Description													
Project Name:						Date:			Waterbody Survey ID:				
Line 5 Relocation Pro	ject					2019-09-24		sase006p					
State:		County/	Parish:			USGS Waterbody Name:							
WI		Ashland				Bay City Creek							
Company:		Crew Me	ember Initial	ls:		Latitude:			Longitude:	ongitude:			
Enbridge		KDF/AR	K			46.551127			-90.895194				
Survey Type: (check one)	Centerl	ine	□ Re-Route	9	□A	Access Road	□Facility	□Other					
Waterbody Type: (check one)	□ River		Stream			Ditch	□ Swale	🗆 Canal		Other			
Water Appearance: (check one)	No Wat	ter	Clear			Furbid	□Sheen on Surface	n ⊡Surfac	e Scum □A	Algal Mats □Other			
Existing Condition ^a : (check one)	I Highly	Function	al Stream	Moder	ately	y Functional S		□ Functionally	Impaired Stre	am			
Feature Description: (check one)	Natural		🗆 Artificial, ı	man-made		Manipulated							
Flow Regime: (check one)	Ephem	eral	Intermitte	ent		Perennial	Connect Swale	ting					
Sinuosity within Survey Corridor: (check one)	□ Straigh	t	Meander	ing			Swale						
species are present a					Jiest.								
Measurements													
Depth of Water: <u>1</u>	ft.	N/A□	Unknown	U Water E	Edge	e to Water Ed	ge: <u>10</u> ft.	N/A□	OHWM Widt	h: <u>12</u> ft.			
OHWM Indicator: (check all that apply)		ear line o	on bank	Shelving		□Wrested v	egetation	Scouring		□Water staining			
(nt, matte ing vegel		□Wrack line	1	Litter and	debris	□Abrupt plan change	t community	□Soil characteristic change			
Dominant Substrate: (check all that apply)	Be	edrock	□ Bould	ler 🗆 C	Cobb	le 🗆 C	Gravel	🗹 Sand	□ Silt/ clay	y 🗌 Organic			
Observations													
Riparian Zone Presen (check one)	nt: □Ye	es	🗹 No										
Vegetation Layers: (check all that apply)	🗹 Tr	ees	🗹 Sa	plings/Shrub	S	🗹 Herbs							
Dominant Bank Vege Rhamnus cathartica,	etation <i>(list</i> Fraxinus ni): gra, llex	verticillata, A	thyrium filix-	-femi	ina, Thalictrur	n thalictroide	S.					
Aquatic Habitats (ex: Downed woody debris	submerged or s, overhanç	^{emerged} ac ging bank	quatic vegetation, s and roots.	, overhanging ba	anks/ro	oots, leaf packs, la	arge submerged w	vood, riffles, deep po	ools, etc.) :				
Aquatic Organisms (Frogs, tadpoles, aqua	Observed (atic inverteb	<i>(list)</i> : orates.											
Disturbances (ex: live None.	estock acces	s, manure	in waterbody,	waste dischar	ge pi	ipes):							
Observation Notes: None.													



sase006p_N (across)



sase006p_SE (downstream)



sase006p_SW (upstream)

