatic Faun True Aquatic Hydrogen Sul Oxidized Rhiz Prasance of F Recent Iron R Thin Muck Su Geuge or Wel	d Leaves (BE a (B13) Piants (B14) lifde Odor (Consepheres on Reduced iron Reduced iron Reduction in 1 Inface (C7)	1) Living Roots (C (C4) Illed Solls (C6)	Surfac Draina Dry-Se Crayfin 3) Satura Sluntac	e Soil Cracks (86) ge Pattarns (B10) pason Water Table (C2) th Burrows (C6) tion Visible on Asrial Imagery (C9) d or Stressed Plants (D1) popular Position (D2)
etland Hydrology Indicators: imary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sudiment Daposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Asrial im Sparsaly Vagatated Concave (nagery (B7)	Water-Stainer Aquatic Faun True Aquatic Hydrogen Sul Oxidized Rhiz Prasance of F	d Leaves (BE a (B13) Piants (B14) lifde Odor (Consepheres on Reduced iron Reduced iron Reduction in 1 Inface (C7)	1) Living Roots (C (C4) Illed Solls (C6)	Surfac Draina Dry-Se Crayfin 3) Satura Sluntac	e Soil Cracks (86) ge Pattarns (B10) pason Water Table (C2) th Burrows (C6) tion Visible on Asrial Imagery (C9) d or Stressed Plants (D1) popular Position (D2)
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APPENDIX B Upland Data Forms (Additional Features Only)



Project/Site:STL	City	/County: 100	sey Lo	Sampling Date: 3 - 14-72
Applicant/Owner:			State; IL	Sampling Point Upland
Investigator(s):	Sec	tion, Township, R	ange: 2 12 4 '	7~
Landform (hillslope, terrace, etc.): 115	lace	Local relie	f (concave, convex, none)	Convex
Slope (%): 3 % Lat: 39. 0796	22'4 Lon	-90.39		Datum: NAI) 83
Soil Map Unit Name: E co 5:114 c	ley losm, 5-10%	slupes, seur	rely exaded NVM classific	nation: None
Are climatic / hydrologic conditions on the site to	pical for this time of year?	Yes V No	(If no, explain in Fi	emarks.)
Are Vegetation N Soil N or Hydrolo				resent? Yes No
	gyneturally problem		eeded, explain any enswe	
SUMMARY OF FINDINGS - Attach	site map showing sar	mpling point	ocations, transects	important features, etc.
Mandage to the Mandage of the Control of the Contro	No_V			,
1000000	No V	is the Sample		
	No	within a Wetia	nd? Yes	No
-Aren upland sample p			WILCOK100	1
- Area at sample poi	at within	active	rattle pas	ture
VEGETATION – Use scientific names	of plants.			
Tree Stratum (Plot size: 30 Y		ninant Indicator	Dominance Test works	
1. Robinia pseudoacacia		Y FACU	Number of Dominant Spo That Are OBL, FAGW, or	
3.			Total Number of Domina Species Across All Strats	
5.			Percent of Dominant Spa	cles 🔿
15.	10 = Tot	al Cover	That Are OBL, FACW, or	FAC: (A/B)
Sapino/Shrub Stratum (Plot size: 15 v			Prevalence Index works Total % Cover of:	W
2.			OBL species	X1 = S
3.			FACW species	x2= 0
4 HOSENT			FAC species	x3= 0
5.			FACU species 90	x4= 360
Herb Stratum (Plot size: 1)	= Tota	l Cover	UPL species	x5= 50
Trifolium merens	60 Y	FACU	Column Totals: (00	(A) 410 (B)
Poa annua	15 7	FACU	Prevalence Index =	B/A = 4.10
solania viridis	10 0	/ YAL	Hydrophytic Vegetation	
Tapaxacyon offinale	5	/ FACY	1 - Rapid Test for Hyd	
			2 - Dominance Test is	>50%
			3 - Prevalence Index i	
			4 - Morphological Ada,	plations' (Provide supporting
-			Problematic Hydrophy	on a separate sheet)
			Flobielitatic Hydrophy	(IC Aederation, (Exbiain)
0	90 = Total	Cover	Indicators of hydric soil an pe present, unless disturbe	d wetland hydrology must
TOTAL THE SHEIGHT (FIRE SIZE. 770 T		-		STATE OF STA
Absent			fydrophytic /egetation	
	= Total		resent? Yes	No
emarks: (Include photo numbers here or on a se	parate sheet.)			
- Have				

SOIL

Sampling Point:

Histosol (A1) Histosol (A2) Sandy Redox (S5) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sediment Deposits (B3) DRO LOGY Hydrogen Sulfide (A2) Stratified Layers (A5) Loamy Mucky Mineral (F1) Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) Thick Dark Surface (A12) Depleted Dark Surface (F7) Indicators of wetland unless of wetland unless of the surface (F8) Depth (Inches): Hydric Soll P Benarks: DROLOGY Surface Water (A1) Water-Stained Leaves (B9) Surface Water (A1) High Water Table (A2) Saturation (A3) True Aquatic Fauna (B13) Drains; Sediment Deposits (B2) Dritt Deposits (B3) Presence of Reduced Iron (C4) Stunted CAI S	Remarks
Type: C=Concentration, D=Depietion, RM=Reduced Matrix, M5=Masked Sand Grains. Typdric Sail Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Matrix (F3) Depleted Matrix (F3) Depleted Matrix (F3) Sandy Redox (S5) Oither (E Oither (E Thick Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sem Mucky Peat or Peat (S3) Depleted Matrix (F3) From Mucky Peat or Peat (S3) Depleted Matrix (F3) From Mucky Peat or Peat (S3) Depleted Matrix (F3) From Mucky Peat or Peat (S3) Depleted Matrix (F3) From Mucky Peat or Peat (S3) Depleted Matrix (F3) From Mucky Peat or Peat (S3) Depleted Dark Surface (F5) Type: NOTE Depth (Inches): Note Note Depth (
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Coast F (A5) Loamy Mucky Mineral (F1) Depleted Matrix (F3) Depleted Matrix (F3) Depleted Matrix (F3) Depleted Matrix (F3) Prick Dark Surface (A11) Redox Dark Surface (F6) Thick Dark Surface (A12) Sandy Mucky Mineral (F1) For Mucky Peal or Peat (S3) Particitive Layer (If observed): Type: North Depth (Inches): Mydric Soil P Water-Stained Leaves (B9) Surface Water (A1) High Water Table (A2) Aquatic Fauna (B13) Water Marks (B1) Water Marks (B1) Hydrogen Sulfide Odor (C1) Sediment Deposits (B3) Presence of Reduced Iron (C4) Recont Inor Reduction In Tilled Soils (C6) Thin Muck Surface (C7) FAC-Ne inductions: The Coast F (A12) Sandy Redox (S5) Dark Surface (F6) Very Sh Loamy Gleyed Matrix (F2) Depth (F7) Indicators of wetland in unless of wetland in unless of unless of the policy of the poli	
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	ganese Masses (F12)
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Sandy Mucky Mineral (S1) Redox Depressions (F8) Wetland unless destrictive Layer (if observed): Type: Nr MP Depth (inches): Hydric Soil P Imarks: North DROLOGY Interest Mark (A1) Water-Stained Leaves (B9) Surface Water (A1) Water-Stained Leaves (B9) Surface Water (A2) Aquatic Fauna (B13) Drainag Saturation (A3) True Aquatic Plants (B14) Dry-Sei Crayfiel Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Saturation (Deposits (B3) Presence of Reduced Iron (C4) Sturted Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks)	
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Water Marks (B1)	Patterns (B10)
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Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Solfs (C6) Geomol Iron Deposits (B5) Thin Muck Surface (C7) FAC-Ne Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks)	or Stressed Plants (D1)
Iron Deposits (B5) Thin Muck Surface (C7) FAC-Ne Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) d Observations:	phic Position (D2)
Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) d Observations:	utral Test (D5)
d Observations:	
d Observations:	
ace Water Present? Yes No Depth (Inches):	
er Table Present? Yes NoDepth (Inches):	9
wedler Description and the same of the sam	
udes capillary fringe)	sent? Yes No
cribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
narks:	me
120 10 11 10 10 10 10 10 10 10 10 10 10 10	
No hydrology indicators observed	

Project/Site: 512 PIPELINE	Ci	ty/County: Ge	ethe co.	Sampling Date: 11/20/20
Applicant/Owner				Sampling Point: LOVAND
Investigator(s): TP Truff		ection, Township, Ra	ange: 534/10N/1	
Landform (hillslope, terrace, etc.):	d.		(concave, convex, none)	
Slope (%): Lat:31.266094	Lo	ong: -40.417	11	Datum. MOS
Soil Map Unit Name: (279(2 Cozetha				
Are climatic / hydrologic conditions on the site typical				
Are Vegetation <u>I⁾</u> , Soil <u>I⁾</u> , or Hydrology <u>I</u>				
Are Vegetation $^{\ \ \ \ \ \ \ }$, Soil $_{\ \ \ \ \ \ }$, or Hydrology $_{\ \ \ \ \ }$			eeded, explain any answe	
SUMMARY OF FINDINGS – Attach site i	map showing s	ampling point l	ocations, transects	s, important features, etc.
	No X	1-11-0		
	No>	Is the Sampled within a Wetlan		AL V
Wetland Hydrology Present? Yes	No <u></u> ^	Within a vieta	10s	NoX
WPLAND DATH IT FULL WETE C AG FIELD PLANTED VEGETATION - Use scientific names of pl	WITH ALL			
` ` '	Absolute D	Cominant Indicator	Dominance Test work	sheet:
Tree Stratum (Plot size:) 1	% Cover S	pecies? Status	Number of Dominant S That Are OBL, FACW,	
2			Total Number of Domin Species Across All Stra	
4. <u>W</u> 5			Percent of Dominant Sp That Are OBL, FACW,	()
Sapling/Shrub Stratum (Plot size: 15 1	_)=1	Total Cover	Prevalence Index wor	
2. 14			OBL species	x 1 =
3. 40				x 2 =
1 <u>Y</u>				x 3 =
5				x 4 =
Herb Stratum (Plot size:)	= 1	otal Cover		x 5 =
MEDICAGE SATIVA	60	Y FICU	Column Totals:	(A) (B)
LAMIUM APLEXICAULE	10	N UPL	Prevalence Index	= B/A =
	10	N FACH	Hydrophytic Vegetatio	n Indicators;
A DACTYLIS GLOMERATA	10	r FACU	1 - Rapid Test for F	lydrophytic Vegetation
5			2 - Dominance Tes	t is >50%
3			3 - Prevalence Inde	ox is ≤3.0¹
				daptations (Provide supporting
				or on a separate sheet)
			Problematic Hydrop	ohytic Vegetation¹ (Explain)
0	<u>90</u> = T	olal Cover	¹ Indicators of hydric soil be present unless distu	and wetland hydrology must rbed or problematic.
APATE (100 ales			Hydrophytic	
			Hydrophytic Vegetation	
	Ø = T	otal Cover	Present? Yes	No <u>X</u>
Remarks: (Include photo numbers here or on a separ				

SOIL

Sampling Point: UPLAND

Depth	Matrix	6.		edox Feature:			_	
(inches)	Color (moist)		Color (moist)		Type ¹	_Loc²	Texture	
0-12	10 YP 1/3	85 1	0 4R 5/2			<u> </u>	_51 _	
		<i>I</i>	OYR TY	_ <u>_ 5</u> _	<u>C</u>	PL_		
					$\overline{}$			
Tune CaCa	neertration DeBon	letter DU-De	distant Matrix	MD-Marked			21	-0
Hydric Soil I	ncentration, D=Dep	renon, rom-re	duced mainx,	MS-MEDICO	Sanu Gra	ims.		.=Pore Lining, M=Matris. Problematic Hydric Soils ³ :
Histosol			Sand	ly Gleyed Ma	rix (S4)			rie Redox (A16)
_	ipedon (A2)			ly Redox (S5)			Dark Surfa	, -
Black His	etic (A3)			ped Matrix (S				anese Masses (F12)
	n Sulfide (A4)			ny Mucky Min			Very Shallo	ow Dark Surface (TF12)
	Layers (A5)			ny Gleyed Ma			Other (Exp	lain in Remarks)
2 cm Muc		· (A44)		eted Matrix (F	-			
	Below Dark Surface rk Surface (A12)	s (A11)		ox Dark Surfac eted Dark Sur			3Indicators of h	ydrophytic vegetation and
_	ucky Mineral (S1)			x Depression				frology must be present,
	ky Peat or Peat (S3	3)		= -p00.011	- 1. 5)		•	urbed or problematic
Restrictive L	ayer (if observed):							
Туре:								V
Depth (inch	nes):						Hydric Soil Pres	sent? Yes No X
Remarks:								
IYDROLOG	iY			-				
	ology Indicators:			-				
Primary Indica	tors (minimum of or	ne is required:	check all that	apply)			Secondary In	dicators (minimum of two required)
Surface W	/ater (A1)		Water-S	tained Leave	s (B9)			Soil Cracks (B6)
High Wate	er Table (A2)		Aquatic	Fauna (B13)				Patterns (B10)
Saturation	(A3)		True Aq	uatic Plants (I	24.41			144 · T. 14 · 100
					D14)		Dry-Seas	son Water Table (C2)
Water Ma				n Sulfide Odd				Burrows (C8)
Sediment	Deposits (B2)		Hydroge	en Sulfide Odd I Rhizosphere	or (C1) es on Livir	•	Crayfish	, -
Sediment Drift Depo	Deposits (B2) sits (B3)		Hydroge	n Sulfide Odd	or (C1) es on Livir	•	Crayfish Saturatio	Burrows (C8)
Sediment Drift Depo	Deposits (B2) sits (B3) or Crust (B4)		— Hydroge — Oxidized — Presend — Recent	n Sulfide Odo d Rhizosphere e of Reduced ron Reduction	or (C1) es on Livir Iron (C4) n in Tilled		Crayfish C3) Saturatio Stunted of	Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) whic Position (D2)
Sediment Drift Depo Algal Mat Iron Depo	Deposits (B2) sits (B3) or Crust (B4) sits (B5)		— Hydroge — Oxidized — Presend — Recent I — Thin Mu	n Sulfide Odo d Rhizosphere e of Reduced ron Reduction ck Surface (C	or (C1) es on Livir Iron (C4) n in Tilled 7)		Crayfish C3) Saturatio Stunted of	Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1)
Sediment Drift Depo Algal Mat Iron Depo: Inundation	Deposits (B2) sits (B3) or Crust (B4) sits (B5) i Visible on Aerial In		— Hydroge — Oxidized — Presend — Recent I — Thin Mu — Gauge o	en Sulfide Odd d Rhizosphere e of Reduced fron Reduction ck Surface (C or Well Data (I	or (C1) es on Livir Iron (C4) n in Tilled 7)		Crayfish C3) Saturatio Stunted of	Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) whic Position (D2)
Sediment Drift Depo Algal Mat Iron Depo Inundation Sparsely \	Deposits (B2) sits (B3) or Crust (B4) sits (B5) I Visible on Aerial In /egelated Concave		— Hydroge — Oxidized — Presend — Recent I — Thin Mu — Gauge o	n Sulfide Odo d Rhizosphere e of Reduced ron Reduction ck Surface (C	or (C1) es on Livir Iron (C4) n in Tilled 7)		Crayfish C3) Saturatio Stunted of	Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) whic Position (D2)
Sediment Drift Depo Algal Mat Iron Depo Inundation Sparsely \	Deposits (B2) sits (B3) or Crust (B4) sits (B5) i Visible on Aerial In /egelated Concave	Surface (B8)	— Hydroge — Oxidized — Presend — Recent I — Thin Mu — Gauge o — Other (E	en Sulfide Odd d Rhizosphere e of Reduced ron Reduction ck Surface (C or Well Data (I xplain in Rem	or (C1) es on Livir Iron (C4) n in Tilled 7) D9) narks)	Soils (C6)	Crayfish C3) Saturatio Stunted of	Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) whic Position (D2)
Sediment Drift Depo Algal Mat Iron Depo: Inundation Sparsely \ Field Observa	Deposits (B2) sits (B3) or Crust (B4) sits (B5) visible on Aerial In /egelated Concave ttons: Present?	Surface (B8)	Hydroge Oxidized Presend Recent I Thin Mu Gauge o Other (E	en Sulfide Odd d Rhizosphere e of Reduced ron Reduction ck Surface (C or Well Data (I explain in Rem inches):	or (C1) es on Livir fron (C4) in in Tilled 7) O9) harks)	Soils (C6)	Crayfish C3) Saturatio Stunted of	Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) whic Position (D2)
Sediment Drift Depo Algal Mat Iron Depo Inundation Sparsely \ Field Observa Surface Water Water Table Pr	Deposits (B2) sits (B3) or Crust (B4) sits (B5) visible on Aerial In/egelated Concave ttons: Present? Yesent? Yesent?	Surface (B8) s No _ s No _	Hydroge Oxidized Presend Recent I Thin Mu Gauge o Other (E	en Sulfide Odd d Rhizosphere e of Reduced fron Reduction ck Surface (Cor Well Data (I explain in Rem inches):	or (C1) es on Livir fron (C4) in in Tilled 7) D9) harks)	Soils (C6)	Crayfish C3) Saturatio Stunted c Geomorp FAC-Neu	Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) whic Position (D2) stral Test (D5)
Sediment Drift Depo Algal Mat Iron Depo Inundation Sparsely \ Field Observa Surface Water Water Table President Control President Control	Deposits (B2) sits (B3) or Crust (B4) sits (B5) i Visible on Aerial In /egelated Concave tions: Present? Ye sent? Ye ary fringe)	Surface (B8) s No _ s No _	Hydroge Oxidized Presend Recent I Thin Mu Gauge o Other (E	en Sulfide Odd I Rhizosphere e of Reduced ron Reduction ck Surface (Cor Well Data (Inches): inches):	or (C1) es on Livir fron (C4) n in Tilled 7) D9) narks)	Soils (C6)	Crayfish C3) Saturatio Stunted of Geomorp FAC-Neu	Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) whic Position (D2) stral Test (D5)
Sediment Drift Depo Algal Mat Iron Depo Inundation Sparsely \ Field Observa Surface Water Water Table President Control President Control	Deposits (B2) sits (B3) or Crust (B4) sits (B5) visible on Aerial In/egelated Concave ttons: Present? Yesent? Yesent? Yesent? Yesent?	Surface (B8) s No _ s No _	Hydroge Oxidized Presend Recent I Thin Mu Gauge o Other (E	en Sulfide Odd I Rhizosphere e of Reduced ron Reduction ck Surface (Cor Well Data (Inches): inches):	or (C1) es on Livir fron (C4) n in Tilled 7) D9) narks)	Soils (C6)	Crayfish C3) Saturatio Stunted of Geomorp FAC-Neu	Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) whic Position (D2) stral Test (D5)
Sediment Drift Depo Algal Mat Iron Depo Inundation Sparsely \ Field Observa Surface Water Water Table President Control President Control	Deposits (B2) sits (B3) or Crust (B4) sits (B5) visible on Aerial In /egelated Concave tions: Present? resent? ye sent? ye ary fringe) rided Data (stream g	Surface (B8) s No _ s No _ gauge, monitor	Hydroge Oxidized Presend Recent I Thin Mu Gauge o Other (E	en Sulfide Odd I Rhizosphere e of Reduced ron Reduction ck Surface (Cor Well Data (Inches): inches):	or (C1) es on Livir fron (C4) n in Tilled 7) D9) narks)	Soils (C6)	Crayfish C3) Saturatio Stunted of Geomorp FAC-Neu	Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) whic Position (D2) stral Test (D5)
Sediment Drift Depo Algal Mat Iron Depo Inundation Sparsely \ Field Observa Surface Water Valer Table Proseturation Presinctudes capill Describe Reco	Deposits (B2) sits (B3) or Crust (B4) sits (B5) visible on Aerial In /egelated Concave tions: Present? resent? ye sent? ye ary fringe) rided Data (stream g	Surface (B8) s No _ s No _	Hydroge Oxidized Presend Recent I Thin Mu Gauge o Other (E	en Sulfide Odd I Rhizosphere e of Reduced ron Reduction ck Surface (Cor Well Data (Inches): inches):	or (C1) es on Livir fron (C4) n in Tilled 7) D9) narks)	Soils (C6)	Crayfish C3) Saturatio Stunted of Geomorp FAC-Neu	Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) whic Position (D2) stral Test (D5)
Sediment Drift Depo Algal Mat Iron Depo Inundation Sparsely \ Weld Observa Surface Water Valer Table Presenctudes capill	Deposits (B2) sits (B3) or Crust (B4) sits (B5) visible on Aerial In /egelated Concave tions: Present? resent? ye sent? ye ary fringe) rided Data (stream g	Surface (B8) s No _ s No _ gauge, monitor	Hydroge Oxidized Presend Recent I Thin Mu Gauge o Other (E	en Sulfide Odd I Rhizosphere e of Reduced ron Reduction ck Surface (Cor Well Data (Inches): inches):	or (C1) es on Livir fron (C4) n in Tilled 7) D9) narks)	Soils (C6)	Crayfish C3) Saturatio Stunted of Geomorp FAC-Neu	Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) whic Position (D2) stral Test (D5)
Sediment Drift Depo Algal Mat Iron Depo Inundation Sparsely \ Geld Observa Surface Water Valer Table Presenctudes capill	Deposits (B2) sits (B3) or Crust (B4) sits (B5) visible on Aerial In /egelated Concave tions: Present? resent? ye sent? ye ary fringe) rided Data (stream g	Surface (B8) s No _ s No _ gauge, monitor	Hydroge Oxidized Presend Recent I Thin Mu Gauge o Other (E	en Sulfide Odd I Rhizosphere e of Reduced ron Reduction ck Surface (Cor Well Data (Inches): inches):	or (C1) es on Livir fron (C4) n in Tilled 7) D9) narks)	Soils (C6)	Crayfish C3) Saturatio Stunted of Geomorp FAC-Neu	Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) whic Position (D2) stral Test (D5)

Project/Site: STL/Printipia	c	ty/County: 10 65	Sampling Date: 6 5 70
Applicant/Owner: $\underline{\zeta P \vee e}$			State: Sampling Point: State
Investigator(s): JUP-WJW	s	ection, Township, Ra	nge: 36/12 U/18 N
Landform (hillslope, terrace, etc.): Flood Plan			
Slope (%): 7 Lat: 38.456 939		ong: -90,373	
Soil Map Unit Name: (3475A) Elsal save			
7	/		/
Are climatic / hydrologic conditions on the site typical for			4
Are Vegetation, Soil, or Hydrology			'Normal Circumstances" present? Yes No
Are Vegetation	_ naturally probl	ematic? (If ne	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site ma	p showing s	ampling point le	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes	No _		4 75
Hydric Soil Present? Yes	No	is the Sampled	
	No	within a Wetlan	nd? Yes No
- Avea upland sample poin	1 for 1	M LJJP148	3
VEGETATION – Use scientific names of plant	ls.		
Tree Stratum (Plot size: 30'V)	12242	Dominant Indicator	Dominance Test worksheet:
1. Calya dabra	% Cover	FACU	Number of Dominant Species
2 Asimina trileba	-15-	FAC	That Are OBL, FACW, or FAC:(A)
3 Cellis lacuisata	-15-	V CN(III	Total Number of Dominant
4. Sassa-fras albidum	10	FALL	Species Across All Strata: (B)
5. Acen nocunclo		N FAI	Percent of Dominant Species
S. TIEST REGULATED	60	Total Cover	That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum (Pto) size: 15'v-)	4010=	l otal Cover	Prevalence Index worksheet:
1. Lonicera marckii	25	1 Upl	Total % Cover of: Multiply by:
2. Asimina Itviloloa	ζ-	N FAC	OBL species x 1 =
3.			FACW species x 2 =
4.			FAC species x 3 =
5			FACU species x 4 =
F1 - 15	= 08	Total Cover	UPL species x 5 =
Herb Stratum (Plot size:)	. ~	المثدال	Column Totals: (A) (B)
1 Lonicera Maackii		- 50F	D. 1- 11. 04
2 Perilla fruitescens		1-1-1-1	Prevalence Index = B/A =
3.			Hydrophytic Vegetation Indicators:
4.			1 - Rapid Test for Hydrophylic Vegetation
5:			2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹
6			4 - Morphological Adaptations (Provide supporting
7.			data in Remarks or on a separate sheet)
8.			Problematic Hydrophytic Vegetation (Explain)
9.			
10	10=	Total Cover	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: 20'V)	-		/
1. Absent			Hydrophytic /
2.			Vegetation Present? Yes No
Beautita fladida abita sunbara bara		Total Cover	
Remarks: (Include photo numbers here or on a separate	smeet.)		
-N-ON			

S	O	ì	L

Profile Description: (Describe to the dep Depth Mehix	Redox Feat	ires			
(inches) Color (moist) %	Color (moist) %	Type'	_Loc²	<u>Texture</u>	Remarks
0-10 101 R3/2 100				<u>5L</u>	_
10-17 104R4/4 65	104R3/2 3	2 1)	<u>M</u> _	SL	-
ype: C=Concentration, D=Depletion, RM= ydric Soit 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) Indicators in the strategy of the	Reduced Matrix, MS=Masi Sandy Gleyed Sandy Redox (Stripped Matrix Loamy Mucky I Loamy Gleyed Depleted Matrix Redox Dark Su Depleted Dark Redox Depress	Matrix (S4) S5) (S6) Alineral (F1) Matrix (F2) (F3) rface (F6) Surface (F7)		Indicate Coa Dan Iron Ven Othe	ion: PL=Pore Lining, M=Matrix. ors for Problematic Hydric Soils*: st Prairie Redox (A16) k Surface (S7) -Manganese Masses (F12) y Shallow Dark Surface (TF12) er (Explain in Remerks) ors of hydrophytic vegetation and and hydrology must be present, ss disturbed or problematic.
Depth (Inches):	_			Hydric Se	oll Present? Yes No
	+	+		1.,,	
emarks: — N one	•	+			+
emarks:		+			
DROLOGY etland Hydrology Indicators:	rd; check all that apply)	-			
DROLOGY etland Hydrology Indicators:		ves (89)		Secon	dary Indicators (minimum of two require
DROLOGY etland Hydrology Indicators: Imary Indicators (minimum of one is require	Water-Stained Lea			Secon	dary Indicators (minimum of two required
DROLOGY etland Hydrology Indicators: Imary Indicators (minimum of one is require _ Surface Water (A1)	Water-Stained Lea Aquatic Fauna (B1	3)		<u>Secon</u> Si Dr	dary Indicators (minimum of two required Inface Solt Cracks (B6) alnage Patterns (B10)
DROLOGY etland Hydrology Indicators: Imary Indicators (minimum of one is require Surface Water (A1) High Water Table (A2)	Water-Stained Lea Aquatic Fauna (B1 True Aquatic Plant	3) s (B14)		<u>Secon</u> Si Dr	dary Indicators (minimum of two require Irface Solt Cracks (B6) rainage Patterns (B10) y-Season Water Table (C2)
DROLOGY etland Hydrology Indicators: Imary Indicators (minimum of one is require _ 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)	na Roots (Secon	dary Indicators (minimum of two require irface Solt Cracks (B6) alnage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8)
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)	Water-Stained Lea Aquatic Fauna (B1 True Aquatic Plant Hydrogen Sulfide (Oxidized Rhizosph	3) s (B14) Odor (C1) eres on Livii		Secon	dary Indicators (minimum of two require Irface Solt Cracks (B6) alnage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8) Ituration Visible on Aerial Imagery (C9)
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)	Water-Stained Lea Aquatic Fauna (B1 True Aquatic Plant Hydrogen Sulfide (Oxidized Rhizosph Presence of Reduce	3) s (B14) Odor (C1) eres on Livir ed Iron (C4))	Secon Si Di Cr C3) Si	dary Indicators (minimum of two require urface Solt Cracks (B6) alnage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) unted or Stressed Plants (D1)
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)	Water-Stained Lea Aquatic Fauna (B1 True Aquatic Plant Hydrogen Sulfide (Oxidized Rhizosph Presence of Reducent Iron Reducent	3) s (B14) Odor (C1) eres on Livi eed Iron (C4) tion In Tilled)	Secon SI Di Cr C3) Si Si	dary Indicators (minimum of two require urface Solt Cracks (B6) alnage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8) uturation Visible on Aerial tmagery (C9) unted or Stressed Plants (D1) comorphic 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)	Water-Stained Lea Aquatic Fauna (B1 True Aquatic Plant Hydrogen Sulfide (Oxidized Rhizosph Presence of Reduction Recent Iron Reduction	3) s (B14) Odor (C1) eres on Livined Iron (C4) tion In Tilled (C7))	Secon SI Di Cr C3) Si Si	dary Indicators (minimum of two require urface Solt Cracks (B6) alnage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) unted or Stressed Plants (D1)
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)	Water-Stained Lea Aquatic Fauna (B1 True Aquatic Plant Hydrogen Sulfide of Oxidized Rhizosph Presence of Reduct Recent Iron Reduct Thin Muck Surface Gauge or Well Dat	3) s (B14) Odor (C1) eres on Livined Iron (C4) tion In Tilled (C7) a (D9))	Secon SI Di Cr C3) Si Si	dary Indicators (minimum of two require urface Solt Cracks (B6) alnage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8) uturation Visible on Aerial tmagery (C9) unted or Stressed Plants (D1) comorphic Position (D2)
TOROLOGY 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 (B8)	Water-Stained Lea Aquatic Fauna (B1 True Aquatic Plant Hydrogen Sulfide of Oxidized Rhizosph Presence of Reduct Recent Iron Reduct Thin Muck Surface Gauge or Well Dat	3) s (B14) Odor (C1) eres on Livined Iron (C4) tion In Tilled (C7) a (D9))	Secon SI Di Cr C3) Si Si	dary Indicators (minimum of two required inface Soil Cracks (B6) alnage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8) alturation Visible on Aerial Imagery (C9) unted or Stressed Plants (D1) comorphic 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 (B8)	Water-Stained Lea Aquatic Fauna (B1 True Aquatic Plant Hydrogen Sulfide of Oxidized Rhizosph Presence of Reduct Recent Iron Reduct Thin Muck Surface Gauge or Wetl Dat Other (Explain in F	3) s (B14) Odor (C1) eres on Livin ed Iron (C4) tion In Tilled (C7) a (D9) emarks))	Secon SI Di Cr C3) Si Si	dary Indicators (minimum of two required inface Soil Cracks (B6) alnage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8) alturation Visible on Aerial Imagery (C9) unted or Stressed Plants (D1) comorphic 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 (B8)	Water-Stained Lea Aquatic Fauna (B1 True Aquatic Plant Hydrogen Sulfide of Oxidized Rhizosph Presence of Reduct Recent Iron Reduct Thin Muck Surface Gauge or Wetl Dat Other (Explain in F	3) s (B14) Odor (C1) eres on Livin ed Iron (C4) tion In Tilled (C7) a (D9) emarks))	Secon SI Di Cr C3) Si Si	dary Indicators (minimum of two required inface Soil Cracks (B6) alnage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8) alturation Visible on Aerial Imagery (C9) unted or Stressed Plants (D1) comorphic Position (D2)
PROLOGY Tetland 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 (B5) and Observations: Inface Water Present? Yes Notater Table Present?	Water-Stained Lea Aquatic Fauna (B1 True Aquatic Plant Hydrogen Sulfide of Oxidized Rhizosph Presence of Reduct Recent Iron Reduct Thin Muck Surface Gauge or Well Dat	3) s (B14) Odor (C1) eres on Livin ed Iron (C4) tion In Tilled (C7) a (D9) emarks)) Soils (C6)	Secon Si Di Ci Ci Si Si Si FA	dary Indicators (minimum of two required inface Soil Cracks (B6) alnage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8) alturation Visible on Aerial Imagery (C9) unted or Stressed Plants (D1) comorphic Position (D2)
emarks: DROLOGY Torona 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 (B8) and Observations:	Water-Stained Lea Aquatic Fauna (B1 True Aquatic Plant Hydrogen Sulfide (Oxidized Rhizosph Presence of Reduct Recent Iron Reduct Thin Muck Surface Gauge or Well Dat Other (Explain in Reduct) Depth (Inches): Depth (Inches):	3) s (B14) Ddor (C1) eres on Livinged Iron (C4) tion In Tilled (C7) a (D9) emarks)	Soils (C6)	Secon Si Di Ci C3) Si Si FA	dary Indicators (minimum of two required inface Soil Cracks (B6) rainage Patterns (B10) ry-Season Water Table (C2) ayfish Burrows (C8) sturation Visible on Aerial Imagery (C9) unted or Stressed Plants (D1) remorphic Position (D2) to Neutral Test (D5)
PROLOGY Setland 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) aid Observations: Irface Water Present? Internation Present?	Water-Stained Lea Aquatic Fauna (B1 True Aquatic Plant Hydrogen Sulfide (Oxidized Rhizosph Presence of Reduct Recent Iron Reduct Thin Muck Surface Gauge or Well Dat Other (Explain in Reduct) Depth (Inches): Depth (Inches):	3) s (B14) Ddor (C1) eres on Livinged Iron (C4) tion In Tilled (C7) a (D9) emarks)	Soils (C6)	Secon Si Di Ci C3) Si Si FA	dary Indicators (minimum of two required inface Soil Cracks (B6) rainage Patterns (B10) ry-Season Water Table (C2) ayfish Burrows (C8) sturation Visible on Aerial Imagery (C9) unted or Stressed Plants (D1) remorphic Position (D2) to Neutral Test (D5)
POROLOGY Torontogy Indicators: Torontogy In	Water-Stained Lea Aquatic Fauna (B1 True Aquatic Plant Hydrogen Sulfide (Oxidized Rhizosph Presence of Reduct Recent Iron Reduct Thin Muck Surface Gauge or Well Dat Other (Explain in Reduct) Depth (Inches): Depth (Inches):	3) s (B14) Ddor (C1) eres on Livinged Iron (C4) tion In Tilled (C7) a (D9) emarks)	Soils (C6)	Secon Si Di Ci C3) Si Si FA	dary Indicators (minimum of two required inface Solt Cracks (B6) rainage Patterns (B10) ry-Season Water Table (C2) ayfish Burrows (C8) sturation Visible on Aerial Imagery (C9) unted or Stressed Plants (D1) recomprise Position (D2) recomprise Position (D2)

andform (hillalope, terrace, etc.): andform (hillalope, terrace, etc.): ope (%): 10 1/- Lat: 37 09 9 9 bil Map Unit Name: 1	this time of significan naturally p showli	Long: Long: Year? Yearly disturb problemating samp	Local re	re "Normal Circumstances" present? Yes No _ f needed, explain any answers in Remarks)
pope (%):	this time of significan naturally p showli	Long: Long: Year? Yearly disturb problemating samp	Local re	Datum: MAD (3 Datum: Manager) No. (If no, explain in Remarks.) The Normal Circumstances present? Yes No. (If no provided the No
bil Map Unit Name:	this time of significan naturally p showli	year?	- 90. pres Pred es No. ped? A	Datum: MAD (3) Located NWI classification: Monte (if no, explain in Remarks.) The "Normal Circumstances" present? Yes No. No.
bil Map Unit Name:	this time of significan naturally p showli	year?	ed? A	(if no, explain in Remarks.) re "Normal Circumstances" present? Yes No I needed, explain any answers in Remarks.)
e climatic / hydrologic conditions on the site typical for a Vegetation, Soit or Hydrology	this time of significan naturally pshowle No	f year? Ye ntly disturb problemat ng samp	es No led? A lic? (If	o (If no, explain in Remarks.) re "Normal Circumstances" present? Yes No _ f needed, explain any answers in Remarks.)
JMMARY OF FINDINGS — Attach site may ydrophytic Vegetation Present? ydrophytic Soil Present? ydrophytic Soil Present? yetland Hydrology Present? yes yetland Hydrology Present?	significant naturally p show!	ntly disturb problemat ng sam	ed? A	re "Normal Circumstances" present? Yes No _ f needed, explain any answers in Remarks)
JMMARY OF FINDINGS — Attach site may ydrophytic Vegetation Present? ydric Soli Present? yetiand Hydrology Present? yes yetiand Hydrology Present?	_ naturally p showl: No	problema(n g sam)	tic? (If	needed, explain any answers in Remarks.)
JMMARY OF FINDINGS - Attach site may ydrophytic Vegetation Present? ydric Soli Present? yetland Hydrology Present? Yes	p showli	ng sam		t locations, transacts important features
ydrophytic Vegetation Present? Yes ydric Soll Present? Yes /etland Hydrology Present? Yes	No X	_	, .	
detland Hydrology Present? Yes	No 💢			, important leatures,
emarks:			is the Sample	×
	No X	- !	within a Wetl	lend? Yes No
	slope			
upland representative	•		TI	1- 148 (PEM)
		U 4.	11	1 170 (PENT).
GETATION - Use scientific names of plants				
ee Stretum (Plot size: 30'/	Absolute % Cove		ant Indicator	
	15			That Am ORI FACIAL SPECIES
		_		
				Total Number of Dominant Species Across All Strata:
				Parcent of Dominant Species
	15	-		That Are OBL, FACW, or FAC: 0%
oling/Shrub Stratum (Plot size: 15 /	_13	_ = Total (Cover	Prevalence Index worksheet:
Rusa Multitlura	10	<u> </u>	FACY	Total % Cover of:Multiply by:
		·—		OBL species #1=O
	-			FACW species O x2= O
				FAC species 10 x3= 30
<i>C</i> 1	10			FACU species 90 x4= 360
Stratum (Plot size: 5 /)		≖ Total C	Over	UPL species 0 x5= 0
Schedenorus protensis	50	7	FACY	Column Totals: 100 (A) 390 (B)
Solidago conadensis	15	_N_	F4C4	Prevalence Index = B/A = 3,90
Perilla frustercens	10	<u>~~</u>	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)
		- 1		Problematic Hydrophytic Vegetation ¹ (Explain)
				-
	75.	Total Co	ver	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Absent	-		_ +	disturbed of problematic.
				Hydrophytic
	0	Total Cov		Vegetation Present? Yes No
ks: (Include photo numbers here or on a separate she	oot)	· Cear CO		

-	_	
-	rz	

(/nches)	Matrix			x Feature				
Pa +1 11	Color (moist)	_%_	Color (moist)	_%_	_Type'	Loc'	Texture	Remarks
	04K 4/2-	100		_		_	SL	
4-16in 1	OYK 4/4	100	_	_	<u>-</u>	_	SCL_	
ydric Soil Indic Histosol (A1) Histic Epipedi Black Histic (/ Hydrogen Sul Stratified Laye 2 cm Muck (A Depleted Belo Thick Dark Su Sandy Mucky 5 cm Mucky P	etors: on (A2) A3) lifide (A4) ers (A5) A0) ow Derk Surface urface (A12) Mineral (S1) eat or Peet (S3)	(A11)	Sandy R	leyed Mai edox (S5) Metrix (Si lucky Mini leyed Mai Matrix (F erk Surfac Dark Surfac	trix (S4) 6) 8) 8ral (F1) trix (F2) 3) 9e (F6) face (F7)	ins.	Indicators for Coast Praid Dark Surfe Iron-Menge Very Shale Other (Exp	L=Pore Lining, M=Matrix. Problematic Hydric Soils ³ : rie Redox (A16) ce (S7) enese Masses (F12) ow Dark Surface (TF12) lain in Remarks) ydrophytic vegetation and trology must be present, urbed or problemetic.
			_			- 1	Madala Oall Day	
Depth (inches):						- 1	Hydric Soil Pres	ent? Yes No _^ `
Ma	hydric	. Soi	= indicate	915	ubser	ved.		
/V ₀		; 20i	- l indicate	915	. bse/	ved.		
/V ₀		; Soi	- l indicate	ors o	wbse/	ved.		
OROLOGY	y Indicators: minimum of one		l indicate		wbser	ved.	Secondary Inc	licators (minimum of two requin
DROLOGY Illand Hydrologicary Indicators (I Surface Water (I High Water Tab Saturation (A3) Water Merks (B Sediment Deposits (B Algai Mat or Cru Iron Deposits (B Inundation Visib Sparsely Vegeta	y Indicators: minimum of one (A1) ble (A2) 1) sits (B2) 33) ust (B4) 15) le on Aeriel Imag	is required		d Leaves a (B13) Plants (B fide Odor cospheras Reduced I eduction riece (C7	(B9) 14) (C1) 0 on Living ron (C4) in Tilled Sc)	Roots (C3	Surface S Drainage Dry-Sease Crayfish E Seturation Stunted of	licators (minimum of two requino oil Cracks (86) Patterns (810) on Water Table (C2) Burrows (C8) Visible on Aeriel Imagery (C9) Stressed Plants (D1) ic Poeltion (D2) rail Test (D5)
DROLOGY Illand Hydrologic mary Indicators (I Surface Water (I High Water Tab Saturation (A3) Water Merks (B Sediment Deposits (B Algai Mat or Cru iron Deposits (B Inundation Vielb Sparsely Vegeta Hobservations:	y indicators: minimum of one (A1) ble (A2) 1) sits (B2) 33) ist (B4) 15) le on Aeriel Imagated Concave Su	<u>ls required</u> gery (B7) urface (B8)	Check all that apply Water-Staine Aquatic Faun True Aquatic Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Thin Muck Su Geuge or Wel	d Leaves a (B13) Plants (B fide Odor cospheras Reduced I reduction rfece (C7 i Data (Di a in Rema	(B9) 14) (C1) 0 on Living ron (C4) in Tilled Sc)	Roots (C3	Surface S Drainage Dry-Sease Crayfish E Seturation Stunted of	oil Cracks (B6) Patterns (B10) on Water Table (C2) surrows (C8) Visible on Aeriel Imagery (C9) Stressed Plants (D1) iic Poeltlon (D2)
DROLOGY Illand Hydrologic mary Indicators (I Surface Water (I High Water Tab Saturation (A3) Water Merks (B Sediment Deposits (B Incomplete (B) Incomplete	y indicators: minimum of one (A1) ble (A2) 1) sits (B2) 33) ust (B4) 15) le on Aeriel Imagined Concave Suited C	gery (B7) urface (B8)	Check all that apply Water-Staine Aquatic Faun True Aquatic Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Thin Muck Su Geuge or Wel Other (Explain Depth (Inches	d Leaves a (B13) Plants (B fide Odor cospheras Reduced I reduction riece (C7 I Data (Di in Rema	(B9) 14) (C1) o on Living ron (C4) in Tilled Sc) 9) rks)	Roots (C3 bils (C6)	Surface S Drainage Dry-Sease Crayfish E Seturation Stunted or Geomorph FAC-Neut	oil Cracks (B6) Patterns (B10) on Water Table (C2) surrows (C8) Visible on Aeriel Imagery (C9) Stressed Plants (D1) aic Poeltion (D2) ral Test (D5)
DROLOGY Illand Hydrologic mary Indicators (I Surface Water (I High Water Tab Saturation (A3) Water Merks (B Sediment Deposits (B Incomplete (B) Incomplete	y indicators: minimum of one (A1) ble (A2) 1) sits (B2) 33) ust (B4) 15) le on Aeriel Imagined Concave Suited C	gery (B7) urface (B8)	Check all that apple Water-Staine Aquatic Faun True Aquatic Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Thin Muck Su Geuge or Wel Other (Explair	d Leaves a (B13) Plants (B fide Odor cospheras Reduced I reduction riece (C7 I Data (Di in Rema	(B9) 14) (C1) o on Living ron (C4) in Tilled Sc) 9) rks)	Roots (C3 bils (C6)	Surface S Drainage Dry-Sease Crayfish E Seturation Stunted or Geomorph FAC-Neut	oil Cracks (B6) Patterns (B10) on Water Table (C2) surrows (C8) Visible on Aeriel Imagery (C9) Stressed Plants (D1) air Poeltion (D2) ral Test (D5)
DROLOGY Illand Hydrologic mary Indicators (I Surface Water (I High Water Tab Saturation (A3) Water Merks (B Sediment Deposits (B Incomplete (B) Incomplete	y indicators: minimum of one (A1) ble (A2) 1) sits (B2) 33) ust (B4) 15) le on Aeriel Imagined Concave Suited C	gery (B7) urface (B8)	Check all that apply Water-Staine Aquatic Faun True Aquatic Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Thin Muck Su Geuge or Wel Other (Explain Depth (Inches	d Leaves a (B13) Plants (B fide Odor cospheras Reduced I reduction riece (C7 I Data (Di in Rema	(B9) 14) (C1) o on Living ron (C4) in Tilled Sc) 9) rks)	Roots (C3 bils (C6)	Surface S Drainage Dry-Sease Crayfish E Seturation Stunted or Geomorph FAC-Neut	oil Cracks (B6) Patterns (B10) on Water Table (C2) surrows (C8) Visible on Aeriel Imagery (C9) Stressed Plants (D1) aic Poeltion (D2) ral Test (D5)

Sampling Date:
Local relief (concave, convex, none):
Local relief (concave, convex, none): 90.387662 Datum: NWI classification: Wes No (If no, explain in Remarks.) Are "Normal Circumstances" present? Yes No atic? (If needed, explain any answers in Remarks.) Inpling point locations, transects, important features, explains a Wetland? Is the Sampled Area within a Wetland? Yes No Hand WILWP109+149 Inant Indicator Circumstance Test worksheet: Number of Dominant Species That Are OBL FACW, or FAC: Total Number of Dominant
Is the Sampled Area within a Wetland? Yes No Within a Wetland? Yes No
No
Are "Normal Circumstances" present? Yes No atic? (If needed, explain any answers in Remarks.) Inpling point locations, transects, important features, explain a Wetland? Yes No No Normal Circumstances of the Sampled Area within a Wetland? Yes No No Normal Sections of the Sampled Area within a Wetland? Yes No No Normal Sections of the Sampled Area within a Wetland? Yes No No Normal Sections of the Status o
Are "Normal Circumstances" present? Yes No atic? (If needed, explain any answers in Remarks.) Inpling point locations, transects, important features, e Is the Sampled Area within a Wetland? Yes No Hand WILLUP 10 9 +149 Inplinant Indicator Cies? Status Number of Dominant Species That Are OBL, FACW, or FAC: (A) Total Number of Dominant
Is the Sampled Area within a Wetland? When I within a Wetland? Within a Wetland? When I withi
Is the Sampled Area within a Wetland? Hand WILWP109+149 Inant Indicator Class? Status Total Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Total Number of Dominant Total Number of Dominant
Is the Sampled Area within a Wetland? Yes No Hand WILW Plog +149 Inant Indicator Class? Status Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Total Number of Dominant
within a Wetland? Yes No Hand WILWP109+149 Inant Indicator Class? Statue Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Total Number of Dominant
Hand WILWP109+149 pran Lie 1 d prant Indicator Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Total Number of Dominant
inant Indicator Class Status Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant
Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant (A)
Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant (A)
Number of Dominant Species That Are OBL, FACW, or FAC: (A) Total Number of Dominant
That Are OBL, FACW, or FAC: Total Number of Dominant
Total Number of Dominant
Percent of Dominant Species
That Are OBL, FACW, or FAC: (A/B)
Prevalence index worksheet:
OBL species x1=
FACW species x 2 =
FAC species x 3 =
FACU species x 4 =
Cover UPL species x 5 =
Column Totals: (A) (B)
FACE Prevalence Index = B/A =
Prevalence index = B/A =
1 - Rapid Test for Hydrophytic Vegetation
2 - Dominince 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)
Cover Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
- Hydrophytic
Vegetation
Cover Present? Yes No

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-3	u	и	_

Oepth Matrix (inches) Culor (moist)	Red	ox Feature				
A A A	Color (moist)	%	Type	Loc	Texture	Remarks
	0 10 1 R3/2	70)	7	m	36	
			_			
		\equiv	\equiv	\equiv	=	
Type: C=Concentration, D=Depletion, ydric Soil Indicators:	RM=Reduced Matrix, M	S=Masked	Sand Gra	ins.	³ Location:	PL=Pore Lining, M=Matrix.
_ Histosol (A1)	Candy	Gleyed Mat	H. (04)			or Frablematic Hydric Solls ¹ :
_ Histic Epipedon (A2)		Redox (S5)				rairie Redox (A16) rface (S7)
_ Black Histic (A3)		d Matrix (St				nganese Masses (F12)
_ Hydrogen Sulfide (A4)		Mucky Mine	•			allow Dark Surface (TF12)
Stratified Layers (A5) 2 cm Muck (A10)		Gleyed Mai d Matrix (F			Other (E	xplain in Remarks)
Depleted Below Dark Surface (A11		Dark Surfac				
_ Thick Dark Surface (A12)		d Dark Suri			3Indicators o	f hydrophytic vegetation and
_ Sandy Mucky Mineral (S1)	Redox 0	Depressions	e (F8)		wetland t	nydrology must be present,
5 cm Mucky Peat or Peat (\$3)					uniesa di	sturbed or problematic.
estrictive Layer (if observed):						
Туре:				- 1	Hydric Soll Pa	Man Channel
Donth (Inches)						
Depth (Inches):					riyurki soli Fi	esent? Yes No
marks:					nyara sun Pi	osantr res RO
DROLOGY					nyara suli Pi	osontr res RO
DROLOGY tland Hydrology Indicators:	zuired: check all that app	lv)			•	
DROLOGY Itland Hydrology Indicators:			(B9)		Secondary	indicators (minimum of two require
DROLOGY Itland Hydrology Indicators: mary Indicators (minimum of one is rec	Water-Stain	ed Leaves	(69)		Secondary Surface	indicators (minimum of two require Soil Cracks (88)
DROLOGY Itland Hydrology Indicators: mary Indicators (minimum of one is rec Surface Water (A1)	Water-Stain Aquatic Fau	ed Leaves na (B13)			Secondary Surface Drainag	indicators (minimum of two require Soil Cracks (B8) e Patterns (B10)
DROLOGY Itland Hydrology Indicators: The surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Stain	ed Leaves na (B13) : Plants (B1	14)		Secondary Surface Drainag Dry-Sea	Indicators (minimum of two require Soil Cracks (86) e Patterns (810) ason Water Table (C2)
DROLOGY Itland Hydrology Indicators: mary Indicators (minimum of one is reconstructed Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Stain Aquatic Fau True Aquatic Hydrogen Si	ed Leaves na (B13) Plants (B1 ulfide Odor	14) (C1)	Roots (C3	Secondary Surface Drainag Dry-Sea	ndicators (minimum of two require Soil Cracks (B8) e Patterns (B10) son Water Table (C2)
DROLOGY Identificators (minimum of one is reconstructed by the state of the state	Water-Stain Aquatic Fau True Aquatic Hydrogen Si	ed Leaves na (B13) c Plants (B1 ulfide Odor izoapheres	(C1) an Living	Roots (C3	Secondary Surface Drainag Dry-Sea Crayfier Saturation	indicators (minimum of two restutes Soil Cracks (B8) e Patterns (B10) ison Water Table (C2) is Burrows (C8) on Visible on Aerial Imagery (C9)
DROLOGY Identifications (minimum of one is reconstructed by surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	Water-Stain Aquatic Fau True Aquatic Hydrogen St	ed Leaves na (B13) Plants (B1 ulfide Odor izoapheres Reduced Ir	(C1) on Living		Secondary Surface Drainag Dry-Sea Crayfier Saturatio	indicators (minimum of two restures Soil Cracks (B8) se Patterns (B10) son Water Table (C2) se Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1)
DROLOGY Identified Hydrology Indicators: mary Indicators (minimum of one is reconstructed Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Cruat (B4) Iron Deposits (B5)	Water-Stain Aquatic Fau True Aquatic Hydrogen Si Oxidized Rh Presence of Recent Iron Thin Muck S	ed Leaves na (B13) Plants (B1 ulfide Odor izoapheres Reduced Ir Reduction I	(C1) (C1) on Living ron (C4) in Tilled S		Secondary Surface Drainag Dry-Sea Crayfiel Saturati Stunted Geomor	indicators (minimum of two restutes Soil Cracks (B8) e Patterns (B10) ison Water Table (C2) is Burrows (C8) on Visible on Aerial Imagery (C9)
DROLOGY Itland Hydrology Indicators: mary Indicators (minimum of one is reconstructed by the control of the co	Water-Stain Aquatic Fau True Aquatic Hydrogen Si Oxidized Rh Presence of Recent Iron Thin Muck S B7) Gauge or We	ed Leaves na (B13) c Plants (B1 ulfide Odor izoapheres Reduced Ir Reduction I	(4) (C1) on Living ron (C4) in Tilled S		Secondary Surface Drainag Dry-Sea Crayfiel Saturati Stunted Geomor	indicators (minimum of two restutes: Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) is Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
DROLOGY tland Hydrology Indicators: nerv Indicators (minimum of one is rec Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marke (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aeriel Imagery (Sparsely Vegetated Concave Surface	Water-Stain Aquatic Fau True Aquatic Hydrogen Si Oxidized Rh Presence of Recent Iron Thin Muck S B7) Gauge or We	ed Leaves na (B13) c Plants (B1 ulfide Odor izoapheres Reduced Ir Reduction I urface (C7) all Data (D8	(C1) on Living ron (C4) In Tilled So		Secondary Surface Drainag Dry-Sea Crayfiel Saturati Stunted Geomor	indicators (minimum of two restutes: Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) is Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
DROLOGY Itland Hydrology Indicators: nery Indicators (minimum of one is reconstructed 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 (Sparsely Vegetated Concave Surface	Water-Stain Aquatic Fau Aquatic Fau True Aquatic Hydrogen Si Oxidized Rh Presence of Recent Iron Thin Muck S B7) Gauge or We (B8) Other (Explain	ed Leaves ne (B13) c Plants (B1 ulfide Odor izoapheres Reduced Ir Reduction I urface (C7) in I Data (D8 in In Remar	(C1) on Living ron (C4) in Tilled So)))		Secondary Surface Drainag Dry-Sea Crayfiel Saturati Stunted Geomor	indicators (minimum of two restutes: Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) is Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
DROLOGY Itand Hydrology Indicators: nary Indicators (minimum of one is reconstructed by the control of the co	Water-Stain Aquatic Fau Aquatic Fau True Aquatic Hydrogen Si Oxidized Rh Presence of Recent Iron Thin Muck S B7) Gauge or We (B8) Other (Expla	ed Leaves ne (B13) c Plants (B1 ulfide Odor izoapheres Reduced In Reduction I urface (C7) oil Data (D8 in in Remai	(C1) on Living ron (C4) in Tilled So () ()		Secondary Surface Drainag Dry-Sea Crayfiel Saturati Stunted Geomor	redicators (minimum of two restutes: 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)
DROLOGY Itland Hydrology Indicators: nary Indicators (minimum of one is reconstructed by the control of the co	Water-Stain Aquatic Fau True Aquatic Hydrogen Si Oxidized Rh Presence of Recent Iron Thin Muck S B7) Gauge or We (B8) Other (Expla	ed Leaves ne (B13) c Plants (B1 ulfide Odor izospheres Reduced In Reduction I urface (C7) all Data (D8 in in Remai	(C1) on Living ron (C4) In Tilled So () ()	oils (C6)	Secondary Surface Drainag Dry-Sez Crayfiel Saturati Stunted Geomor	Indicators (minimum of two resurres Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) is Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) philo Position (D2) utrai Test (D5)
DROLOGY Itland Hydrology Indicators: mary Indicators (minimum of one is reconstructed by several processors) 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 (Imagery Vegetated Concave Surfaced Concave Sur	Water-Stain Aquatic Fau Aquatic Fau True Aquatic Hydrogen Si Oxidized Rh Presence of Recent Iron Thin Muck S B7) Gauge or We (B8) Other (Explain No Depth (Inche	ed Leaves ne (B13) c Plants (B1 ulfide Odor izoapheres Reduced Ir Reduction I urface (C7) eli Data (D9 in in Remai	(C1) on Living ron (C4) in Tilled So)) rks)	oils (C8) Wetland	Secondary Surface Drainag Dry-Sea Crayfiel Saturati Stunted Geomor FAC-Ne	redicators (minimum of two restutes: 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)
DROLOGY Itland Hydrology Indicators: mary Indicators (minimum of one is reconstructed by several processors) 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 (Imagery Vegetated Concave Surfaced Concave Sur	Water-Stain Aquatic Fau Aquatic Fau True Aquatic Hydrogen Si Oxidized Rh Presence of Recent Iron Thin Muck S B7) Gauge or We (B8) Other (Explain No Depth (Inche	ed Leaves ne (B13) c Plants (B1 ulfide Odor izoapheres Reduced Ir Reduction I urface (C7) eli Data (D9 in in Remai	(C1) on Living ron (C4) in Tilled So)) rks)	oils (C8) Wetland	Secondary Surface Drainag Dry-Sea Crayfiel Saturati Stunted Geomor FAC-Ne	Indicators (minimum of two resurres Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) is Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) philo Position (D2) utrai Test (D5)
DROLOGY Itland Hydrology Indicators: mary Indicators (minimum of one is reconstructed 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 (Inspection Visible On	Water-Stain Aquatic Fau Aquatic Fau True Aquatic Hydrogen Si Oxidized Rh Presence of Recent Iron Thin Muck S B7) Gauge or We (B8) Other (Explain No Depth (Inche	ed Leaves ne (B13) c Plants (B1 ulfide Odor izoapheres Reduced Ir Reduction I urface (C7) eli Data (D9 in in Remai	(C1) on Living ron (C4) in Tilled So)) rks)	oils (C8) Wetland	Secondary Surface Drainag Dry-Sea Crayfiel Saturati Stunted Geomor FAC-Ne	Indicators (minimum of two resurres Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) is Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) philo Position (D2) utrai Test (D5)
DROLOGY Itland Hydrology Indicators: mary Indicators (minimum of one is reconstructed by the content of the co	Water-Stain Aquatic Fau Aquatic Fau True Aquatic Hydrogen Si Oxidized Rh Presence of Recent Iron Thin Muck S B7) Gauge or We (B8) Other (Explain No Depth (Inche	ed Leaves ne (B13) c Plants (B1 ulfide Odor izoapheres Reduced Ir Reduction I urface (C7) eli Data (D9 in in Remai	(C1) on Living ron (C4) in Tilled So)) rks)	oils (C8) Wetland	Secondary Surface Drainag Dry-Sea Crayfiel Saturati Stunted Geomor FAC-Ne	Indicators (minimum of two resurres Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) is Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) philo Position (D2) utrai Test (D5)

Project/Site:STL		_ City/County:	(ISE) Co. Sampling Date: 3/14
Appilcant/Owner: Spir c		on probability.	State: I Sampling Point UPLA
Investigator(s):/ CDK		Section, Townshi	p, Range: 11/12-17/
Landform (hillstope, terrace, etc.): Hillstope			relief (concave, convex, none):
Slope (%): 32 Lat 39.070 89		Long: - 90.	39/393 Datum:
Soil Map Unit Name: Blylon 5:1+ long			Datum: 70716
re climatic / hydrologic conditions on the site typical fo	e this time of a	the state of the s	V
re Vegetation	/ commented or y	earr res	No (If no, explain in Remarks.)
re Vegetation Soil, or Hydrology	7 significantly		Are "Normal Circumstances" present? Yes No
			(If needed, explain any answers in Remarks.)
11 1 1 1 1 1 1 1 1 1		sampling poi	nt locations, transects, important features,
Hydrophytic Vegetation Present? Yes		is the Sam	nied Area
Hydric Soil Present? Yes Wetland Hydrology Present? Yes	-	within a W	
Remarks:			
upland representative to VI	L- JJP-	150/151 +	WIL- CDK-101,
EGETATION – Use scientific names of plan			
	Absolute	Deminent Indian	
ree Stratum (Plot size: 30)		Species? Statu	
Justans nisra	<u> 40</u>	Y FACE	
Celtis occidentalis	10	N FA	
Platanus Occidentalis		~ FAC	Total Number of Dominant Species Across All Strata:
Frazions pennsylvanica		N FAC	V
			Percent of Dominant Species That Are OBL, FACW, or FAC:
apling/Shrub Stratum (Plot stret 15)	_60_	= Total Cover	
Asimina triloba	10	Y FAC	Prevalence Index worksheet:
Lonicara Maackii	- 10	Y UPL	Total % Cover of: Multiofy by:
T. Harden			FACW species 15 x2 = 30
		+	FAC species 20 x3= 60
			FACU species 50 x4= 200
+1.	15	Total Cover	UPL species 15 x5= 75
rb Stratum (Plot size: 5'/			Column Totals: 100 (A) 365 (B)
Galium adoratum	10	Y YPL	
Allina vincale	_ 5	Y FACU	Prevalence Index = B/A = 3.65
Rannoulus abortions	ـ کے۔	FACH	
Osmorhiza ckytenii		Y FACY	
			_ 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)
			(Explain)
			Indicators of hydric soil and wetland hydrology must
2.2	25 =	Total Cover	be present unless disturbed or emblements
2.2	25 =	Total Cover	be present, unless disturbed or problematic.
ody Vine Stratum (Plot size: 30'()	25 =	Total Cover	Hydrophytic
2.2		Total Cover	be present, unless disturbed or problematic.

Redax Fe			n the absence of	Trancator a.,
	atures			
Color (moist)	96 Type	Loc	Texture	Remarks
			SICL	
104R4/4 =	10 C	_^	SICL	
+				
t=Reduced Matrix, MS=Ma	ished Sand Gra	ns.	² Location: PL	=Pore Lining, M=Matrix.
				roblematic Hydric Solle ¹ :
	, ,			le Redox (A16)
 - •	• •			•
				nese Masses (F12)
				w Dark Surface (TF12)
				m romarks)
			Indicators of hy	drophytic vegetation and
Redox Depre	ssions (F6)		wetland hydi	ology must be present,
			uniess distu	bed or problematic.
		- 1	Mudda Call Brees	ont? Yes No 🔀
			Tryunc oon Frest	ont? Yes No
of check off that annual it				
ed: check all that apoly)				
Water-Stained Le			Surface So	cators (minimum of two require
Water-Stained Le Aquatic Fauna (B	13)		Surface So Drainage F	il Cracks (B6) attems (B10)
Water-Stained Le Aquatic Fauna (B True Aquatic Plan	13) ts (B14)		Surface So Drainage F Dry-Season	il Cracks (B6) atterns (B10) n Water Table (C2)
Water-Stained Le Aquatic Fauna (B True Aquatic Plan Hydrogen Sulfide	13) its (B14) Odor (C1)	Doots (C2	Surface So Drainage F Dry-Season Crayfish Bu	il Cracks (B6) atterns (B10) I Water Table (C2) Irrows (C8)
Water-Stained Le Aquatic Fauna (B True Aquatic Plan Hydrogen Sulfide Oxidized Rhizospi	13) its (B14) Odor (C1) heres on Living	Roots (C3	Surface So Drainage F Dry-Season Crayfish Bu () Saturation	il Cracks (B6) attems (B10) I Water Table (C2) irrows (C8) /isible on Aerial Imagery (C9)
Water-Stained Le Aquatic Fauna (B True Aquatic Plan Hydrogen Sulfide Oxidized Rhizosp	13) Its (B14) Odor (C1) heres on Living ced Iron (C4)		Surface So Drainage F Dry-Season Crayfish Bu t) Saturation v Stunted or so	il Cracks (B6) attems (B10) t Water Table (C2) trows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1)
Water-Stained Le Aquatic Fauna (B True Aquatic Plan Hydrogen Sulfide Oxidized Rhizoap Presence of Redu Recent Iron Redu	13) Its (B14) Odor (C1) heres on Living ced Iron (C4) tilon in Tilled Sc		Surface So Drainage F Dry-Season Crayfish Bu Saturation v Stunted or s Geomorphik	il Cracks (B6) atterns (B10) t Water Table (C2) trrows (C8) /isible on Aerial Imagery (C8) Stressed Plants (D1) t Position (D2)
Water-Stained Le Aquatic Fauna (B True Aquatic Plan Hydrogen Sulfide Oxidized Rhizoap Presence of Redu Recent Iron Redu Thin Muck Surface	13) Its (B14) Odor (C1) heres on Living ced Iron (C4) tilon in Tilled Sc e (C7)		Surface So Drainage F Dry-Season Crayfish Bu t) Saturation v Stunted or so	il Cracks (B6) atterns (B10) t Water Table (C2) trrows (C8) /isible on Aerial Imagery (C8) Stressed Plants (D1) t Position (D2)
Water-Stained Le Aquatic Fauna (B True Aquatic Plan Hydrogen Sulfide Oxidized Rhizospi Presence of Redu Recent Iron Redu Thin Muck Surface Gauge or Well Da	13) Its (B14) Odor (C1) heres on Living ced Iron (C4) ction in Tilled Sc e (C7) Is (D9)		Surface So Drainage F Dry-Season Crayfish Bu Saturation v Stunted or s Geomorphik	il Cracks (B6) atterns (B10) t Water Table (C2) trrows (C8) /isible on Aerial Imagery (C8) Stressed Plants (D1) t Position (D2)
Water-Stained Le Aquatic Fauna (B True Aquatic Plan Hydrogen Sulfide Oxidized Rhizoap Presence of Redu Recent Iron Redu Thin Muck Surface Gauge or Well Dat	13) Its (B14) Odor (C1) heres on Living ced Iron (C4) ction in Tilled Sc e (C7) Is (D9)		Surface So Drainage F Dry-Season Crayfish Bu Saturation v Stunted or s Geomorphik	il Cracks (B6) atterns (B10) t Water Table (C2) trrows (C8) /isible on Aerial Imagery (C8) Stressed Plants (D1) t Position (D2)
Water-Stained Le Aquatic Fauna (B True Aquatic Plan Hydrogen Sulfide Oxidized Rhizospi Presence of Redu Recent Iron Redu Thin Muck Surface Gauge or Well Dai Other (Explain in F	13) Its (B14) Odor (C1) heres on Living ced Iron (C4) ction in Tilled Sc e (C7) Is (D9)		Surface So Drainage F Dry-Season Crayfish Bu Saturation v Stunted or s Geomorphik	il Cracks (B6) atterns (B10) t Water Table (C2) trrows (C8) /isible on Aerial Imagery (C8) Stressed Plants (D1) t Position (D2)
Water-Stained Le Aquatic Fauna (B Aquatic Fauna (B True Aquatic Plan Hydrogen Sulfide Oxidized Rhizospi Presence of Redu Recent Iron Redu Thin Muck Surface Gauge or Well Dat Other (Explain in F	13) Its (B14) Odor (C1) heres on Living ced Iron (C4) ction in Tilled Sc e (C7) Is (D9)		Surface So Drainage F Dry-Season Crayfish Bu Saturation v Stunted or s Geomorphik	il Cracks (B6) atterns (B10) t Water Table (C2) trrows (C8) /isible on Aerial Imagery (C8) Stressed Plants (D1) t Position (D2)
Water-Stained Le Aquatic Fauna (B Aquatic Flar Aquatic Flar Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Thin Muck Surface Gauge or Well Da Other (Explain in F	13) Its (B14) Odor (C1) heres on Living ced Iron (C4) ction in Tilled Sc e (C7) Is (D9)	Nis (C6)	Surface So Drainage F Dry-Season Crayfish Bu Saturation v Stunted or s Geomorphic FAC-Neutra	il Cracks (B6) atterns (B10) n Water Table (C2) nrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) il Test (D5)
Water-Stained Le Aquatic Fauna (B True Aquatic Plan Hydrogen Sulfide Oxidized Rhizospi Presence of Redu Recent Iron Redu Thin Muck Surface Gauge or Well Dat Other (Explain in F	nts (B14) Odor (C1) heres on Living ced Iron (C4) ction in Tilled Sc c (C7) ta (D9) Remarks)	Wetland	Surface So Drainage F Dry-Season Creyfish Bu Saturation v Stunted or s Geomorphic FAC-Neutra	il Cracks (B6) atterns (B10) n Water Table (C2) nrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) il Test (D5)
Water-Stained Le Aquatic Fauna (B Aquatic Flar Aquatic Flar Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Thin Muck Surface Gauge or Well Da Other (Explain in F	nts (B14) Odor (C1) heres on Living ced Iron (C4) ction in Tilled Sc c (C7) ts (D9) Remarks)	Wetland	Surface So Drainage F Dry-Season Creyfish Bu Saturation v Stunted or s Geomorphic FAC-Neutra	il Cracks (B6) atterns (B10) n Water Table (C2) nrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) il Test (D5)
	Sandy Gleye Sandy Redox Stripped Mati Loamy Mucky Loamy Gleye Depleted Mat Redox Dark S Depleted Dar Redox Depre	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)	Sandy Redox (S5) Stripped Metrix (S6) Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8)	Indicators for I Sandy Gleyed Matrix (S4) Coast Prairi Sandy Redox (S5) Dark Surface Stripped Matrix (S6) Iron-Mangae Loamy Mucky Mineral (F1) Very Shalloe Loamy Gleyed Matrix (F2) Other (Explain Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Indicators of hy Redox Depressions (F8) wetland hydrox