Description														
Project Name:						Date:			Waterbody Survey ID:					
Line 5 Relocation Pro	ject					2019-09-25	2019-09-25 sasa047i							
State:		County/	/Parish:			USGS Waterbody Name:								
WI		Ashland	ł			Little Beartrap Creek								
Company:		Crew M	ember Init	ials:		Latitude:			Longitude:					
Enbridge	-	NTT/DO				46.528086			-90.895009					
Survey Type: (check one)	Center	line	□ Re-Roι	ute		Access Road	,	□Other						
Waterbody Type: (check one)	□ River		🗹 Stream	l		Ditch	Swale	🗆 Cana	al 🗌 Other					
Water Appearance: (check one)	🗆 No Wa	ter	Clear			Turbid	□ Sheen or Surface	n ⊡Surfac	e Scum	□Algal Ma	its [□Other		
Existing Condition ^a : (check one)	□ Highly	Functior	nal Stream	□ Mo	deratel	y Functional	Stream	Functionally	Impaired	Stream				
Feature Description: (check one)	🗹 Natura	I	□ Artificia	il, man-mac	le 🗆	Manipulated								
Flow Regime: (check one)	Epherr	neral	Intermi	ttent		Perennial	Connec Swale	cting						
Sinuosity within Survey Corridor: (check one)	□ Straigh	nt	Meand	ering			Owald							
logs are washed up a	long the ba	anks of th	ne stream.											
Measurements														
Depth of Water: <u>0.5</u>	ft.	N/A□	Unknov	vn⊡ Wate	er Edge	e to Water Eo	dge: <u>3</u> ft	N/A□	онмм и	Vidth: <u>4</u>	ft.			
OHWM Indicator: (check all that apply)	□ C	lear line	on bank	Shelvin	g	□Wrested v	egetation	Scouring	I	□Wa	iter stai	ining		
		ent, matte ing vege		□Wrack I	ine	Litter and	debris	I ▲Abrupt plar change	it commur	nity ⊟Soi chang		cteristic		
Dominant Substrate: (check all that apply)	□ Be	edrock	🗆 Βοι	ulder	Cobb	ole 🗌	Gravel	□ Sand	□ Silt/	clay	🗹 Org	janic		
Observations														
Riparian Zone Presen (check one)	nt: 🗆 Ye	es		10										
Vegetation Layers: (check all that apply)	🗹 Tr	ees	1 S	Saplings/Sh	rubs	🗹 Herbs	6							
Dominant Bank Vege Fraxinus nigra, Rham	etation <i>(lisi</i> nus cathar	tica, Car	ex intumes	cens.										
Aquatic Habitats (ex: Pools of standing wat	submerged or er .	emerged a	quatic vegetat	ion, overhangir	g banks/r	roots, leaf packs,	large submerged	wood, riffles, deep p	ools, etc.) :					
Aquatic Organisms (None.	Observed	(list):												
Disturbances (ex: live Cattle grazing.	stock acces	s, manure	in waterboo	ly, waste disc	harge p	ipes):								
Observation Notes: Currently, no water is	flowing, bu	ut some s	standing w	ater is poole	ed.									



sasa047i_E (downstream)



sasa047i_S (across)



sasa047i_W (upstream)

Description													
Project Name:						Date:			Waterbody	Survey ID:			
Line 5 Relocation Proje	ect					2019-09-10 sasb007i							
State:		County/	Parish:			USGS Waterbody Name:							
WI		Ashland	l			Beartrap Creek							
Company:		Crew Me	ember Initi	als:		Latitude:			Longitude:				
Enbridge		MAL/SA	M			46.517822			-90.895906				
(check one)	Centerl	ine	🗆 Re-Rou	te	$\Box A$	Access Road	□Facility	□Other					
(check one)	□ River		Stream			Ditch	Swale	🗆 Cana] Other			
Water Appearance: (check one)	□ No Wat	ter	Clear		1	Furbid	□ Sheen or Surface	n ⊡Surfao	ce Scum]Algal Mats □Other			
Existing Condition ^a : (check one)	Highly	Function	al Stream	□ Mode	rately	y Functional S		Functionally	Impaired Str	ream			
Feature Description:	🗹 Natural		□ Artificia	l, man-made		Manipulated							
Flow Regime: (check one)	Ephem	eral	Intermit	ttent		Perennial	Connec Swale	ting					
Sinuosity within Survey Corridor: (check one)	□ Straigh	t	Meande	ering			onalo						
Measurements													
Depth of Water: 0.25	_ft.	N/A□	Unknow	m 🗆 Water	Edge	e to Water Ed	l ge: <u>5</u>ft .	N/A□	OHWM Wid	dth: <u>6</u>f t.			
OHWM Indicator: (check all that apply)		ear line o	on bank	Shelving		Wrested v	egetation	□Scouring		□Water staining			
		nt, matte ing vegel		□Wrack line	Э	Litter and	debris	□Abrupt plar change	nt community	/ □Soil characteristic change			
Dominant Substrate: (check all that apply)	□ Be	edrock	🗆 Bou	lder 🗌 (Cobb	le 🗹 (Gravel	✓ Sand	🗹 Silt/ cla	ay 🗌 Organic			
Observations													
Riparian Zone Present (check one)	t: □Ye	es	🗹 N	0									
Vegetation Layers: (check all that apply)	🗆 Tr	ees	⊻ S	aplings/Shrul	os	I Herbs							
Dominant Bank Veget Bank vegetation domin	ation <i>(list</i> ated by R): hamnus	cathartica,	Crataegus s	p., an	nd Alnus incar	าล.						
Aquatic Habitats (ex: si Pools of water.	ubmerged or	emerged ad	quatic vegetatio	on, overhanging b	anks/r	oots, leaf packs, la	arge submerged v	vood, riffles, deep p	oools, etc.) :				
Aquatic Organisms O Water striders, frogs.	bserved ((list):											
Disturbances (ex: lives Erosion, invasive speci		s, manure	in waterbody	y, waste discha	rge pi	ipes):							
Observation Notes: None.													