WMU-JJP-126+127

Project/Site:STL NCE	Citv/Cou	inty: 51. Cours Co. Sampling Date: 3/15/
Applicant/Owner: Spire		State: MO Sampling Point: 494AA
Investigator(s): <u>JJ// CDK</u>	Section,	Township, Range: 15/76/47 W
Landform (hillslope, terrace, etc.): Plain		Local relief (concave, convex, none):
Slope (%): O Lat: 35. 8/43	54 Long:	-90, 220 484 Datum: NADE }
oil Map Unit Name: Willey - 11	land G-2% slives	s, freq. Fleeded NWI classification: None
are climatic / hydrologic conditions on the site to	nical for this time of year? Ves	No (If no, explain in Remarks.)
re Vegetation Soil or Hydrolog		
re Vegetation V Soil V, or Hydrolog	y	
		V
		ing point locations, transects, important features, e
Hydrophytic Vegetation Present? Yes _ Hydric Soil Present? Yes _	No No Is	the Sampled Area
		thin a Wetland?
Remarks:		
uplend representative to	NWO-176-1767	127.
EGETATION – Use scientific names o	of plants	
ree Stratum (Plot size: 30 /	Absolute Dominari % Cover Species?	nt Indicator Dominance Test worksheet:
Absent		That An Ool Sacres
· · ·		Total Number of Dominant Species Across All Strata: (B)
		101
-		Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
apling/Shrub Stratum (Plot size: 15 '/	Total Co	Wer
Lonicera magchii	-' 10 V	Prevalence Index worksheet: UPL Total % Cover of Andrew No.
		CA
		FACU species 25 x4= 100
	(O = Total Cov	
rb Stratum (Plot size:)	· · · · · · · · · · · · · · · · · · ·	Column Tatata SC 44 250
Tridens Flavus		4/2
Solidação consdensis	<u> 10 7</u>	FACY Prevalence Index = B/A = 4,55
Schedonorus arendinac	<u> </u>	Hydrophytic Vegetation Indicators:
Schedonorus arundinge Symphyatrichum sp. 4		1 - Rapid Test for Hydrophytic Vegetation
Sp. 7	- 3F F	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 ¹ (Explain)
		(LADIAIII)
	45 a Total Cours	Indicators of hydric soil and wetland hydrology must
dv Vine Stratum (Plot size: 30'/	= Total Cove	be present, unless disturbed or problematic.
Absent		Moderntude
		Hydrophytic Vegetation
	= Total Cover	- December 16
arks: (include photo numbers here or on a sec	acete sheet \	
	100000000000000000000000000000000000000	
ecios not identified	beyond sens	index calculations

SOIL Sampling Point UPLAND Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix (inches Color (moist) Texture OYK 4/2 99 Type: C=Concentration, D=Depletion, RM=Reduced Metrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: Indicators for Problematic Hydric Soils1: 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 (S1) unless disturbed or problematic. Restrictive Layer (if observed): None Type: **Hydric Soil Present?** Depth (inches): 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 Visible on Aerial Imagery (C9) Drift Deposits (B3) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Algai Mat or Crust (B4) Recent Iron Reduction in Tilled Solls (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? No Depth (Inches): Water Table Present? _ No Depth (inches): Saturation Present? Depth (Inches): Wetland Hydrology Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, serial photos, previous inspections), if available:

indicators observed

Remarks:

NO

NIA

UMO- JJP- 129 + 130
upland

Project/Site: 5TL NCE			1 1	1 / i
Applicant/Owner: Sairt		_ City/County:	· LOHIS CO,	Sampling Date: 3/16/
Investigator(s): JJ (C DK			State: /10	Sampling Point: UPLA
			Range: 1940	
Landform (hilislope, terrace, etc.):	100 E-11	200.000	ef (concave, convex, none	None
Slope (%): 47/ Lat: 38/		_ Long: 90. 9		Datum: NAD83
Soil Map Unit Name:	silt loam, co	ars, 9-35	% Those was close	ication NAGE
Are climatic / hydrologic conditions on th	e site typical for this time of u	Appro Vac Ala	(If no, explain in i	Remarks.)
Are vegeration /V , or h	lydrology A significanti	v disturbed? A.		present? Yes No
Are Vegetation 1. Soil , or h	lydrologynaturally p		needed, explain any answe	
SUMMARY OF FINDINGS - At	tach site map showing	a samplina point	incations transacts	Important factors
Hydrophytic Vegetation Present?	Yes No		Todations, transcots	, important reatures, e
Hydric Soil Present?	Yes No		d Area	
Wetland Hydrology Present?	Yes No	within a Wetla		No_×
Remarks:	1 1,00	T70 130		
upland representative	e to wmo-	194 - 194 + 1	130.	
EGETATION - Use scientific na	mes of plants.			
ree Stratum (Plot size: 307	Absolute		Dominance Test works	sheet:
Minus rubra		Species? Status	Number of Dominant Sc	eclas ?
		-Y FAC	That Are OBL, FACW, o	r FAC: (A)
			Total Number of Domina	inf (1)
			Species Across All Strat	a: (B)
			Percent of Dominant Spe	icles 77—
	10	= Total Cover	That Are OBL, FACW, or	FAC: 45% (A/B)
iolino/Shrub Stratum (Plot size: 15	/)		Prevalence Index work	sheet:
Eleaconus umbellata		Y UPL	Total % Cover of:	- 10-0-0-0
Ulmus rubig		Y FAC	OBL species	
			FACW species	x 2 =
			FAC species	x3=
			FACU species	
rb Stratum (Plot size: 5 1/	, 15.	Total Cover	UPL species	x 5 =
Phelaris grunding	cea 80	V CALL	Column Totals:	(A) (B)
Schedenerus srum	L'accond IC	T FACT		
Lenicera japoniro	15	A FACU	Prevalence Index =	
9-4-12-1		N FACU	Hydrophytic Vegetation	
			Rapid Test for Hyd	
			2 - Dominance Test Is	
			3 - Prevalence Index i	
			data in Remarks or	ptations ¹ (Provide supporting on a separate sheet)
			Problematic Hydrophy	tic Vegetation ¹ (Evaluate)
				no Aeffermion (Exbiniu)
idv Vine Stratum (Plot size: 301)	110 =1	Total Cover	¹ Indicators of hydric soil an be present, unless disturbe	d wetland hydrology must
ALGENT			The state of the s	prosimilatic.
ALCEA I			Hydrophytic	
ALCENT			fa4-41-	
	6 -1		fa4-41-	× No

2.

Depth Matrix	th needed to document the indicator or con Redox Features	
(Inches) Color (moist) % No DATA	Cofor (moist) % Type Loc	Texture Remarks
Type: C=Concentration, D=Depletion, RM=	Reduced Matrix, MS=Masked Sand Grains.	³ Location: PL=Pore Lining, M=Matrix.
ydrtc Soil Indicators; _ Histosoi (A1)	0-1-01	Indicators for Problematic Hydric Solls
Histosof (A1) Histic Epipedon (A2)	Sandy Gleyed Metrix (S4) Sandy Redox (S5)	Coest Prairie Redox (A16)
Black Histic (A3)	Stripped Matrix (S6)	Dark Surface (S7) Iron-Mengenese Masses (F12)
Hydrogen Sulfide (A4)	Losmy 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 Derk Surface (A11)	Redox Derk Surface (F6)	
_ Thick Dark Surface (A12)	Depleted Dark Surface (F7)	³ Indicators of hydrophytic vegetation and
Sendy Mucky Minerel (S1)	Redox Depressions (F8)	wettend hydrology must be present,
5 cm Mucky Peat or Peet (S3)		unless disturbed or problematic.
etrictive Layer (if observed):		
Type:	_	Hydric Soli Present? Yes No
Depth (Inches):		Hydric Soli Present? Yes No _/
-No soil data due		equest: golf course
-No soil data due Soil assumed to	to landowner A be non-hydric	equest: golf course
-No soil data due Soil assumed to DROLOGY		equest: golf course
No soil data due Soil assumed to DROLOGY utland Hydrology Indicators:	be non-hydric	
- No soil data due Soil assumed to DROLOGY Illand Hydrology Indicators: mary Indicators (minimum of one is required	be non-hydric check all that apply)	Secondary Indicators (minimum of two requ
No soil data due Soil assumed to DROLOGY Itland Hydrology Indicators: mary Indicators (minimum of one is required Surface Water (A1)	be non-hydric : check all that apply) Water-Stained Leaves (B9)	Secondary Indicators (minimum of two requ
No soil data due Soil assumed to DROLOGY Itland Hydrology Indicators: mary Indicators (minimum of one is required	i: check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13)	Secondary indicators (minimum of two requ Surface Soil Cracks (B6) Drainage Patterns (B10)
No soil data due Soil assumed to DROLOGY Itland Hydrology Indicators: mary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2)	i: check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14)	Secondary indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2)
Soil assumed to DROLOGY Itland Hydrology Indicators: mary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Weter Marks (B1)	i: check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1)	Secondary indicators (minimum of two required Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
No Soil data due Soil assumed to DROLOGY Itland Hydrology Indicators: mary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3)	i: check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots	Secondary indicators (minimum of two required Surface Soil Cracks (B6) Surface Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) (C3) Seturation Visible on Aerial Imagery (C5)
Soil assumed to DROLOGY Hend Hydrology Indicators: mary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Weter Marks (B1) Sediment Deposits (B2)	i: check 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 indicators (minimum of two required Surface Soil Cracks (B6) Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) (C3) Seturation Visible on Aerial Imagery (C4) Stunted or Stressed Plants (D1)
Soil assumed to DROLOGY Itland Hydrology Indicators: mary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Weter Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Echeck 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 Solls (C	Secondary Indicators (minimum of two requ Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) (C3) Seturation Visible on Aerial Imagery (C3) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
Soil assumed to DROLOGY Itland Hydrology Indicators: mary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Weter Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	Echeck 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 required Surface Soil Cracks (B6) Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) (C3) Seturation Visible on Aerial Imagery (C4) Stunted or Stressed Plants (D1)
Soil assumed to CROLOGY Hand Hydrology Indicators: mary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Weter Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aeriel Imagery (B7)	Echeck 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 Solls (C	Secondary Indicators (minimum of two requ Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) (C3) Seturation Visible on Aerial Imagery (C3) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
Soil assumed to DROLOGY Itland Hydrology Indicators: mary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Weter 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 (B8)	i: check 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 Solls (C Thin Muck Surface (C7) Geuge or Well Data (D9)	Secondary Indicators (minimum of two requ Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) (C3) Seturation Visible on Aerial Imagery (C3) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
Soil assumed to DROLOGY Illend Hydrology Indicators: mary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Weter 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 (B8) d Observations:	i: check 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) Geuge or Well Data (D9) Other (Explein in Remerks)	Secondary Indicators (minimum of two requ Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) (C3) Seturation Visible on Aerial Imagery (C3) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
Soil assumed to DROLOGY Itlant Hydrology Indicators: mary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Weter 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 (B8) d Observations: Irace Water Present? Yes No	i: check 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) Geuge or Well Data (D9) Other (Explein in Remerks)	Secondary Indicators (minimum of two requ Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) (C3) Seturation Visible on Aerial Imagery (C3) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
Soil assumed to DROLOGY Internal Hydrology Indicators: mary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Weter 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 (B8) d Observations: Face Water Present? Yes No. Per Table Present? Yes No.	i: check 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) Geuge or Well Data (D9) Other (Explein in Remerks)	Secondary indicators (minimum of two required Surface Soil Cracks (B6) Drainage Pattems (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) (C3) Seturation Visible on Aerial Imagery (C3) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5)
Soil assumed to DROLOGY Itland Hydrology Indicators: mary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Weter 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 (B8) d Observations: face Water Present? Yes No uration Present? Yes No	i: check 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 Solls (C Thin Muck Surface (C7) Geuge or Well Data (D9) Other (Explein in Remerks) 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) (C3) Seturation Visible on Aerial Imagery (C4) Stunted or Stressed Plants (D1) 6) Geomorphic Position (D2) FAC-Neutral Test (D5)
Soil assumed to DROLOGY Itland Hydrology Indicators: mary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Weter 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 (B8) d Observations: face Water Present? Yes No uration Present? Yes No	i: check 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) Geuge or Well Data (D9) Other (Explein in Remerks)	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) (C3) Seturation Visible on Aerial Imagery (C4) Stunted or Stressed Plants (D1) 6) Geomorphic Position (D2) FAC-Neutral Test (D5)
Soil assumed to DROLOGY Itland Hydrology Indicators: mary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Weter 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 (B8) d Observations: face Water Present? Yes No uration Present? Yes No	i: check 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) Geuge or Well Data (D9) Other (Explein in Remerks) Depth (Inches): Depth (Inches): Depth (Inches): Wett	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) (C3) Seturation Visible on Aerial Imagery (C4) Stunted or Stressed Plants (D1) 6) Geomorphic Position (D2) FAC-Neutral Test (D5)

Project/Site: STL W	CE	Clh/County 51	Louis C	5/10/10
Application Owilds.			a 40 //	Sampling Date: 3/17/1
Investigator(s): TP/CDK		Codles Toursel' 1	State: 700	_ Sampling Point: WPLAN
Landform (hillslope, terrace, etc.):	lade on plain	1 1 12		^
Slope (%): 3 % Lat: 3 7.	881994	Local relik	et (concave, convex, none ヽ (、) ノ) /): CONCAVE
Soil Map Unit Name: Sons De	sein sitta ala	_ Long:	10171	Datum: A/AD&}
Soil Map Unit Name: Sans Des Are climatic / hydrologic conditions on	the site towing to all the	X 3/100	J NWI classif	ication://4
Are Vegetetion / Soil /	Live site typical for this time of	year? Yes No	(If no, explain in I	Remarks.)
Are Vegetetion Soil	r mydrology <u>/ v</u> significani	ly disturbęd? Are	"Normal Circumstances"	present? Yes 🔀 No
Are Vegetation Soil, oil, oil			needed, explain any answe	ers in Remarke.)
Hydrophytic Vegetation Present?		a sampling boint	locations, transects	s, important features, etc
Hydric Soil Present?	Yes No X	ls the Sample	d Area	
Wetland Hydrology Present?	Yes No X	within a Wetla		No_X
Remarks:				
upland representative t	0 WMO-JJP-131	. Edge of	agricultural (Dield
VEGETATION - Use scientific r	names of plants.			
Tree Stratum (Plot size: 30'	Absolute	Dominant Indicator	Dominance Test work	sheet:
1. Absent		Species? Status	Number of Dominant Sp	lacies ()
2			That Are OBL, FACW, o	r FAC: (A)
3.			Total Number of Domina	int)
4			Species Across All Strat	a: (B)
5			Percent of Dominant Spi	ocles (5-/
San Haaritta a Si	15% 0	= Total Cover	That Are OBL, FACW, o	FAC: U/- (A/B)
Seoling/Shrub Stratum (Plot size:	15 /)		Prevalence Index work	sheet:
753861			Total % Cover of:	Multioty by:
			OBL species	x1=5
			FACW species	x2- O
			FAC species	x3*O
	$\overline{}$		FACU species 65	×4= 2-60
erb Stretum (Plot size: 5) <u></u> ;		UPL species 20	x5= <u>(00)</u>
Pon annua	60	Y FACY	Column Totals: 90	(A) 365 (B)
Setaria viridis		N UPL	Prevalence Index =	B/A= 4.06
Cirium Sp. *	10*	N¥ ¥	Hydrophytic Vegetation	Indicators:
Lanium amplexic	aule 10	N WAL	1 - Rapid Test for Hyd	drophytic Vegetation
Alliam Vinente	- 5	N FACY	2 - Dominance Test Is	
Americathus tube	renlatus 5	N OBL	3 - Prevalence Index i	
			4 - Morphological Ada	ptations' (Provide supporting
			cata in Remarks of	on a separate sheet)
			Problematic Hydrophy	tic Vegetation¹ (Explain)
oody Vine Stratum (Plg) size: 30 /	100 =	Total Cover	Indicators of hydric soil an o present, unless disturbe	d wetland hydrology must
ASSENT				
			lydrophytic 'egatation	\checkmark
	۔ ن		resent? Yes_	No
marks: (Include photo numbers here or	on a separate shoot.)		1 1	141
ecies not identific		enns level	have been	amittod
ron calculations	ſ.			

SOIL Sampling Point: UPLAND Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Dopth Matrix Redox Features (inches) Color (moist) Color (moist) % Type Loc Texture 0-17in 104/63/ 100 Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. *Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: Indicators for Problematic Hydric Solls¹: _ Histosol (A1) Sandy Gleyed Metrix (S4) Coast Prairie Redox (A16) _ Histic Epipedon (A2) Sandy Redox (S5) Dark Surface (S7) Bleck Histic (A3) Stripped Matrix (S8) 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 Remerks) 2 cm Muck (A10) Depleted Metrix (F3) Depleted Below Dark Surface (A11) Redox Derk Surface (F6) Thick Derk Surfece (A12) Depleted Dark Surface (F7) 3Indicators of hydrophytic vegetation and Sandy Mucky Mineral (S1) Redox Depressions (F8) wattand hydrology must be present. 5 cm Mucky Peet or Peat (S3) unless disturbed or problematic. Restrictive Layer (if observed): None Type:__ Hydric Soll Present? Depth (Inchea): Remarks: soil indicators observed hydric No HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of two required) Surface Weter (A1) Weter-Stained Leaves (B9) Surface Soil Cracks (B6) _ High Weter Table (A2) _ Aquatic Fauna (B13) Drainage Patterns (810) Saturation (A3) True Aquatic Plents (B14) Dry-Senson Water Table (C2) Water Marks (B1) Hydrogen Sulfide Odor (C1) Crayfish Burrows (C8) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) ___ Saturetion Visible on Aerial Imagery (C9) Drift Deposits (B3) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Algal Met or Crust (B4) Recent Iron Reduction In Tillad Solls (C6) Geomorphic Position (D2) Iron Deposits (B5) Thin Muck Surface (C7) FAC-Neutral Test (D5) inundation Visible on Aeriel Imagery (B7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Field Observations: Surfece Water Present? Depth (Inches): No Depth (Inches): Water Table Present? Saturation Present? __ Depth (inches): _ Wetland Hydrology Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aertal photos, previous inspections), if available:

No hydro indicators observed.

Remarks

Applicant/Owner: 5pire				. Lonis Co	Sampling Date: 3/11/ Sampling Point: 4.4
nvestigator(s): TTP/ CDK		S		Range: 0155	Sampling Point:
andform (hillslope, terrace, etc.):	illslope			lef (concave, convex, none)	AC
lope (%): 6 ×. Lat: 38.		3	ng: c 10.		
oil Map Unit Name: Men Fro	5:17 10	en Kert	9-3-4	7 (0000	Detum: NAD83
	the site business	THE PARTY	36	Slupes NWI classific	eation:A//A
re climatic / hydrologic conditions on	ine site typica	if for this time of year . /	? Yes Z No	(If no, explain in R	emarks.)
re Vegetation / Soil / O	Hydrology_	significantly dis	sturbęd? Ar	e "Normal Circumstances" p	resent? Yes X No
s vegetation /v Soil /v O	Hydrology_	naturally proble	ematic? (If	needed, explain any answer	n Remarks.)
UMMARY OF FINDINGS - A	ttach site	map showing s	ampling point	locations, transects	important features
lydrophytic Vegetation Present?		No X		-	, mp - min (outuros
lydric Soil Present?	Yes	No Z	is the Sample	ed Area	
Vetland Hydrology Present?		No	within a Wetl	and? Yes	_ No X
lemarks:					
Apland representative	. to h	Mo- JJb - 137	- Furested	hillslope.	
GETATION – Use scientific i	names of pl	ants.			
2		Absolute D	ominant Indicator	Dominance Test works	hoet:
			recles? Status	Number of Dominant Spe	77777
Quercus core		<u> </u>	Y UPL	That Are OBL, FACW, or	FAC:(
Diospyros Virginie			N FAC	1	(
Sassa Fras albidua			N FACY	Total Number of Dominal Species Across All Strata	
Quercus imbricar	ia	_ 5	V FACY		
				Percent of Dominant Spe That Are OBL, FACW, or	
- Hand Charles -	C'	65 = To	otal Cover	THE PART OF LANGEY, CY	FAC: 03.37. (A
pilna/Shrub Stratum (Plot size: 1	3/	.)		Prevalence Index works	heut:
		15	Y UPL	Total % Cover of:	Multiply by:
Asimina triloba			Y FAC	OBL species O	x1=O
				FACW species	x2=O
				FAC species	x3=_ <u>45</u>
				FACU species 15	x4=60
b Stratum (Plot size: 5'/		20 = To	tal Cover	UPL species	_ x5= 275
Absent	_,		-	Column Totals: _ 85	(A) 380 (E
risseri					(1)
				Prevelence tndex =	
				Hydrophytic Vegetation I	
				1 - Rapid Test for Hyd	
				2 - Dominance Test is	
				3 - Prevalence Index is	-
				4 - Morphological Adap	otations ¹ (Provide aupportir on a separate sheet)
				Problematic Hydrophyt	w vegetation (Explain)
				Indicators of hydric soil and	(walland budge)
dv Vine Stratum (Plot size: 30'	()	= Tota	il Cover	be present, unless disturbed	d or problematic.
Absent		-			- o legendisetas
				Hydrophytic Vegetation	1
				Present? Yes	No X
		→ = 1 AM	I COVAr		
arks: (Include photo numbers here o	r on a separa	= Tota le sheet.)	Cover		

SOIL

Sampling Point: 4/LAND

Depth _	Matrix		Redo	Features	6			
(ipches)	Color (moist)	_ %	Color (moist)	_%_	Type'	_Loc³	Texture	Remarks
0-10.	101R3/2	100	_	_	~		SL	
0-14"	10YR4/3	100	-	_	_		SL	
ype: C=Conc ydric Soll Ind Histosol (A1 Histic Epipe Black Histic Hydrogan S	lcatora: I) don (A2) (A3)	elion, RM+R	Sandy Ro	eyad Matedox (\$5) Matrix (\$6 ucky Mine	rix (S4) 3)	ins,	Indicators for Coast Pra Dark Surfa	L=Pore Lining, M=Matrix. Problematic Hydric Soils ³ : Irle Redox (A16) ace (S7) anese Messes (F12) ow Dark Surface (TF12)
Stratified La 2 cm Muck (Depleted Ba Thick Dark S Sandy Muck	yers (A5)		Loamy G Depleted Redox De Depleted	leyed Mat Matrix (F3 ork Surfac Dark Surf epressions	rix (F2) 3) e (F6) face (F7)		Other (Exp Indicators of the wetland hyperseconds)	ow Dark Surface (TF12) plain in Remerks) hydrophytic vegetation and drology must be present, urbed or problematic.
-	er (If observed): Root		-				Hydric Soil Pres	sent? Yes No
marks; ∕Vo		soil	indicate	975	obs	elveo	<i>(.</i>	
Nυ		soil	indicati)/S	obs	:01ve0	<i>(.</i>	
No DROLOGY	hydric				obs	elveo		
DROLOGY Indicators Surface Water High Water T. Saturation (A: Water Marks Sediment Deposits Algai Met or C. Iron Deposits Inundation Via Sparsely Vage	my Indicators: s (minimum of one or (A1) able (A2) 3) (B1) cosits (B2) (B3) crust (B4) (B5) alble on Aerial imagelated Concave S	Is required:	check all that apole Water-Staine Aquatic Feun True Aquatic Hydrogen Su Oxidized Rhiz Presence of I Recent Iron F Thin Muck Su Geuge or Wa	d Leaves a (B13) Plants (Bi ifide Odor cospheres Reduced in Reduction rface (C7)	(B9) 14) (C1) s on Living ron (C4) in Tilled S)	Roots (C	Secondary in Surface 5 Drainage Dry-Sens Creyfish 1 Saturation Stunted 0 Geomorp	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 Hydrolo mary Indicators Surface Water High Water T. Saturation (A: Water Marks Sediment Deposits Algal Met or C. Iron Deposits Inundation Via Sparsely Vage Ind Observation face Water Present Incomplete Present Index of Complete Present	my Indicators: s (minimum of one or (A1) able (A2) 3) (B1) cosits (B2) (B3) crust (B4) (B6) alble on Aerial ims elated Concave Si ts: sent? Yes ent? Yes ent? Yes ent? Yes ent? Yes ent? Yes ent? Yes	gary (B7) urface (B8) No /	check all that apole Water-Staine Aquatic Faun True Aquatic Hydrogen Su Oxidized Rhiz Presence of I Recent Iron F Thin Muck Su Geuge or Wa Other (Explain	d Leaves a (B13) Plants (Bifide Odor cospheres Reduced in Reduction riface (C7) ii Data (Dia n in Rema	(B9) 14) (C1) s on Living fron (C4) in Tilled S) 9) orka)	Roots (C: olis (C6)	Secondary in Surface S Drainage Dry-Seas Crayfish Saturation Stunted of Geomorp FAC-Neu	Patterns (B10) con Water Table (C2) Burrows (C8) n Visible on Aenal Imagery (C9) or Stressed Plants (D1) hic Position (D2)
DROLOGY etland Hydroid mary Indicators Surface Water High Water T. Saturation (A: Water Marks Sediment Deposits Algal Met or C. Iron Deposits Inundation Via Sparsely Vage Ind Observation face Water Present Indee capillary	my Indicators: s (minimum of one or (A1) able (A2) 3) (B1) cosits (B2) (B3) crust (B4) (B6) alble on Aerial ims elated Concave Si ts: sent? Yes ent? Yes ent? Yes ent? Yes ent? Yes ent? Yes ent? Yes	gary (B7) urface (B8) No /	check all that apole Water-Staine Aquatic Feun True Aquatic Hydrogen Su Oxidized Rhiz Presence of I Recent Iron F Thin Muck Su Geuge or Wa Other (Explain Dapth (Inche	d Leaves a (B13) Plants (Bifide Odor cospheres Reduced in Reduction riface (C7) ii Data (Dia n in Rema	(B9) 14) (C1) s on Living fron (C4) in Tilled S) 9) orka)	Roots (C: olis (C6)	Secondary in Surface S Drainage Dry-Seas Crayfish Saturation Stunted of Geomorp FAC-Neu	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) In Stressed Plants (D1) Into Position (D2) Itral Test (D5)

WMO-JJP-133

Project/Site: 57L NCE		014-10-1-1- TI	1 /
Applicant/Owner: Spir c		City/County:	Louis Co. Sampling Date: 3/17/
Investigetor(s): JIP/CDK			State: MU Sampling Point: LIPLAN
Lendform (hillslope, terrace, etc.): Hillslope			, Range:
Slope (%): 5% Lat: 38. 80 67		Local ra	alief (concave, convax, nona):
	_	Long: 40.	118979 Datum: NADR3
Soil Map Unit Name: 100 100 5/14 loc	m 17-1	ov. slover	Scaled MMI classification Acada
Are climatic / hydrologic conditions on the site typical f	or this time of ve	Ar? Yes N	lo X //fine emplois in Process
Are vegatation, Soil or Hydrology \	, significantly	disturbed? A	Are "Normal Circumstances" present? Yes No
Are Vegatetlon, Soil, or Hydrology	neturally pro	blematic? (I	if needed, explain any enewers in Remerks.)
			nt locations, transects, important features, et
Hydrophytic Vegetation Present? Yes	No >		, mportant loatures, et
Hydric Soll Present? Yas	∠ No	is the Samp	
Wetland Hydrology Present? Yes	No_X	within a Wet	tland? Yes No
Florance:	A TT-0		
upland representative to wm	0- 33P- 13	3, turested	hillslope / county Park.
EGETATION – Use scientific names of plan	 nts.		
Tree Stratum (Plat size: 30')	Absolute	Dominant Indicato	Dominance Test worksheet:
Ulmis anticana		Species? Status	Number of Dominant Species
Robinia Psendnacacia	<u> 30</u>	FACE	That Are OBL, FACW, or FAC: (A)
- I Despite Cap , a		FACU	I can Number of Dominant
			Species Across All Strata: (B)
			Percent of Dominant Species \\\\\
(F)	40	Total Cover	That Are OBL, FACW, or FAC:
poling/Shrub Stretum (Plot size: 15)		Total Cover	Prevalence Index worksheet:
Lunicera Maackii	10	Y UPL	Total % Cover of: Multiply by:
			OBL species
			FACW species 45 x2= 90
			FAC species O x3= O
			FACU species 77 x4= 300
st Stratum (Plot size: 5	10 -	Total Cover	UPL species 10 x5= 50
For strong	25	V 540	Column Totals: 130 (A) 440 (B)
Lonicera Japonica	10	Y FACY	Prevalence Index = B/A = 3,38
Alling Vineale	10	Y FACU	
Veronian Serpyllifolia	10	Y FACE	Hydrophytic Vegetation Indicators:
Trifulium repens	10	Y FALY	1 - Rapid Test for Hydrophytic Vegetation
bigitaria Sanguinalis	10	Y FACY	2 - Dominance Test is >50%
Arthraxen hiseidus		N FACH	3 - Prevalence Index is ≤3,01
1111/10/10		N Incu	4 - Morphological Adaptations* (Pravide supporting data in Remarks or on a separate sheet)
			Problematic Hydrophytic Vegetation ¹ (Explain)
			(Explain)
100	80 =T	otal Cover	Indicators of hydric soil and welland hydrology must
dv Vine Stratum (Plot size: 30'		otal Cover	be present, unless disturbed or problematic.
		-	
Absent			Hydronhytic
			Hydrophytic Vegetation Present? Yes No

SOIL Sampling Point: UPLANT Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features Color (moist) (inches) Color (moist) Texture 0-10" 101R 5/4 Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains ²Location: PL=Pere Lining, M=Matrix. Hydric Soil Indicators: Indicators for Problematic Hydric Solis3: Histosol (A1) Sandy Gleyed Melrix (S4) _ Coast Prairie Redox (A16) Histic Epípedon (A2) Sandy Redox (\$5) ___ Dark Surface (S7) Black Histic (A3) Stripped Matrix (S6) iron-Mangenese 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) ³Indicators of hydrophytic vegetation and Depleted Dark Surface (F7) 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): Nune Type: Hydric Soli Present? Depth (Inches): Ramarks: **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) _ Dry-Season Water Table (C2) True Aquatic Plants (B14) Water Marks (B1) Hydrogen Sulfide Odor (C1) _ Crayfish Burrows (C8) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Seturation 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 Solis (C6) Geomorphic Position (D2) Iron Deposits (B5) Thin Muck Surface (C7) FAC-Neutral Test (D5) Inundation Visible on Aeriel 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):

Depth (inches):

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

observed.

Saturation Present?

Remarks:

(includes capillary fringe)

None.