sasb007i_NW (downstream)



sasb007i_SW (upstream)



sasb007i_W (across)

Description														
Project Name:						Dat	te:				Waterbody Survey ID:			
Line 5 Relocation Proj	ect					20	2019-10-09 sasc039i							
State:		County	/Parish:			US	USGS Waterbody Name:							
WI		Ashland	Ł			UN	UNT to Deer Creek							
Company:		Crew M	lember Init	tials:		Lat	itude:				Longitude:			
Enbridge		BRG/JS					480553				-90.902888			
Survey Type: (check one)	□ Center	line	🗹 Re-Ro	ute			ss Road	□Facility	[□Other				
Waterbody Type: (check one)	□ River		Stream	n		Ditcl	h	Swale		□ Canal		□ Oth	ner	
, ,	🗆 No Wa	iter	Clear			□Turb	id	Sheen o	on [∃Surfac	e Scum	□Alga	al Mats	□Other
Existing Condition ^a : (check one)	I Highly	Function	nal Stream		□ Modera	ately Fu	nctional	<u>Surface</u> Stream	Func	tionally l	mpaired	Stream		
Feature Description: (check one)	🗹 Natura		□ Artificia	al, man	-made	□ Man	ipulated							
Flow Regime: (check one)	Ephen	neral	Interm	ittent		Pere	ennial	Conne Swale	cting					
, ,	□ Straigl	nt	Meand	dering				Swale						
Measurements									_					
Depth of Water: 0.5	_ ft.	N/A□	Unknov	wn□	Water E	dge to	Water Ed	lge: _ 4 _ f	t.	N/A□	OHWM	Width:	<u>12</u> fl	ί.
OHWM Indicator: (check all that apply)		lear line	on bank	□Sh	nelving	ΠV	Vrested v	regetation	Sco	ouring			∃Water s	staining
		ent, matte sing vege		□Wr	rack line		itter and	debris	□Abr chang		t commu		∃Soil cha change	aracteristic
Dominant Substrate: (check all that apply)	□B	edrock	🗆 Bo	ulder		obble		Gravel	🗹 Sar	nd	□ Silt	/ clay		Organic
Observations														
Riparian Zone Presen (check one)	it: □Y	es		No										
Vegetation Layers: (check all that apply)	M TI	rees	2	Sapling	gs/Shrubs	S	Herbs	3						
Dominant Bank Vege Acer rubrum, Thuja oc Osmunda claytoniana.	tation <i>(lis</i> cidentalis	<i>t)<mark>:</mark></i> , Tsuga d	canadensis	s, Fraxi	nus nigra	a, Abies	balsame	a, Athyrium	filix-femi	na, Care	ex pedun	culata, l	Rhamnus	s cathartica,
Aquatic Habitats (ex: s Woody debris.	submerged or	emerged a	iquatic vegetat	tion, over	hanging bar	nks/roots,	leaf packs,	arge submerged	wood, riffle	es, deep po	ools, etc.) :			
Aquatic Organisms O None.	bserved	(list):												
Disturbances (ex: lives Runoff from nearby cro	stock acces op field.	s, manure	∍ in waterboo	dy, wast	e discharg.	ge pipes)	:							
Observation Notes: The feature is highly e	rosional, v	with spar	se bank ve	egetatio	งท.									



sasc039i_E (downstream)



sasc039i_S (across)



sasc039i_W (upstream)

Description													
Project Name:						Date:			Waterbody Survey ID:				
Line 5 Relocation Proj	ect					2020-06-03 sase1015i							
State:		County/	Parish:			USGS Waterbody Name:							
Wisconsin		Ashland	ł			UNT to Marengo River							
Company:			ember Init	ials:		Latitude:			Longitude				
Enbridge		DMP/AF				46.419167			-90.824596				
Survey Type: (check one)	Center	ine	□ Re-Rou	ute		Access Road	ccess Road						
Waterbody Type: (check one)	□ River		Stream	1		Ditch	Swale	🗆 Cana	I 🛛 Other				
Water Appearance: (check one)	🗆 No Wa	ter	Clear			Turbid	□ Sheen or Surface	n ⊡Surfac	e Scum	□Algal Mats	□Other		
Existing Condition ^a : (check one)	Highly	Function	nal Stream	🗹 Mo	deratel	y Functional		Functionally	Impaired S	tream			
Feature Description: (check one)	Natural		□ Artificia	al, man-mao	de 🗆	Manipulated							
Flow Regime: (check one)	Ephem	eral	Intermi	ttent		Perennial	Connec Swale	cting					
, ,	Straigh	ıt	Meand	lering			Owale						
Measurements													
Depth of Water: <u>1</u>	_ft.	N/A□	Unknov	vn⊡ Wat	er Edge	e to Water E	dge: <u>2</u> ft	. N/A□	OHWM W	idth: <u>2</u> ft	i.		
OHWM Indicator: (check all that apply)	C I	lear line (on bank	□Shelvin	g	Wrested	vegetation	Scouring		□Water s	staining		
(ent, matte ing vege		⊠ Wrack	line	Litter and	debris	☐ Abrupt plar change	it communi	ty □Soil cha change	aracteristic		
Dominant Substrate: (check all that apply)	□ Be	edrock	🗆 Βοι	ulder [□ Cobb	ole 🗆	Gravel	□ Sand	🗹 Silt/ c	clay 🗆 🕻	Drganic		
Observations													
Riparian Zone Presen (check one)	it: □Ye)S	M N	No									
Vegetation Layers: (check all that apply)	🗆 Tr	ees	R S	Saplings/Sh	rubs	🗹 Herbs	6						
Dominant Bank Vege Salix petiolaris, Ribes	tation (list americant): im, Corn	us alba, So	olidago giga	antea, E	Bromus inerm	nis						
Aquatic Habitats (ex. s Small riffles and pools	ubmerged or , overhang	emerged a JING Vege	quatic vegetat	ion, overhangir	ng banks/r	oots, leaf packs,	large submerged	wood, riffles, deep p	ools, etc.):				
Aquatic Organisms O Aquatic insects were c	bserved	<i>'list)</i> : Amphibia	ans and rep	otiles are as	ssumed	to use the fe	eature.						
Disturbances (ex: lives The feature flows throu	stock acces ugh a culv	s, manure ert undei	in waterboo r a lightly u	ly, waste dise sed field ro	charge p ad on tl	ipes): he north end.							
Observation Notes: The intermittent strear small, lightly used field							s located betv	veen a small wo	oodland and	d an alfalfa field	d. There is a		



sase1015i_NW (downstream)



sase1015i_SW (upstream)

Description												
Project Name:				Date:				Waterbod	ly Survey ID:			
Line 5 Relocation Project				2020-0	2020-06-05 sasc1006p							
State:	Cou	nty/Parish:		USGS	USGS Waterbody Name:							
Wisconsin	Ash				UNT to Brunsweiler River							
Company:		v Member Init	tials:		Latitude: Longitude:							
Enbridge	EJO	JSW		46.40	1275			-90.801781				
(check one)	Centerline	C Re-Ro		Access	Road □F	acility	Other					
Waterbody Type:	River	🗹 Stream	ו	□ Ditch		Swale	🗆 Cana		Other			
(check one)	No Water	Clear		□Turbid	Su	Sheen on rface	□Surfac	e Scum	□Algal Mats □Other			
(check one)	• •	tional Stream	□ Mode	rately Functi	onal Strea	m 🗆] Functionally	Impaired S	Stream			
Feature Description:	Natural	□ Artificia	al, man-made	🗆 Manipu	ated							
Flow Regime:	Ephemeral	□ Interm	ittent	Perenn		Connect ale	ing					
Sinuosity within Survey Corridor: (check one)	Straight	Meanc	lering									
Measurements												
Depth of Water: 0.5 ft	. N/A[Unknow	wn 🗆 🛛 Water	Edge to Wa	ter Edge:	<u>4</u> ft.	N/A□	онwм w	/ idth: <u>8</u>ft .			
OHWM Indicator: (check all that apply)	Clear li	ne on bank	Shelving	□Wre	sted vegeta	ation	Scouring		□Water staining			
(□Bent, m missing v		□Wrack line	e 🗹 Litte	r and debri		□Abrupt plan change	t communi	ity □Soil characteristic change			
Dominant Substrate: (check all that apply)	□ Bedroc	k 🗆 Bo	ulder 🗌 (Cobble	□ Grave	el	Sand	□ Silt/ o	clay 🗌 Organic			
Observations												
Riparian Zone Present: (check one)	🗹 Yes	1 🗆	No									
Vegetation Layers: (check all that apply)	I Trees	R :	Saplings/Shrul	bs 🗹	Herbs							
Dominant Bank Vegetati Salix interior, Cornus seri	on <i>(list)</i> : cea, Equise	tum sylvaticun	n, Equisetum I	hyemale								
Aquatic Habitats (ex: subm Pools, overhanging veget	nerged or emerg ation, coars	ed aquatic vegetat e woody debri	tion, overhanging b S.	oanks/roots, leaf	oacks, large si	ubmerged w	ood, riffles, deep p	ools, etc.):				
Aquatic Organisms Observators Water striders, minnows.	erved (list):											
Disturbances (ex: livestoc None observed.	k access, ma	nure in waterboo	dy, waste discha	arge pipes):								
Observation Notes: The perennial stream has	a sandy su	bstrate with sa	andbar willow	being the do	minant veç	getation a	t the sample p	oint.				