Wetland Hydrology Present? Yes

NA

APPENDIX C Stream Data Forms (Additional Features Only)



DATE:
GAI STREAM ID: STL-CDK-022
STREAM TYPE: INTERMITTENT EPHEMERAL
Stream crossed by centerline: NO
Stream crossed by access road: TYES NO
PHOTOGRAPHS TAKEN:
3207 - Upstream # 3206 - Downstream 5 # 3209 - Impact Area 5
#3107 - Upstream #3208 - Downstream E #3209 - Impact Area 5 # Culvert Inflow # - Culvert Outflow
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: 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: X 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
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 WETLAND
FARMLAND SCRUB/SHRUB SCRUB/SHRUB
HAYFIELD PRAIRIE HAYFIELD PRAIRIE
☐ INDUSTRIAL ☐ HIGH BLUFFS ☐ INDUSTRIAL ☐ HIGH BLUFFS
RESIDENTIAL RESIDENTIAL

DATE:	TR	<u> </u>	
			TO TOD OF BANK (************************************
Average bank-to-bank width			TO TOP OF BANK (ESTIMATE):
Average bank height (feet):	7 -	at center	dine (feet): 77
Bottom width (feet): 50'	Water	width (f	eet): 20' Water depth (feet): 16 in
Ordinary High Water Mark (O			
, 6			60 ft
FLOW CHARACTERISTICS:			
Water present: No water	R, STREAM	BED DRY	STREAMBED MOIST STANDING WATER FLOWING WATE
If flow present, estimate stage Average depth of water (feet)			
Explain (sloughing banks, exposed root	waits, under	DERATE Cut banks, e	LITTLE/NONE Scone hadered banks
OBSERVED PRESENCE OF GRO			
OBSERVED PRESENCE OF SUBS	OKFACE	FLOW:	YES NO
WATER QUALITY CHARACTERI	STICS.		
Obvious siltation:	T YES	Stun	
		or is dear, di	iscolored, oily film, scum, water odor; etc.);
	,	200000	sectores, only min, seam, water odor, etc.).
Identify specific pollutants, if k	nown: _		
	-		Nunl
AQUATIC PLANTS: PERIPHYTO	ON (brown o	or yellowish	algae on rocks or substrate)
	1		
WETLAND FRINGE:	X YES	☐ ABUT	TTING OF ADJACENT NO
Describe: YEM	<u> </u>		
BIOLOGICAL CHARACTERISTICS			
BIOLOGICAL CHARACTERISTICS Macroinvertebrates observed?	Z yes	□ №	Describe: Bivalues
Fish or wildlife observed?			Describe:
Habitat for:	YES	☐ NO	Describe:
Fish/spawn areas?			
Fishly spawif at eas?	YES	☐ NO	
JURISDICTIONAL STATUS:			
Is this stream jurisdictional?	YES	□ NO	Describe:
OTHER OBSERVATIONS AND CO	MMENT	s:	ilt, sand, smul, cubble
		4	+

DATE: 3/14/17 REVIEWER(S): 37/ CDF GAI STREAM ID: SIL-CDK-040	WEATHER CONDITIONS: 33°F Hish < 1 in s	
STREAM TYPE: PERENNIAL INTERMIT Stream crossed by centerline: YES Stream crossed by access road: YES	NO NO	
	- Downstream, N # 3798 - Impact Area E	
FULLY FUNCTIONAL: YES Considered fully functional if the following criteria ar 1. Unaltered in any significant manner by human actions are significant manner by human actions.	re met:	
2. 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 normar hydrologicar fullctions	
	al 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		
2. Streams support many, but not all, of the hydraulic	ND e mec very has a moderate probability of occurring naturally and geomorphic functions characteristic of fully functioning streams	
of similar order in the watershed		
TIMETIONALLY IMPAIRED		
	□ NO	
Considered functionally impaired if the stream has mo	ore than one of the following:	
. Has been channelized and shows no evidence of sel . Is levee protected, impounded, or artificially constri		
. Entrenched or contains active headcuts	icted	
. Has little or no riparian buffer of deep-rooted vegeti		
. Has banks that are extensively eroded or unstable, b	auon on 1 or both sides of channel	
. Has 4 or greater stream impacts within 0.5 mile upst	tream of proposed stream impact, and stream impacts individually	
r cumulatively exceed 100 ft in length	tream of proposed stream impact, and stream impacts individually	
ENERAL WATERSHED AND/OR RIPARIAN AREA	CHARACTERISTICS WITHIN 100ET BUEEED	
IGHT BANK:	LEFT.BANK:	
FORESTED WETLAND	FORESTED WETLAND	
FARMLAND SCRUB/SHRUB	FARMLAND SCRUB/SHRUB	
HAYFIELD PRAIRIE	HAYFIELD PRAIRIE	
] INDUSTRIAL	☐ INDUSTRIAL ☐ HIGH BLUFFS	
RESIDENTIAL	RESIDENTIAL	

Spire STL Pipeline Stream Survey Data Collection Form (PAGE 2) GAI STREAM ID: SIL-CDK-040 STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet): 2 ft; at centerline (feet): M/A

Average bank height (feet): 4 ft; at centerline (feet): N/A Bottom width (feet): 1.5 1 Water width (feet): dry Water depth (feet): Ordinary High Water Mark (OHWM), if observed (feet): 25: FLOW CHARACTERISTICS: Water present: WATER, STREAMBED DRY STREAMBED MOIST STANDING WATER ☐ FLOWING WATER If flow present, estimate stage at time of survey: HIGH MEDIUM TOW Average depth of water (feet): BANK EROSION: EXTENSIVE MODERATE NONE Explain (sloughing banks, exposed root wads, undercut banks, etc.): OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES YES NO **OBSERVED PRESENCE OF SUBSURFACE FLOW: WATER QUALITY CHARACTERISTICS:** Obvious siltation: ☐ YES ☐ NO Observable water quality (siltation, water color is clear, 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 Describe: _____ Fish or wildlife observed? YES NO Describe: Habitat for: Fish/spawn areas? YES NO **JURISDICTIONAL STATUS:** YES NO Describe: _____ Is this stream jurisdictional?

	DATE: 3/14/17 REVIEWER(S): JJP/CDK WEATHER CONDITIONS: High 33 "F, < 1 in Snot
	STREAM TYPE: PERENNIAL INTERMITTENT SEPHEMERAL Stream crossed by centerline: YES
	Stream crossed by access road: YES YES
	# 3799 - Upstream, SSE # 3800 - Downstream, WWW 3801 - Impact Area ENE # Culvert Inflow # - Culvert Outflow
	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
	Is connected to its overbank flood plain supporting normal hydrological functions 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 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 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
i	 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
6	5. Has 4 or greater stream impacts within 0.5 mile upstream of proposed stream impact, and stream impacts individually
c	or cumulatively exceed 100 ft in length
•	GENERAL WATERSHED AND/OR RIPARIAN AREA CHARACTERISTICS WITHIN 100FT BUFFER
ŀ	RIGHT BANK: LEFT BANK:
×	FORESTED WETLAND WETLAND
	FARMLAND SCRUB/SHRUB FARMLAND SCRUB/SHRUB
	HAYFIELD PRAIRIE HAYFIELD PRAIRIE
L	INDUSTRIAL HIGH BLUFFS INDUSTRIAL HIGH BLUFFS
L	RESIDENTIAL RESIDENTIAL

STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet): 3 f +; at centerline (feet): MA Average bank-to-bank width (feet): 0.5 f at centerline (feet): MA Bottom width (feet): 2.5 f water width (feet): MA Bottom width (feet): 2.5 f water width (feet): MA Bottom width (feet): 2.5 f water width (feet): MA Bottom width (feet): 2.5 f water width (feet): MA Bottom width (feet): 2.5 f water width (feet): MA Bottom width (feet): 2.5 f water width (feet): MA FLOW CHARACTERISTICS: Water present: MO WATER STREAMBED DRY STREAMBED MOIST STANDING WATER PLOWING WATER If flow present, estimate stage at time of survey: HIGH MEDIUM WATER BANK EROSION: Extensive MODERATE WITHLE NONE Explain (sloughing banks, exposed rout wads, underent banks, etc.): SCOULT OBSERVED PRESENCE OF SUBSURFACE FLOW: VES WATER QUALITY CHARACTERISTICS: Obvious silitation: Yes MO Obvious silitation: Yes MO Observable water quality (silitation, water color is clear, discolored, oily film, scum, water odor; etc.): Identify specific pollutants, if known: MEDIUM AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES WETLAND FRINGE: YES ABUTTING or ADJACENT WETLAND FRINGE: YES ABUTTING or ADJACENT Describe: Macroinvertebrates observed? YES ABUTTING or DEScribe: Macroinvertebrates observed?	Identify specific pollutants, if known AQUATIC PLANTS: PERIPHYTON (bit WETLAND FRINGE: Describe: BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed? Fish or wildlife observed? Habitat for: Fish/spawn areas?	Prown or yellowish algae on rocks or substrate)
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet): 3 f +; at centerline (feet): MA Average bank height (feet): 0.5 f at centerline (feet): MA Bottom width (feet): 2.5 f water width (feet): d/y Ordinary High Water Mark (OHWM), if observed (feet): d/y Water depth (feet): d/y 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 HOW Average depth of water (feet): d/y BANK EROSION: EXTENSIVE MODERATE MODERATE SCOULE OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES WATER QUALITY CHARACTERISTICS: Obvious silitation: YES TNO Obvious silitation: YES TNO Obvious silitation: YES TNO Observable water quality (silitation, water color is clear, discolored, clly film, scum, water odor; etc.): Identify specific pollutants, if known: Wes ABUTTING or ADJACENT WETLAND FRINGE: YES ABUTTING or ADJACENT BIOLOGICAL CHARACTERISTICS: YES NO Describe: BIOLOGICAL CHARACTERISTICS: YES NO Describe: BIOLOGICAL CHARACTERISTICS: YES NO Describe: SHOOT STANDING NETWORK THE CHARACTERISTICS: Macroinvertebrates observed? YES NO Describe: SHOOT STANDING NETWORK THE CHARACTERISTICS: Macroinvertebrates observed? YES NO Describe: SHOOT STANDING NETWORK THE CHARACTERISTICS: Macroinvertebrates observed? YES NO Describe: SHOOT STANDING NETWORK THE CHARACTERISTICS: Macroinvertebrates observed? YES NO Describe: SHOOT STANDING NETWORK THE CHARACTERISTICS: MACROINVERT NETWORK T	Identify specific pollutants, if known AQUATIC PLANTS: PERIPHYTON (bit WETLAND FRINGE: Describe: BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed? Sish or wildlife observed? Habitat for:	YES DOOD Describe:
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet): 3 f +; at centerline (feet): MA Average bank height (feet): 0.5 f at centerline (feet): MA Bottom width (feet): 2.5 f water width (feet): d/y Ordinary High Water Mark (OHWM), if observed (feet): d/y Water depth (feet): d/y 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 HOW Average depth of water (feet): d/y BANK EROSION: EXTENSIVE MODERATE MODERATE SCOULE OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES WATER QUALITY CHARACTERISTICS: Obvious silitation: YES TNO Obvious silitation: YES TNO Obvious silitation: YES TNO Observable water quality (silitation, water color is clear, discolored, clly film, scum, water odor; etc.): Identify specific pollutants, if known: Wes ABUTTING or ADJACENT WETLAND FRINGE: YES ABUTTING or ADJACENT BIOLOGICAL CHARACTERISTICS: YES NO Describe: BIOLOGICAL CHARACTERISTICS: YES NO Describe: BIOLOGICAL CHARACTERISTICS: YES NO Describe: SHOOT STANDING NETWORK THE CHARACTERISTICS: Macroinvertebrates observed? YES NO Describe: SHOOT STANDING NETWORK THE CHARACTERISTICS: Macroinvertebrates observed? YES NO Describe: SHOOT STANDING NETWORK THE CHARACTERISTICS: Macroinvertebrates observed? YES NO Describe: SHOOT STANDING NETWORK THE CHARACTERISTICS: Macroinvertebrates observed? YES NO Describe: SHOOT STANDING NETWORK THE CHARACTERISTICS: MACROINVERT NETWORK T	Identify specific pollutants, if known AQUATIC PLANTS: PERIPHYTON (bit WETLAND FRINGE: Describe: BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed? Sish or wildlife observed? Habitat for:	YES DOOD Describe:
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet): 3 f +; at centerline (feet): 1 Average bank height (feet): 2 f + at centerline (feet): 1 Average bank height (feet): 2 f + at centerline (feet): 1 Average bank height (feet): 2 f + at centerline (feet): 1 Average bank height (feet): 2 f + at centerline (feet): 1 Average bank height (feet): 2 f + at centerline (feet): 1 Average bank height (feet): 2 f + at centerline (feet): 1 Average bank height (feet): 2 f + at centerline (feet): 1 Average bank height (feet): 2 f + at centerline (feet): 1 Average bank (feet): 2 f + at centerline (feet):	Identify specific pollutants, if known AQUATIC PLANTS: PERIPHYTON (br WETLAND FRINGE: Describe: Describe	Prown or yellowish algae on rocks or substrate)
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet): 3 f +; at centerline (feet):	Identify specific pollutants, if known AQUATIC PLANTS: PERIPHYTON (br WETLAND FRINGE: Describe: BIOLOGICAL CHARACTERISTICS:	Prown or yellowish algae on rocks or substrate)
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet): 3 f +; at centerline (feet): MA Average bank height (feet): 0.5 f t at centerline (feet): MA Bottom width (feet): 2.5 f t Water width (feet): MA Bottom width (feet): 2.5 f t Water width (feet): MA Bottom width (feet): 2.5 f t Water width (feet): MA Bottom width (feet): 2.5 f t Water width (feet): MA Bottom width (feet): 2.5 f t Water width (feet): MA Bottom width (feet): 2.5 f t Water depth (feet): MA Bottom width (feet): MO WATER STREAMBED DRY STREAMBED MOIST STRANDING WATER STREAMBED MOIST STREAMBED MOIS	Identify specific pollutants, if known AQUATIC PLANTS: PERIPHYTON (br WETLAND FRINGE:	orown or yellowish algae on rocks or substrate)
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet): 3 f +; at centerline (feet): 1/4 Average bank height (feet): 2 f + water width (feet): 1/4 Bottom width (feet): 2 f + water width (feet): 1/4 Bottom width (feet): 2 f + water width (feet): 1/4 Bottom width (feet): 1/4 Bottom width (feet): 1/4 Bottom width (feet): 1/4 Bottom width (feet): 1/4 Water depth (feet): 1/4 FLOW CHARACTERISTICS: Water present: 1/4 Water present: 1/4 BANK EROSION: 1/	Identify specific pollutants, if know	orown or yellowish algae on rocks or substrate)
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet): 3 f + ; at centerline (feet): 1/A Average bank-to-bank width (feet): 3 f + ; at centerline (feet): 1/A Bottom width (feet): 2 f + Water width (feet): 1/A Bottom width (feet): 2 f + Water width (feet): 1/A Bottom width (feet): 2 f + Water width (feet): 1/A Bottom width (feet): 2 f + Water width (feet): 1/A Bottom width (feet): 1/A Bottom width (feet): 1/A Water depth (feet): 1/A FLOW CHARACTERISTICS: Water present: 1/NO WATER, STREAMBED DRY STREAMBED MOIST STANDING WATER FLOWING WATER If flow present, estimate stage at time of survey: 1/A Average depth of water (feet): 1/A BANK EROSION: 1/A	dr	ti: None
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet): 3 f + ; at centerline (feet): 1/A Average bank height (feet): 0.5 f t at centerline (feet): 1/A Bottom width (feet): 2.5 f t Water width (feet): 1/A Bottom width (feet): 2.5 f t Water width (feet): 1/A Bottom width (feet): 2.5 f t Water width (feet): 1/A Bottom width (feet): 1/A Bottom width (feet): 1/A Bottom width (feet): 1/A Bottom width (feet): 1/A Water depth (feet): 1/A FLOW CHARACTERISTICS: Water present: 1/NO WATER, STREAMBED DRY 1/A STREAMBED MOIST 1/A STANDING WATER 1/A FLOWING WATER If flow present, estimate stage at time of survey: 1/A Average depth of water (feet): 1/A BANK EROSION: 1/A BANK ERO	dr	Y
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet): 3 f +; at centerline (feet): MA Average bank height (feet): 0.5 f t at centerline (feet): MA Bottom width (feet): 2.5 f t water width (feet): MA Bottom width (feet): 2.5 f t water width (feet): MA Bottom width (feet): 2.5 f t water width (feet): MA Bottom width (feet): 2.5 f t water width (feet): MA 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 STANDING WATER BANK EROSION: STREAMBED DRY STREAMBED MOIST STANDING WATER WATER PROJUM STANDING WATER WATER PROJUM STANDING WATER WATER PROJUM STANDING WATER ST	Ohana III a sa	ater color is clear, discolored, olly film, scum, water odor; etc.):
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet): 3 f+; at centerline (feet): 1/4 Average bank height (feet): 0.5 ft at centerline (feet): 1/4 Bottom width (feet): 2.5 ft Water width (feet): 1/4 Bottom width (feet): 2.5 ft Water width (feet): 1/4 Ordinary High Water Mark (OHWM), if observed (feet): 1/4 FLOW CHARACTERISTICS: Water present: 1/10 NO WATER, STREAMBED DRY STREAMBED MOIST STANDING WATER If flow present, estimate stage at time of survey: HIGH MEDIUM Average depth of water (feet): 1/4 Average depth of water (feet): 1/4 BANK EROSION: EXTENSIVE MODERATE STITLE / NONE Explain (stoughing banks, exposed rout wads, undercot banks, etc.): 5 Comb OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES OBSERVED PRESENCE OF SUBSURFACE FLOW: YES OBSERVED PRESENCE OF SUBSURFACE FLOW: YES	Obvious siltation:	YES NO
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet): 3 f + ; at centerline (feet): MA Average bank height (feet): 0.5 f at centerline (feet): MA Bottom width (feet): 2.5 f + Water width (feet): d/y Water depth (feet): d/y Ordinary High Water Mark (OHWM), if observed (feet): 4 in Water depth (feet): 4 in Water present: No water, Streambed Dry Streambed Moist Standing water flow present, estimate stage at time of survey: HIGH MEDIUM Average depth of water (feet): dry BANK EROSION: EXTENSIVE MODERATE MITTLE/NONE Explain (slowghing banks, exposed rout wads, undercut banks, etc.): Scory OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES		
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet): 3 f +; at centerline (feet): MA Average bank height (feet): 0.5 f at centerline (feet): MA Bottom width (feet): 2.5 f + Water width (feet): d/y Water depth (feet): d/y Ordinary High Water Mark (OHWM), if observed (feet): 4 y Water depth	OBSERVED PRESENCE OF SUBSURF	FACE FLOW: TYES TIME
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet): 3f+; at centerline (feet): 1/4 Average bank height (feet): 0.5 ft at centerline (feet): 1/4 Bottom width (feet): 2.5ft Water width (feet): 1/4 Ordinary High Water Mark (OHWM), if observed (feet): 1/4 FLOW CHARACTERISTICS: Water present: 1/2 NO WATER, STREAMBED DRY STREAMBED MOIST STANDING WATER FLOWING WATER If flow present, estimate stage at time of survey: HIGH MEDIUM HIGH MEDIUM HIGH MEDIUM HIGH	OBSERVED PRESENCE OF GROUND	DWATER SEEPS:
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet): 3f+; at centerline (feet): 1/4 Average bank height (feet): 0·5+f at centerline (feet): 1/4 Bottom width (feet): 2·5ff Water width (feet): 1/4 Ordinary High Water Mark (OHWM), if observed (feet): 1/4 FLOW CHARACTERISTICS: Water present: No water, STREAMBED DRY STREAMBED MOIST STANDING WATER If flow present, estimate stage at time of survey: HIGH MEDIUM Average depth of water (feet): 1/4 Average depth of water (feet): 1/4 HIGH MEDIUM Average depth of water (feet): 1/4 Average depth of water (f		
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet): 3f+; at centerline (feet): MA Average bank height (feet): 0.5f+ at centerline (feet): MA Bottom width (feet): 2.5f+ Water width (feet): 4 Water depth (feet): 4	BANK EROSION: EXTENSIVE	MODERATE DITTLE / NONE
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet): 3f+; at centerline (feet): M/A Average bank height (feet): 0-5+f at centerline (feet): M/A Bottom width (feet): 2.5f+ Water width (feet): 4/2 Water depth (feet): 4/2 Ordinary High Water Mark (OHWM), if observed (feet): 4/3 FLOW CHARACTERISTICS: Water present: NO WATER, STREAMBED DRY STREAMBED MOIST STANDING WATER FLOWING WATER		
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet): 3f+; at centerline (feet): 1/4 Average bank height (feet): 0.5ft at centerline (feet): 1/4 Bottom width (feet): 2.5ft Water width (feet): 1/4 Ordinary High Water Mark (OHWM), if observed (feet): 1/4 FLOW CHARACTERISTICS:		The wind water
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet): 3f+; at centerline (feet): 1/4 Average bank height (feet): 0-5+t at centerline (feet): 1/4 Bottom width (feet): 2.5f+ Water width (feet): 4/2 Water depth (feet): 0-5+t at centerline (feet): 1/4 Ordinary High Water Mark (OHWM), if observed (feet): 1/4 > 2.5 f+.		
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet): 3f+; at centerline (feet): M/A Average bank height (feet): 0.5ft at centerline (feet): M/A Bottom width (feet): 2.5ft Water width (feet): d/y Water depth (feet): d/y		
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet): 3 ft; at centerline (feet): M/A Average bank height (feet): 0.5 ft at centerline (foot): M/A	Ordinary High Water Mark (OHW)	'M), if observed (feet): 4 4 5
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet): 3 ft; at centerline (feet): A/A	Average bank height (feet): 0-5	5 1t at centerline (feet): VA
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE):	Average bank-to-bank width (feet	et): 3f+; at centerline (feet): VIA
		WITH RESPECT TO TOP OF BANK (ESTIMATE):
	STREAM CHANNEL PROPERTIES V	
REVIEWER(S): CDK / JJF	STREAM CHANNEL PROPERTIES V	

	DATE: 3/11/17 REVIEWER(S): JIP/CDK WEATHER CONDITIONS: 30°F Light Show
	STREAM TYPE: PERENNIAL INTERMITTENT STREAM CROSSED BY CENTERINE: YES NO Stream crossed by access road: YES NO
	PHOTOGRAPHS TAKEN: # 7191 - Upstream # 7192 - Downstream # 7193 - 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: 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: LEFT BANK: FORESTED WETLAND FARMLAND SCRUB/SHRUB HAYFIELD PRAIRIE INDUSTRIAL HIGH BLUFFS RESIDENTIAL WETLAND SCRUB/SHRUB HAYFIELD PRAIRIE INDUSTRIAL HIGH BLUFFS RESIDENTIAL

DATE: 3/14/17				
REVIEWER(S): JI/CDE GAI STREAM ID: STL-JJ				
ON STREAM ID. BLE TO	-047			
STREAM CHANNEL PROPERTIES	WITH RESPECT	TO TOP OF BANK (I	ESTIMATE):	
Average book to book of det 18.	- > P1	The second secon		
Average bank height (feet): 3	++; at center	rline (feet): NA		
Average bank-to-bank width (feet): 3 Bottom width (feet): 4 f f Ordinary High Water Mark (OH)	Water width (f	eet): dry Wat	er depth (feet): dry	
Ordinary High Water Mark (OH)	VIVI), it observed	d (feet):	•	
FLOW CHARACTERISTICS:				
Water present: NO WATER,	STREAMBED DRY	STREAMBED MOIS	ST STANDING WATER	FLOWING WATER
If flow present, estimate stage a	t time of survey		MEDIUM KOW	
Average depth of water (feet): _	dry_	1		
BANK EROSION: EXTENSIVE	MODERATE			
Explain (sloughing banks, exposed root wa			1.1.+	
	us, undercut banks, e	ic.j	, Azad en l	
	-			
OBSERVED PRESENCE OF GROUN	DWATER SEEP	S: YES XNO		
OBCERVED ORGENIAL OF CURRY				
OBSERVED PRESENCE OF SUBSU	RFACE FLOW:	YES NO		
WATER QUALITY CHARACTERIST	ICS.			
COLUMN TO THE TAX TO T	YES NO			
Observable water quality (siltation, v	_	scolored, oily film, scum, wa	ter odor; etc.):	
Identify specific pollutants, if know	wn:	None		
AQUATIC PLANTS: PERIPHYTON	(brown or vellowish	algae on rocks or substra	POL TILAMENTOUS ALCAS	- AAACRONUNGTO
_	(, , , , , , , , , , , , , , , , , , ,	angue on rocks or substra	LE) I TIDAIMENTOUS ALGAE	☐ MACKOPHYTES
WETLAND FRINGE:	YES ABUT	TING or ADJACENT	MO	
Describe:				
BIOLOGICAL CHARACTERISTICS:				
Macroinvertebrates observed?	TYES XINO	Describe:		
	YES NO	Describe:		_
Habitat for:	1123	Describe.		
Fish/spawn areas?	YES NO			
HIDIODICTIONAL CTATUS	•			
JURISDICTIONAL STATUS:				
Is this stream jurisdictional?	LAEZ INO	Describe:		_
OTHER OBSERVATIONS AND COM	MENTS:			

	/14/17 (S): <u>JIP/CDK</u> MID: <u>SIL</u> - J	11-050	WEATHER (CONDITIONS:	o'f	Light Sm	<u> </u>
	YPE: PERENNIAL ssed by centerline: ssed by access road:	☐ INTERMIT☐ YES☐ YES	TENT DEPI	EMERAL		+	
#195	APHS TAKEN: Upstream Culvert Inflow	# <u>7196</u> #>	- Downstrean		<u>17</u> - Im _l	pact Area	
 Unaltered Is stable ar Is connected Has a ripar If stream se 	ully functional if the foll in any significant manna nd does not exhibit head ed to its overbank flood ian buffer of at least 25 egment is impacted by a lter stream segments al	owing criteria and er by human acting dcutting, incision plain supporting ft in width a minor structura	vities , or excessive agg ; normal hydrolog	ical functions (ional and do ered separat	es not te and	
Considered m 1. Streams hav 2. Streams sup	Y FUNCTIONAL: oderately functional if the vertice been altered; however, poort many, but not all, er in the watershed	er, system recove	ery has a modera	te probability of oc functions character	curring natur	rally functioning stream	ıs
Considered fur 1. Has been ch 2. Is levee prot 3. Entrenched of 4. Has little or of 5. Has banks th 6. Has 4 or great	LY IMPAIRED: nctionally impaired if the annelized and shows not ected, impounded, or a cortains active heading riparian buffer of delat are extensively erodeter stream impacts with exceed 100 ft in length	e stream has mo o evidence of self rtificially constric cuts ep-rooted vegeta ed or unstable, b hin 0.5 mile upst	f-recovery cted ation on 1 or both ank sloughing, er	sides of channel	d stream im	pacts individually	
GENERAL WA' RIGHT BANK: FORESTED AFARMLAND HAYFIELD INDUSTRIAL RESIDENTIAL	TERSHED AND/OR RI WETLAND SCRUB/SHRUB PRAIRIE HIGH BLUFFS	PARIAN AREA	CHARACTERISTI LEFT BANK: FORESTED HAYFIELD INDUSTRIAL RESIDENTIAL	CS WITHIN 100FT WETLAND SCRUB/SHRUB PRAIRIE HIGH BLUFFS	BUFFER		

WETLAND FRINGE: Describe: BIOLOGICAL CHARACTERISTIC Macroinvertebrates observed Fish or wildlife observed? Habitat for: Fish/spawn areas? URISDICTIONAL STATUS: Sthis stream jurisdictional?			TING or ADJAC			
AQUATIC PLANTS: PERIPHY WETLAND FRINGE: Describe: BIOLOGICAL CHARACTERISTIC Macroinvertebrates observed? Habitat for: Hispawn areas?	☐ YES CS: ☐ YES }	ABUTT	ΠNG or ☐ ADJAC	ENT NO		
AQUATIC PLANTS: PERIPHY WETLAND FRINGE: Describe: BIOLOGICAL CHARACTERISTIC Macroinvertebrates observed Fish or wildlife observed? Habitat for:	☐ YES CS: ☐ YES }	ABUTT	ΠNG or ☐ ADJAC	ENT NO		
AQUATIC PLANTS: PERIPHY WETLAND FRINGE: Describe: BIOLOGICAL CHARACTERISTIC Macroinvertebrates observed?	☐ YES CS: YES YES	ABUTI	ΠNG or ☐ ADJAC	ENT NO		
AQUATIC PLANTS: PERIPHY WETLAND FRINGE: Describe: BIOLOGICAL CHARACTERISTIC Macroinvertebrates observed	YES	☐ ABUTT	ΠNG or ∏ ADJAC	ЕИТ ДИО		
AQUATIC PLANTS: PERIPHY WETLAND FRINGE: Describe: BIOLOGICAL CHARACTERISTIC	YES	☐ ABUTT			OUS ALGAE	☐ MACROPHYTES
AQUATIC PLANTS: PERIPHY WETLAND FRINGE:					OUS ALGAE	MACROPHYTES
	YTON (brown or)	yellowish a	algae on rocks of 👊	Strate FILAMENT	OUS ALGAE	☐ MACROPHYTES
•						
Identify specific pollutants, if	f known:		None			
OBSERVED PRESENCE OF GI OBSERVED PRESENCE OF SU WATER QUALITY CHARACTE Obvious siltation: Observable water quality (silt	JBSURFACE FIERISTICS:	LOW:	□ ves 👂		diy	,
BANK EROSION: EXTENSE Explain (sloughing banks, exposed r			LITTLE/NONE	-		
Water present: PROW. If flow present, estimate sta Average depth of water (fee	age at time of		STREAMBED: HIGH		g water Ylow	FLOWING WATE
FLOW CHARACTERISTICS:						
			d (feet):	L	-	
STREAM CHANNEL PROPE Average bank-to-bank wid Average bank height (feet) Bottom width (feet): 1.5 Ordinary High Water Mark	th (feet): <u>3</u> : <u>3</u>	++; a t center width (fe	et centerline (fee dine (feet): <u>//</u> eet): dry	et): <u>NA</u> <u>A</u> Water depth (feet)	: dese	
Bottom width (feet): 1.5	ERTIES WITH F Ith (feet): 3 PI Water v	RESPECT ++ ; a t center width (fe	et centerline (fee dine (feet): <u>//</u> eet): dry	et): <u>NA</u> <u>A</u> Water depth (feet)	: dr.ve	

DATE: REVIEWER(: GAI STREAN	3/14/17 S): <u>JTP/CDK</u> NID: <u>STL-JJ</u> P	WEATHER	R CONDITIONS: 30 F Light Sono	<u>_</u>
	PE: PERENNIAL sed by centerline: sed by access road:	☐ INTERMITTENT ☐ YES NO ☐ YES NO	PHEMERAL	
#1199	PHS TAKEN: Upstream	# 7)_00 - Downstre		/
Unaltered in Is stable and Is connected Has a riparia Is stream se	lly functional if the follon any significant manner does not exhibit headed to its overbank flood pan buffer of at least 25 figment is impacted by a ter stream segments about the segments about the stream segments about the stream segments about the stream segments about the stream segments about the segments about the stream segments about the segments	r by human activities cutting, incision, or excessive a plain supporting normal hydrol it in width minor structural alteration but		
Considered mo 1. Streams have 2. Streams sup	Y FUNCTIONAL: Inderately functional if the seen altered; howeve port many, but not all, or in the watershed	r, system recovery has a mode	rate probability of occurring naturally ic functions characteristic of fully functioning stream	18
 Has been cha Is levee prote Entrenched of Has little or n Has banks tha Has 4 or great 	ctionally impaired if the innelized and shows no ected, impounded, or ar or contains active heado o riparian buffer of dee at are extensively erode	uts p-rooted vegetation on 1 or bo d or unstable, bank sloughing,	oth sides of channel	
GENERAL WAT RIGHT BANK: FORESTED FARMLAND HAYFIELD INDUSTRIAL RESIDENTIAL	TERSHED AND/OR RIP WETLAND SCRUB/SHRUB PRAIRIE HIGH BLUFFS	PARIAN AREA CHARACTERIS LEFT BANK: PORESTED ARMIANE HAYFIELD INDUSTRIA RESIDENTIA	PRAIRIE HIGH BLUFFS	

DATE: 3 (14/17 REVIEWER(S): JJ7/CDK
GAISTREAM ID: STL JII - USI
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet): 4f; at centerline (feet): 4/A Average bank height (feet): 4f; at centerline (feet): 4/A Bottom width (feet): 4/Y Water width (feet): 4/Y Ordinary High Water Mark (OHWM), if observed (feet): 6/A
FLOW CHARACTERISTICS: Water present: No water, streambed dry streambed moist standing water flowing water flow present, estimate stage at time of survey: HIGH MEDIUM NEDIUM NE
BANK EROSION: EXTENSIVE MODERATE LITTLE / NONE Explain (sloughing banks, exposed root wads, undercut banks, etc.):
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES YES ONO OBSERVED PRESENCE OF SUBSURFACE FLOW: YES YES
WATER QUALITY CHARACTERISTICS: Obvious siltation:
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? Yes X NO Describe:
Habitat for:
Fish/spawn areas?
JURISDICTIONAL STATUS:
Is this stream jurisdictional? YES NO Describe:
OTHER OBSERVATIONS AND COMMENTS:

	3/14/17					_
REVIEWER			WEATHER	CONDITIONS:	o'F Light	Snow
GAI STREAI	MID:	-027			, ,	
STREAM TY	YPE: PERENNIAL	☐ INTERMI	TENT DEP	HEMERAL		
Stream cros	ssed by centerline:	XES VES	□NO			
	ssed by access road:	☐ YES	NO			
DUOTOCRA	ADUC TAVEAL					
//-	APHS TAKEN:	" J)02				
" X	Culvert Inflow	#	Downstrea Culvert	m w # <u> チェロ</u> Outflow	Impact Area	N
CITILIA CITAL	TONAL		~			
FULLY FUNC		YES	NO.			
	ully functional if the foll					
	in any significant manne					
2. Is stable an	nd does not exhibit head	dcutting, incision	n, or excessive ag	gradation		
3. Is connecte	ed to its overbank flood	plain supportin	g normal hydrolo	gical functions		
	ian buffer of at least 25				•	
5. If stream se	egment is impacted by a	minor structur	al alteration but o	otherwise fully function	onal and does not	
significantly a	Iter stream segments al	ove and below	, then the alterati	on should be conside	red separate and	
moderately fu	Inctional					
MODERATE	VEUNCTION		~			
	Y FUNCTIONAL:	YES	Z-NO		4	
	oderately functional if t					
1. Streams nav	ve been altered; howeve	er, system recov	ery has a modera	ate probability of occu	arring naturally	
of similar orde	pport many, but not all, er in the watershed	of the hydraulic	and geomorphic	functions characteris	itic of fully functioning	streams
or surmar or ac	Till the watershed					
FUNCTIONAL	LY IMPAIRED:	Notice .				
	nctionally impaired if th	MILE.	☐ NO			
	annelized and shows no			ne following:		
	ected, impounded, or a					
	or contains active head		icted			
5 Has hanks th	no riparian buffer of dec	ep-rooted veget	ation on 1 or bot	h sides of channel		
6 Has 4 or grea	at are extensively erode	ea or unstable,	bank sloughing, e	rosional scars	_	
or cumulatively	ater stream impacts with exceed 100 ft in length	nin 0.5 mile ups	tream or propose	d stream impact, and	stream impacts indivi	dually
o. damadare.,	exceed 100 it in length					
GENERAL WA	TERSHED AND/OR RI	ΡΔΒΙΔΝ ΔΒΕΔ	CHARACTERIST	ICS WITHIN 100ET	DUITTED	
RIGHT BANK:		· AMAN ANEA	LEFT BANK:	ICO ANTI UNA TOOLI	DUFFER	
FORESTED	☐ WETLAND		FORESTED	- Lucro cum		
FARMLAND	DISCHUB/SHRUB			WETLAND		
HAYFIELD	PRAIRIE		FARMLAND	SCRUB/SHRUB		
INDUSTRIAL	HIGH BLUFFS		HAYFIELD	PRAIRIE		
RESIDENTIAL	רין חוטת מנטגני		INDUSTRIAL	☐ HIGH BLUFFS		
			RESIDENTIAL			

AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES WETLAND FRINGE: YES ABUTTING or ADJACENT NO Describe: Macroinvertebrates observed? YES NO Describe: Habitat for: YES NO Describe: Habitat for: YES NO Describe: Sthis stream jurisdictional? YES NO Describe: Habitat for: YES NO Describe: YES NO Describe: Habitat for: YES NO Describe: YES YES NO DESCRIBE: YES YES
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES WETLAND FRINGE: YES ABUTTING or ADJACENT NO BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed? YES NO Describe: Fish or wildlife observed? YES NO Describe: Habitat for:
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES WETLAND FRINGE: YES ABUTTING or ADJACENT NO BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed? YES NO Describe: Fish or wildlife observed? YES NO Describe: Habitat for:
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES WETLAND FRINGE: YES ABUTTING or ADJACENT NO BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed? YES NO Describe: Fish or wildlife observed? YES NO Describe:
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES WETLAND FRINGE: YES ABUTTING or ADJACENT NO BIOLOGICAL CHARACTERISTICS:
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES WETLAND FRINGE: YES ABUTTING or ADJACENT NO Describe:
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES
Identify specific pollutants, if known:
Identify specific pollutants if he arms
WATER QUALITY CHARACTERISTICS: Obvious siltation: YES NO Observable water quality (siltation, water color is clear, discolored, oily film, scum, water odor; etc.):
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES YES YES YES YES
BANK EROSION: EXTENSIVE MODERATE LITTLE / NONE Explain (sloughing banks, exposed root wads, undercut banks, etc.): Scoul
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 COW Average depth of water (feet):
Average bank height (feet): 2.5ft; at centerline (feet): 2.5ft Bottom width (feet): 1ft Water width (feet): dry Water depth (feet): dry Ordinary High Water Mark (OHWM), if observed (feet):
Average bank-to-bank width (foot): 3 Ct
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet): 3 f+; at centerline (feet): 3 f+
DATE:3 / 4 / 17 REVIEWER(S):JJF / C DK GAI STREAM ID:STL - DF - OS STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (foot): 3 C foot and appendix of the state of the

DATE:3 REVIEWER(S GAI STREAM		K-053	WEATHER CONE	ortions: 30°F	Light Snow
	PE: PERENNIAL sed by centerline: sed by access road:	INTERMITTENT YES YES	☐ EPHEMER.	AL	
PHOTOGRAI # 7258 #	PHS TAKEN: Upstream E Culvert Inflow	# 7259 - 0	ownstream V		Impact Area ルレ
 Unaltered in Is stable and Is connected Has a riparia If stream set 	Ily functional if the folion any significant manned does not exhibit head to its overbank flood an buffer of at least 25 gment is impacted by a ter stream segments ab	er by human activities dcutting, incision, or e plain supporting norr ft in width I minor structural alte	xcessive aggradat mal hydrological fu ration but otherw	unctions rise fully functional a	nd does not eparate and
Considered mo 1. Streams have 2. Streams supp	Y FUNCTIONAL: oderately functional if the been altered; howeve port many, but not all, in the watershed	er, system recovery h	as a moderate pro	bability of occurring	naturally fully functioning streams
 Has been cha Is levee prote Entrenched o Has little or n Has banks tha Has 4 or great 	ctionally impaired if thi innelized and shows no ected, impounded, or a or contains active head o riparian buffer of dea at are extensively erode	o evidence of self-recontricted cuts ep-rooted vegetation ed or unstable, bank shin 0.5 mile upstream	an one of the folkovery on 1 or both side:	s of channel al scars	am impacts individually
GENERAL WAT RIGHT BANK: FORESTED HAYFIELD INDUSTRIAL RESIDENTIAL	WETLAND SCRUB/SHRUB PRAIRIE HIGH BLUFFS	 	FARMIAND HAYFIELD	VITHIN 100FT BUFF WETLAND SCRUB/SHRUB PRAIRIE HIGH BLUFFS	ER

Spire STL Pipeline Stream Survey Data Collection Form (PAGE 2) DATE: 3/14/17 REVIEWER(S): JJP GAI STREAM ID: STI (- J) STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet): _5 +; at centerline (feet): _A//A_ Average bank height (feet): 3 + ; at centerline (feet): \sqrt{A} Bottom width (feet): 2 + ; Water width (feet): 2 + ; Water depth (feet): 2 + ;Ordinary High Water Mark (OHWM), if observed (feet): 5 in **FLOW CHARACTERISTICS:** Water present: NO WATER, STREAMBED DRY STREAMBED MOIST STANDING WATER FLOWING WATER If flow present, estimate stage at time of survey: MEDIUM KLOW HIGH Average depth of water (feet): 2in BANK EROSION: EXTENSIVE MODERATE LATTLE / NONE Explain (sloughing banks, exposed root walls, undercut banks, etc.)! OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES **OBSERVED PRESENCE OF SUBSURFACE FLOW:** YES XNO **WATER QUALITY CHARACTERISTICS:** Obvious siltation: YES NO Observable water quality (siltation, water color is clear, discolored, olly film, scum, water odor; etc.): AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) | FILAMENTOUS ALGAE | MACROPHYTES WETLAND FRINGE: ABUTTING OF ADJACENT **BIOLOGICAL CHARACTERISTICS:** Macroinvertebrates observed?

YES Describe: Fish or wildlife observed? YES Describe: Habitat for: Fish/spawn areas? YES YOU JURISDICTIONAL STATUS: Is this stream jurisdictional? Describe:

OTHER OBSERVATIONS AND COMMENTS:

	DATE: _3/1/17 REVIEWER(S): _JIV/ cDK GAI STREAM ID: _SIL JIV - 054	WEATHER CONDITIONS: 30% Light Snin
	Stream crossed by centerline: YES Stream crossed by access road: YES	T EPHEMERAL NO
	PHOTOGRAPHS TAKEN: # 72.63 - Upstream 5 # 72.64 - Culvert Inflow #	Downstream $N = 7265$ - Impact Area E Culvert Outflow
	FULLY FUNCTIONAL: YES Considered fully functional if the following criteria are m 1. Unaltered in any significant manner by human activitions	es
	Is stable and does not exhibit headcutting, incision, or Is connected to its overbank flood plain supporting no	excessive aggradation rmal hydrological functions
	4. Has a riparian buffer of at least 25 ft in width 5. If stream segment is impacted by a minor structural all significantly alter stream segments above and below, the moderately functional	teration but otherwise fully functional and does not in the alteration should be considered separate and
	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	NO t: has a moderate probability of occurring naturally I geomorphic functions characteristic of fully functioning streams
	FUNCTIONALLY IMPAIRED: Considered functionally impaired if the stream has more to 1. Has been channelized and shows no evidence of self-re-	han one of the following:
	2. Is levee protected, impounded, or artificially constricted	
	 Entrenched or contains active headcuts Has little or no riparian buffer of deep-rooted vegetatio 	n on 1 or both sides of shares!
	Has banks that are extensively eroded or unstable, bank	sloughing, erosional scars
	6. Has 4 or greater stream impacts within 0.5 mile upstread or cumulatively exceed 100 ft in length	m of proposed stream impact, and stream impacts individually
	GENERAL WATERSHED AND/OR RIPARIAN AREA CHA	ARACTERISTICS WITHIN 100FT BLIEFER
	RIGHT BANK: LE	FT BANK:
_	☐ FORESTED ☐ WETLAND	FORESTED WETLAND
2	DO AVOYE	FARMLAND SCRUB/SHRUB
	_	HAYFIELD PRAIRIE
	☐ INDUSTRIAL ☐ HIGH BLUFFS ☐ RESIDENTIAL] INDUSTRIAL

DATE: 3/14/17 REVIEWER(S): DP/CDK GAI STREAM ID: STL-JJP-054
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet): 6++; at centerline (feet): N/A Average bank height (feet): 5++; at centerline (feet): N/A Bottom width (feet): 1++ Water width (feet): 0,5++ Water depth (feet): 3 Ordinary High Water Mark (OHWM), if observed (feet): 12:0
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): 3 / \(\)
BANK EROSION: EXTENSIVE MODERATE SLITTLE / NONE Explain (sloughing banks, expussed 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 to clear, discolored, oily film, scum, water odor; etc.):
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) HLAMENTOUS ALGAE MACROPHYTES WETLAND FRINGE: YES ABUTTING or ADJACENT Describe:
BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed?
Fish/spawn areas? YES NO JURISDICTIONAL STATUS:
OTHER OBSERVATIONS AND COMMENTS:

DATE: 3/14/17	
REVIEWER(S): JJP/cDK	WEATHER CONDITIONS: 30 F Light Snow
GAI STREAM ID: TL-JJY- 148	WEATHER CONDITIONS. 30 1 CIPY Share
STREAM TYPE: PERENNIAL INTE	RMITTENT
Stream crossed by centerline: YES	
	INO MOC 80
Stream crossed by access road: YES	Mo
DUOTOCO ADUC TA VENI	
PHOTOGRAPHS TAKEN: #7180 - Upstream NE #7181	35~ 0162
	Downstream # 7182 - Impact Area
# Culvert Inflow #	- Culvert Outflow
FILLY FUNCTIONAL	_
FULLY FUNCTIONAL: YES	200
Considered fully functional if the following criter	
1. Unaltered in any significant manner by human	
Is stable and does not exhibit headcutting, inci	
is connected to its overbank flood plain suppo	rting normal hydrological functions
4. Has a riparian buffer of at least 25 ft in width	•
If stream segment is impacted by a minor struct	ctural alteration but otherwise fully functional and does not
significantly alter stream segments above and be	low, then the alteration should be considered separate and
moderately functional	·
MODERATELY FUNCTIONAL: YES	NO
Considered moderately functional if the following	are met.
	ecovery has a moderate probability of occurring naturally
2. Streams support many, but not all, of the hydro	aulic and geomorphic functions characteristic of fully functioning streams
of similar order in the watershed	and and geomorphic functions characteristic of fully functioning streams
FUNCTIONALLY IMPAIRED:	
· · · · · · · · · · · · · · · · · · ·	□ NO
Considered functionally impaired if the stream has	
1. Has been channelized and shows no evidence o	
2. Is levee protected, impounded, or artificially co	nstricted
3. Entrenched or contains active headcuts	
4. Has little or no riparian buffer of deep-rooted ve	
5. Has banks that are extensively eroded or unstab	ole, 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 AR	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: 3/4/17 REVIEWER(S): JT//C GAI STREAM ID: ST/-7					
STREAM CHANNEL PROPER Average bank-to-bank width Average bank height (feet): Bottom width (feet):	h (feet): 6 ft 6 ft; at cent Water width	; at centerline terline (feet): (feet): <u>bd</u> a	(feet): 6 6 ft wist Water de	<u> </u>	muis t
If flow present, estimate star Average depth of water (fee	t): bed moist	ey: Hi	SH ME	STANDING WATER	FLOWING WATE
Explain (sloughing banks, exposed ro OBSERVED PRESENCE OF GR					
OBSERVED PRESENCE OF SUI WATER QUALITY CHARACTER Obvious siltation: Observable water quality (siltate	RISTICS: YES tion, water color is clear,	O o , discolored, olly film		or; etc.}:	
Identify specific pollutants, if			one or substrate)	☐ FILAMENTOUS ALGA	E MACROPHYTES
WETLAND FRINGE: Describe:		UTTING or A		≫ NO	
BIOLOGICAL CHARACTERISTIC Macroinvertebrates observed? Fish or wildlife observed? Habitat for:			4		
Fish/spawn areas?	YES NO				
JURISDICTIONAL STATUS: Is this stream jurisdictional?	XVES 🗆 NO	Describe:	++		
OTHER OBSERVATIONS AND C	OMMENTS:	-			
	-				

DATE: 6-5-2017			/	
REVIEWER(S): JUP-WJW	WEATHER CON	IDITIONS: Clean	180°F/10	in las
GAI STREAM ID: STLJJPZOO	WEATHER COR		1 4	TON ICAS
5.115.115.15.15.15.15.15.15.15.15.15.15.	4.	24 hr	Š	
STREAM TYPE: PERENNIAL INTERMITTE	ENT EPHEME	RAL		+-
Stream crossed by centerline:	ΠNO			
Stream crossed by access road:	Ž(NO			
	ZANO			
PHOTOGRAPHS TAKEN:				
	- Downstream S	£ # 36	- Impact Area &) C	
# 40 - Culvert Inflow # 39	- Culvert Out	flow 1	O. D / - o	
18"/metal	curvert out	3+	-RB->5W/38L	ムラルと
FULLY FUNCTIONAL: Tyes	XNO 60	C 1		
Considered fully functional if the following criteria are	met		9	
1. Unaltered in any significant manner by human activ				
2. Is stable and does not exhibit headcutting, incision,		ation		
3. Is connected to its overbank flood plain supporting				
4. Has a riparian buffer of at least 25 ft in width	, , , , , , , , , , , , , , , , , , ,	Turicularia		
5. If stream segment is impacted by a minor structural	alteration but other	rwise fully functional ar	nd does not	
significantly aiter stream segments above and below, t				
moderately functional		+		
+ "				-
MODERATELY FUNCTIONAL: YES	KNO (2)	1		
Considered moderately functional if the following are		Luyer Lucies		
1. Streams have been altered; however, system recove	ry has a moderate p	probability of occurring	naturally	
2. Streams support many, but not all, of the hydraulic a				
of similar order in the watershed				
	~~			
FUNCTIONALLY IMPAIRED: DYES [□no 🙆	CL		
Considered functionally impaired if the stream has mor	re than one of the fo	oliowing:		
 Has been channelized and shows no evidence of self 	-recovery	-		
2. is levee protected, impounded, or artificially constric	:ted			4.
3. Entrenched or contains active headcuts			10	
Has little or no riparian buffer of deep-rooted vegeta				
5. Has banks that are extensively eroded or unstable, b				
5. Has 4 or greater stream impacts within 0.5 mile upst	ream of proposed st	tream impact, and strea	m Impacts individually	
or cumulatively exceed 100 ft in length				
GENERAL WATERSHED AND/OR RIPARIAN AREA (CHARACTERISTICS	WITHIN 100FT BUFF	ER	
RIGHT BANK:	LEFT BANK:			
FORESTED WETLAND	FORESTED [WETLAND		
FARMLAND SCRUB/SHRUB	FARMLAND	SCRUB/SHRUB	4	
HAYFIELD PRAIRIE	HAYFIELD [PRAIRIE		
☐ INDUSTRIAL ☐ HIGH BLUFFS	INDUSTRIAL [HIGH BLUFFS		
PRESIDENTIAL Nishway roadside	RESIDENTIAL			
a si	•			
0 (1				
2 25 27 2				

DATE: 6-5-7017
DATE.
REVIEWER(S):
GAI STREAM ID: STLUNDZOO
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE):
Average bank-to-bank width (feet): 4'; at centerline (feet): 4'
Average bank height (feet): at centerline (feet): 4
Bottom width (feet): Water width (feet): Water depth (feet):
Bottom width (feet): 5 Water width (feet): Water depth (feet): 2 Ordinary High Water Mark (OHWM), If observed (feet): 1 Scour destroyed Ues
FLOW CHARACTERISTICS:
Water present: NO WATER, STREAMBED DRY STREAMBED MOIST STANDING WATER FLOWING WATER
Water present
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 walls, undertut banks, etc.): extension sediment do losition
(2) CL crossin / pavallels road/
EN CE LADSOLA AMARIONS ADDITION
_ _/
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES NO
OBSERVED PRESENCE OF SUBSURFACE FLOW: THE DING (possible along existing pipeline ROW)
Charling Day D
WATER QUALITY CHARACTERISTICS:
Obvious siltation: YES 2 NO
Observable water quality (sitution, water culor 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
ACCUMENTATION (Statement Selection and account of Selection of Substitute)
WETLAND FRINGE: YES ABUTTING OF ADJACENT NO
Describe: WTLDP148 (PFO) abute Shealth
BIOLOGICAL CHARACTERISTICS:
Macroinvertebrates observed? YES DO Describe:
7)
Fish or wildlife observed? TYES DINO Describe:
Habitat for: N M
Fish/spawn areas? Tyes NO
URISDICTIONAL STATUS:
s this stream jurisdictional? XYES NO Describe: Tr. 5 0 + STLWW010/
NHD stram
NIID SIKAWI
OTHER OBSERVATIONS AND COMMENTS: Streem channel manipulated thoughout
entire levith from flat it 5 - and from from
existing opineline construction/ Possible stream could
be classified as intermittent

REVIEWER(S):	5-2017 _1/1P-WJU D:_6TL/1P		WEATHER CO	INDITIONS:	Clean / gast 24 V	300F/1	ain
	PERENNIAL d by centerline: d by access road:	VES YES	TENT EPHEN	∕IERAL			
PHOTOGRAPH ##	IS TAKEN: Upstream $S \in$ Culvert Inflow	# 48	Downstream Culvert O	NW #	5 - Impac	t Area NN 8	<u>د</u> د لان
FULLY FUNCTION Considered fully 1. Unaltered in a	ONAL: functional if the folloany signIficant manne	☐ YES owing criteria ar r by human act	e met ivitles		,	•	
3. is connected a4. Has a riparlan5. if stream segr	does not exhibit head to its overbank flood p buffer of at least 25 t ment is impacted by a or stream segments ab ctional	plain supporting ft in width minor structura	g normal hydrologid al alteration but oth	cal functions nerwise fully fur			
1. Streams have	lerately functional if the been altered; howeve ort many, but not all,	er, system recov	very has a moderate				
 Has been char Is levee protec Entrenched or Has little or no Has banks that Has 4 or great 	I impaired if the trongly impaired if the tree in elized and shows no cted, impounded, or a contains active headed riparian buffer of deet are extensively eroder stream impacts with exceed 100 ft in length	evidence of se rtificially constr cuts ep-rooted vege ed or unstable, hin 0.5 mile up:	off-recovery victed tation on 1 or both bank sloughing, ero	sides of channe osional scars		ects individually	
RIGHT BANK:	ERSHED AND/OR RI	PARIAN AREA	LEFT BANK:		OFT BUFFER		,
FORESTED FARMLAND HAYFIELD	☐ WETLAND ☐ SCRUB/SHRUB ☐ PRAIRIE		FORESTED FARMLAND HAYFIELD	WETLAND SCRUBYSHR PRÁIRIE			
INDUSTRIAL RESIDENTIAL	HIGH BLUFFS Flood plain		INDUSTRIAL RESIDENTIAL	Flood			

DATE:
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet): 5 ; at centerline (feet): 4 Average bank height (feet): 4 ; at centerline (feet): 4 Bottom width (feet): Water width (feet): 4
FLOW CHARACTERISTICS: Water present: No water, streambed dry Streambed moist Standing water flowing water flow present, estimate stage at time of survey: HIGH MEDIUM LOW Average depth of water (feet): 1
BANK EROSION: EXTENSIVE MODERATE LITTLE / NONE Explain (sloughing banks, exposed root wads, undercut banks, etc.): Explain (sloughing banks, exposed root wads, undercut banks, etc.): Explain (sloughing banks, exposed root wads, undercut banks, etc.): Explain (sloughing banks, exposed root wads, undercut banks, etc.): Explain (sloughing banks, exposed root wads, undercut banks, etc.): Explain (sloughing banks, exposed root wads, undercut banks, etc.): Explain (sloughing banks, exposed root wads, undercut banks, etc.): Explain (sloughing banks, exposed root wads, undercut banks, etc.): Explain (sloughing banks, exposed root wads, undercut banks, etc.): Explain (sloughing banks, exposed root wads, undercut banks, etc.): Explain (sloughing banks, exposed root wads, undercut banks, etc.): Explain (sloughing banks, exposed root wads, undercut banks, etc.): Explain (sloughing banks, exposed root wads, undercut banks, etc.): Explain (sloughing banks, exposed root wads, undercut banks, etc.): Explain (sloughing bank
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 in 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: Now
BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed? YES NO Describe: NO Descr
SURISDICTIONAL STATUS: s this stream jurisdictional? No Describe: Trib of STLWJW 011
other observations and comments: Boulder - bedrock - cobble - gravel sand substrate / many areas of channel shouling

DATE: 6-5-2017						
DATE: 2 2017		MEATUED CO	MIDITIONIC T LOC	- / anof	10.	
REVIEWER(S): 11 P- W1 U	m = 7	WEATHER CO	INDITIONS:	4 / 80°F	- Main	
GALSTREAMINE SECTION C	D C		las	t 24 hrs		
STREAM TYPE: PERENNIAL	☐ INTERMITTE	ENT DEPHEN	AEDAI		+1	
•		INI EPHE	MERAL		4	
Stream crossed by centerline:	YES	KI-NO				
Stream crossed by access road:	YES	OVE				
PHOTOGRAPHS TAKEN:	n 1977)					
#_56 Upstream N	#_5-/-	Downstream (S #	Impact Area		
# Culvert Inflow	#	Culvert O	utflow 58 Q.Q.	Impact Area -> W /594/) 5 6	
			7071117	7 / 3/21)	
FULLY FUNCTIONAL:	YES	DE NO	*			
Considered fully functional if the follow	wing criteria ard	met:				
1. Unaitered in any significant manner	by human activ	lties				
2. Is stable and does not exhibit headc			dation			+
3. is connected to its overbank flood p	=					
4. Has a riparian buffer of at least 25 ft		nonnai nyarologia	ar rationals			
5. If stream segment is impacted by a r		aiteration but oth	envise fuily functional	and does not		
significantly alter stream segments abo						
moderately functional	realid below,	inen the diteration	i silodid be collsidered	separate and		
model attry functional				-		
		×/				
MODERATELY FUNCTIONAL:	YES	1				
Considered moderately functional if the	-					
 Streams have been altered; however 			d.			
2. Streams support many, but not all, o	f the hydraulic	and geomorphic fo	inctions characteristic o	of fully functioning strea	ms	
of similar order in the watershed						
					4	
FUNCTIONALLY IMPAIRED:	YES	□ NO				
Considered functionally Impaired If the	stream has mo	re than one of the	following:			
1. Has been channelized and shows no	evidence of self	-recovery				
2. is ievee protected, Impounded, or ar		1.4				
3. Entrenched or contains active heads	•					
4. Has little or no riparian buffer of dee		ation on 1 or hoth	sides of channel			
5. Has banks that are extensively erode						
5. Has 4 or greater stream impacts with	•			eam impacts individuali	V	
or cumulatively exceed 100 ft in length	iii o.5 iiiie apst	realit of proposed	stream impact, and str	cam ninpacts marvidadi	7	
or definition of the control of the						
CENTERAL MATERIALES AND OR DIE	NA DIANI ADEA	CITADA CTEDICTA	C MUTUUN 400FT DIE	TEED		
GENERAL WATERSHED AND/OR RIP	AKIAN AKEA		2 MILHIN TOOLI BOI	FFER		
RIGHT BANK:		LEFT BANK:			4	
FORESTED WETLAND		FORESTED	☐ WETLAND			
FARMLAND SCRUB/SHRUB		FARMLAND	SCRUB/SHRUB			
☐ HAYFIELD ☐ PRAIRIE		HAYFIELD	PRAIRIE			
INDUSTRIAL HIGH BLUFFS		INDUSTRIAL	HIGH BLUFFS			1
RESIDENTIAL		RESIDENTIAL	Dipolino (204) (Anthi	ro poininit	
			1. Les mes	Row (Antho		1
				r	Chassiang	儿

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): Water depth (feet): Ordinary High Water Mark (OHWM), If observed (feet): S COUNT
FLOW CHARACTERISTICS: Water present:
BANK EROSION: EXTENSIVE MODERATE CHITTLE/NONE Explain (sloughing banks, exposed root wads, undercut banks, etc.): SCOUNT VER Was
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, 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 OF ADJACENT NO Describe: NO
BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed?
URISDICTIONAL STATUS:
s this stream jurisdictional? Ness No Describe: Trib of NHD Stream
THER OBSERVATIONS AND COMMENTS: POSSIBLE & bream channel formed due to the diversion of strain STLDP200 as channel was interrepted strain principle poweredge. Stream runs along foot of slope parallel to existing pripe line Row,

DATE: 6-5-2017 REVIEWER(S): JJP-WJW GAI STREAM ID: 514JJP203	weather conditions: Clear /80" F/Rain la	<+
+ 4	- 24hrs	
Z	NTERMITTENT EPHEMERAL	
Stream crossed by centerline:	NES NO	
Stream crossed by access road:	res DNO	
PHOTOGRAPHS TAKEN:		
#_ (00 - Upstream N2 #_ (- Downstream SW # 64 Impact Area	
# Culvert Inflow #	- Culvert Outflow	
	- Downstream SW # 64 - Impact Area W - Culvert Outflow 62.RB-NNW/63.CB-\$SSW	
FULLY FUNCTIONAL:	E5 DA NO	
Considered fully functional if the following of		
1. 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	stn structural alteration but otherwise fully functional and does not	
_ , ,	d below, then the alteration should be considered separate and	
moderately functional	2 200 11) (1101 110 110 110 110 110 110 110 110 1	
MODERATELY FUNCTIONAL:	ES NO	
Considered moderately functional if the follo		
	em recovery has a moderate probability of occurring naturally	
2. Streams support many, but not all, of the h	nydraulic and geomorphic functions characteristic of fully functioning streams	
of similar order in the watershed		
	× .	
FUNCTIONALLY IMPAIRED: YE	71	
Considered functionally impaired if the stream		
1. Has been channelized and shows no evider		
2. is levee protected, impounded, or artificial 3. Entrenched or contains active headcuts	y constricted	
4. Has little or no riparian buffer of deep-root	red 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		
GENERAL WATERSHED AND/OR RIPARIA	N AREA CHARACTERISTICS WITHIN 100FT BUFFER	
RIGHT BANK:	LEFT BANK:	
FORESTED WETLAND	FORESTED WETLAND	
FARIMLAND SCRUB/SHRUB	FARMLAND SCRUB/SHRUB	
HAYFIELD PRAIRIE	HAYFIELD PRAIRIE	
INDUSTRIAL HIGH BLUFFS	☐ INDUSTRIAL ☐ HIGH BLUFFS	
RESIDENTIAL	RESIDENTIAL	
* within	a ravine (ferested)	

DATE:
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet): 5; at centerline (feet): 5 Average bank height (feet): 1.5; at centerline (feet): 1.5 Bottom width (feet): 1.5; Water width (feet): 5 Ordinary High Water Mark (OHWM), if observed (feet): 5 Scout degree wash
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): 1
BANK EROSION: EXTENSIVE MODERATE LITTLE / NONE SOME SCOUP Explain (sloughling 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, olly film, scum, water odor; etc.):
Identify specific poliutants, if known: \(\rangle \) \(\lambda \) \(\lambda \) \(\lambda \) \(\lambda \)
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES WETLAND FRINGE: YES ABUTTING or ADJACENT NO Describe: Tous or ADJACENT NO
BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed?
Flsh/spawn areas? YES NO VES NO VE
throughout Steam alignment

1.7	
DATE: 6-5-2017 REVIEWER(S): 10 P-W1W WEATHER C GAI STREAM ID: STUNP 203 ex+2:	CONDITIONS: Clear / 80° F/Rair
CAISTILLAWID:	Last 24 hrs
STREAM TYPE: PERENNIAL DINTERMITTENT PEPH	EMERAL
Stream crossed by centerline: YES NO	
Stream crossed by access road: YES NO	
PHOTOGRAPHS TAKEN:	
#_ 85 - Upstream NE #_ 86) - Downstream	1 SW # Impact Area
# Culvert Inflow # Culvert	
	Outflow 87 RB->NW/88LB-> SE
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 agg	radation
3. 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 o	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 NO	
Considered moderately functional if the following are met:	
1. Streams have been altered; however, system recovery has a modera	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	
·	
FUNCTIONALLY IMPAIRED: YES 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	
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 bot	n sides of channel
5. Has banks that are extensively eroded or unstable, bank sloughing, e	rosional scars
6. Has 4 or greater stream impacts within 0.5 mile upstream of propose	d stream impact, and stream impacts individually
or cumulatively exceed 100 ft in length	
GENERAL WATERSHED AND/OR RIPARIAN AREA CHARACTERIST	ICS WITHIN 100FT BUFFER
RIGHT BANK: LEFT BANK:	
FORESTED WETLAND FORESTED	WETLAND
☐ FARMLAND ☐ SCRUB/SHRUB ☐ FARMLAND	SCRUB/SHRUB
HAYFIELD HAYFIELD	PRAIRIE
☐ INDUSTRIAL ☐ HIGH BLUFFS ☐ INDUSTRIAL	HIGH BLUFFS
RESIDENTIAL RESIDENTIAL	
within forosted ra	u ine
	<i>Y</i> .