sasc1006p_SE (across)



sasc1006p_N (downstream)



sasc1006p_SW (upstream)

Linear Waterbody	y Data S	heet							
Survey Description	า								
Project Name:		Waterboo	•			v	aterbody ID:		Date:
Line 5 Relocation Project	t	Unnamed	tribut	ary to Gerhi	man Creek	sa	asw011		9/27/2019
State:	County:			Company:		Crew I	Member Initials	s: Photos	s:
wi	Ashland			WEST		AS,ES		7595, 9	98, 7612, 7617, 7634
Tract Number(s):				Nearest Mile	epost		Associated W	/etland ID(s):	
WI-AS-244.000				33.9			wasw022f,	wasw023ss	
Survey Type:									
(check one)		nterline	□Re-R	oute	⊠Access Road	1	Other:		
Physical Attributes Stream Classification:	5								
(check one)	🗆 Epł	hemeral	⊠Interr	nittent	□Perennial				
Waterbody Type: (check one)	River	⊠ Stream	Ditc	:h □C	Canal 🛛 🗆 Oth	er:			
OHWM Width: _4_ft.	OHWM I (check all th	Indicator: hat apply)		□ Clear lin on bank	ne ⊠Shelvir	g	□Wrested vegetation	□Scouri	ng ⊟Water staining
Height: <u>8in</u> . N/A□		Bent, matted, o egetation	r missi	ng ⊡Wra	ck line □Litter a debris	nd	□ Abrupt plant community cha		naracteristic change
Width of Waterbody - To Bank to Top of Bank:	op of M to	Vidth of Waterb o Toe of Slope:	ody - T	oe of Slope	Width of Waterb Water Edge:	ody - W	ater Edge to	Depth of Wat (Approx.)	er:
<u>6</u> ft.		_	<u>6</u> ft.		N/A 🗆	<u>4.5</u> ft.		N/A□	<u>0.5</u> ft.
Sinuosity: (check one)		Vater velocity: Approx.)			Bank height			Bank slope	
	(*		01 fps		Right:	<u>3</u> ft.		Rig	ht: 90 degrees
⊠Meanderin			<u>91_</u> ips		Left:			Le	eft:
	ig N	J/A□				<u>2</u> ft.			<u>90</u> degrees
Qualitative Attribut	tes								
Water Appearance: (check one)	No water	⊠Clear	∃Turbi			rface cum	□Algal mats	□Other:	
	Bedrock	□ Boulder □	Cobble	e 🛛 Grav	el 🗆 Sand	⊠ Silt/ c	lay 🛛 Organ	ic 🗆 Other:	
(check all that apply) % of Substrate:	%	%		% 65 %	%	20 %	15 %	%	
Width of Dination Zono	Vog								
Width of Riparian Zone		etative Layers: k all that apply)		⊠ Trees	: 🛛 🖾 Sap	lings/Sh	nrubs:	⊠ Herbs	
ft. N/A⊠	Avg. (appro	DBH of Domin	ants:	<u>12</u> in.	_	<u>2</u> in.	-	in.	
Dominant Bank Vegeta		,							
Betula alleghaniensis, Al	nus incana,	Carex scabrata,	Carex	bromoides					
Aquatic Habitats (ex: su	bmerged or e	merged aquatic ve	getation	, overhanging	banks/roots, leaf pao	ks, large	submerged wood	l, riffles, deep po	ols):
Overhanging C. bromoid							-		
Aquatic Organisms Ob):							
Ranid amphibian species	6								
T&E Species Observed	(list):								
Disturbances (ex: livesto	ock access, ma	anure in waterbody	/, waste	discharge pipe	es):				
Waterbody is: (check one)	⊠ Nat	tural	🗆 Arti	ficial, man-m	ade 🗆 Manip	ulated			
Stream Quality ^a : (check one)	🛛 Hig	Jh		derate	□ Low				

sasw011

^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

High quality, natural stream flows through hummock/tussock forested wetland and alder thicket scrub-shrub wetland

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)





Form Rev. 09/20/2019