DATE:
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 W Average depth of water (feet): Nov
BANK EROSION: EXTENSIVE MODERATE LITTLE / NONE Explain (sloughing banks, exposed root wads, undercut banks, etc.): 10055 110 5000 100
OBSERVED PRESENCE OF GROUNDWATER SEEPS: TYES TO NO
WATER QUALITY CHARACTERISTICS: Obvious siltation: YES NO Observable water quality (siltation, water color is drar, 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: Describe:
BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed?
JURISDICTIONAL STATUS: Is this stream jurisdictional? YES NO Describe: TVID Sheam
OTHER OBSERVATIONS AND COMMENTS: STLJJP 203 ext 2 section does contain 7-3 drainages / source upslope run-off/ No bod rock substitute abserved in this sect of store

DATE: 6-5-2017			1200	F/Dain
REVIEWER(S): JAP - WOW GAI STREAM ID: STWIP 204	WEATHER CO	NOTIONS:	lean 1800	- Rain
STREAM TYPE:	TENT DEPHEN	∕IERAL		
Stream crossed by centerline:	NO.			
Stream crossed by access road:	NO			
PHOTOGRAPHS TAKEN:	A			
# 67 - Upstream N£ # 68	Downstream	SW #	Impact Area	
#_G7 Upstream N2 #_G8 # Culvert Inflow #	- Culvert O	utflow 69 R	B-> N /70	LB→5
FULLY FUNCTIONAL: YES	MNO		, ,	_
Considered fully functional if the following criteria ar	e met:			
1. Unaltered in any significant manner by human act				
2. Is stable and does not exhibit headcutting, incision		adation		
3. is connected to its overbank flood plain supporting				
4. Has a riparian buffer of at least 25 ft in width	3 1101111W 11, W 010 B.C			
5. If stream segment is impacted by a minor structure	al alteration but oth	erwise fully function	onal and does not	
significantly alter stream segments above and below				
moderately functional			•	
MODERATELY FUNCTIONAL:	□ NO			
Considered moderately functional if the following are				
 Streams have been altered; however, system recover. 				
2. Streams support many, but not all, of the hydraulic	and geomorphic fu	unctions characteri	stic of fully functioning	streams
of similar order in the watershed				
FUNCTIONALLY IMPAIRED: YES	Ď NO			
Considered functionally impaired if the stream has m	ore than one of the	following:		
. Has been channelized and shows no evidence of se	If-recovery			
. is levee protected, impounded, or artificially consti	lcted		•	
. Entrenched or contains active headcuts		*		
. Has little or no riparian buffer of deep-rooted vege	tation 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 up			d stream impacts indivi	dualiv
r cumulatively exceed 100 ft in length	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,		
SENERAL WATERSHED AND/OR RIPARIAN AREA	CHADACTEDISTIC	CE NAZITHINI 100ET	BITCCED	
EIGHT BANK:	LEFT BANK:	-5 WITHING 1001 I	DOTTER	
FORESTED WETLAND	FORESTED	C WET AND		
	_	WETLAND		
FARMLAND SCRUB/SHRUB	FARMLAND	SCRUB/SHRUB		
HAYFIELD PRAIRIE	HAYFIELD	PRAIRIE		
INDUSTRIAL HIGH BLUFFS	INDUSTRIAL	HIGH BLUFFS		
RESIDENTIAL	RESIDENTIAL			
Mario Constant	valling			

DATE: 6-5-2017
REVIEWER(S): JSP-WW
GAI STREAM ID: STLWPROY
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): $2 5c_0 \cup c$
FLOW CHARACTERISTICS:
Water present: NO WATER, STREAMBED DRY STREAMBED MOIST STANDING WATER TOWNING WATER
If flow present, estimate stage at time of survey: HIGH MEDIUM XLOW - some are as
Average depth of water (feet):
Wester
BANK EROSION: EXTENSIVE MODERATE MITTLE / NONE
Explain (sloughing banks, exposed root wads, undercut banks, etc.): Sowe 5000 + loc was
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES NO
OBSERVED PRESENCE OF SUBSURFACE FLOW: YES NO
WATER QUALITY CHARACTERISTICS:
Obvious siltation:
Observable water quality (siltation, water color is clear, discolored, oily film, scum, water odor; etc.):
Identify specific poliutants, if known: NOW OBSEVUED
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES
WETLAND FRINGE: YES ABUTTING OF ADJACENT NO
Describe: 100 S (mpl S
·
BIOLOGICAL CHARACTERISTICS:
Macroinvertebrates observed? YES Describe:
Fish or wildlife observed? TYES NO Describe:
Habitat for: M M l
Fish/spawn areas?
JURISDICTIONAL STATUS:
Is this stream jurisdictional? XYES NO Describe: Tribulary of STLUSP203
Section.
Dec Linear
OTHER OBSERVATIONS AND COMMENTS: Substrate of boulder-cobble
and crowel + sand/ Few areas of exposed todruck
i'm Cananal

DATE: 6-5-2017 REVIEWER(S): NP-WIW GAI STREAM ID: 5-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	WEATHER CO	INDITIONS: _Cla	act 24 hrs	/Rain
STREAM TYPE: PERENNIAL INTERMIT	TENT EPHEN	MERAL		
Stream crossed by centerline:	DINO			
Stream crossed by access road: YES	Naio			
Stream crossed by access road.	5000			
PHOTOGRAPHS TAKEN:			,	
#	Downstream	W # /	Impact Area	
# - Culvert Inflow #		-		1 7/10 -
#Calvert IIIIOW #	- Culvert O	43-75	TRB>N/7	1-46 68-
FULLY FUNCTIONAL:	D'NO			
	7			
Considered fully functional if the following criteria ar				
1. Unaltered in any significant manner by human act		adable		
2. Is stable and does not exhibit headcutting, incision				
3. Is connected to its overbank flood plain supporting	g normai nyarologia	cattunctions		
4. Has a riparian buffer of at least 25 ft in width			al and dass wat	
5. If stream segment is impacted by a minor structural significantly alter stream segments above and below,				
moderately functional	, trien the alteration	i Silbulu be collsidere	eu separate anu	
moderately functional				
	~/			
MODERATELY FUNCTIONAL: YES	DANO			
Considered moderately functional if the following are				
1. Streams have been altered; however, system recov	•	•	-	
2. Streams support many, but not all, of the hydraulk	c and geomorphic f	unctions characteristi	c of fully functioning strea	ims
of similar order in the watershed				
FUNCTIONALLY IMPAIRED: XYES	□ NO			
Considered functionally impaired if the stream has m	ore than one of the	following:		
 Has been channelized and shows no evidence of se 	lf-recovery			
is levee protected, impounded, or artificially constr	ricted			
3. Entrenched or contains active headcuts				
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, er	osional scars		
6. Has 4 or greater stream impacts within 0.5 mile up:	stream of proposed	stream impact, and	stream impacts individuali	У
or cumulatively exceed 100 ft in length		+		
GENERAL WATERSHED AND/OR RIPARIAN AREA	CHARACTERISTI	CS WITHIN 100FT B	UFFER	
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:(N			
GAI STREAM ID: STLNP				
Average bank-to-bank width (feet Average bank height (feet): Bottom width (feet): W. Ordinary High Water Mark (OHW)	at ce; at ce; at ce; at centerline	enterline (feet):	denth (feet):	= leas was h
FLOW CHARACTERISTICS: Water present: No water, str If flow present, estimate stage at t Average depth of water (feet):	ime of survey: 🕺			TER I FLOWING WATER
BANK EROSION: EXTENSIVE Explain (sloughing banks, exposed root wads	MODERATE undercut banks, etc.)	Little «	i cour	
OBSERVED PRESENCE OF GROUNE	WATER SEEPS:	☐ YES ☐ NO		*
OBSERVED PRESENCE OF SUBSUR	ACE FLOW:	YES NO		
WATER QUALITY CHARACTERISTIC Obvious siltation: Observable water quality (siltation, wa	YES NO	ored, olly film, scum, wate	r odor; etc.):/\/0	me No flow
Identify specific pollutants, if know	n:NOW	e observe	d	
AQUATIC PLANTS: PERIPHYTON (E	rown or yellowish alg	jae on rocks or substrate	e) FILAMENTOUS	ALGAE MACROPHYTES
WETLAND FRINGE: Describe: Frosted :	YES ABUTTIN	NG or ADJACENT	NO	
	F 2	Describe:	+	
	YES NO			
JURISDICTIONAL STATUS: is this stream jurisdictional?	, YES NO I	Describe: Tw	b to N	HD steam
of boulder - cob	MENTS: IV.	d-51/1	LUPZOS	/ substrate
* stream outs	de of	currend	SA-bo	undang

DATE: 6-5-2017 REVIEWER(S): 110-WJW	WEATHER CONDITIONS: Clan / 800P/	Rain
GAI STREAM ID: STLJJP 706	WEATHER CONDITIONS: Clear / 800P/	
STREAM TYPE: PERENNIAL INTERMITTEN		
Stream crossed by centerline: XYES	□ NO /	
Stream crossed by access road:	D NO	
PHOTOGRAPHS TAKEN:	- 14	
# 9 D - Upstream W&W # 9 L	- Downstream ムルと # Impact Area P	
# Culvert Inflow #	- Downstream (N2 # 9 4 - Impact Area N - Culvert Outflow 92 RB > 5 /93 LB > N	
FULLY FUNCTIONAL: YES	X(мо	
Considered fully functional if the following criteria are r	met:	
1. Unaltered in any significant manner by human activit	ties	
2. Is stable and does not exhibit headcutting, incision, o	or excessive aggradation	
3. Is connected to its overbank flood plain supporting n	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 a		
significantly alter stream segments above and below, the moderately functional	hen the alteration should be considered separate and	
	,	
MODERATELY FUNCTIONAL: YES	Źno .	4
Considered moderately functional if the following are	het:	
1. Streams have been altered; however, system recover	ry has a moderate probability of occurring naturally	
	and geomorphic functions characteristic of fully functioning streams	
of similar order in the watershed		
FUNCTIONALLY IMPAIRED:	J [*] NO	
Considered functionally impaired if the stream has more	e than one of the following:	
1. Has been channelized and shows no evidence of self-r	recovery	
2. is levee protected, Impounded, or artificially constrict	ted	
3. Entrenched or contains active headcuts	+	7
4. Has little or no riparian buffer of deep-rooted vegetat	tion on 1 or both sides of channel	
5. Has banks that are extensively eroded or unstable, ba	ank sloughing, erosional scars	
5. Has 4 or greater stream Impacts within 0.5 mile upstre	ream of proposed stream impact, and stream impacts individually	
or cumulatively exceed 100 ft in length	14	
* *		
GENERAL WATERSHED AND/OR RIPARIAN AREA C	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: 6-5-2017 REVIEWER(S): 330-WJW GAI STREAM ID: STUN P206
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): Scour
FLOW CHARACTERISTICS: Water present: No Water, Streambed Dry Streambed Moist Standing water Flowing water If flow present, estimate stage at time of survey: High Dow No + Cow Average depth of water (feet):
BANK EROSION: EXTENSIVE MODERATE MUTILE/NONE Explain (sloughing banks, exposed root wads, undercut banks, etc.): SCOUV - lecil was h
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES YOU
OBSERVED PRESENCE OF SUBSURFACE FLOW: YES NO
WATER QUALITY CHARACTERISTICS: Obvious siltation: YES NO NO TO COU 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
BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed?
Fish/spawn areas?
IURISDICTIONAL STATUS: Is this stream jurisdictional? NO Describe:
other observations and comments: Steam source upslese run off/ Substrate masth of sand-granel yet areas of expased bedrack - boulder just down strain from CL crossing within chammal,

DATE: 6-5-7017 REVIEWER(S): JJ P-WJW GAI STREAM ID: 8 - LJJ P 70 7 WEATHER CONDITIONS: C. Gain / 80° F / Rain / 80° F /	las
GAISTREAM ID: STLJJP707	V5
STREAM TYPE: PERENNIAL INTERMITTENT EPHEMERAL	+ 1
Stream crossed by centerline: 🛛 YES 🔲 MO	
Stream crossed by access road:	
PHOTOGRAPHS TAKEN:	
	_
#Culvert Inflow #Culvert Outflow 98 RB \> \W /99 LB \>	٤ -
FULLY FUNCTIONAL: YES WIND	
Considered fully functional if the following criteria are met:	
1. Unaitered 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	
MADDEDATELY ELINIOTIONAL.	
MODERATELY FUNCTIONAL: YES NO	
Considered moderately functional if the following arm 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 iittle 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	
☐ FARMLAND ☐ SCRUB/SHRUB	
☐ HAYFIELD ☐ PRAIRIE ☐ HAYFIELD ☐ PRAIRIE	
☐ INDUSTRIAL ☐ HIGH BLUFFS ☐ INDUSTRIAL ☐ HIGH BLUFFS	
RESIDENTIAL RESIDENTIAL	

DATE: 6-5-2017 REVIEWER(S): 11P-W1W GAI STREAM ID: 57-411707
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): I each was h
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 FOR THE STANDING WATER 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: Observable water quality (siltation, water color is clear, 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 NO Describe: On On On On On On On O
BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed?
SURISDICTIONAL STATUS: s this stream jurisdictional? NO Describe:
composed of few sound and mosty silt and saud

REVIEWER(S): WP-WJW GAI STREAM ID: STI JP 20	WEATHER CONDITIONS:	oan/80°F/Rain 24 h
STREAM TYPE: PERENNIAL INT Stream crossed by centerline: YES Stream crossed by access road: YES		
PHOTOGRAPHS TAKEN: #_/O/ Upstream / #_/O # Culvert Inflow #_	2 - Downstream S # Culvert Outflow	Impact Area W / 104LB → E
FULLY FUNCTIONAL: YES Considered fully functional if the following crite	eria are met:	0/1096672
1. Unaltered in any significant manner by huma		4
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 5. if stream segment is impacted by a minor str		l and does not
significantly alter stream segments above and be moderately functional		
MODERATELY FUNCTIONAL: YES	√Q.60	
Considered moderately functional if the following	ng are met:	
1. Streams have been altered; however, system	recovery has a moderate probability of occur	ing naturally
Streams support many, but not all, of the hyd of similar order in the watershed	draulic and geomorphic functions characteristic	of fully functioning streams
		*
FUNCTIONALLY IMPAIRED: YES	□NO	
Considered functionally impaired if the stream		
1. Has been channelized and shows no evidence		
2. is levee protected, impounded, or artificially	constricted	•
3. Entrenched or contains active headcuts		
 Has little or no riparian buffer of deep-rooted Has banks that are extensively eroded or uns 	_	
6. Has 4 or greater stream impacts within 0.5 m		tream impacts individually
or cumulatively exceed 100 ft in length		steam impacts marriadally
GENERAL WATERSHED AND/OR RIPARIAN	AREA CHARACTERISTICS WITHIN 100FT R	IEEER
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:(g-5-7017] REVIEWER(S):UD-UJ-UJ-UJ-UJ-UJ-UJ-UJ-UJ-UJ-UJ-UJ-UJ-UJ-
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): possible scale
FLOW CHARACTERISTICS: Water present: No water, streambed dry streambed moist standing water flowing water liftlow present, estimate stage at time of survey: MEDIUM LOW MC Flow water Average depth of water (feet):
BANK EROSION: EXTENSIVE MODERATE MUTTLE / NONE Explain (sloughing banks, exposed root wads, undercut banks, etc.): 10.55. 10. 5000 in 50000
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES NO OBSERVED PRESENCE OF SUBSURFACE FLOW: YES NO
WATER QUALITY CHARACTERISTICS: Obvious siltation: YES Z NO Observable water quality (siltation, water color is dear, discolored, oily film, scum, water odor; etc.): PO How
Identify specific pollutants, if known:
WETLAND FRINGE: YES ABUTTING OF ADJACENT KIND Describe: FORESTED WILLSON
BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed?
IURISDICTIONAL STATUS: s this stream jurisdictional?
other OBSERVATIONS AND COMMENTS: Dense (8" docp) logf pack within channel steam channel was caturated within sand-silf-svavel substrate throughout

DATE: 6-5-2017		-1	100	OF 10.
REVIEWER(S): 110- W.	WEATHER C	CONDITIONS:	eav 700	1/ Plain
GAI STREAM ID: STUND?	0.7	CONDITIONS:	last Z	1 hvs
STREAM TYPE: PERENNIAL		EMERAL		
Stream crossed by centerline:	YES NO		+	
Stream crossed by access road:	YES NO			
PHOTOGRAPHS TAKEN:	1.16			t. \
#_105 - Upstream W	# Downstream	n 2 # 109	Impact Are	ea 🏳
# Culvert Inflow	# Downstream	Outflow 107 RE	3-35/101	3LB->N
	YES NO			
FULLY FUNCTIONAL:	T .			
Considered fully functional if the folio	= 40000000 minor 2000000			
1. Unaitered in any significant manne				
2. Is stable and does not exhibit head				
3. Is connected to its overbank flood		gical functions		
4. Has a riparian buffer of at least 255. If stream segment is impacted by a		thorwise fully function	nal and door not	
significantly alter stream segments al		•		
moderately functional	ove and below, then the alterati	on should be consider	eu separate anu	
moderately functional				
MODEO ATELY PUNCTIONAL.	YES NO			
MODERATELY FUNCTIONAL:				
Considered moderately functional if t	-	I Late C		+
1. Streams have been altered; however				In a state
Streams support many, but not all, of similar order in the watershed	or the hydraulic and geomorphic	runctions characteris	uc of fully function	iing streams
or similar order in the watershed				
CHAICTIONALLY INADAIDED.	□ YES □NO			
FUNCTIONALLY IMPAIRED:		a followings		
Considered functionally impaired if th		te tollowing:		
1. Has been channelized and shows no				
2. Is levee protected, impounded, or a	•			
3. Entrenched or contains active head				
4. Has little or no riparlan buffer of de	•			
 Has banks that are extensively erod Has 4 or greater stream impacts wij 			l stroom imposts in	بطابيتما بيمالي
or cumulatively exceed 100 ft in length		eu stream mipact, and	i stream impacts ii	dividually
or cumulatively exceed 100 to in length				
CENERAL WATERCHER AND OR R	IDADIAN ADEA CHADACTERIC	FICE MUTUINI 400FT	DUCCED	
GENERAL WATERSHED AND/OR R		IIC2 MILHIN TOOLI	BUFFEK	
RIGHT BANK: FORESTED WETLAND	LEFT BANK:			
		WETLAND		
FARIMLAND SCRUB/SHRUB	FARMLAND	SCRUB/SHRUB		
HAYRELD PRAIRIE	HAYFIELD	☐ PRAIRIE		
INDUSTRIAL HIGH BLUFFS	INDUSTRIAL			
RESIDENTIAL.	RESIDENTIAL		4.	
	6 .			
X stream wi	thin lovestors	Marino		
-/ Ulleath Con	1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	h of m h		

DATE: 6-5-2017 REVIEWER(S): 110-110-1 GAI STREAM ID: 571111170-1
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): &COUNT
FLOW CHARACTERISTICS: Water present: No water, Streambed Dry Streambed Moist Standing water Flowing water High Medium Low Average depth of water (feet): 1 5
BANK EROSION: EXTENSIVE MODERATE LITTLE/NONE Explain (sloughing banks, exposed root wads, undercut banks, etc.):
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES YES OBSERVED PRESENCE OF SUBSURFACE FLOW: YES YES YES
WATER QUALITY CHARACTERISTICS: Obvious siltation: YES NO Observable water quality (stration 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: Describe: Yet some areas contain flood plain of small size deminated by pawpaw.
BIOLOGICAL CHARACTERISTICS: Macroinvertebrates observed? YES NO Describe: Limne earlier C
Fish or wildlife observed? YES NO Describe:
Habitat for: YES NO
S this stream jurisdictional? YES NO Describe: NO Describe:
of vairages connect to this scheam.

DATE:	Clean/90°F/No ra
STREAM TYPE: PERENNIAL INTERMITTENT EPHEMERAL	
Stream crossed by centerline: TYES	
Stream crossed by access road:	*
PHOTOGRAPHS TAKEN: #_547 - Upstream S #_548 - Downstream M #_ # Culvert Inflow # Culvert Outflow	Impact Area 549 RB→ E/550 LB→ C
FULLY FUNCTIONAL: YES NO	•
Considered fully functional if the following criteria are met:	9.00
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 f	functional and does not
significantly alter stream segments above and below, then the alteration should be comoderately functional	
MODERATELY FUNCTIONAL: Considered moderately functional if the following are met: Streams have been altered; however, system recovery has a moderate probability of the hydraulic and geomorphic functions characteristics of similar order in the watershed	
FUNCTIONALLY IN ADAIDED.	
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 change	nel '
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 or cumulatively exceed 100 ft in length	ct, and stream impacts individually
GENERAL WATERSHED AND/OR RIPARIAN AREA CHARACTERISTICS WITHIN 1	OOFT BUFFER
RIGHT BANK: LEFT BANK:	
FORESTED WETLAND FORESTED WETLAND	
FARMLAND SCRUB/SHRUB FARMLAND SCRUB/SH	HRUB
☐ HAYFIELD ☐ PRAIRIE ☐ HAYFIELD ☐ PRAIRIE	
☐ INDUSTRIAL ☐ HIGH BLUFFS ☐ INDUSTRIAL ☐ HIGH BLU	FFS
☐ RESIDENTIAL ☐ RESIDENTIAL	•

	4
WATER QUALITY CHARACTERISTICS:	
Obvious siltation: YES XNO	Ala Claus
	etc.); No flow
Obvious siltation: YES XNO Observable water quality (siltation, water color is clear, discolored, olly film, scum, water odor;	etc.); No flow
Obvious siltation: YES XNO Observable water quality (siltation, water color is clear, discolored, olly film, scum, water odor;	etc.): No flow
Obvious siltation: YES XNO Observable water quality (siltation, water color is clear, discolored, olly film, scum, water odor;	etc.): No flow
Obvious siltation: YES NO Observable water quality (siltation, water color is clear, discolored, oily film, scum, water odor; discolored, oily film, scum, oily film, scum, oily film, scum, oily film, s	d
Obvious siltation: YES NO Observable water quality (siltation, water color is clear, discolored, oily film, scum, water odor; discolored, oily film, scum, oily film, scum, oily film, scum, oily film, s	d
Obvious siltation: Observable water quality (siltation, water color is clear, discolored, oily film, scum, water odor; didentify specific pollutants, if known: AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate)	d
Obvious siltation: YES NO Observable water quality (siltation, water color is clear, discolored, oily film, scum, water odor; didentify specific pollutants, if known: AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) WETLAND FRINGE: ABUTTING or ADJACENT	d
Obvious siltation: Observable water quality (siltation, water color is clear, discolored, oily film, scum, water odor; dentify specific pollutants, if known: AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) WETLAND FRINGE: ABUTTING or ADIACENT	d
Obvious siltation: Observable water quality (siltation, water color is clear, discolored, olly film, scum, water odor; oldentify specific pollutants, if known: AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) WETLAND FRINGE: ABUTTING or ADJACENT Describe:	d
Obvious siltation: Observable water quality (siltation, water color is clear, discolored, olly film, scum, water odor; oldentify specific pollutants, if known: AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) WETLAND FRINGE: Describe: BIOLOGICAL CHARACTERISTICS:	d
Obvious siltation:	d
Obvious siltation:	d
Obvious siltation: Observable water quality (siltation, water color is clear, discolored, olly film, scum, water odor; oldentify specific pollutants, if known: AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) WETLAND FRINGE: Describe: BIOLOGICAL CHARACTERISTICS:	d
Obvious siltation:	d
Obvious siltation: Observable water quality (siltation, water color is clear, discolored, olly film, scum, water odor; oldentify specific pollutants, if known: AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) WETLAND FRINGE: Describe: BIOLOGICAL CHARACTERISTICS:	d
Obvious siltation: Observable water quality (siltation, water color is clear, discolored, olly film, scum, water odor; oldentify specific pollutants, if known: AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) WETLAND FRINGE: ABUTTING or ADJACENT Describe:	d
Obvious siltation: Observable water quality (siltation, water color is clear, discolored, olly film, scum, water odor; oldentify specific pollutants, if known: AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) WETLAND FRINGE: ABUTTING or ADJACENT Describe:	d
Obvious siltation: Observable water quality (siltation, water color is clear, discolored, olly film, scum, water odor; defentify specific pollutants, if known: AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) WETLAND FRINGE: ABUTTING or ADIACENT	d
Obvious siltation: YES NO Observable water quality (siltation, water color is clear, discolored, oily film, scum, water odor; didentify specific pollutants, if known: AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) WETLAND FRINGE: ABUTTING or ADJACENT	d
Obvious siltation: YES NO Observable water quality (siltation, water color is clear, discolored, oily film, scum, water odor; didentify specific pollutants, if known: AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) WETLAND FRINGE: ABUTTING or ADJACENT	d
Obvious siltation: YES NO Observable water quality (siltation, water color is clear, discolored, oily film, scum, water odor; didentify specific pollutants, if known: AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) WETLAND FRINGE: ABUTTING or ADJACENT	d
Obvious siltation: YES NO Observable water quality (siltation, water color is clear, discolored, oily film, scum, water odor; didentify specific pollutants, if known: AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) WETLAND FRINGE: ABUTTING or ADJACENT	d
Obvious siltation: Observable water quality (siltation, water color is clear, discolored, oily film, scum, water odor; didentify specific pollutants, if known: AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate)	d
Obvious siltation: Observable water quality (siltation, water color is clear, discolored, oily film, scum, water odor; didentify specific pollutants, if known: AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate)	d
Obvious siltation: Observable water quality (siltation, water color is clear, discolored, oily film, scum, water odor; didentify specific pollutants, if known: AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate)	d
Obvious siltation: YES NO Observable water quality (siltation, water color is clear, discolored, oily film, scum, water odor; lidentify specific pollutants, if known:	d
Obvious siltation: YES NO Observable water quality (siltation, water color is clear, discolored, oily film, scum, water odor; discolored, oily film, scum, oily film, scum, oily film, scum, oily film, s	d
Obvious siltation: YES NO Observable water quality (siltation, water color is clear, discolored, oily film, scum, water odor; sildentify specific pollutants, if known:	d
Obvious siltation: YES NO Observable water quality (siltation, water color is clear, discolored, oily film, scum, water odor; discolored, oily film, scum, oily film, scum, oily film, scum, oily film, s	d
Obvious siltation: YES NO Observable water quality (siltation, water color is clear, discolored, oily film, scum, water odor; lidentify specific pollutants, if known:	d
Obvious siltation: YES XOO Observable water quality (siltation, water color is clear, discolored, olly film, scum, water odor;	etc.); No Flow
Obvious siltation: YES XOO Observable water quality (siltation, water color is clear, discolored, olly film, scum, water odor;	etc.): No flow
Obvious siltation: YES XNO Observable water quality (siltation, water color is clear, discolored, olly film, scum, water odor;	etc.): No flow
Obvious siltation: YES XNO Observable water quality (siltation, water color is clear, discolored, olly film, scum, water odor;	etc.); No flow
Obvious siltation: YES XNO Observable water quality (siltation, water color is clear, discolored, olly film, scum, water odor;	etc.); No flow
Obvious siltation: YES XOO Observable water quality (siltation, water color is clear, discolored, olly film, scum, water odor;	etc.); No Flow
Obvious siltation: YES XOO Observable water quality (siltation, water color is clear, discolored, olly film, scum, water odor;	etc.); No flow
Obvious siltation: YES XNO	etc.): No flow
Obvious siltation: YES XNO	etc.); No flow
Obvious siltation: YES XNO	etc.): No flow
Obvious siltation: YES XNO	etc.); No flow
Obvious siltation: YES XNO	etc.); No Flow
Obvious siltation: YES XNO	etc.); No Flaw
Obvious siltation: YES XNO	to Na Flance
Obvious siltation: YES XNO	Ald II
Obvious siltation: YES XNO	
	· · · · · · · · · · · · · · · · · · ·
	~
WATER QUALITY CHARACTERISTICS:	4
WATER QUALITY CHARACTERISTICS:	4
MAINTER CHAINTY CHARACTERISTICS.	
/ \	
/ \	
Aug Aug	
OBSERVED PRESENCE OF SUBSURFACE FLOW: YES NO	
OBSERVED PRESENCE OF SUBSURFACE FLOW: YES NO	
ORSEDVED DESCRICE OF SUBSUDEACE FLOW.	
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES NO	*
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES NO	
4 2	
Explain (sloughing banks, exposed root wads, undercut banks, 4r.)	56000
	24.
BANK EROSION: EXTENSIVE MODERATE MITTLE / NONE	
· ·	
Average depution water (reet):	
Average depth of water (feet):	19
	IM [LOW NOF6W
Water present: NO WATER, STREAMBED DRY STREAMBED MOIST	STANDING WATER TLOWING WATER
. /	CTANDING WATER TO STORY
FLOW CHARACTERISTICS:	
CLOW CHARACTERISTICS.	
7-22	
Ordinary High Water Mark (OHWM), if observed (feet): P. Poss	1 De scour
Bottom width (feet): Water width (feet): Water dept	
	h /fonth
Average bank height (feet):; at centerline (feet):	
	•
Average bank-to-bank width (feet):; at centerline (feet):	
HIP	The state of the s
STREET STREET HOTELINGS WITH RESPECT TO TOP OF BANK [ESTIMAL	TE).
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMA:	
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE)	
STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMA)	
	No.
GAI STREAM ID: SIL JJ P2/0	
GAI STREAM ID: SILJJP2/0	
REVIEWER(S): 110-W1W GAI STREAM ID: 110-W1W	
GAI STREAM ID: STLJJ P2/0	

DATE: 4/4/2017 REVIEWER(S): W. John Weekter Jr. Nich Province WEATHER CONDITIONS: Partly cloudy 60 F	
GAI STREAM ID: STL-WIW-006	
STREAM TYPE: PERENNIAL INTERMITTENT PEPHEMERAL	
Stream crossed by centerline: X YES NO	
Stream crossed by access road: YES NO	
PHOTOGRAPHS TAKEN:	
# <u>P4040015</u> - Upstream NE # <u>P4040013</u> - Downstream W->W # <u>P4640014</u> - Impact Area	
# Culvert Inflow # Culvert Outflow	
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	
MODERATELY FUNCTIONAL: X YES NO	
MODERATELY FUNCTIONAL: X 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 geomorphic functions characteristic of fully functioning stre	ame
of similar order in the watershed	.u
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	
1. 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 individua	ally_
or cumulatively exceed 100 ft in length	
GENERAL WATERSHED AND/OR RIPARIAN AREA CHARACTERISTICS WITHIN 100FT BUFFER	
RIGHT BANK: LEFT BANK:	
▼ FORESTED	
☐ HAYFIELD ☐ PRAIRIE ☐ HAYFIELD ☐ PRAIRIE	
☐ INDUSTRIAL ☐ HIGH BLUFFS ☐ INDUSTRIAL ☐ HIGH BLUFFS	
RESIDENTIAL RESIDENTIAL	

DATE: 4/4/2017 REVIEWER(S): W. Tohn Wester GAI STREAM ID: STL-WIN		k Assurei	c			
STREAM CHANNEL PROPERTII Average bank-to-bank width (f Average bank height (feet): Bottom width (feet): Ordinary High Water Mark (OF	feet): 	5; at at centerli width (fe	centerline (ine (feet): _ et): <u>0.76</u>	feet): <u>&</u> Water d	. <u> </u>	
FLOW CHARACTERISTICS: Water present: NO WATER If flow present, estimate stage Average depth of water (feet):	at time o	of survey:			STANDING WATER	X FLOWING WATER
BANK EROSION: EXTENSIVE Explain (sloughing banks, exposed root			X) LITTLE/NO	NE sections d	ouply incised	-
OBSERVED PRESENCE OF GROUDS OBSERVED PRESENCE OF SUBS WATER QUALITY CHARACTERIS Obvious siltation: Observable water quality (siltation) Identify specific pollutants, if kr	SURFACE STICS: YES n, water colo	FLOW:	☐ YES	NO NO scum, water o	dor; etc.): Substrate]s
AQUATIC PLANTS: PERIPHYTO						☐ MACROPHYTES
WETLAND FRINGE: Describe:	YES	ABUT	TING or 🗌 AI	DJACENT [*]	⊠ NO	
BIOLOGICAL CHARACTERISTICS Macroinvertebrates observed? Fish or wildlife observed? Habitat for:		<u>⊠</u> NO	Describe: Describe:	Complish	precome	
ish/spawn areas?	YES	🛛 ио				
URISDICTIONAL STATUS: s this stream jurisdictional?	∑ YES	□ NO	Describe:		+	
OTHER OBSERVATIONS AND CO	MMENT	S:		,	4	

DATE: 4/4/2 REVIEWER(S): W. GAI STREAM ID:	John Wachten J	i.j Nick Paoun 0'7	WEATHER CO	nditions: Pathy cloud	60F
STREAM TYPE:	PERENNIAL	✓ INTERMITTE	ENT EPHEN	1ERAL	
Stream crossed by	centerline:	— ▼ YES	□ NO		
Stream crossed by		☐ YES	⊠ NO		
PHOTOGRAPHS TA	KEN:	•		01 0	
# <u>P4040618</u> - Up		# <u> </u>		and the second s	pact Area
# Cu	llvert Inflow	#	Culvert O	utflow	
FULLY FUNCTIONA	L:	YES	☐ NO		
Considered fully fund		-			
1. Unaltered in any si	_	-			
2. Is stable and does					
3. Is connected to its	-		normal hydrologic	al functions	
4. Has a riparian buff					
				erwise fully functional and do	
moderately functiona	_	ive and below,	then the alteration	should be considered separa	ate and
MODEDATELY FUN	CTIONAL.	X YES	□ vo		
MODERATELY FUN		_	∐ NO		
Considered moderate		_		probability of occurring natu	بالمس
				inctions characteristic of fully	
of similar order in the		Title nyaraanc	and geomorphic in	anctions characteristic of fully	ranctioning streams
FUNCTIONALLY IMI		YES YES	□ NO		
Considered functiona				following:	
L. Has been channeliz			•	•	
2. Is levee protected,	•	•	cted		
3. Entrenched or cont					
I. Has little or no ripa					
. Has banks that are					- 4 + 19 + 1 - 41
o. Has 4 or greater str or cumulatively excee			ream of proposed	stream impact, and stream in	mpacts individually
r camaladively excee	d 100 ft iii lengtii				
SENERAL WATERSH	IED AND/OR RIF	PARIAN AREA	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	
			INDO21KIAL	☐ UIGU BEOLLS	

DATE: 4/4/2017	- 41					
REVIEWER(S): WJaholler	Jr.; Nic	le l'aounc	ie			
STREAM CHANNEL PROPERTIE Average bank-to-bank width (f Average bank height (feet): Bottom width (feet): Ordinary High Water Mark (OH	S WITH (eet): 3; a	5; at at centerl width (fe	centerline (ine (feet): _ et):	feet): <u>5</u> 1.5 Water o		_
FLOW CHARACTERISTICS: Water present: NO WATER If flow present, estimate stage Average depth of water (feet):	at time o	of survey:		BED MOIST	STANDING WATER	☑ FLOWING WATER
BANK EROSION: EXTENSIVE Explain (sloughing banks, exposed root of the state of the	MOD wads, under	DERATE cut banks, et	□ LITTLE/NO. c.): <u>Somt</u> e:	ne s ections p	deeply incised	-
OBSERVED PRESENCE OF SUBS WATER QUALITY CHARACTERIS Obvious siltation: Observable water quality (siltation) Substrate Identify specific pollutants, if kr	STICS: YES n, water cold	□NO		, scum, water	odor; etc.): Much sid	<u> </u>
AQUATIC PLANTS: PERIPHYTO		or yellowish	algae on rocks	or substrate)	☐ FILAMENTOUS ALG	AE MACROPHYTES
WETLAND FRINGE: Describe:	YES	☐ ABUT	TING or 🗌 AI	DJACENT	₩ NO	
BIOLOGICAL CHARACTERISTICS Macroinvertebrates observed? Fish or wildlife observed? Habitat for:		⊠ no	Describe: Describe:	Crawfis	k busous	
Fish/spawn areas?	YES	⊠ NO				
s this stream jurisdictional?	X YES	□ NO	Describe:			
OTHER OBSERVATIONS AND CO	MMENT	rs:				

DATE: 4/4/2017 REVIEWER(S): W.John Wester, Jr.; Nick Parom GAI STREAM ID: SIL-WJW-008	cic WEATHER CONDITIONS: Party cloudy, 60F
STREAM TYPE: PERENNIAL INTERMIT Stream crossed by centerline: YES Stream crossed by access road: YES	TTENT EPHEMERAL NO NO
# <u>P404 0033</u> - Upstream 5 # <u>P404 003</u> # Culvert Inflow #	# <u>P404 0032</u> - Impact Area Culvert Outflow
- , , ,	tivities on, or excessive aggradation
	□ NO re met: overy has a moderate probability of occurring naturally ic and geomorphic functions characteristic of fully functioning streams
FUNCTIONALLY IMPAIRED: YES Considered functionally impaired if the stream has note in the stream has note. Has been channelized and shows no evidence of some in the stream has note. It is levee protected, impounded, or artificially constant in the stream of the stream impacts within 0.5 mile upon cumulatively exceed 100 ft in length	elf-recovery tricted etation on 1 or both sides of channel
GENERAL WATERSHED AND/OR RIPARIAN ARE RIGHT BANK: FORESTED WETLAND SCRUB/SHRUB HAYFIELD PRAIRIE	LEFT BANK: FORESTED WETLAND SCRUB/SHRUB
☐ HAYFIELD ☐ FRANCE ☐ INDUSTRIAL ☐ HIGH BLUFFS ☐ RESIDENTIAL	☐ HAYFIELD ☐ PRAIRIE ☐ INDUSTRIAL ☐ HIGH BLUFFS ☐ RESIDENTIAL

DATE: 4/4/2017 REVIEWER(S): W.T. Widte T GAI STREAM ID: SIL-WW-		Provide				
Average bank-to-bank width (f Average bank height (feet): Bottom width (feet): Ordinary High Water Mark (OH	eet): Y; ; Water	at centerli width (fe	centerline (ine (feet): _ et):	feet): <u>Y</u> Water	8	٢
FLOW CHARACTERISTICS: Water present: NO WATER If flow present, estimate stage Average depth of water (feet):	at time o	of survey:	_	BED MOIST	STANDING WATER	R 🕅 FLOWING WATE
BANK EROSION: EXTENSIVE Explain (sloughing banks, exposed root v	MOE wads, under	DERATE cut banks, et	∏ ШПLE/NO c.): Shae :		meised	
OBSERVED PRESENCE OF GROU	JNDWAT	TER SEEPS	S: YES	⊠ NO	*	
OBSERVED PRESENCE OF SUBS	URFACE	FLOW:	YES	М		
WATER QUALITY CHARACTERIS Obvious siltation: Observable water quality (siltation) Extractly Silt Identify specific pollutants, if kr	YES n, water col	NO NO or is clear, dis	scolored, olly film	, scum, water	odor; etc.)‡ Substa	te is
AQUATIC PLANTS: PERIPHYTO	N (brown	or yellowish	algae on rocks	or substrate) FILAMENTOUS AL	GAE MACROPHYTES
WETLAND FRINGE: Describe:	YES	ABUT	∏ING or □ A	DJACENT	М мо	
BIOLOGICAL CHARACTERISTICS						
Macroinvertebrates observed?		ОИ 💢	Describe:			
Fish or wildlife observed? Habitat for:	YES	□ NO	Describe:	CKANT	ich buccous	
Fish/spawn areas?	YES	D NO	-			-
URISDICTIONAL STATUS:						
s this stream jurisdictional?	X YES	☐ NO	Describe:			
OTHER OBSERVATIONS AND CO	ММЕМ	rs:				

DATE: 4/4/2617 REVIEWER(S): W. T. W. W. J.	Nick Parme	C WEATHER CO	ONDITIONS: Pad	ty cloudy 60 F
GAISTREAMID. SEE WANTE	701			
STREAM TYPE: PERENNIAL	X INTERMIT	TENT EPHE	MERAL	
Stream crossed by centerline:	YES	⊠ NO		
Stream crossed by access road:	YES	™ NO		
PHOTOGRAPHS TAKEN:	۸.		_	
# <u>P4040038</u> - Upstream \$\\	#P484003	Y - Downstream	N #	Impact Area
# Culvert Inflow	#	Culvert C	outflow	
FULLY FUNCTIONAL:	YES	□ NO		
Considered fully functional if the follo	wing criteria ar	e met:		
1. Unaltered in any significant manne				
2. Is stable and does not exhibit head	cutting, incision	i, or excessive aggr	adation	
3. Is connected to its overbank flood	plain supporting	g normal hydrologi	cal functions	
4. Has a riparian buffer of at least 25 f	ft in width			
5. If stream segment is impacted by a				
significantly alter stream segments ab	ove and below,	, then the alteratio	n should be consider	ed separate and
moderately functional				
MODERATELY FUNCTIONAL:	X YES	☐ NO		
Considered moderately functional if t				
1. Streams have been altered; however				
2. Streams support many, but not all,	of the hydraulic	and geomorphic f	unctions characterist	tic of fully functioning streams
of similar order in the watershed				
FUNCTIONALLY IMPAIRED:	YES	∐NO		
Considered functionally impaired if the			e following:	
I. Has been channelized and shows no		•		
2. Is levee protected, impounded, or a	•	ictea		
B. Entrenched or contains active head				
I. Has little or no riparian buffer of de				
6. Has banks that are extensively erod				-
 Has 4 or greater stream impacts with transfer cumulatively exceed 100 ft in length 		stream of proposed	a stream impact, and	stream impacts individually
turnolatively exceed 100 it in length	•			
GENERAL WATERSHED AND/OR RI	DADIAN ADEA	CHADACTERIST	ICS WITHIN 100ET	DUEECD
RIGHT BANK:	PARIAN AREA	LEFT BANK:	C2 MILLIN TOOL!	BUFFER
FORESTED WETLAND		FORESTED	WETLAND	
FARMLAND SCRUB/SHRUB		FARMLAND	SCRUB/SHRUB	
HAYFIELD PRAIRIE		HAYFIELD	PRAIRIE	
INDUSTRIAL HIGH BLUFFS		INDUSTRIAL	<u>=</u>	
RESIDENTIAL HIGH BLOFFS		RESIDENTIAL	HIGH BLUFFS	
		T WESTOCIALITY		

DATE: 4/4/3617 REVIEWER(S): W.T.An Weather GAI STREAM ID: 5TL-WW		de Parisses	è.
Average bank-to-bank width (Average bank height (feet):	feet): / .5 : Water	at centerl width (fe	ine (feet): et): _0,5 Water depth (feet): _0,1
FLOW CHARACTERISTICS: Water present: No water If flow present, estimate stage Average depth of water (feet):	at time o		☐ STREAMBED MOIST ☐ STANDING WATER ☑ HIGH ☐ MEDIUM ☐ LOW
BANK EROSION: EXTENSIVE Explain (sloughing banks, exposed root			□ LITTLE/NONE C.): Some sections proceed.
OBSERVED PRESENCE OF GRO	UNDWAT	TER SEEPS	S: YES X NO
OBSERVED PRESENCE OF SUBS	URFACE	FLOW:	☐ YES 🗷 NO
WATER QUALITY CHARACTER!! Obvious siltation: Observable water quality (siltatio ろいないない。	X YES	NO No or is clear, dis	scolored, oily film, scum, water odor; etc.):
Identify specific pollutants, if kr	nown: _		
AQUATIC PLANTS: PERIPHYTO	N (brown o	or yellowish	algae on rocks or substrate)
WETLAND FRINGE: Describe:	YES	ABUT	TING of ADJACENT X NO
BIOLOGICAL CHARACTERISTICS	_	[5 7]	
Macroinvertebrates observed? Fish or wildlife observed? Habitat for:	YES YES	⊠ νο	Describe: Crawfish buccaus
ish/spawn areas?	YES	Д ио	
URISDICTIONAL STATUS: s this stream jurisdictional?	Z YES	□ NO	Describe:
OTHER OBSERVATIONS AND CO	MMENT	'S:	- + +

DATE: 6/5/2617 REVIEWER(S): WTW, TIP GAI STREAM ID: STL-WTW-61	WEATHER CONDITIONS: SUMM 75	
Stream crossed by centerline:		
# Upstream \(\psi \) ##	- Downstream SSE # Impact Area	3
- ,	riterla are met: Iman activities Inclsion, or excessive aggradation Inpporting normal hydrological functions	
	+ 10 C 1/110/ Vicunium	•
FUNCTIONALLY IMPAIRED: YE Considered functionally impaired if the strear 1. Has been channelized and shows no evider 2. Is levee protected, impounded, or artificial 3. Entrenched or contains active headcuts 4. Has little or no riparian buffer of deep-root	m has more than one of the following: nce of self-recovery ly constricted	
5. Has banks that are extensively eroded or u	-	lividualiy
RIGHT BANK: FORESTED WETLAND FARMLAND SCRUB/SHRUB HAYFIELD PRAIRIE	N AREA CHARACTERISTICS WITHIN 100FT BUFFER LEFT BANK: FORESTED WETLAND FARMLAND SCRUB/SHRUB HAYFIELD PRAIRIE	,
☐ INDUSTRIAL ☐ HIGH BLUFFS ☐ RESIDENTIAL	☐ INDUSTRIAL ☐ HIGH BLUFFS ☐ RESIDENTIAL ROAD	

Identify specific pollutants, if AQUATIC PLANTS: PERIPHY WETLAND FRINGE: Describe: BIOLOGICAL CHARACTERISTIC Macroinvertebrates observed? Habitat for: Fish/spawn areas? URISDICTIONAL STATUS: Is this stream jurisdictional?	Known: TON (brown o	or yellowish	Describe:	or substrate) { DIACENT DIAL		AE MACROPHYTES
Identify specific pollutants, if AQUATIC PLANTS: PERIPHY WETLAND FRINGE: Describe: BIOLOGICAL CHARACTERISTIC Macroinvertebrates observed Fish or wildlife observed? Habitat for:	Known: TON (brown of YES) CS: YES YES	or yellowish ABUT NO NO	n algae on rocks TTING or A	or substrate) {	☐ FILAMENTOUS ALG	
Identify specific pollutants, if AQUATIC PLANTS: PERIPHY WETLAND FRINGE: Describe: BIOLOGICAL CHARACTERISTIC Macroinvertebrates observed Fish or wildlife observed?	Known: TON (brown of YES) CS: YES YES	or yellowish	n algae on rocks TTING or A	or substrate) {	☐ FILAMENTOUS ALG	
Identify specific pollutants, if AQUATIC PLANTS: PERIPHY WETLAND FRINGE: Describe: BIOLOGICAL CHARACTERISTIC Macroinvertebrates observed	Known: TON (brown of YES CS: YES	or yellowish	n algae on rocks TTING or A	or substrate) {	☐ FILAMENTOUS ALG	
Identify specific pollutants, if AQUATIC PLANTS: PERIPHY WETLAND FRINGE: Describe: BIOLOGICAL CHARACTERISTIC	Known: TON (brown o	or yellowish	n algae on rocks	or substrate) {	☐ FILAMENTOUS ALG	
Identify specific pollutants, if AQUATIC PLANTS: PERIPHY WETLAND FRINGE:	known:	or yellowish	algae on rocks	or substrate) {	FILAMENTOUS ALG	
Identify specific pollutants, if	known: _					
Water			scolored, ally film			
Water			iscolored, ally film			
Obvious siltation:	YES	NO 🔀		ı. scum. water odu	or; etc.): Tu-bid	boun
OBSERVED PRESENCE OF SUI		FLOW:	YES	⊠ NO		
OBSERVED PRESENCE OF GR	OUNDWAT	TER SEEP:	S: YES	MO MO		,
+,	-					
Explain (sloughing banks, exposed ro						
BANK EROSION: EXTENSI	IVE MO	DERATE	ITTLE / NO	NE		
Average depth of water (feet	t):	_		+	- ,	
if flow present, estimate stag						TO LEGATING WATER
FLOW CHARACTERISTICS: Water present: No wa	TER, STREAME	BED DRY	CTREAM	BED MOIST [STANDING WATER	FLOWING WATER
ELOW CHADACTERISTICS	**					
Ordinary High Water Mark (OHWM), if	observed	i (feet):	y water de	pui (ieet): 1	
Average bank height (feet): Bottom width (feet): 1,30	D Water	at center	line (feet): _	Water de	nth (feet): 7	1
Average bank-to-bank width	(feet): L	201 a	t centerline	(feet): 4,500	3	
Acceptable to the second second						
STREAM CHANNEL PROPER		RESDECT			4	
STREAM CHANNEL PROPER		DESDECT				
		BESDECT				
GAI STREAM ID:STREAM CHANNEL PROPER	TIES WITH	PESPECT				

DATE: 6/5/2017	±	
REVIEWER(S): WIW TIP	WEATHER CONDITIONS: Sunny 75	
GAI STREAM ID: SIL-WIW-011	J	
STREAM TYPE: PERENNIAL INTERN	MITTENT EPHEMERAL	
Stream crossed by centerline: 🔀 YES	□NO	
Stream crossed by access road: YES	⊠ NO	
*	· —	
PHOTOGRAPHS TAKEN:		
# Upstream 🗸 🗸 =	フ Downstream らう # Impact Area	
# Culvert Inflow #	- Culvert Outflow	
FULLY FUNCTIONAL: X YES	□ NO	
Considered fully functional if the following criteria	a are met:	4
1. Unaltered in any significant manner by human a	activities	
2. is stable and does not exhibit headcutting, incis	sion, or excessive aggradation	
3. Is connected to its overbank flood plain support	rting normal hydrological functions	
4. Has a riparian buffer of at least 25 ft in width	•	
- , , , ,	tural alteration but otherwise fully functional and does not	
	low, then the alteration should be considered separate and	
moderately functional		
_	·	
MODERATELY FUNCTIONAL: YES	NO	
Considered moderately functional if the following		
· · · · · · · · · · · · · · · · · · ·	ecovery has a moderate probability of occurring naturally	
	aulic and geomorphic functions characteristic of fully functioning stream	ms
of similar order in the watershed		
	—	
FUNCTIONALLY IMPAIRED: YES	∐ NO	
Considered functionally impaired if the stream has		
1. Has been channelized and shows no evidence of		
2. Is levee protected, impounded, or artificially cor	nstricted	
3. Entrenched or contains active headcuts	acceptation and any brath address of absorbal	-
4. Has little or no riparlan buffer of deep-rooted ve		
5. Has banks that are extensively eroded or unstab	ole, bank sloughing, erosional scars upstream of proposed stream impact, and stream impacts individually	
or cumulatively exceed 100 ft in length	upstream of proposed stream impact, and stream impacts individually	/
or compliancely exceed 100 it in length		
GENERAL WATERSHED AND OR RIDADIAN AR	DEA CHADACTERISTICS WITHIN 100ET BLIEFER	
RIGHT BANK:	REA CHARACTERISTICS WITHIN 100FT BUFFER LEFT BANK:	
FORESTED WETLAND	FORESTED WETLAND	
☐ FARMLAND ☐ SCRUB/SHRUB ☐ HAYFIFI D ☐ PRAIRIE	FARMLAND SCRUB/SHRUB	
	HAYFIELD PRAIRIE	
☐ INDUSTRIAL ☐ HIGH BLUFFS ☐ RESIDENTIAL	INDUSTRIAL HIGH BLUFFS	
□ VESINEINITYE	RESIDENTIAL	

DATE: 6/5/2017							
REVIEWER(S): WTW TI							
GAI STREAM ID: SIL-WI	W-011				*		
STREAM CHANNEL PROPERTION Average bank-to-bank width (Average bank height (feet): Bottom width (feet):	feet): -3;	at center	t centerline line (feet): _	(feet):	8	.1-0.8	
Ordinary High Water Mark (O	۱WM), if	observed	i (feet):	2]*. +		
FLOW CHARACTERISTICS: Water present: No water If flow present, estimate stage Average depth of water (feet):	at time	of survey:		MBED MOIST	STANDING W.	_	FLOWING WATER
BANK EROSION: EXTENSIVE Explain (sloughing banks, exposed root			LITTLE/NO		ks	, "	
					-		
OBSERVED PRESENCE OF GRO	UNDWA	TER SEEPS	S: TYES	ON 🔀			
OBSERVED PRESENCE OF SUBS	URFACE	FLOW:	☐ YES	_ ∭NO			
WATER QUALITY CHARACTERIS	STICS:						
Obvious siltation:	X YES	☐ NO			ci.		
Observable water quality (siltation	n, water col	or is clear, di	scolored, olly film	n, scum, water	odor; etc.):	ir, Sill	
Identify specific pollutants, if kr	nown: _						
AQUATIC PLANTS: PERIPHYTO	N (brown i	or yellowish	algae on rocks	or substrate)	FILAMENTOU:	S ALGAE	MACROPHYTES
WETLAND FRINGE: Describe:	YES	TUBA 🗌	TTING or A	DJACENT	⊠ NO		+
BIOLOGICAL CHARACTERISTICS	:						
MacroInvertebrates observed?		□ NO	Describe:	Flation	n=, Tsapodo	Hooky	ooda
Fish or wildlife observed?	YES	⊠ ио	Describe:			, , ,	
Habitat for: Fish/spawn areas?	✓ YES						
isin spawn areast	KI YES	☐ NO					
URISDICTIONAL STATUS:	4						
s this stream jurisdictional?	X YES	☐ NO	Describe:	-			+-
OTHER OBSERVATIONS AND CO	MMENT	'S:	-				
						-	+

DATE: 6/5/2017		- 4-	
REVIEWER(S): WTW, JTP	WEATHER CONDITION	is: Sunny 75	,
GAISTREAM ID: STL-WTW-017		3	
STREAM TYPE: PERENNIAL INTERMIT	TENT Z EPHEMERAL		
Stream crossed by centerline:	NO	-	
Stream crossed by access road:	✓ NO		
and the second second			
PHOTOGRAPHS TAKEN:	- Downstream 5W #	I annual Augus	
# O - Upstream = N = # 9 # - Culvert Inflow #	Downstream - F	- Impact Area	
- Culvert lillow #	Culvert Outflow		
FULLY FUNCTIONAL: X YES	Пио		
Considered fully functional if the following criteria a			
1. Unaltered in any significant manner by human act			
2. is stable and does not exhibit headcutting, incision	n, or excessive aggradation		
3. Is connected to its overbank flood plain supportin	g normal hydrological functio	ns	
4. Has a riparian buffer of at least 25 ft in width			
5. If stream segment is impacted by a minor structur		•	
significantly alter stream segments above and below	, then the alteration should b	e considered separate and	
moderately functional .		7	
MODERATELY FUNCTIONAL: YES	Пио		
MODERATELY FUNCTIONAL: YES Considered moderately functional if the following are	—		
Streams have been altered; however, system record		ity of occurring naturally	
2. Streams support many, but not all, of the hydraulie			
of similar order in the watershed	-	,	
FUNCTIONALLY IMPAIRED: YES	□ NO		
Considered functionally impaired if the stream has m	ore than one of the following	:	
 Has been channelized and shows no evidence of se 			
2. Is levee protected, impounded, or artificially consti	ricted		
3. Entrenched or contains active headcuts	*		
4. Has little or no riparian buffer of deep-rooted vege			
5. Has banks that are extensively eroded or unstable,			
Has 4 or greater stream Impacts within 0.5 mile up or cumulatively exceed 100 ft in length	stream of proposed stream in	npact, and stream impacts individually	
or community exceed too remining in			
GENERAL WATERSHED AND/OR RIPARIAN AREA	CHARACTERISTICS WITH	N 100FT BUFFFR	
RIGHT BANK:	LEFT BANK:	14 20011 2011 21	
☑ FORESTED ☐ WETLAND	FORESTED WETL	AND .	
FARMLAND SCRUB/SHRUB		B/SHRUB	
☐ HAYFIELD ☐ PRAIRIE	HAYFIELD PRAIF		
INDUSTRIAL HIGH BLUFFS		BLUFFS	
RESIDENTIAL	RESIDENTIAL		

DATE: 6/5/2017						
REVIEWER(S): WTW J. GAI STREAM ID: STL-W		2			*	
STREAM CHANNEL PROPERTI Average bank-to-bank width (Average bank height (feet): Bottom width (feet): Ordinary High Water Mark (Of FLOW CHARACTERISTICS: Water present: NO WATE	ES WITH feet): Q; Water HWM), if	RESPECT 5 a at center width (fe observed	t centerline line (feet): eet): O d (feet): No	(feet): Water	depth (feet):	— ☐ FLOWING WATE
If flow present, estimate stage Average depth of water (feet):		of survey	: <u> </u>	SH 🗍	MEDIUM 🔀 LOW	+
		_	2	+		
BANK EROSION: EXTENSIVE Explain (sloughing banks, exposed root			LITTLE/Ni tc.): Slove		d underent bank:	<u> </u>
OBSERVED PRESENCE OF GRO	UNDWA	TER SEEP	S: YES	ON 🔀		
OBSERVED PRESENCE OF SUBS	SURFACE	FLOW:	YES	.⊠ NO		÷ +
WATER QUALITY CHARACTERI	STICS:	F				
Obvious siltation:	YES	NO 🔀	,		۸,	Ä
Observable water quality (siltation	on, water col	or is clear, di	scolored, ally film	m, scum, wate	rodor; etc.): //a w/	aec
identify specific pollutants, if k	nown: _				77.00	
					_	_
AQUATIC PLANTS: PERIPHYTO	ON (brown	or yellowish	algae on rocks	s or substrate)	AE MACROPHYTES
WETLAND FRINGE: Describe:	YES	□ АВИ	∏ING or ∏ A	ADJACENT	.⊠ no	
BIOLOGICAL CHARACTERISTICS					+.	
Macroinvertebrates observed?	_	₽ NO	Describe:			
Fish or wildlife observed?	YES	⊠ NO	Describe:			
labitat for:					i	
ish/spawn areas?	YES	NO K				
URISDICTIONAL STATUS: s this stream jurisdictional?	YES	□ NO	Describe:	Maube	non-RPW	
				J	700	•
THER OBSERVATIONS AND CO	MMENT	'S:	+			
			v .			
					+	

DATE: 6/5/2017		
REVIEWER(S): WTW, JTP	WEATHER CONDITIONS:	Sundy 75
GAI STREAM ID: STL-WJW-013		J
STREAM TYPE: PERENNIAL INTERI	MITTENT X EPHEMERAL	
Stream crossed by centerline: YES	□ NO	2
Stream crossed by access road:	_ No	,
	. –	*
PHOTOGRAPHS TAKEN:	1/	
# Upstream \(\frac{150}{50} \) #	16 - Downstream N #	Impact Area
# Culvert Inflow #	- Culvert Outflow	
FULLY FUNCTIONAL: X 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, incis	ion, or excessive aggradation	F
3. is connected to its overbank flood plain suppor	ting normal hydrological functions	
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 belo	ow, then the alteration should be co	onsidered separate and
moderately functional		
MODERATELY FUNCTIONAL: YES	∐ NO	
Considered moderately functional if the following		e un to menso D
1. Streams have been altered; however, system re		
Streams support many, but not all, of the hydra of similar order in the watershed	ulic and geomorphic functions chara	acteristic of fully functioning streams
or string order in the watershed		
FUNCTIONALLY IMPAIRED: YES	Пио	
Considered functionally impaired if the stream has		
 Has been channelized and shows no evidence of 		
2. Is levee protected, impounded, or artificially con		
3. Entrenched or contains active headcuts	at rocco	
4. Has little or no riparian buffer of deep-rooted ve	getation on 1 or both sides of change	nel ·
5. Has banks that are extensively eroded or unstab	-	
5. Has 4 or greater stream impacts within 0.5 mile	4	ct. and stream impacts individually
or cumulatively exceed 100 ft in length		
GENERAL WATERSHED AND/OR RIPARIAN AR	EA CHARACTERISTICS WITHIN 1	OOFT BUFFER
RIGHT BANK:	LEFT BANK:	,
☑ FORESTED ☐ WETLAND	FORESTED WETLAND	
☐ FARMLAND ☐ SCRUB/SHRUB	☐ FARMLAND ☐ SCRUB/SH	7
☐ HAYFIELD ☐ PRAIRIE	HAYFIELD PRAIRIE	
INDUSTRIAL HIGH BLUFFS	☐ INDUSTRIAL ☐ HIGH BLU	FFS -
RESIDENTIAL	RESIDENTIAL	

WETLAND FRINGE: Describe:	YES YES YES	2 NO 2 NO 2 NO 2 NO	Describe:	aybe, Non-Rf		+
Describe:	YES	М Мо	Describe:			
Describe:	YES	М Мо	Describe:			
Describe:	: YES	(X) NO	Describe:			
Describe:	: :		Describe:			
			LING OF TADACE		*	
	☐ YES	☐ ARLI	TING OF ADJACE	ON 🔀 TM		
AQUATIC PLANTS: PERIPHYTO	ON (brown o	or yellowish	algae on rocks or sul	ostrate) 🔲 FILAMENT	OUS ALGAE	■ MACROPHYTES
Identify specific pollutants, if k	nown: _					
WATER QUALITY CHARACTERS Obvious siltation: Observable water quality (siltation)	YES	NO is clear, di	scolored, oily film, scum	, water odor; etc.):	o water	
OBSERVED PRESENCE OF SUBS	SURFACE	FLOW:	☐ YES 🔀 N	10		
OBSERVED PRESENCE OF GRO	UNDWAT	TER SEEPS	S: YES 🛣 N	10		
				+		
BANK EROSION: EXTENSIVE	wads, under	Cut banks, et	LITTLE/NONE tc.): <u>Sloughing</u>	and underest	banks	
•		-	+			
If flow present, estimate stage Average depth of water (feet):		of survey:	: HIGH	☐ MEDIUM 🄀	rom	
Water present: 🗵 NO WATE	R, STREAME	BED DRY	STREAMBED N	NOIST STANDING	WATER	FLOWING WATE
FLOW CHARACTERISTICS:						
Bottom width (feet): 2 Ordinary High Water Mark (O				Vater depth (feet):		4
Average bank height (feet): _	: نــــــــــــــــــــــــــــــــــــ	at center	line (feet):	<u> </u>		
Average bank-to-bank width (_		•		
STREAM CHANNEL PROPERTA						
GAI STREAM ID: STL-WESTREAM CHANNEL PROPERTIE	W-613	3	. *	++		
STREAM CHANNEL PROPERTA	W-613	<u></u>		*		

DATE: 6/6/2017		545		
REVIEWER(S): WITH JJP	WEATHER CO	nditions: <u>Sעמ</u> יט	N 80F	
GAI STREAM ID: STL-WIW-014	+ +	+	J	
STREAM TYPE: PERENNIAL INTERMI	TTENT 🔀 EPHEM	1ERAL		
Stream crossed by centerline:	□ NO		2	
Stream crossed by access road: YES	□ NO		4	
	_		4	
PHOTOGRAPHS TAKEN:	+	- 1	4	
#	Downstream ^{\$}	st.) #	- Impact Area	1
# Culvert Inflow #	- Culvert Ou	utflow		
FULLY FUNCTIONAL: X YES	☐ NO		4	
Considered fully functional if the following criteria	are met:		•	
1. Unaltered in any significant manner by human ac				
2. Is stable and does not exhibit headcutting, incision	n, or excessive aggra-	dation		
3. Is connected to its overbank flood plain supporting				
4. Has a riparian buffer of at least 25 ft in width			41	
5. If stream segment is impacted by a minor structu	ral alteration but othe	erwise fully function	al and does not	
significantly alter stream segments above and below	v, then the alteration	should be considere	d separate and	
moderately functional				
MODERATELY FUNCTIONAL: YES	NO			
Considered moderately functional if the following ar	e met:			
1. Streams have been altered; however, system reco	very has a moderate	probability of occur	ring naturally	
2. Streams support many, but not all, of the hydraul	lc and geomorphic fu	nctions characteristic	c of fully functionin	ig streams
of similar order in the watershed	7		-	
		+	*	
FUNCTIONALLY IMPAIRED: YES	☐ NO			
Considered functionally impaired if the stream has n	ore than one of the f	following:		
1. Has been channelized and shows no evidence of s	elf-recovery			
Is levee protected, impounded, or artificially const	ricted			
3. Entrenched or contains active headcuts	4			*
4. Has little or no riparian buffer of deep-rooted vege				- 1
5. Has banks that are extensively eroded or unstable				
6. Has 4 or greater stream impacts within 0.5 mile up	stream of proposed s	stream Impact, and s	tream impacts indi	vidually
or cumulatively exceed 100 ft in length				
	4			
GENERAL WATERSHED AND/OR RIPARIAN AREA	A CHARACTERISTIC	S WITHIN 100FT B	UFFER	
RIGHT BANK:	LEFT BANK:			
☑ FORESTED ☐ WETLAND	FORESTED	WETLAND .		
FARMLAND SCRUB/SHRUB	FARMLAND	SCRUB/SHRUB		15
HAYFIELD PRAIRIE	HAYFIELD	PRAIRIE		
INDUSTRIAL HIGH BLUFFS	☐ INDUSTRIAL	HIGH BLUFFS		. +
RESIDENTIAL	RESIDENTIAL	•		

DATE: 6/6/2017							
REVIEWER(S): WTW, JT	P						
GAI STREAM ID: SIL-WIL					16		
STREAM CHANNEL PROPERTI	EC WITH	DECDECT	TO TOD OF	DANK (ECT	INAATE\.		
Average bank-to-bank width (-	•		
Average bank height (feet):						2	
Bottom width (feet): 3					depth (feet): 0		
Ordinary High Water Mark (OI	-	-					
		+					
FLOW CHARACTERISTICS:			_		_	_	
Water present: NO WATE				ABED MOIST	STANDING WATER	FLOWING	WATE
If flow present, estimate stage	_	of survey	: Hig	iH 🔲 i	WEDIUM 🔀 LOW		
Average depth of water (feet):		_				*	
PANK EBOSIONA	- 171 400	DEDATE		DATE			
BANK EROSION: EXTENSIVE	: [X] MOI	DERATE	LITTLE / NO	JNE	ale made at la	est c	
Explain (sloughing banks, exposed root	wads, under	rcut banks, e	ec.,	gring Do	MKS, OMMERCE E	anks	
* *	-				-		
OBSERVED PRESENCE OF GRO	UNDWA	TER SEEP	S: TYES	₽ NO			-
			_				
OBSERVED PRESENCE OF SUBS	SURFACE	FLOW:	YES	⊠ NO		•	
-145						9	
WATER QUALITY CHARACTERI	STICS:	1					
Obvious siltation:	YES	⊠ NO	•		A	,	
Observable water quality (siltation	n, water col	lor is clear, di	iscolored, olly film	n, scum, water	odor; etc.): No WA	ter .	
							_
Identify specific pollutants, if k	nown: _						_
AQUATIC PLANTS: PERIPHYTO	ON /hrown	or vellowish	algae on rocks	or cubetrate)	T ETI AMENTOUS ALC	EAE MACRODE	IVTEC
neorman Britis: [] I Bullini	JIV (DIOWIII	or yellowish	algue on tocks	or substrate,		WE [] WACKOT!	11123
WETLAND FRINGE:	YES	☐ ABU	TTING or A	DJACENT	⊠ NO		
Describe:							
BIOLOGICAL CHARACTERISTICS	i:	8.			4		
MacroInvertebrates observed?	YES	⊠ NO	Describe:				_
Fish or wildlife observed?	YES	NO 🔀	Describe:				_
Habitat for:							_
ish/spawn areas?	YES	⊠ NO					
URISDICTIONAL STATUS:							4
s this stream jurisdictional?	YES	☐ NO	Describe:	Mach	Mar-RPW		
s this stream juristictionan			Describe.	VIIIVE	e, Non-RPW	76	_
					-		-
THER OBSERVATIONS AND CO	MMENT	'S:				***************************************	
					4	4	

	140	a	
WEATHER CO	NDITIONS: SUM	., 801	
	4	Ĵ	
TENT 🔀 EPHEN	1ERAL		
⋈ NO		#	
3.6			
		4	100
+	(-4	
Downstream S	> #	Impact Area	
- Culvert Oเ	utflow		
☐ NO			
re met:			*
tivitles			
ı, or excessive aggra	dation		
g normal hydrologica	al functions		
		•	
•	•		
, then the alteration	should be considered	separate and	
□ NO			
e met:			
and geomorphic fu	nctions characteristic	of fully functioning	g streams
2 <u></u>	4	+	
□ NO			
	following:		
·lcted			
			40
			7
stream of proposed s	stream impact, and sti	ream impacts indi	vidually
	S WITHIN 100FT BU	FFER	
		+	
<u>=</u>	WETLAND .		
FARMLAND	SCRUB/SHRUB		
HAYFIELD	PRAIRIE		
INDUSTRIAL	HIGH BLUFFS		
Control of the second of the second			
	Downstream - Culvert Oc - Downstream - Culvert Oc NO re met: No re met: No al alteration but other then the alteration NO re met: Very has a moderate cand geomorphic fu NO re than one of the relation Action on 1 or both so bank sloughing, ero stream of proposed : CHARACTERISTIC LEFT BANK: FORESTED FARMLAND	TENT	NO Downstream

DATE: 6/7/2017	_				
REVIEWER(S): WIW, III GAI STREAM ID: STL - WI		_		*	
STREAM CHANNEL PROPERTIE Average bank-to-bank width (Average bank height (feet): Bottom width (feet): Ordinary High Water Mark (Of	feet): ; Water	3; a at center wldth (fe	at centerline (feet): rline (feet): Water deet): Water de	· ·	
FLOW CHARACTERISTICS: Water present: NO WATER If flow present, estimate stage			STREAMBED MOIST	STANDING WATER	FLOWING WATE
Average depth of water (feet):	_0_	_			*
BANK EROSION: EXTENSIVE Explain (sloughing banks, exposed root	MOI wads, under	DERATE rcut banks, e	LITTLE/NONE Stoodsing bank	s and undercut 1	banks
OBSERVED PRESENCE OF GRO	UNDWA ⁻	TER SEEP	S: YES MO		+
OBSERVED PRESENCE OF SUBS	URFACE	FLOW:	☐ YES 💆 NO		+
WATER QUALITY CHARACTERIS Obvious siltation: Observable water quality (siltation)	YES Yes	⊠ NO or is clear, d	iscolored, oily film, scum, water or	dor; etc.): No water	
Identify specific pollutants, if ki		or yellowish	n algae on rocks or substrate)	☐ FILAMENTOUS ALGAI	MACROPHYTES
WETLAND FRINGE: Describe:	YES	ABU	TTING or ADJACENT	⊠ NO	
BIOLOGICAL CHARACTERISTICS				**.	
Macroinvertebrates observed?	_	₩ ио	Describe:		
Fish or wildlife observed? Habitat for:	YES	⊠ NO	Describe:		
Fish/spawn areas?	YES	ОИ 💢			
URISDICTIONAL STATUS: s this stream jurisdictional?	☐ YES	□ NO	Describe: Maybe,	Non-RPW	•
OTHER OBSERVATIONS AND CO	MMENT	'S:			
			-	+	

	CONDITIONS: Sunny 85F	
GAI STREAM ID: SIL-WIW-DI6		
STREAM TYPE: PERENNIAL INTERMITTENT EPH	HEMERAL	
Stream crossed by centerline:	9	
Stream crossed by access road: YES X NO		
PHOTOGRAPHS TAKEN:	6	
# Upstream # Downstrear	m E # Impact Area	
# Culvert Inflow # Culvert	Outflow	
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 age	gradation	
3. Is connected to its overbank flood plain supporting normal hydrological supporting normal		
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	otherwise fully functional and does not	
significantly alter stream segments above and below, then the alterati	on should be considered separate and	
moderately functional		
110		
MODERATELY FUNCTIONAL: YES NO		
Considered moderately functional if the following are met:		
1. Streams have been altered; however, system recovery has a modera	- · · · · · · · · · · · · · · · · · · ·	
2. Streams support many, but not all, of the hydraulic and geomorphic of similar order in the watershed	: functions characteristic of fully functioning streams	
FUNCTIONALLY IMPAIRED: YES NO		
Considered functionally impaired if the stream has more than one of ti	he 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 bot	th sides of channel	
Has banks that are extensively eroded or unstable, bank sloughing, e	erosional scars	
6. Has 4 or greater stream impacts within 0.5 mile upstream of propose	ed stream impact, and stream impacts individually	
or cumulatively exceed 100 ft in length		
GENERAL WATERSHED AND/OR RIPARIAN AREA CHARACTERIST	rics within 100ft Buffer	
RIGHT BANK: LEFT BANK:	_	
FORESTED WETLAND TO FORESTED	WETLAND	
FARMLAND SCRUB/SHRUB FARMLAND	SCRUB/SHRUB	
HAYFIELD PRAIRIE HAYFIELD	☐ PRAIRIE	
	_	
INDUSTRIAL ☐ HIGH BLUFFS ☐ INDUSTRIAL RESIDENTIAL ☐ RESIDENTIAL		

DATE: 6/7/2017 REVIEWER(S): WWW, JT	P		4.				
GAI STREAM ID: SIL-WI	W-016						
STREAM CHANNEL PROPERTI Average bank-to-bank width (Average bank height (feet): Bottom width (feet): Ordinary High Water Mark (Or	feet): 1,5 Water	at center width (fe	t centerline (line (feet): _ eet): _ <u>/), 5</u>	(feet): Water d	· ·	<u>_</u> .	
FLOW CHARACTERISTICS: Water present: No WATE If flow present, estimate stage Average depth of water (feet):	at time	of survey:	_	BED MOIST H 🔀 M	STANDING WATE	er (23)	FLOWING WATER
BANK EROSION: EXTENSIVE Explain (sloughing banks, exposed root	MOI wads, under	DERATE rcut banks, e	LITTLE/NO	ne phing an	d undexcit bas	nks	
OBSERVED PRESENCE OF GROODSERVED PRESENCE OF SUBS			S:	⊠ №		<u>+</u>	
WATER QUALITY CHARACTERI Obvious siltation: Observable water quality (siltation	YES	NO or is clear, di	scolored, oily film), scum, water o	dor; etc.): Water	is clea	
Identify specific pollutants, if k		وا وازدروا المحدود		av avlastrata)	C ELAMENTOLIS A	ICAE [AAACDODUVTEE
AQUATIC PLANTS: PERIPHTIC	N (Drown	or yellowish	algae on rocks	or substrate)	□ HITAMEN 1002 ¥	LOAE _	WACKOPHTIES
WETLAND FRINGE: Describe:	YES	ABUT	ΓπNG or ∏ Al	DJACENT	Мио		
BIOLOGICAL CHARACTERISTICS Macroinvertebrates observed? Fish or wildlife observed?		Mo ⊠ No	Describe:		++	+	+
Habitat for: Fish∕spawn areas?	YES	МО 🟋					
URISDICTIONAL STATUS: s this stream jurisdictional?	⊠ YES	□ NO	Describe:				· ·
OTHER OBSERVATIONS AND CO	MMENT	'S:	(C.	.9	eQuantic i		
*				-	**	+	-

DATE: 10/+/2017			
REVIEWER(S): WJW JJP	WEATHER CONDIT	TIONS: <u>Sumy</u> 83	5F
GAI STREAM ID: STI - WJW-017	F		
STREAM TYPE: PERENNIAL INTERM	ITTENT DEPHEMERAL	-	
Stream crossed by centerline: YES	⊠ NO		
Stream crossed by access road: YES	_ *		*
Stream crossed by access road 165	⊠ NO		*
PHOTOGRAPHS TAKEN:			
	n	. a	
# Upstream JV # \\	Downstream >5 5		act Area
# Culvert Inflow #	- Culvert Outflor	W	4
		- 21	
FULLY FUNCTIONAL: YES	∐ 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, inclsi-	on, or excessive aggradation	n	*
3. is connected to its overbank flood plain support	ing normal hydrological fur	nctions	
4. Has a riparian buffer of at least 25 ft in width			
5. if stream segment is impacted by a minor structed	aral alteration but otherwis	se fully functional and doe	es not
significantly alter stream segments above and belo	w, then the alteration shou	ald be considered separat	e and
moderately functional			
MODERATELY FUNCTIONAL: YES	. 🗆 NO		+
Considered moderately functional if the following a	re met:		
1. Streams have been altered; however, system rec		bablilty of occurring natur	allv
2. Streams support many, but not all, of the hydrau			
of similar order in the watershed	-		g
FUNCTIONALLY IMPAIRED: YES	Пио		
Considered functionally impaired if the stream has		· ·vlna•	
1. Has been channelized and shows no evidence of		willig.	5 4
		•	
2. Is levee protected, impounded, or artificially cons	itricted	1.0	4
3. Entrenched or contains active headcuts	, 		4
4. Has little or no riparian buffer of deep-rooted veg			
5. Has banks that are extensively eroded or unstable			
6. Has 4 or greater stream impacts within 0.5 mile u	pstream of proposed strea	m impact, and stream im	pacts individually
or cumulatively exceed 100 ft in length			
		4	
GENERAL WATERSHED AND/OR RIPARIAN ARE	A CHARACTERISTICS WI	ITHIN 100FT BUFFER	
RIGHT BANK:	LEFT BANK:		
FORESTED WETLAND	✓ FORESTED □ V	WETLAND .	
FARMLAND SCRUB/SHRUB .	☐ FARMLAND ☐ S	SCRUB/SHRUB	
HAYFIELD PRAIRIE		PRAIRIE	
INDUSTRIAL HIGH BLUFFS		HIGH BLUFFS	
RESIDENTIAL	RESIDENTIAL		+ 7

Identify specific pollutants, if known according to the control of	ON (brown YES YES YES YES YES YES	or yellowish ABUT ABUT NO NO		ebstrate) 🔲	FILAMENTOUS ALGA		ROPHYTES
Identify specific pollutants, if known and periphyrous the per	ON (brown or YES YES YES YES	or yellowish ABUT ABUT NO NO	algae on rocks or su TIING or ADJAC Describe: Describe:	ebstrate) 🔲	FILAMENTOUS ALGA		ROPHYTES
Identify specific pollutants, if known in the periphyrous specific pollutants, if known in the periphyrous specific pollutants, if known in the periphyrous specific pollutants, if known in the periphyrous specific periphyrous specifi	ON (brown decomposed on the control of the control	or yellowish ABUT 2 NO NO	algae on rocks or su TTING or	ibstrate) 🔲	FILAMENTOUS ALGA		ROPHYTES
Identify specific pollutants, if known according to the periphyrometric periph	ON (brown decomposed on the control of the control	or yellowish ABUT 2 NO NO	algae on rocks or su TTING or	ibstrate) 🔲	FILAMENTOUS ALGA		ROPHYTES
Identify specific pollutants, if known according to the periphyrous statements of the periphyrou	DN (brown	or yellowish	algae on rocks or su TTING or	ibstrate) 🔲	FILAMENTOUS ALGA		ROPHYTES
Identify specific pollutants, if kn AQUATIC PLANTS: PERIPHYTO WETLAND FRINGE: Describe: BIOLOGICAL CHARACTERISTICS	DN (brown	or yellowish	algae on rocks or si	ibstrate) 🔲	FILAMENTOUS ALGA		ROPHYTES
Identify specific pollutants, if k	nown:	or yellowish	algae on rocks or su	ıbstrate)	filamentous alga		ROPHYTES
identify specific pollutants, if k	nown: _			*			ROPHYTES
		or is clear, un	scolored, olly film, scu	m, water odor; e	tc.): No wate	kr	
		or is clear, un	scolored, olly film, scu	m, water odor; e	tc.): No wate	kr	
WATER QUALITY CHARACTERI Obvious siltation: Observable water quality (siltation	☐ YES	∑ NO	*		A / /		
OBSERVED PRESENCE OF SUBS		FLOW:	☐ YES 🔀	NO			
OBSERVED PRESENCE OF GRO	UNDWA	TER SEEP:	S: YES 🔀	NO			
			• •				
BANK EROSION: EXTENSIVE Explain (sloughing banks, exposed root	wads, under	DERATE rcut banks, e	UTTLE/NONE	and un	decent bank	cc .	_
			<u>,</u>				
If flow present, estimate stage Average depth of water (feet)		•	: Пнісн	MEDIU	M ⊠ rom		
Water present: X NO WATE	r, streami	BED DRY	STREAMBED	MOIST []	STANDING WATER	FLOW	ING WATE
FLOW CHARACTERISTICS:							
Ordinary High Water Mark (O		-	·	-	1 (1664).		
Average bank height (feet):					(feet): 6		
	λ						
Average bank-to-bank width (8 ; a	t cantarline (fee	м.			
	feet):	_		-	E):		
STREAM CHANNEL PROPERTI Average bank-to-bank width (ES WITH	RESPECT		-	E):		
Average bank-to-bank width (<u>w-017</u> ES WITH feet):	RESPECT		-	E):		

DATE: 6/7/2017		(A)		
REVIEWER(S): WJW. JJP	WEATHER CON	NDITIONS: Swin	4 85 F	
GAISTREAM ID: SIL-WIW-018	+)	
STREAM TYPE: PERENNIAL INTERMIT	ТЕМТ 🔀 ЕРНЕМ	IERAL		
Stream crossed by centerline: YES	∑ NO			
•	3.		4	
Stream crossed by access road: YES	⊠ NO		4	
PHOTOGRAPHS TAKEN:	,	, ,	+.	4
# 52 - Upstream \(\mathcal{J} # 2.1	- Downstream	SÉ #	Impact Area	
# Culvert Inflow #	- Culvert Ou	tflow		
7 7 7			+	
FULLY FUNCTIONAL: YES	□NO		*	
Considered fully functional if the following criteria ar	—			1
1. Unaltered in any significant manner by human act				
Is stable and does not exhibit headcutting, incision		dation		
3. Is connected to its overbank flood plain supporting				
4. Has a riparlan buffer of at least 25 ft in width	5 Hormal Hydrologica	ii Idilectoris		
5. If stream segment is impacted by a minor structura	al alteration but othe	anuico fullu functional a	and does not	
significantly alter stream segments above and below,		-		
moderately functional	then the diteration.	silodia de colisiaciea s	cparate and	
,				*
MODERATELY FUNCTIONAL: YES	Пио	+:		
Considered moderately functional if the following are				
1. Streams have been altered; however, system recov		probability of occurring	a naturally	
2. Streams support many, but not all, of the hydraulic				tranna
of similar order in the watershed	, and Beomor bine in	ictions characteristic o	Traily furictioning 5	ucams
4				
FUNCTIONALLY IMPAIRED: YES	□NO	+		
+ —		in II anni a an		
Considered functionally impaired if the stream has mo		ollowing:		10
1. Has been channelized and shows no evidence of se		•		
2. Is levee protected, impounded, or artificially constr	ictea	2		
3. Entrenched or contains active headcuts				4.
4. Has little or no riparian buffer of deep-rooted veget				
5. Has banks that are extensively eroded or unstable,				39
6. Has 4 or greater stream impacts within 0.5 mile ups	tream of proposed s	tream impact, and stre	am impacts individ	lually
or cumulatively exceed 100 ft in length				
	¥.	(*)		
GENERAL WATERSHED AND/OR RIPARIAN AREA	. CHARACTERISTICS	WITHIN 100FT BUF	FER	
RIGHT BANK:	LEFT BANK:			
FORESTED WETLAND	FORESTED	WETLAND		
FARMLAND SCRUB/SHRUB	FARMLAND	SCRUB/SHRUB		
HAYFIELD PRAIRIE	HAYFIELD	PRAIRIE		
INDUSTRIAL HIGH BLUFFS	☐ INDUSTRIAL	HIGH BLUFFS	.67	
RESIDENTIAL	RESIDENTIAL			

DATE: 6/7/2017 REVIEWER(S): WTW JJ	5	_	9				
GAI STREAM ID: STL-W		8			+		
STREAM CHANNEL PROPERTY Average bank-to-bank width (Average bank height (feet): Bottom width (feet): 3	feet): 1.5 Water	at center width (fo	it centerline line (feet): _ eet):	(feet): Water d	+		
Ordinary High Water Mark (O	HWM), if	observed	d (feet):l	-			
FLOW CHARACTERISTICS: Water present: No WATE If flow present, estimate stage Average depth of water (feet)	at time			MBED MOIST	STANDING WATER	R FLOWING	WATEI
BANK EROSION: EXTENSIVE Explain (sloughing banks, exposed root	wads, unde	DERATE rout banks, e	LITTLE/NO	one thing, ut	decent banks		
- i					+		
OBSERVED PRESENCE OF GRO	UNDWA	TER SEEP:	S: YES	NO 🔀			-
OBSERVED PRESENCE OF SUBS	SURFACE	FLOW:	☐ YES	IX NO			
+		4	_	_		ž +	
WATER QUALITY CHARACTERI	STICS:						
Obvious siltation:	YES	NO 🔀			Μ	L.	
Observable water quality (siltetic	n, water col	lor is clear, di	iscolored, olly film	n, scum, water o	dor; etc.): <u> </u>	ec	9
Identify specific pollutants, if k	nown:						_
				(4)	.,,		_
AQUATIC PLANTS: PERIPHYTO	ON (brown	or yellowish	algae on rocks	or substrate)	☐ FILAMENTOUS ALC	GAE MACROPI	IYTES
WETLAND FRINGE: Describe:	YES	ABUT	ITING or ☐ Å	DJACENT	⊠ NO		
BIOLOGICAL CHARACTERISTICS	:					+	
Macroinvertebrates observed?	☐ YES	⋈ NO	Describe:				
Fish or wildlife observed?	YES	MO	Describe:				_
labitat for:							_
ish/spawn areas?	YES	⊠ NO					
URISDICTIONAL STATUS:							
s this stream jurisdictional?	YES	□ NO	Describe:	Maybe	, Non-RPG)	_
OTHER OBSERVATIONS AND CO	MMENT	'S:				,	
9				· ·			
					+		

DATE: 6/8/2017		
REVIEWER(S): WIN TIT	WEATHER CONDITIONS:	SURPAY 80F
GAISTREAM ID: STL-WTW-019		J. P. J.
STREAM TYPE: DEPENDIAL INTER	MITTENT EPHEMERAL	
Stream crossed by centerline: YES	⊠ NO	4
Stream crossed by access road: YES	⊠ NO	
	*	
PHOTOGRAPHS TAKEN:	* NF	
# Upstream \wides \sigma \wides #\	Downstream 1 / #	Impact Area
# Culvert Inflow #	- Culvert Outflow	
	<u></u>	
FULLY FUNCTIONAL: YES	∐ NO	
Considered fully functional if the following criteria		·
1. Unaltered in any significant manner by human		
2. Is stable and does not exhibit headcutting, incis		
3. Is connected to its overbank flood plain suppor4. Has a riparlan buffer of at least 25 ft in width	· Horman Hydrological functions	4
5. If stream segment is impacted by a minor struct	tural alteration but otherwise fully func	tional and does not
significantly alter stream segments above and belo		
moderately functional		·
MODERATELY FUNCTIONAL: YES	□ NO	
Considered moderately functional if the following	are met:	
1. Streams have been altered; however, system re	covery has a moderate probability of o	ccurring naturally
2. Streams support many, but not all, of the hydra	ulic and geomorphic functions characte	ristic of fully functioning streams
of similar order in the watershed		
. *	4	*
FUNCTIONALLY IMPAIRED: YES	☐ NO	
Considered functionally impaired if the stream has	-	
1. Has been channelized and shows no evidence of		
2. Is levee protected, impounded, or artificially cor	nstricted	
3. Entrenched or contains active headcuts		
4. Has little or no riparlan buffer of deep-rooted ve	_	
5. Has banks that are extensively eroded or unstab 6. Has 4 or greater stream impacts within 0.5 mile (nd stronge imments hadfuldusthe
or cumulatively exceed 100 ft in length	upstream of proposed stream impact, a	nd stream impacts individually
or outstanding choiced 200 it instanges		
GENERAL WATERSHED AND/OR RIPARIAN AR	EA CHARACTERISTICS WITHIN 1005	T RITEEED
RIGHT BANK:	LEFT BANK:	DOTTER
☑ FORESTED ☐ WETLAND	FORESTED WETLAND	
☐ FARMLAND ☐ SCRUB/SHRUB .	FARMLAND SCRUB/SHRUE	
☐ HAYFIELD ☐ PRAIRIE	HAYFIELD PRAIRIE	
INDUSTRIAL HIGH BLUFFS	☐ INDUSTRIAL ☐ HIGH BLUFFS	
RESIDENTIAL	RESIDENTIAL	

Obvious siltation: Observable water quality productions of the bound o	ON (brown of YES YES YES YES	or yellowish ABUT NO NO	algae on rocks or substr TING or ADJACENT Describe: Describe:	ate) FILAMENTOUS ALGA	E MACROPHYTES
Observable water quality protection in the second process of the second period period of the second period of the second period of the second period of the second period	N (brown of YES YES YES	or yellowish ABUT NO NO	algae on rocks or substr TING or ADJACENT Describe: Describe:	ate) ☐ FILAMENTOUS ALGA	E MACROPHYTES
Observable water quality protect to be a bount Sill v Seldentify specific pollutants, if known and the periphyrometric procession of the periphyrometric posserved? Siological characteristics was provided and the periphyrometric posserved? Sish or wildlife observed? Sish or wildlife observed? Sish or wildlife observed? Sish spawn areas?	ON (brown of YES	or yellowish ABUT NO	algae on rocks or substr TING or ADJACENT	ate) 🗍 FILAMENTOUS ALGA	E MACROPHYTES
Observable water quality protect to be a bound Silve Seldentify specific pollutants, if known and the peripher of the peripher	ON (brown of YES	or yellowish ABUT NO	algae on rocks or substr TING or ADJACENT	ate) 🗍 FILAMENTOUS ALGA	E MACROPHYTES
Observable water quality protection of the body of the	nown: YES	or clear, di	algae on rocks or substr TING or ADJACENT	ate) 🗍 FILAMENTOUS ALGA	E MACROPHYTES
Observable water quality protection of house, Sally Selly Se	nown: YES	or clear, di	algae on rocks or substr TING or	ate) 🗍 FILAMENTOUS ALGA	E MACROPHYTES
Observable water quality provided to be a bound Silve Seldentify specific pollutants, if known and the peripher of the control	nown: YES	or vellowish	algae on rocks or substr	ate) FILAMENTOUS ALGA	E MACROPHYTES
Observable water quality provided to be a bound Sall & Sell & Sel	nown:	or yellowish	algae on rocks or substr	ate)	
Observable water quality provided to the second hours, Sall + second dentify specific pollutants, if ki	m water col	or a clear, di		15.0	
Observable water quality states	m water col	or a clear, di	scolored, olly film, scum, w	ater odor; etc.): Water ve	ed slightly
	X YES	☐ NO	and an or	m.d.	. , el : ltl
Obstace allegations					
WATER QUALITY CHARACTERI	STICS:			*	
OBSERVED PRESENCE OF SUBS	SURFACE	FLOW:	🗌 yes 🛮 No		
ODSERVED FRESENCE OF OKO	ONDWA	ER SEEP	S: YES 🗷 NO		
OBSERVED PRESENCE OF GRO	LINDVALAT	LEB CEED	S. Duce Indian		
Explain (sloughing banks, exposed root	wags, under	cut Danks, et	co. Streetway	OTHER CALL DRIVES	
BANK EROSION: EXTENSIVE	E X MOI	DERATE	LITTLE / NONE	under thout	
+	(J.1.2)	=			
If flow present, estimate stage Average depth of water (feet):			: HIGH	MEDIUM LOW	
Water present: NO WATE			STREAMBED MOI		K FLOWING WATE
FLOW CHARACTERISTICS:				*	
Ordinary High Water Mark (O	HVVIVI), IT	observed	r (reet):	*	
Bottom width (feet): 7				ter depth (feet): <u>0.1-0.</u>	2
Average bank height (feet): _	<u>.3</u> .;	at center	line (feet):	-	4
Average Dank-LO-Dank Width			t centerline (feet):	•	
	E2 AAIIU		TO TOD OF DANK /	ECTINANTE).	
STREAM CHANNEL PROPERTI	ES WITH	DESDECT			
STREAM CHANNEL PROPERTI	TW-619				
STREAM CHANNEL PROPERTI	TW-619			*.	

DATE: 6/10/2017 REVIEWER(S): W.J. Wester, Jr. GAI STREAM ID: SIL-WIN-0:	w	reather conditions: 5	enny, 80F
Day High C			
STREAM TYPE: PERENNIAL	INTERMITTENT	EPHEMERAL	
Stream crossed by centerline:	VES □ N	0	
Stream crossed by access road:	🗌 YES 💢 N	0	
##Uloosog - Upstream & S & Culvert Inflow	# <u>P&100011</u> - Do	Acordiy to Notes ownstream wnw # <u>P6100</u> - Culvert Outflow	<u>ව්/ව</u> - Impact Area
FULLY FUNCTIONAL:	☐ YES ☐ N)	
Considered fully functional if the follo		•	
1. Unaltered in any significant manner	-		
2. Is stable and does not exhibit head	cutting, incision, or ex	cessive aggradation	
3. Is connected to its overbank flood p			
4. Has a riparian buffer of at least 25 f			
If stream segment is impacted by a significantly alter stream segments ab moderately functional	minor structural alter ove and below, then t	ation but otherwise fully funct he alteration should be consid	ional and does not ered separate and
MODERATELY FUNCTIONAL:	₩ vec		
Considered moderately functional if the	YES NO	+ *	
1. Streams have been altered; however	-	s a moderate probability of oc	cuering poturally
2. Streams support many, but not all, of similar order in the watershed			
FUNCTIONALLY IMPAIRED:	□ YES □ NO	,	
Considered functionally impaired if the	e stream has more tha	n one of the following:	
1. Has been channelized and shows no			
2. Is levee protected, impounded, or a	rtificially constricted		
Entrenched or contains active heads			
4. Has little or no riparian buffer of dee			
5. Has banks that are extensively erode			
6. Has 4 or greater stream impacts with	nin 0.5 mile upstream	of proposed stream impact, ar	nd stream impacts individually
or cumulatively exceed 100 ft in length	į		
CENEDAL WATERSHED AND OR DU	DARIAN AREA CUAL	A CTEDICTICS HARDING ASSET	
GENERAL WATERSHED AND/OR RII RIGHT BANK:		ACTERISTICS WITHIN 100F TBANK:	ROFFER
FORESTED WETLAND			
FARMLAND SCRUB/SHRUB	·	FORESTED WETLAND	
HAYFIELD PRAIRIE	<u>-</u>	FARMLAND SCRUB/SHRUB	
INDUSTRIAL HIGH BLUFFS	=	HAYFIELD PRAIRIE NDUSTRIAL HIGH BLUFFS	
RESIDENTIAL HIGH BLOFFS		NDUSTRIAL HIGH BLUFFS	

DATE: 6/10/2017 REVIEWER(S): W. TohnWack GAI STREAM ID: SIL-WWW		_				
STREAM CHANNEL PROPERTIE Average bank-to-bank width (for Average bank height (feet): Bottom width (feet): Ordinary High Water Mark (OH	S WITH Feet):; a Water v	at t centerli width (fec	centerline (ne (feet): _ et):	feet): 8 3 Water de		<u>) </u>
FLOW CHARACTERISTICS: Water present: No water If flow present, estimate stage Average depth of water (feet):	at time o		☐ STREAM ☐ HIGH	BED MOIST H MI	STANDING WATER	₩ FLOWING WATER
BANK EROSION: EXTENSIVE Explain (sloughing banks, exposed root w		-	LITTLE / NO :.):Bank	4.		
OBSERVED PRESENCE OF GROU	JNDWAT	ER SEEPS	: YES	№ NO		
OBSERVED PRESENCE OF SUBS	URFACE	FLOW:	YES	X NO		
WATER QUALITY CHARACTERIS	TICS:					
Obvious siltation:	X YES	☐ NO				
Observable water quality (siltation	n, water colo	or is clear, dis	colored, oily film	n, scum, water o	dor; etc.): Substa	<u>Te</u>
Mostly sitt						
Identify specific pollutants, if kn	iown:					
AQUATIC PLANTS: PERIPHYTO	N (brown o	or yellowish	algae on rocks	or substrate)	FILAMENTOUS ALC	GAE MACROPHYTES
WETLAND FRINGE: Describe:	☐ YES	ABUT	TING or 🗌 A	DJACENT	NO 🔀	
BIOLOGICAL CHARACTERISTICS		nsca.				
Macroinvertebrates observed?	YES	NO 🔀				
Fish or wildlife observed?	YES	⊠ NO	Describe:			
Habitat for:						
Fish/spawn areas?	YES	X NO				
JURISDICTIONAL STATUS:						-
ls this stream jurisdictional?	YES	□ NO	Describe:	Maybe,	pobablyan k	2PW
OTHER OBSERVATIONS AND CO	MMENT	S:				

DATE: 3/5/17 REVIEWER(S): JUP/CDK GAI STREAM ID: SMU-CDK-006 WEATHER CONDITIONS: 39°F POITH Claude
STREAM TYPE: PERENNIAL INTERMITTENT EPHEMERAL Stream crossed by centerline: YES Stream crossed by access road: YES NO
7270 - Upstream & # 7271 - Downstream W # 7272 - Impact Area 5E # 7269 - Culvert Inflow W # 7268 - Culvert Outflow E
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: 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
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
ENERAL WATERSHED AND/OR RIPARIAN AREA CHARACTERISTICS WITHIN 100FT BUFFER IGHT BANK: FORESTED WETLAND FORESTED WETLAND
FARMLAND SCRUB/SHRUB HAYFIELD PRAIRIE INDUSTRIAL HIGH BLUFFS RESIDENTIAL HORESTED WETCHNO FARMLAND SCRUB/SHRUB PRAIRIE HAYFIELD PRAIRIE INDUSTRIAL HIGH BLUFFS RESIDENTIAL

Spire STL Pipeline Stream Survey Data Collection Form (PAGE 2) GAI STREAM ID: SMO-CDE - OOG STREAM CHANNEL PROPERTIES WITH RESPECT TO TOP OF BANK (ESTIMATE): Average bank-to-bank width (feet): 3 f+; at centerline (feet): 1A Average bank height (feet): 0.75 ft at centerline (feet): 1A

Bottom width (feet): 2.5	HWM), if observed (feet): 1 3 1	
FLOW CHARACTERISTICS:	717 +4	
Water present: No wa	ER STREAMBED DRY STREAMBED MOIST STANDING WATER FLOWING WAT	ΓFR
If flow present, estimate sta	e at time of survey: HIGH MEDIUM MOW	
Average depth of water (fee): <u><110</u>	
BANK EROSION: EXTENS	/E MODERATE NONE	
	ot wads, undercut banks, etc.):	
OBSERVED PRESENCE OF GR	DUNDWATER SEEPS: YES	
OBSERVED PRESENCE OF SU	SURFACE FLOW: YES	
WATER QUALITY CHARACTE	ISTICS:	
Obvious siltation:	☐ YES NO	
Observable water quality (silta	ion, water color a dear discolored, oily film, scum, water odor; etc.):	
Identify specific pollutants, if	nown:None	
AQUATIC PLANTS: PERIPHY	ON (brown or yellowish algae on rocks or substrate) 🔲 FILAMENTOUS ALGAE 🔲 MACROPHYTE:	s None
WETLAND FRINGE: Describe:	YES ABUTTING OF ADJACENT NO	
BIOLOGICAL CHARACTERISTIC	S:	
Macroinvertebrates observed	YES Describe:	
Fish or wildlife observed?	YES Describe:	
Habitat for:		
Fish/spawn areas?	□ YES DINO	
JURISDICTIONAL STATUS:		
Is this stream jurisdictional?	YES NO Describe:	
OTHER OBSERVATIONS AND C	DIMMENTS: Receives some vetland drainere by	r
other observations and o mostly epleme		r

DATE: 2-25-2017 REVIEWER(S): JUD-WJW GAI STREAM ID: EMOJJPO33A WEATHER CONDITIONS: party Cloudy /40° F
STREAM TYPE: PERENNIAL INTERMITTENT EPHEMERAL Stream crossed by centerline: YES NO Stream crossed by access road: YES NO
PHOTOGRAPHS TAKEN: #_686 Upstream NW #_6981 Downstream SE # Impact Area # Culvert Inflow # Culvert Outflow 6987RB \rightarrow W / 6988LB \rightarrow E
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
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: VES NO 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 2. Is levee protected, impounded, or artificially constricted 3. Entrenched or contains active headcuts
l. Has little or no riparian buffer of deep-rooted vegetation on 1 or both sides of channel i. 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 IGHT BANK: FORESTED

DATE: 2-45-2017
REVIEWER(S): JJP-WJW
GAI STREAM ID: CMOJJP033A
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):
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 PLOW
Average depth of water (feet):
BANK EROSION: EXTENSIVE MODERATE LITTLE / NONE
Explain (sloughing banks, exposed rout wolds, undercut banks, etc.):
Explain (stoughing danks, exposes mut wads, unitercut danks, etc.):
OBSERVED PRESENCE OF GROUNDWATER SEEPS: YES NO
OBSERVED PRESENCE OF SUBSURFACE FLOW: YES NO
WATER QUALITY CHARACTERISTICS:
Obvious siltation: YES XNO
Observable water quality (slitation, water color or dear, discolored, oily film, scum, water odor; etc.): 100 + 600
Identify specific pollutants, if known:
AQUATIC PLANTS: PERIPHYTON (brown or yellowish algae on rocks or substrate) FILAMENTOUS ALGAE MACROPHYTES
MACROTITES
WETLAND FRINGE: YES ABUTTING OF ADJACENT NO
Describe:
BIOLOGICAL CHARACTERISTICS:
Macroinvertebrates observed? YES Describe:
ish or wildlife observed?
Fish or wildlife observed? Tyes Dino Describe:
Habitat for:
Habitat for:
Habitat for:YES NO
Habitat for:
Habitat for: