Survey Description	n								
Project Name:		Waterbody Na	me:			aterbody ID:			ite:
Atlantic Coast Pipel	ine	Broad Run			S	LEB120i		4/	11/2015
State:	County:		Company:		Crew N	Member Initials:	F	hotos:	
West Virginia	Lewis		NRG		TP, S	5A		01-03	
Tract Number(s):			Nearest Mile	epost:		Associated We	etland I	D(s):	
02-065			10.4			None			
Survey Type: (check one)		e □Re-l	Route	⊠Access Road		□Other:			
Physical Attributes	S								
Stream Classification: (check one)	□ Ephemer	al 🛛 🖾 Inter	rmittent	Perennial					
Waterbody Type:									
	River St	ream 🗆 Dite	ch 🗆 Ca	anal 🗌 Other	:				
ОНШМ	OHWM Indica								
Width: <u>3.0</u> ft.	(check all that app	<i>lY)</i>	☑ Clear lin on bank	le ⊠Shelvin	g	□Wrested vegetation	\boxtimes	Scouring	□Water staining
Height:	□Bent,	matted, or missir	ng ⊡Wrack lin	ne 🗆 Litter ar	nd	□Abrupt plant		□Soil cha	racteristic change
ft. N/A□	vegetatio	on		debris		community cha	ange		
Width of Waterbody - T Bank to Top of Bank:			Toe of Slope	Width of Waterb	ody - W		Depth (Approx.)	of Water:	
	to Toe	of Slope:		Water Edge:		(Αρριολ.)		^
<u>_5.0</u> ft.	-	<u>2.0</u> ft.		N/A□	<u>3.0</u> ft.	1	N/A□	_0	<u>.75_</u> ft.
Sinuosity:	Water	velocity:		Bank height			Bank s	оре	
(check one)	(Approx.)		Right:				Right:	
		<u>_2.0</u> fps	6	Left:	<u>3_</u> ft.			Left:	<u>85</u> degrees
⊠Meanderir	ng N/A□				<u>2</u> ft.				<u>85</u> degrees
Qualitative Attribu	tes								
Water Appearance: (check one)	No water	Clear ⊠Turt	oid ⊡Sh	een ⊡Su	rface	□Algal □]Other:		
				surface sci		mats			
Substrate:	Bedrock 🗆 Be	oulder 🗆 Cobb	ole 🛛 Grave	el 🛛 Sand 🛛	⊠ Silt/ c	lay 🗆 Organic	□ 0	ther:	
% of Substrate:	%%	%	<u>10_</u> %	<u>40</u> %	<u>50</u> %	%		%	
Width of Riparian Zone									
ft.	(check all tha	t apply) I of Dominants:	Trees:			ngs/Shrubs:	\boxtimes	Herbs	
N/A⊠	(approx.)	or bonnants.	in.	-	in.				
Dominant Bank Vegeta		fatroam							
Livestock pasture of									
Aquatic Habitats (ex: su	Ibmerged or emerge	ed aquatic vegetatio	n, overhanging	banks/roots, leaf pac	ks, large	submerged wood,	riffles, d	leep pools):	
None.									
Aquatic Organisms Ob	served (list):								
None.									
T&E Species Observed	(list):								
None									
Disturbances (ex: livesto	ock access, manure	in waterbody, waste	e discharge pipe	es):					
Road culvert and liv	restock								
Tributary is: (check one)	⊠ Natural	□ Ar	tificial, man-m	ade 🛛 Manip	ulated				
Stream Quality ^a : (check one)	🗆 High	⊠ Mo	oderate	□ Low					

Waterbody ID: SLEB120i

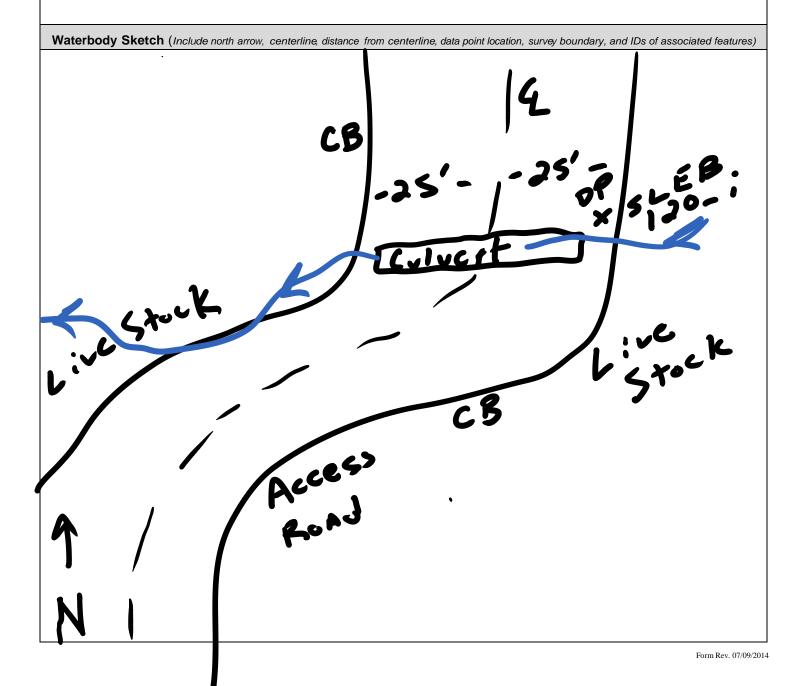
High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

Degraded perennial stream in livestock pasture. Part of stream is intermittent. Noted bank failures, moderate grade control, weak sinuosity, weak bars and benches, rooted wetland plants in channel, and no macrobenthos.





Waterbody SLEB120i facing south upstream



Waterbody SLEB120i facing northwest downstream



Waterbody SLEB120i facing west across

Survey Description	n									
Project Name:			ody Nam				aterbody ID:			ate:
Southeast Reliability	у	Unnam	ned Trik	outary to H	lackers Creek	S	LEA012		6	/17/2014
State:	County/Paris	ו:	C	Company		Crew I	Member Initials	:	Photos:	
West Virginia	Lewis		١	Natural Re	esource Group	GB, L	_E		3	
Tract Number(s):			N	learest Mile	epost:		Associated W	etland	ID(s):	
02-071			1	1.2			WLEA007			
Survey Type: (check one)	⊠Cente	rline	□Re-Ro	oute	□Access Road		□Other:			
Physical Attributes	S									
Stream Classification: (check one)	□Epher	neral	⊠Interm	littent	□Perennial					
Waterbody Type:										
(check one)	River 🛛	Stream	□ Ditch		anal 🗌 Other	:				
OHWM Width:	OHWM Inc (check all that			Clear lir	ne ⊠Shelvin	a	⊠Wrested	X	Scouring	□Water
<u>3.0</u> ft.				on bank		9	vegetation		looouning	staining
Height:		nt, matted, o	r missing	⊠Wrack li		nd	□Abrupt plan		□Soil cha	aracteristic change
<u>1.25</u> ft. N/A□	veget	ation			debris		community ch	lange		
Width of Waterbody - T Bank to Top of Bank:		Ith of Water		pe of Slope	Width of Waterb Water Edge:	ody - W	ater Edge to	Depth (Approx.)	of Water:	
•	10 1	•	•					(F 4
<u> </u>		<u>_2.0</u> ft.				<u>2.0_</u> ft.		N/A□		<u>.5_</u> ft.
Sinuosity:		ter velocity:			Bank height			Bank s	slope	
(check one)	(Арр	rox.)			Right:	60 4			Right:	CE degrees
		0.	<u>5</u> fps		Left:	<u>6.0</u> ft.			Left:	<u>65</u> degrees
Meanderir	ng N/A					<u>5.5_</u> ft.				50 degrees
Qualitative Attribu	tes									
Water Appearance: (check one)	No water	⊠Clear	□Turbic		leen ⊡Su surface sci		□Algal mats	□Othe	r:	
	Bedrock	Boulder	Cobble	e 🛛 Grave	el 🛛 Sand 🛛	⊠ Silt/ o	clay 🛛 Organic	: 🗆 C	Other:	
(check all that apply) % of Substrate: 1	5_%	%	_ <u>15</u> _%	_ <u>10</u> _%	<u> 10 </u> %	_ <u>10_</u> %	_ <u>40_</u> %			
Width of Riparian Zone		tive Layers:								
ft-		l that apply) BH of Domi	nants:	□ Trees	: [ngs/Shrubs:	\boxtimes	Herbs	
N/A⊠	(approx.)		namo.	<u>i</u> n.	-	in	l.		in.	
Dominant Bank Vegeta										
Fescue, ironweed, o	-	-	•		•	-				
Aquatic Habitats (ex: su	ubmerged or eme	erged aquatic v	regetation,	overhanging	banks/roots, leaf pac	ks, large	e submerged wood	, riffles,	deep pools)	:
Leaf packs										
Aquatic Organisms Ob	served (list):									
none										
T&E Species Observed	(<i>list</i>):									
none										
Disturbances (ex: livesto			dy, waste o	discharge pipe	es):					
Livestock access, s	everely tran	npled								
Tributary is: (check one)	Natur	al	□ Artif	icial, man-m	ade 🛛 Manip	ulated				
Stream Quality ^a : (check one)	High		□ Mod	erate	⊠ Low					

Waterbody ID:

SLEA012

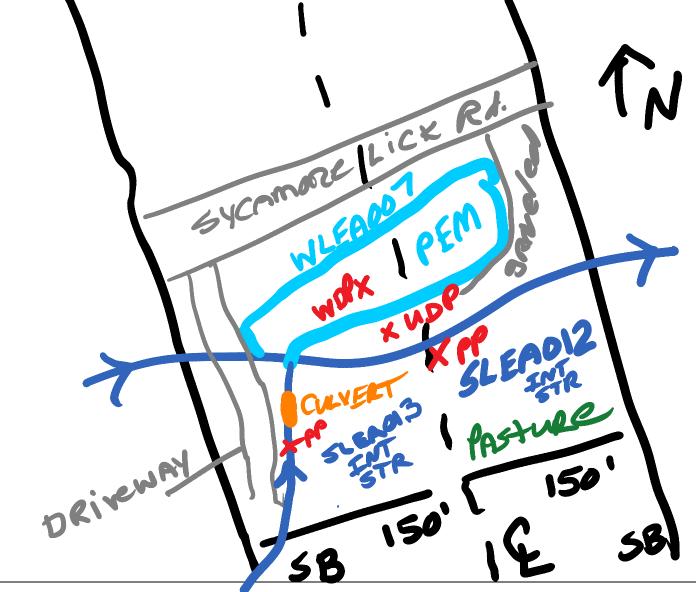
High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

Continues out of corridor both directions, NHD stream





Waterbody SLEA012 facing west upstream



Waterbody SLEA012 facing east downstream



Waterbody SLEA012 facing south across

Survey Description	n							
Project Name:		Waterbody Na				Vaterbody ID:		Date:
Southeast Reliability	У	Unnamed Tr	ibutary to F	Hackers Creek	S	SLEA013		6/17/2014
State:	County/Parish:	·	Company			Member Initials:	Phot	.os:
West Virginia	Lewis		Natural Re	esource Group	GB, L	E	3	
Tract Number(s):			Nearest Mile	epost:		Associated We	etland ID(s)
02-071			11.2			Fringe wetla	nd < 3 ft.	
Survey Type: (check one)	Centerline	e □Re-F	Route	□Access Road		□Other:		
Physical Attributes	S							
Stream Classification: (check one)		al ⊠Inter	mittent	□Perennial				
Waterbody Type:	-							
	River Sti	ream 🗆 Dito	h 🗆 Ca	anal 🛛 🗆 Other	:			
ОНѠМ	OHWM Indica							
Width: <u>3.0</u> ft.	(check all that appl	<i>y)</i>	Clear lir on bank	ne ⊠Shelvin	g	⊠Wrested vegetation	Sco	uring
Height:		matted, or missin	g ⊠Wrack li		nd	□Abrupt plant		oil characteristic change
ft. N/A□	vegetatio	on		debris		community cha	ange	
Width of Waterbody - T			Toe of Slope	Width of Waterb	ody - W	Vater Edge to	Depth of W	ater:
Bank to Top of Bank:	to Toe	of Slope:		Water Edge:		(-	Approx.)	
<u>10.0</u> ft.	-	<u>2.0</u> ft.			<u>2.0_</u> ft.		N/A□	<u>0.25</u> ft.
Sinuosity:	Water	velocity:		N/A□ Bank height			Bank slope	ž
(check one)	(Approx.)			Right:			•	ight:
		<u>0.5</u> fps	i	Left:	<u>3.5_</u> ft.			_ <u>65</u> degrees Left:
⊠Meanderir	ng N/A□				<u>3.5_</u> ft.			65_ degrees
Qualitative Attribu	tes							
Water Appearance: (check one)	No water	Clear □Turb		leen ⊡Su i surface sci		□Algal □ mats]Other:	
	Bedrock 🗆 Bo	oulder 🛛 Cobb	le 🛛 Grave	el 🛛 Sand 🛛	⊠ Silt/ c	clay 🛛 Organic	□ Other	
(check all that apply) % of Substrate: 1:	5_%	% _ <u>_15</u> _%	_ <u>10</u> _%	<u>10</u> %	_ <u>10</u> _%	_ <u>40</u> _%		
Width of Riparian Zone	: Vegetativ	e Layers:						
-	(check all tha		□ Trees	: 🛛 🖂 Saplir	ngs/Shr	rubs: 🛛 🖂 H	Herbs	
<u>ft</u> · N/A⊠	AV G. DBH (approx.)	of Dominants:	_in.	<u> 0.25 i</u>	n.		in.	
Dominant Bank Vegeta	tion (list):							
Fescue, Morrow's h	oneysuckle, Ja	apanese barb	erry, ironw	eed, curly docl	k, oxey	ye daisy, soft	rush, red	l clover, hop sedge
Aquatic Habitats (ex: su	Ibmerged or emerge	d aquatic vegetatio	n, overhanging	banks/roots, leaf pac	ks, large	e submerged wood,	riffles, deep	pools):
none								
Aquatic Organisms Ob	served (list):							
none								
T&E Species Observed	l (list):							
none								
Disturbances (ex: livesto	ock access, manure	in waterbody, waste	e discharge pipe	es):				
Livestock access, s	everely trampl	ed, culvert						
Tributary is: (check one)	[⊠] Natural	nA 🗆	ificial, man-m	ade 🗌 Manip	ulated			
Stream Quality ^a : (check one)	🗆 High		oderate	⊠ Low				

Waterbody ID:

SLEA013

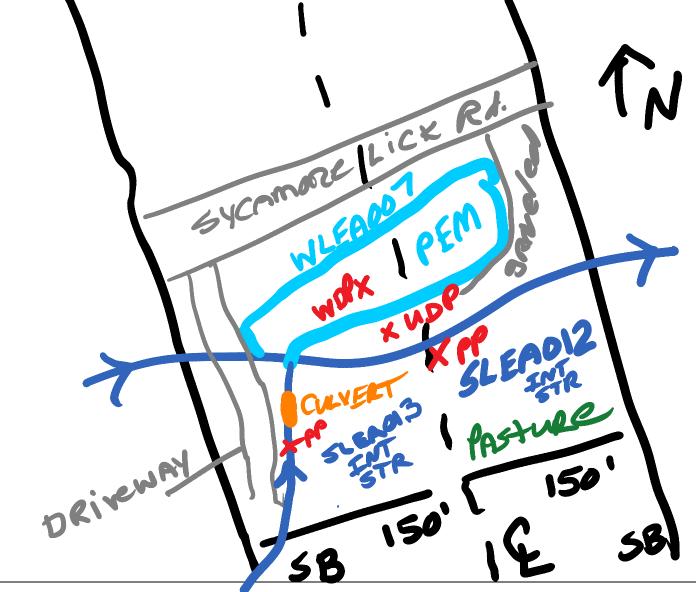
High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

Flows into SLEA012 within corridor, upstream continues out





Waterbody SLEA013 facing southwest upstream



Waterbody SLEA013 facing northeast downstream



Waterbody SLEA013 facing northwest across

L	inear	Waterbo	ody Data	Sheet
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Survey Description	n										
Project Name:		Waterbo	•					/aterbody ID:			ate:
Southeast Reliability	Ý	Unnam	ed Trib	utary to V	Vest R	un	S	LEA014		6	/17/2014
State:	County/Parish:			ompany				Member Initials	s: F	Photos:	
West Virginia	Lewis		Ν	latural Re	esource	Group	GB, L	E		3	
Tract Number(s):			N	earest Mile	epost:			Associated W Fringe wetla	etland	ID(s) 3 ft_fron	
02-076, 02-076			1	1.75				discontinuo	us	5 11. 1101	
Survey Type: (check one)	⊠Centerli	ne	□Re-Ro	ute	□Acc	ess Road		□Other:			
Physical Attributes	S										
Stream Classification: (check one)	Epheme	eral	⊠Interm	ittent	□Per	ennial					
Waterbody Type:	Ephonic					orman					
	River 🛛 S	Stream	□ Ditch	🗆 Ca	anal	□ Other:					
онwм	OHWM India										
Width: <u>3.0</u> ft.	(check all that ap	iply)		Clear lin on bank	ie	□Shelvin	9	⊠Wrested vegetation		Scouring	□Water staining
Height:		, matted, or	missing	⊠Wrack li	ne	⊠Litter an	d	□Abrupt plan		□Soil cha	aracteristic change
<u>0.75_</u> ft. N/A□	vegetat	tion				debris		community ch	nange		
Width of Waterbody - T Bank to Top of Bank:		n of Waterk e of Slope:		e of Slope	Width o Water E		ody - W	ater Edge to	Depth (Approx.)	of Water:	
•	10 10	e of Slope.			water E	uge.			(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		o
<u> 10.0 </u> ft.		<u>_2.0</u> ft.			N/A□	_1	<u>I.0_</u> ft.		N/A□	<u> </u>	<u>.25</u> ft.
Sinuosity:		r velocity:			Bank h	eight			Bank s	lope	
(check one)	(Appro					Right:	F0 #			Right:	EQ degrade
		0.2	<u>25_</u> fps			Left:	<u>5.0_</u> ft			Left:	<u>50</u> degrees
Meanderin	ng N/A□]					<u>5.0_</u> ft.				70_degrees
Qualitative Attribu	tes										
Water Appearance: (check one)	No water	∃Clear	□Turbid		een surface	⊡Sur scu		□Algal mats	□Other	:	
	Bedrock 🗆 E	Boulder D	Cobble	Grave	el ⊠ S	Sand D	⊴ Silt/ o	clay 🛛 Organic	; 🗆 C	Other:	
(check all that apply) % of Substrate: 1	5%	% _2	<u>25</u> _%	_ <u>10</u> _%	<u>10 </u>	%	_ <u>10</u> _%	_ <u>30</u> _%			
Width of Riparian Zone	: Vegetati	ve Layers:									
ft.	(check all th	nat apply) H of Domir	ante	⊠ Trees:				ngs/Shrubs:	\boxtimes	Herbs	
N/A⊠	(approx.)		iants.	<u>12.0</u> in	•	_	0.50	n.	_	in.	
Dominant Bank Vegeta Shagbark hickory, b		nito ook k	alack or	ok multifl	ora roc	o hono		la facaua irr	2014/00	d orobo	ordarace
-	-					-					-
Aquatic Habitats (ex: su	ibmerged or emerg	ged aquatic ve	egetation,	overhanging	banks/roo	ts, leaf pack	ks, large	e submerged wood	i, riffles, o	deep pools)	:
none	- // >										
Aquatic Organisms Ob	served (list):										
none											
T&E Species Observed	(list):										
none											
Disturbances (ex: livesto			ly, waste d	lischarge pipe	es):						
Livestock access, s	everely traffic	Jeu									
Tributary is: (check one)	Natural		🗆 Artifi	cial, man-m	ade	🗆 Manipu	ulated				
Stream Quality ^a : (check one)	\Box High		□ Mode	erate		🛛 Low					

Waterbody ID:

SLEA014

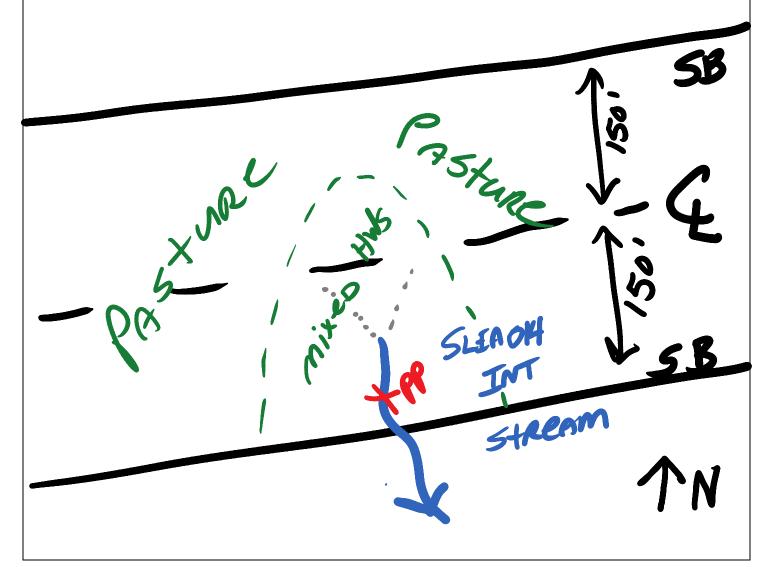
High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

Origin within corridor where two erosional features converge, downstream continues out of corridor, severely impacted by cattle.





Waterbody SLEA014 facing northeast upstream



Waterbody SLEA014 facing southwest downstream



Waterbody SLEA014 facing northwest across

Survey Description	n								
Project Name:		Waterbody				Vaterbody ID:		Dat	
Southeast Reliability	y	Unnamed	Tributary to	West Run	S	SLEB013		6/1	17/2014
State:	County/Parish:		Company			Member Initials	: F	Photos:	
West Virginia	Lewis		Natural I	Resource Group	TP, S	SK		3	
Tract Number(s):			Nearest M	ilepost:	1	Associated W	etland	ID(s)	
02-077			11.9			WLEB008			
Survey Type: (check one)	⊠Centerlir	ne 🗆 R	e-Route	□Access Road	k	□Other:			
Physical Attributes	S								
Stream Classification: (check one)	□Epheme	ral ⊠Ir	ntermittent	□Perennial					
Waterbody Type:									
	River S	tream 🗆 I	Ditch 🗆	Canal	r:				
ОНШМ	OHWM Indic (check all that app			line Chabrin			_		
Width: ft.	(check an that app	<i>(</i> , <i>y</i>)	□ Clear on bank	line Shelvir	ig	⊠Wrested vegetation		Scouring	□Water staining
Height:		matted, or mis	sing □Wrack		nd	⊠Abrupt plan		□Soil char	acteristic change
<u>0.50_</u> ft. N/A□	vegetat	ion		debris		community ch	ange		
Width of Waterbody - T			y - Toe of Slop	be Width of Waterb	ody - V	Vater Edge to	Depth ((Approx.)	of Water:	
Bank to Top of Bank:	to lo	e of Slope:		Water Edge:			(Αρριοχ.)		
<u>3.5</u> ft.		<u>_1.0_</u> ft.		N/A□	<u>0.5_</u> ft.		N/A□	0.12	<u>25 f</u> t.
Sinuosity:	Water	r velocity:		Bank height			Bank s	lope	
(check one)	(Approx			Right:				Right:	
		0.10	_fps	Left:	<u>2.0</u> ft	t.		Left:	<u>35</u> degrees
Meanderir	ng N/A□]			<u>3.0_</u> ft				<u>5</u> degrees
Qualitative Attribu	tes								
Water Appearance: (check one)	No water	Clear □T			irface um	□Algal [mats	Other	:	
	Bedrock 🗆 B	Boulder 🛛 🖂 Co	obble 🛛 Gra	avel 🛛 Sand	Silt/	clay 🗆 Organic)ther:	
(check all that apply) % of Substrate:	%	% 10_	<u>% _10_%</u>	<u> </u>	_70_%	<u> </u>			
Width of Riparian Zone	: Vegetativ	ve Layers:							
-	(check all th	at apply)	□ Tree	•	-	ubs: 🛛 🖂 H	lerbs		
<u>ft</u> · N/A⊠	AVG. DBI (approx.)	H of Dominant	:s:i	n. <u>0.50</u>	_in.		in		
Dominant Bank Vegeta	tion (list):								
Autumn olive, Morro	ow honeysuck	de, multiflora	a rose, blac	kberry, hop sedo	ge, orc	chardgrass, fe	escue,	oxeye da	aisy
Aquatic Habitats (ex: su	Ibmerged or emerg	ed aquatic veget	ation, overhangir	ng banks/roots, leaf pao	cks, large	e submerged wood	, riffles, c	leep pools):	
none									
Aquatic Organisms Ob	served (list):								
none									
T&E Species Observed	(list):								
none									
Disturbances (ex: livesto	ock access, manure	e in waterbody, w	aste discharge p	ipes):					
Livestock access									
Tributary is: (check one)	Natural		Artificial, man-	-made 🛛 Manip	oulated				
Stream Quality ^a : (check one)	\Box High	\boxtimes	Moderate	□ Low					

Waterbody ID: SLEB013

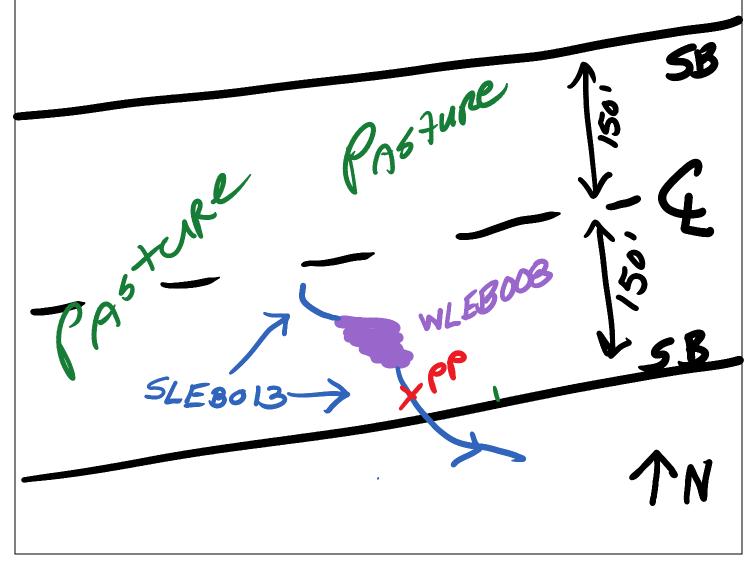
High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

Origin within corridor at a headcut, downstream continues out of corridor, loses channel for a stretch where wetland WLEB008 is located.





Waterbody SLEB013 facing south upstream



Waterbody SLEB013 facing north downstream



Waterbody SLEB013 facing west across

Survey Description	า							
Project Name:		Waterbody Na				/aterbody ID:		Date:
Southeast Reliability	/	Unnamed Ti	ributary to V	Vest Run	S	LEB012		6/17/2014
State:	County/Parish:		Company:		Crew I	Member Initials:	Photos	:
West Virginia	Lewis		Natural Re	esource Group	ΤP		3	
Tract Number(s):			Nearest Mile	epost:		Associated Wet	land ID(s):	
02-077			12			none		
Survey Type: (check one)	⊠Centerline	e □Re-I	Route	□Access Road		□Other:		
Physical Attributes	5							
Stream Classification: (check one)		al 🗆 Inte	rmittent	⊠Perennial				
Waterbody Type: (check one)	River 🛛 Str	eam 🗆 Dite	ch 🗆 Ca	anal 🗌 Other	:			
OHWM Width: _ <u>2.0</u> ft.	OHWM Indica (check all that apply		⊠ Clear lir on bank	ne ⊠Shelvin	g	□Wrested vegetation	Scourir	ng ⊡Water staining
Height: 	□Bent, r vegetatio	natted, or missir n	ng	ne □Litter ar debris	nd	□Abrupt plant community char		characteristic change
Width of Waterbody - T Bank to Top of Bank:	op of Width o to Toe	of Waterbody - of Slope:	Toe of Slope	Width of Waterbo Water Edge:	ody - W	Ater Edge to A	epth of Wate	er:
<u>_3.0</u> ft.		<u>1.5_</u> ft.			<u>.25_</u> ft.		′A□	<u>0.25</u> ft.
Sinuosity: (check one) □Straight ⊠Meanderir	(Арргох.)	velocity: _1.0_fps	3	Bank height Right: Left:	<u>1.0</u> ft. 2_ft.	B	ank slope Righ Le	85 degrees
Qualitative Attribu								<u></u> aog.coo
Water Appearance: (check one)	No water 🛛 🖾	Clear 🗆 Turb			rface um	□Algal □ mats	Other:	
Substrate: (check all that apply) % of Substrate:	Bedrock 🗆 Bo			el 🛛 Sand 🛛		clay □ Organic %	□ Other: %	
Width of Riparian Zone ft. N/A⊠	(check all that		□ Trees		∃ Saplii _ <u>0. i</u> n.	ngs/Shrubs: 	⊠ Herbs in.	
Dominant Bank Vegeta Orchardgrass, fescu		umn olive, ho	neysuckle					
Aquatic Habitats (ex: su Moderate to strong				-	-	-	ffles, deep poo	ols):
Aquatic Organisms Ob Fish, Gambusia	served (list):							
T&E Species Observed none	(list):							
Disturbances (ex: livesto	ock access, manure i	n waterbody, wast	e discharge pipe	es):				
Agriculture, right ba	nk is pasture,	left bank cuto	over, chann	elized, possible	e strai	ghtened		
Tributary is: (check one)	⊠ Natural	□ Ar	tificial, man-m	ade 🗆 Manip	ulated			
Stream Quality ^a : (check one)	□ High	⊠ Mo	oderate	□ Low				

Waterbody ID: SLEB012

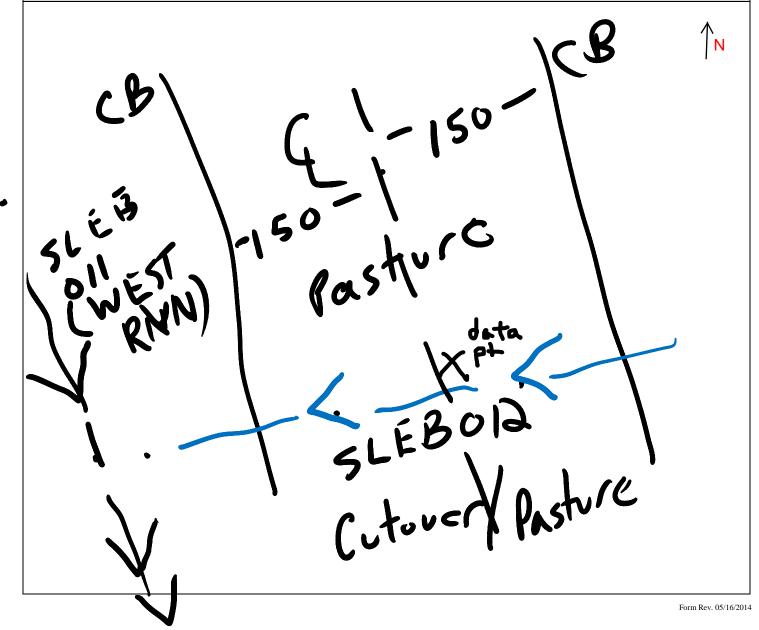
High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

Stream is surrounded by hay pasture on right bank. Tributary to West Run.





Waterbody SLEB012 facing northwest upstream



Waterbody SLEB012 facing southeast downstream



Waterbody SLEB012 facing north across

Survey Description	n	1						1	
Project Name:		Waterbody Na	me:			Vaterbody ID:			Date:
Southeast Reliability	y	West Run			S	SLEB011		e	6/17/2014
State:	County/Parish:	I	Company:		Crew I	Member Initials:	l	Photos:	
West Virginia	Lewis		Natural Re	esource Group	ΤP			3	
Tract Number(s):			Nearest Mile	epost:	l	Associated We	etland	ID(s):	
02-077			12.0			WLEB007e			
Survey Type: (check one)	⊠Centerline	e □Re-F	Route	□Access Road		□Other:			
Physical Attributes	S								
Stream Classification: (check one)	□ Ephemera	al 🗌 Inter	rmittent	⊠Perennial					
. ,	Ephemen								
Waterbody Type: (check one)	River 🛛 Str	ream 🗆 Dito	ch 🗆 Ca	anal 🗌 Other	:				
онwм	OHWM Indica								
Width: <u>8</u> ft.	(check all that appl	y)	Clear lir on bank	ne 🗆 Shelvin	g	☐Wrested vegetation	\boxtimes	Scouring	□Water staining
Height:	□Bent, r	natted, or missin	ng ⊡Wrack li		nd	□Abrupt plant		□Soil ch	aracteristic change
ft. N/A□	vegetatio	n		debris		community cha	ange		
Width of Waterbody - T Bank to Top of Bank:			Toe of Slope	Width of Waterb Water Edge:	ody - W		Depth Approx.)	of Water	
	to 10e	of Slope:		water Euge.		(-	Αρριολ.)		o ==
<u>_12_ft</u> .	-	<u>7_</u> ft.		N/A□	<u>5_</u> ft.		N/A□	-	<u>0.75_</u> ft.
Sinuosity:	Water	velocity:		Bank height			Bank s	lope	
(check one)	(Approx.)	-		Right:				Right:	
g		<u>_0.75</u> _fps	S	Left:	<u>3_</u> ft.			Left:	<u>70</u> degrees
⊠Meanderir	ng N/A□				<u>4</u> ft.				85 degrees
Qualitative Attribu	tes								
Water Appearance: (check one)	No water	Clear □Turb	oid ⊡Sh	ieen 🗆 Sui	rface	□Algal □	∃Othei	r.	
· · · ·				surface sci		mats		•	
Substrate:	Bedrock 🗆 Bo	oulder 🗆 Cobb	ole 🛛 Grave	el 🛛 Sand 🛛	⊠ Silt/ o	clay 🗆 Organic		Other:	
% of Substrate:	%	_%	_% <u>5</u> %	<u> 10 % </u>	<u>85 </u> %	%		%	
Width of Riparian Zone	: Vegetative	e Layers:							
	(check all that	apply)	⊠ Trees	:	🛛 Saplii	ngs/Shrubs:		Herbs	
<u>ft</u> . N/A⊠	Avg. DBH (approx.)	of Dominants:	<u>4</u> in.	-	<u>2</u> in.		_	in	
Dominant Bank Vegeta	tion (list):								
black willow, elderbo	erry, locust, fe	scue, poison	ivy						
Aquatic Habitats (ex: su	Ibmerged or emerge	d aquatic vegetatio	on, overhanging	banks/roots, leaf pac	ks, large	e submerged wood,	riffles,	deep pools	.):
Strong riffle/pool co	•	benches, ove	erhanging trees	and roots					
Aquatic Organisms Ob	served (list):								
Crawfish									
T&E Species Observed	(list):								
none									
Disturbances (ex: livesto	ock access, manure i	n waterbody, waste	e discharge pipe	es):					
Agriculture, right ba	nk is pasture,	left bark mixe	ed hardwoo	ds					
Tributary is: (check one)	[⊠] Natural	□ ∧	tificial man	ado 🗆 Maria	ulatad				
Stream Quality ^a :		⊔ Ar	tificial, man-m	ade 🗆 Manip	uiated				
(check one)	\Box High	⊠ Mo	oderate	□ Low					

Waterbody ID: SLEB011

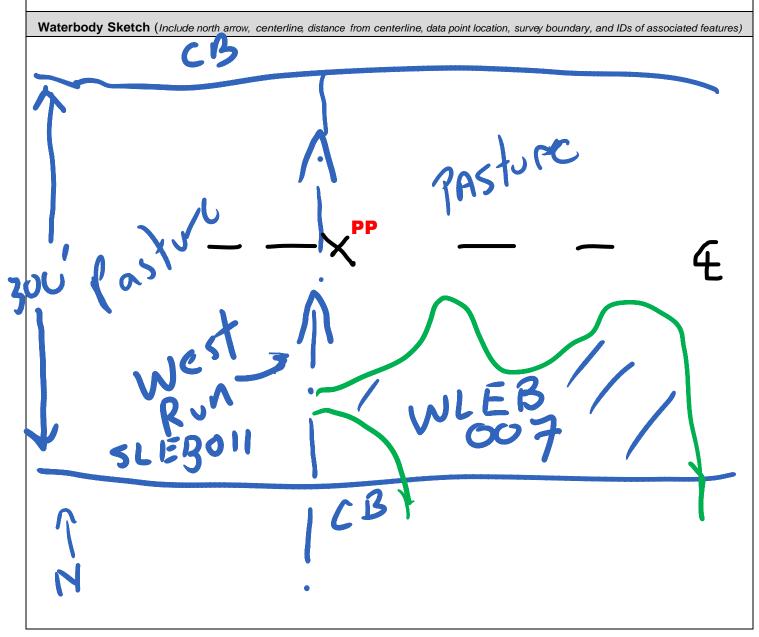
High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

Stream is surrounded by hay pasture on right bank. WLEB007 drains into creek.





Waterbody SLEB011 facing west upstream



Waterbody SLEB011 facing north downstream



Waterbody SLEB011 facing northwest across

Survey Description	า							i	
Project Name:		Waterbody Nar				Vaterbody ID:		Da	
Southeast Reliability	ý	Unnamed I	ributary to	Hackers Creek	S	LEB010		6/1	17/2014
State:	County/Parish:		Company:		Crew I	Member Initials:		hotos:	
West Virginia	Lewis		Natural Re	esource Group	ΤP		3	5	
Tract Number(s):			Nearest Mile	epost:		Associated We	tland I	D(s):	
02-084			12.55			none			
Survey Type: (check one)	⊠Centerline	e □Re-F	Route	□Access Road		□Other:			
Physical Attributes	5								
Stream Classification: (check one)		al ⊠Inter	mittent	Perennial					
Waterbody Type:									
	River 🛛 Str	eam 🗆 Dito	h 🗆 Ca	anal 🗌 Other	:				
онwм	OHWM Indica								
Width: _ <u>4_</u> ft.	(check all that apply	/)	Clear lir on bank	ne ⊡Shelvin	g	⊠Wrested vegetation	⊔s	Scouring	□Water staining
Height:	□Bent, n	natted, or missin	g ⊡Wrack li	ne 🗆 Litter ar	nd	□Abrupt plant		Soil char	acteristic change
<u>0.5_</u> ft. N/A□	vegetatio	n	-	debris		community cha	inge		-
Width of Waterbody - T			Foe of Slope	Width of Waterb	ody - W			f Water:	
Bank to Top of Bank:	to Toe	of Slope:		Water Edge:		(#	Approx.)		
<u>8</u> ft.		<u>5</u> ft.			<u>2_</u> ft.	N	I/A□	<u>0.</u>	<u>1</u> ft.
Sinuosity:	Water	velocity:		Bank height			Bank slo	ope	
(check one)	(Approx.)			Right:				Right:	
		<u>0.5</u> fps		Left:	<u>6</u> ft.			Left:	70 degrees
⊠Meanderin	ng N/A□				<u>3</u> ft.				<u>20</u> degrees
Qualitative Attribu	tes								
Water Appearance:	No water	Clear ⊠Turb	id □Sh	neen 🗆 Su	rfaqq		Other:		
				i surface sci		□Algal □ mats	Jourier.		
Substrate:	Bedrock 🗆 Bo	ulder 🗆 Cobb	le 🛛 Grav	el 🛛 Sand 🛛	⊠ Silt/ o	clay 🗆 Organic	□ Ot	her:	
% of Substrate:	%	_%	% <u>10</u> %	<u>_30 %</u>	<u>60</u> %	%		%	
Width of Riparian Zone	: Vegetative	E Layers:							
-	(check all that	apply)	☑ Trees			ngs/Shrubs:	ΠH	lerbs	
<u>ft</u> . N/A⊠	Avg. DBH (approx.)	of Dominants:	<u>8</u> in.		<u>2</u> in.			in.	
Dominant Bank Vegeta Orchardgrass, red fes	. ,	ss, black willow	v, rusty blac	khaw, honeysuc	kle bus	sh, multiflora ros	se		
Aquatic Habitats (ex: su	bmeraed or emeraed	aquatic vegetation	n. overhanging	banks/roots, leaf pac	ks. large	submerged wood.	riffles, de	ep pools):	
none			,	··· · · · · · · · · · ·	-, - 5-	, je start je	,		
Aquatic Organisms Ob	served (list):								
none									
T&E Species Observed	(list):								
none									
Disturbances (ex: livesto	ock access, manure i	n waterbody, waste	e discharge pipe	es):					
Agriculture, grazing									
Tributary is: (check one)	[⊠] Natural	□ Art	ificial, man-m	ade 🗆 Manip	ulated				
Stream Quality ^a : (check one)	□ High	□ Mc	derate	⊠ Low					

Waterbody ID: SLEB010

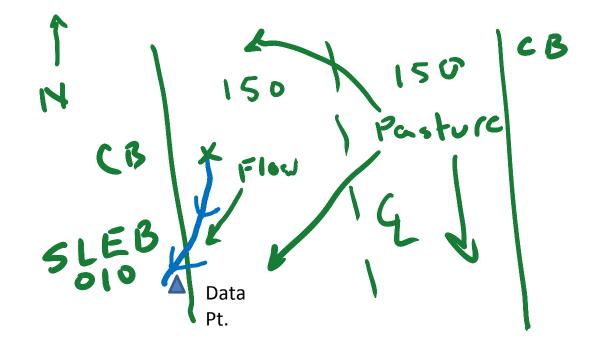
High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

Stream is surrounded by hay pasture.





Waterbody SLEB010 facing south upstream



Waterbody SLEA010 facing north downstream



Waterbody SLEB010 facing east across

Linear Waterbody Data Sheet	:
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Survey Description								
Project Name:		Waterbody Nar	ne:		v	/aterbody ID:		Date:
Atlantic Coast Pipelin	e	UNT to Lifes	Run		S	LEC001		5/12/2015
State: C	County:		Company:		Crew I	Member Initials:	Photos:	
3	ewis		NRG		CR, A	AS	SLEC00	1_001-003
Tract Number(s):			Nearest Mile	epost:		Associated Wetla	and ID(s):	
02-090			13.3			None		
Survey Type: (check one)		□Re-F	Route	⊠Access Road		□Other:		
Physical Attributes								
Stream Classification: (check one)	⊠Ephemera	l ⊡Inter	mittent	Perennial				
Waterbody Type:								
	River 🛛 Stre	eam 🗆 Dito	:h □ Ca	anal 🗌 Other:				
OHWM Width:	OHWM Indicat (check all that apply		🛛 Clear lir	e 🗆 Shelving	q	□Wrested		g ⊡Water
<u>2</u> ft.			on bank	·	5	vegetation	·	staining
Height: ft. N/A□	□Bent, m vegetatio	natted, or missin n	g □Wrack li	ne □Litter ar debris	nd	□Abrupt plant community chang		haracteristic change
Width of Waterbody - To			Toe of Slope	Width of Waterbo	ody - W	ater Edge to De	pth of Wate	r:
Bank to Top of Bank:	to Toe	of Slope:		Water Edge:		(Арг	brox.)	
<u>5</u> ft.		<u>5_</u> ft.		N/A□	<u>0.5_</u> ft.	N/A		<u>1_</u> ft.
Sinuosity:	Water	velocity:		Bank height			nk slope	
(check one)	(Approx.)			Right:	0 4		Right	
_		<u>_0.5</u> _fps		Left:	<u>2</u> ft.		Left	<u>40</u> degrees
Meandering	N/A□				<u>2</u> ft.			40 degrees
Qualitative Attribute	es							
Water Appearance: (check one)	lo water ⊠C	Clear □Turb		een ⊡Sur surface scu		□Algal □O mats	ther:	
Substrate:	Bedrock 🗆 Bo	ulder 🗆 Cobb	le 🛛 Grave	el 🛛 Sand 🛛	⊠ Silt/ o	clay 🗆 Organic	Other:	
(check all that apply) % of Substrate:	%	%	<u>% 10 %</u>	20 %	<u>70_</u> %	%	%	
Width of Riparian Zone:								
width of Riparian Zone:	Vegetative (check all that	-	□ Trees	: 2	🛛 Sapliı	ngs/Shrubs:	⊠ Herbs	
<u>ft</u> . N/A⊠	Avg. DBH (approx.)	of Dominants:		_in	<u>2</u> in.	-		
Dominant Bank Vegetati	on (list):							
Dactylis, Multiflora Ro	ose, Sneezew	veed, Dandeli	on, Red Cl	over, Henbit				
Aquatic Habitats (ex: sub	merged or emerged	aquatic vegetatio	n, overhanging	banks/roots, leaf pac	ks, large	submerged wood, riff	les, deep pool	s):
None								
Aquatic Organisms Obse	erved (list):							
None								
T&E Species Observed (list):							
None								
Disturbances (ex: livestoc	k access, manure ir	n waterbody, waste	e discharge pipe	es):				
Access by cattle, ma	nure in water	oody, stream	flows throu	ugh a culvert ur	nder th	ne access road		
Tributary is: (check one)	Natural	□ Art	ificial, man-m	ade 🛛 🖾 Manipi	ulated			
Stream Quality ^a : (check one)	□ High	⊠ Mc	oderate	□ Low				

Waterbody ID: SLEC001

^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:

	WIECOOL
25' 25'	
	\rightarrow
PR / PR	
Crimer, SJEC001	K
Curr	
	\checkmark
	Ň
/	·



Waterbody SLEC001 facing east upstream



Waterbody SLEC001 facing north across



Waterbody SLEC001 facing west downstream

Linear Waterbody	y Data S	sheet										
Survey Description	า											
Project Name:			Vaterbo	-					Waterbody ID:			Date:
Atlantic Coast Pipeli	ne	L	JNT to	Lifes	Run				SLEC002		5	5/12/2015
State:	County:				Company:			Crew	Member Initials	5:	Photos:	
West Virginia	Lewis				NRG			CR,	AS		SLEC002	2_001-003
Tract Number(s):					Nearest Mi	epost:			Associated W	etland	ID(s):	
02-090 Survey Type:					13.3				None			
(check one)	□Cei	nterline		□Re-R	oute	⊠A	ccess Road		□Other:			
Physical Attributes	6											
Stream Classification: (check one)	Ept	hemeral		⊠Interr	nittent	□P	erennial					
Waterbody Type:												
	River	⊠ Strea	Im	Ditc	h 🗆 (Canal	□ Other:					
OHWM Width:	OHWM (check all t	Indicato that apply)	r:		⊠ Clear I	ine	Shelving	9	□Wrested		Scouring	
<u> 3 </u> ft.					on bank				vegetation			staining
Height: _ <u>1_</u> ft. N/A□		Bent, ma getation	itted, or	missinę	g ⊡Wrack	line	□Litter an debris	nd	□Abrupt plar community cl		□Soil ch	aracteristic change
Width of Waterbody - To Bank to Top of Bank:		Nidth of			oe of Slop		of Waterbo	ody - V	Water Edge to	Depth (Approx.	of Water:	
<u>_5 f</u> t.	-		ft.				- J	<u>2</u> ft.				<u>0.5</u> ft.
Sinuacity		Notorius	lecitur			N/A 🗆	haisht			N/A□ Benk		
Sinuosity: (check one)		Water ve (Approx.)	locity:			Dank	height Right:			Bank	Right:	
□Straight			_0	<u>.5_</u> fps			-	<u>1.5_</u> f	t.		•	90 degrees
⊠Meanderin	n Bi	N/A□					Left:	<u>1.5_</u> f	t.		Left:	90 degrees
Qualitative Attribut	tes											
Water Appearance: (check one)	No water	⊠Cle	ear	□Turbi		heen n surfac	⊡Sur e scu		□Algal mats	□Othe	er:	
Substrate:	Bedrock	Boul	der [Cobb					clay		Other:	
(check all that apply)									, 0			
% of Substrate:	%		_%		% <u>10</u> %	_	%	<u>90_</u> %	»%	'	%	
Width of Riparian Zone	-	etative l	•		— —		_			_		
<u>ft</u>		ck all that ap 1. DBH o		ants:	□ Tree	s: in.			lings/Shrubs:	Σ	☑ Herbs	
N/A⊠ Dominant Bank Vegeta	(appr		-				-	in.				
Henbit, Red Clover,		n, Keni	tucky t	oluegr	ass, butte	ercup						
Aquatic Habitats (ex: su	bmerged or e	emerged a	iquatic ve	egetatior	n, overhangin	g banks/re	oots, leaf pacl	ks, larg	e submerged wood	l, riffles,	deep pools):
None												
Aquatic Organisms Ob	served (list	t):										
Boatmen												
T&E Species Observed	(list):											
None												
Disturbances (ex: livesto					• • •	,	مىلىمىد		the energy	.		
Access by cattle, ma		waterbo	buy, st	ream	nows info	uyn a	cuivert ur	iuer	une access fo	au		
Tributary is: (check one)	□ Na	atural		🗆 Arti	ficial, man-i	nade	🛛 Manipu	ulated				

Stream Quality^a: (check one)

🗆 High

⊠ Moderate

Waterbody ID: SLEC002

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:

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

VCC DE

Multifilla Bre Autumn di E



Waterbody SLEC002 facing north upstream



Waterbody SLEC002 facing east across



Waterbody SLEC002 facing south downstream

Naterbody Data Shee	et					
Survey Description	an a	and the second	an a		ana na mana ana amin'ny faritr'o amin'ny faritr'o amin'ny faritr'o amin'ny faritr'o amin'ny faritr'o amin'ny fa	
Project Name:	Waterbo	ody Name:	nandaraan talahaan ka sa waxay waxaa dabah yang waxaa ka ka dhad	Waterbody ID:		Data
PCP		T TO LIFES	RUN	SLEHC	∇I	Date:
State: County:	and an address of the second	Company: DD	1 JEST Crew Ma	ember Initials: Pr		9-30-14
WV Lewis	•	Dekente	JU,		1010 10(3).	3
Tract Number(s): Unlabeled pa	real	Milepost Entry:	Milepost Exit:	Associated Wetl	and ID(s):	
south of a	22-086			SURGA	.,	
Survey Type:	Constant of the second s					
		Re-Route	Access Road	Other:		
Physical Attributes		anningen gesternen in der Stan ein der hin Stan und der Standers sind an gesternen.	an al an in an in a star in a s	MY COLORISM (MARK 1997) (MY COLORISM) (MY CO		
Stream Classification:	Ephemeral X		2	******		
Waterbody Type:	:5000000000000000000000000000000000000	Intermittent	Perennial			
(check one) XI Stream	River D	itch Pond	Lake Conne	ecting swale a	Other:	
	OHWM Indicator:					
Width:ft.	(check all that apply)	Clear line on bank	Shelving	Wrested vegetation	Scouri	ng Water staining
Height:ft.	Bent, matted, or missing vegetation	on Wrack	Litter and debris	Abrupt plar	nt 👘	Soil characteristic
Width of Waterbody - Top of Top of Bank at Centerline:	Bank to Wid	th of Waterbody - M	later Edge to	Depth of Water		change
.5 #	at at	er Edge at Centerlir	ie:	(Approx.)		
Sinuosity:	Water velocit	- <u>-</u>	ft. Bank height		4 inchest	
(check one)	(Approx.)		Right:		Bank slope Righ	t. 1
Meandering		2 fps		<u> </u>	rugn	t: <u>40</u> degrees
/-\			Left:	ft.	Lef	t: 40 degrees
Qualitative Attributes				антария 1999 — Аралия Калана, со станов, рока с станова со станование 1999 — Прогоссия Калана, со станова со станование	L	deglees
Vater Appearance: check one) No wate	r 🔀 Clear 🔲 1		Freed .	Jogensel Toursenador	ni cha vara ca a ca	
		urbid Sheen		Algai C mats	Other:	
Bubstrate: Eedrock	Gravel	Sand 🕅	Silt/clay	Organic C)ther:	
	%%	%	90	ID	·····	
Vidth of Riparian Zone:	Vegetative Layers:		10 %	10_%	204) 304-247 (2016) (2014) 47 (2012)	%
5	(check all that apply) Avg. DBH of Domina	Trees:	5 8	Shrubs:		Herbs
ominant Bank Vegetation:	(approx.)		2 in.	1-3	in,	
FAGUS GEANDIT	ala Richard		\i	1 (1 ()	MICROS	tegun Ulmu
quatic Habitats (ex: submerged o	or emerged aquatic vegetation	argutus, E	laeagnus u	mbellata,	12-	rulti Storm
small pools in	Aquistic V	e C	lear packs, large submerged	wood, riffles, deep pools):	
quatic Organisms Observed	: maric V	<u> </u>			an a	
wasive and/or T&E Species (Observed:	a na na ann an an an an an an an an an a				
Elocagnus (1	1 01 0	0	$r \rho l$			
ributary is: 0		Kossa mul	h Hors	THE PARTY STOLEN AND INCOMES IN THE REAL PROPERTY.	Canada ay by containing managements and	
isturbances:	atural	Artificial, man-made	Manipulated			
neck all that apply)		Manure in vaterbody]Waste discharge pipes	Other:		
tream Quality ^b :	igh 🔲	Aoderate 🕅	Low	THE RECEIPTION OF THE RECEIPTION OF THE PARTY OF THE PART		
		[mar	3			

Waterbody ID: SLEHOD Connecting swales are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting. ^b 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 Waterbody Sketch Include north arrow, conterline, distance from conterline, photo locations, survey boundary, and unique IDs of associated features. Stehoo UPLINE



Waterbody sleh001 facing upstream



Waterbody sleh001 facing downstream

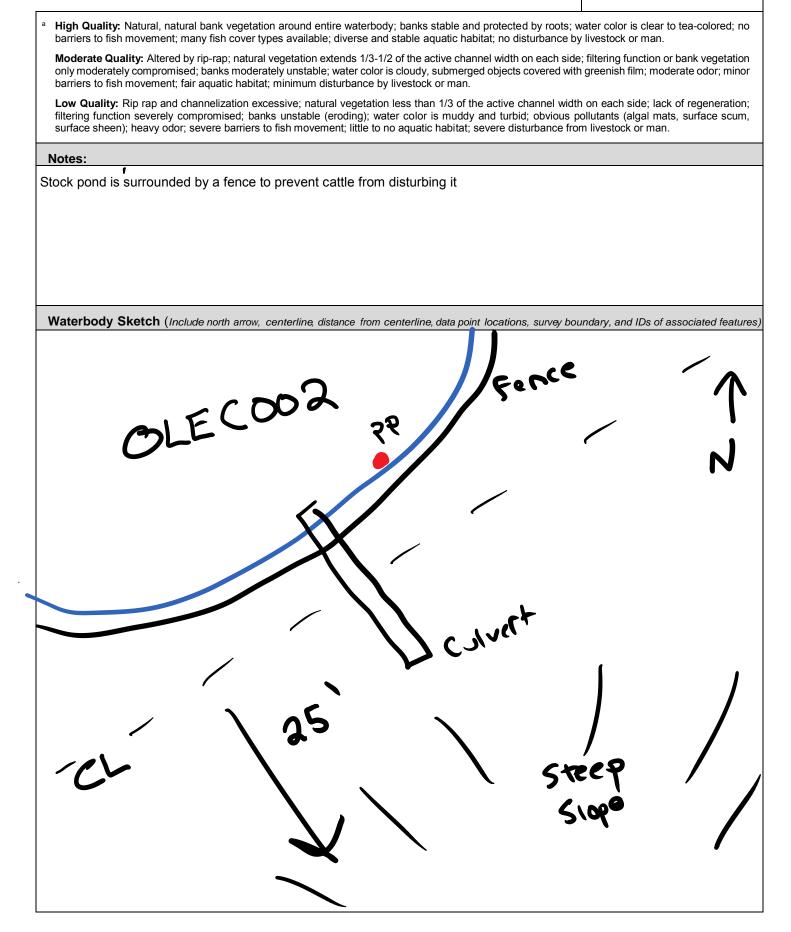


Waterbody sleh001 facing upline cross stream

Open Waterbod	ly Dat	ta Sheet									
Survey Descripti	on										
Project Name:		l l	Vaterbody	y Name:				Waterbody ID:		Date:	
Atlantic Coast Pip	eline	ι	Jnname	d Pond				OLEC002		5/12/20 ⁻	15
State:	Count	y:		Comp	any:		Crew	Member Initials:	Photos:		
Virginia	Lewis	i		NRG	ì		CR,	AS	OLEC0	02_001-	003
Tract Number(s):				Neare	st Milepost:			Associated Wetlan	d ID(s):		
02-090 AR 231b				13.8				None			
Survey Type: (check one)				∃Re-Rou	ite I	⊠Access R	oad	□Other:			
Physical Attribut	es										
Waterbody Type: (check one) Stor	ck Pond	I 🗆 Natural I	Pond 🗆 I	Lake 🗆	Reservoir] Impoundr	nent 🗆	Oxbow D Other:			
Hydrologic Regime:	⊠ P	ermanently F	looded	□ Semi	permanently I	Flooded		sonally Flooded	Temporaril	v Flooded	1
онwм		OHWM Indica		_ 00///			_ 0000			,	
Height:		(check all that app			Clear line on bank	e ⊡SI	nelving	□Wrested vegetation	□Scou	ıring	□Water staining
<u>NA</u> ft.		⊟Bent, vegetati		missing	□Wrack line	□Li debi	tter and ris	□Abrupt pla community c	nt □Soil ch hange	aracteristi	c change
Depth of Water:			Bank he	ight (ave	erage):			Bank slope (av	erage):		
N/A□	_ft.				<u>12</u> ft.				<u>70</u> degree	S	
Qualitative Attrib	outes										
Water Appearance: (check one)	□No w	/ater ⊠C	ilear 🛛	∃Turbid	□Sheer on surfa]Surface cum	e □Algal [mats	∃Other:		
Substrate: (check all that apply)	□ Bed	rock 🗆 Boi	ulder 🗆	Cobble	□ Gravel	⊠ Sand	⊠ Si	ilt/ clay 🛛 Organic	□ Other:		
% of Substrate:		_%	_%	%	%	<u> 50 </u> %	50	_%%		%	
Width of Riparian Zo	ne:	Vegetative	-		_						
ft.		(check all that a	oply)		□ Trees:		□ Sa	plings/Shrubs:	⊠ Her	os	
N/A⊠		Avg. DBH o	f Domina	nts:	in.		in.				
Dominant Bank Vege	tation	(approx.)									
Juncus effuses, r		. ,	cup, elyn	nus							
Aquatic Habitats (ex: s	submerge	d or emerged aqu	atic vegetatio	n, overhang	ing banks/roots, le	af packs, large	submerge	d wood, riffles, deep pools	, etc.) :		
Deep pool											
Aquatic Organisms C	Observe	ed (list):									
Tadpoles and frog	gs pres	sent									
T&E Species Observe	ed (list):	:									
None											
Disturbances (ex: live	stock ac	cess, manure in	waterbody	, waste dis	scharge pipes):						
None											
Waterbody is: (check one)		Natural		⊠ Artific	ial, man-made	e 🗆 Ma	anipulate	ed			
Waterbody Quality ^a : (check one)	:	□ High		⊠ Mode	rate	□ Low					

Waterbody ID:

OLEC002





Open waterbody OLEC002 facing north



Open waterbody OLEC002 facing south



Open waterbody OLEC002 facing west

Linear Waterbod	y Data	Sheet											
Survey Description	n												
Project Name: Atlantic Coast Pipel	ino		Waterbo Lifes Rເ	•	ne:				aterbody ID: LEC005			Date: 5/13/2015	
· · ·					-							5/15/2015	
State:	County				Company:				lember Initials	5:	Photos:		•
West Virginia	Lewis				NRG			CR, A				005_001-00	3
Tract Number(s):					Nearest Mile	post:			Associated W	etland	I ID(s):		
02-090 – AR 248					n/a				None				
Survey Type: (check one)		Centerline	[□Re-R	Route	⊠Acces	s Road		□Other:				
Physical Attributes	S												
Stream Classification: (check one)		Ephemeral	I [Inter	mittent	⊠Peren	nial						
Waterbody Type: (check one)	River	⊠ Stre	am	□ Ditc	h □ Ca	anal 🗆	Other	:					
OHWM Width: _22_ft.		M Indicate all that apply)			⊠ Clear lin on bank	e 🗆	Shelvin	g	□Wrested vegetation		Scouring	g ⊡Wate staining	
Height: 2_ft. N/A□		⊠Bent, m vegetatior	-	missinę	g ⊠Wrack lii		Litter ar bris	nd	□Abrupt plar community ch		⊡Soil c	haracteristic ch	lange
Width of Waterbody - T Bank to Top of Bank:	op of		f Waterb of Slope:	ody - T	Foe of Slope	Width of Water Edg		ody - W	ater Edge to	Depth (Approx.	of Wate	r:	
<u>_25_</u> ft.			<u>5_</u> ft.			N/A□		<u>20_</u> ft.		N/A□		<u>1.5</u> ft.	
Sinuosity: (check one)		Water v (Approx.)	•	1 fps			ight:	<u>5_</u> ft.		Bank	Right	70 degrees	3
⊠Meanderir	ng	N/A□	_				Left:	<u>5</u> ft.			Left	t: <u>70</u> degrees	6
Qualitative Attribu	tes												
Water Appearance: (check one)	[]] No wate	r ⊠C	lear	□Turbi		een surface	⊡Sui sci		□Algal mats	□Othe	er:		
	Bedroc	k 🗆 Bou	ulder 🗆	Cobb	le 🛛 Grave	el 🛛 Sa	nd 🛛	⊠ Silt/ c	lay 🗆 Organio		Other:		
(check all that apply) % of Substrate:	%	<u> 10 </u> %	<u>2</u>	<u>20 </u> %	<u> 10 </u> %	<u> 50 </u> %	6 <u>-</u>	<u>10_</u> %	%)	%		
Width of Riparian Zone		egetative			⊠ Trees:		D	⊲ Saplin	igs/Shrubs:	D	∃ Herbs		
<u>10 ft</u> . N/A□	(á	vg. DBH (of Domin	ants:	<u>8</u> in.			<u>2</u> in.	0				
Dominant Bank Vegeta Box Elder, Virginia (•		Mustar	d, Bin	idweed, Sy	camore,	Salix	exigua	1				
Aquatic Habitats (ex: su	Ibmerged	or emerged	aquatic ve	getatior	n, overhanging	banks/roots,	leaf pac	ks, large	submerged wood	l, riffles,	deep pool	s):	
Riffles and deep po	ols												
Aquatic Organisms Ob None	served (list):											
T&E Species Observed	(list):												
None													
Disturbances (ex: livesto			-		• • •	,			_				
Stream flows under bridge construction Tributary is:	a bride	ge of an stream b	access ed.	road	and there i	s some o	disturb	ance f	from cattle.	There	is som	e fill from the	е
(check one)	\boxtimes	Natural		□ Art	ificial, man-m	ade 🗆	Manip	ulated					
Stream Quality ^a : (check one)		High		⊠ Mo	derate		Low						

Waterbody ID: SLEC005

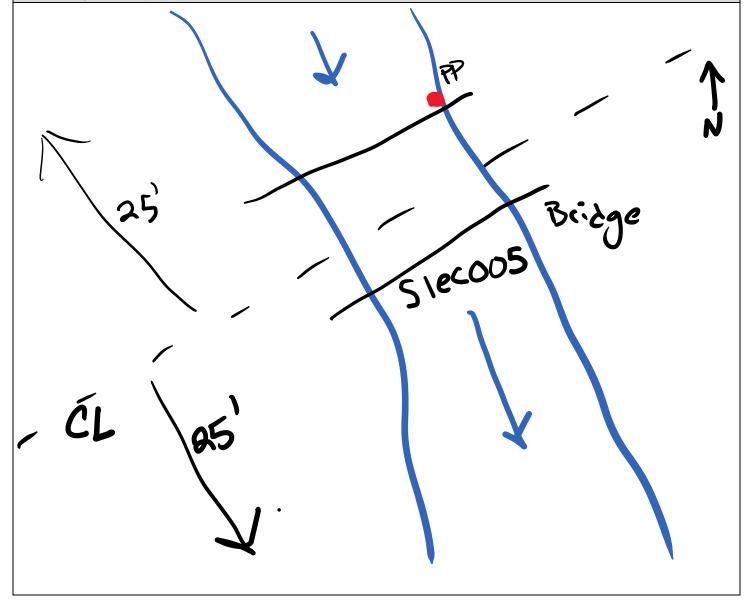
High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

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





Waterbody SLEC005 facing south upstream



Waterbody SLEC005 facing east across

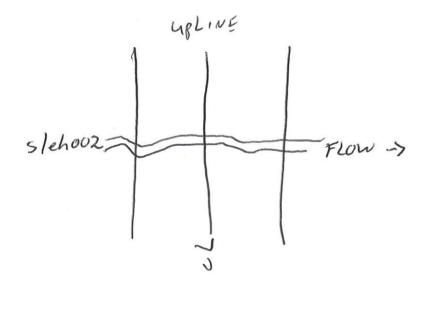


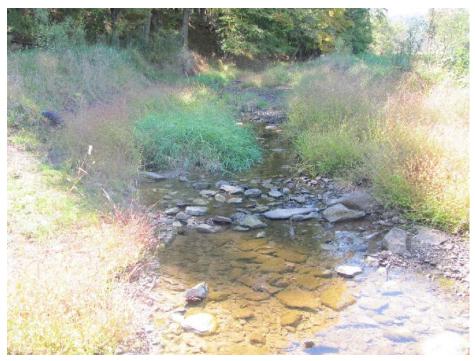
Waterbody SLEC005 facing north downstream

Naterbody Da	ta Sheet							
Survey Descri	the second se				****			
Project Name:		101-1-1						
ACP		Waterbo CAG	ody Name: TLIFES RU	N		Waterbody ID		Date: 9-30-14
State: Count	WIS		Company: DDUEST	13 bir 30 TTTTTTTTTT	14 ST-	ember Initials:		SLEH002: 3
Tract Number(s):	₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩		Milepost Entry:	Milonast	JD'I			0EE11002. 0
	-090		intepost Linty.	Milepost E	:XII:	Associated W		and a series and a series stand stand series and a series of the series of
Survey Type: (check one)	Centerline	Internet of the second s	Re-Route	Access R	oad	C Other:	International Constitution	1900) 149 (W. Y. MILLON & MILLON
Physical Attrib		ana ang kanalan ta sa ang kanal	ለመሆ የሆነ ይህ መስጠር የመለግ ግር እና ይህ መስጠር በመስጠር መስከተለ ይሆን የሆነ ምሳታ		antenno parrier arter	Annual Street St	an a	and 2 a rule of a constraint of the state of t
Stream Classificat (check.one)	ion:		Intermittent	Perennial	6-99-76-66-64 - 199-76-69-76-6		49549 8295 - 55 449 - 56 49 - 55 55 55 55 56 4 4 6 6 7 55 56 7 56 7 5	den man an a
Waterbody Type: (check one)	Stream	Di		Lake	Conn	ecting swale ^a	Other:	
MWHC	OHWW India (check all that ap	cator:				-	Karagoona Maragoona	
Width: 15	ft.		Clear line on bank		helving	Wrested	on Sco	uring Water staining
Height: 2 Nidth of Waterbod	ft. Bent, missing	natted, or J vegetatio	on line	de	tter and ebris	Abrupt p	lant [lity change	Soil characteristic change
op of Bank at Cer	nterline:	Wate	th of Waterbody - W er Edge at Centerlin	ater Edge t e:	0	Depth of Wate (Approx.)	er at Centerlin	
inuosity:			1	_ ft.				, ft.
heck one)	Straight (Approx	er velocity x.)	/: C	Bank hei			Bank slope	
1		X		K	ght:	Źń.	Rig	th: <u>30</u> degrees
7	Meandering		fps	۱ ۱	eft:	ft.	L	.eft: 40 _{degrees}
Qualitative Attr		2						
Vater Appearance: check one)	No water X Clea	ar [] T	urbid Sheen	· · · · · · · · · · · · · · · · · · ·	Surface	Algal	Other:	
ubstrate:	Bedrock Grav	/el		Silt/clay	processory .	mats Organic	Other:	alan managan dalam da kanangan pengangan dalam pengangan dalam seri kanangan dalam seri kanangan dalam seri ka Mangan dalam kanangan dalam pengangan dalam pengan dalam kanangan menangan pengan dalam seri kanangan dalam seri
of Substrate:	20 % 60) %	200 %	20%				n na sa
Vidth of Riparian Z	one: Vegetative I (check all that ap	Lavers	Trees:	<u> </u>	na mana na man Ina mana na mana	%		<u>%</u>
<u>5</u> ft.	Avg. DBH o	f Domina		in.	l	Shrubs:	in.	Herbs
ominant Bank Vec	geniculata	-, pa	stere gr	ASSES				TING A GAMETERSTING FROM A LOOP AND A CONTRACT OF THE CONTRACT AND
quatic, Hadritats (ex.	submerged or emerged aquat	lic vegetation	o, overhanging banks/roots,	leaf packs, large	submerged	l wood, riffles, deep po	ols):	
nuglia Armaniana	Observed: 5kn/ks mul			10.11.4 MINING TO LONG TO 10.10		na wany na 2122 a tanàn amin'ny taona mampika dia kaominina dia kaominina dia kaominina dia kaominina dia kaomi		
vasive and/or T&E	Species Observed:				Artification and the second and	an Baaran Barra - Alar Andre an Barra - Angrain Rowan an A	THE STREET OF THE OWNER OF THE STREET	
NON				HIEF - THEY BE MITTED THE POLITIC TO	and the Draw Solution			
ibutary is: eck one)	Natural		vtificial, man-made	Manin	ulated			
ibutary is:	Natural Livestock access	RIM	Artificial, man-made Manure in arterbody	Manip Waste disc pipes	NAMES OF TAXABLE PARTY.	Other	**************************************	

Waterbody ID: slehoo2 High Quality: Natural, natural bank vegetation around entire waterbody; 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 by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or bank 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: 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:

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





Waterbody sleh002 facing upstream



Waterbody sleh002 facing downstream



Waterbody sleh002 facing upline cross stream

Linear Waterbod	y Data Shee	et						
Survey Description Project Name:	n	Waterbody Nar	ne:		Wa	aterbody ID:		Date:
Atlantic Coast Pipel	ine	UNT to Lifes				.EC003		5/12/2015
State:	County:		Company:		Crew M	ember Initials:	Photo	us:
	Lewis		NRG		CR, A	S	SLEC	003 001-003
Tract Number(s):			Nearest Mile	epost:		Associated We		—
02-091 - AR 232			14			None		
Survey Type: (check one)		e □Re-F	Route	⊠Access Road		□Other:		
Physical Attribute:	S							
Stream Classification: (check one)	Epheme	ral ⊠Inter	mittent	Perennial				
Waterbody Type: (check one)]River ⊠ St	ream 🗆 Ditc	h □ Ca	anal 🗌 Other:	:			
OHWM Width: _ <u>4_ft</u> .	OHWM Indic (check all that app		⊠ Clear lin on bank	ne 🗆 Shelving	g	□Wrested vegetation	Scou	ring ⊟Water staining
Height: ft. N/A□	□Bent, vegetati	matted, or missin on	g	ne □Litter ar debris	nd	□Abrupt plant community cha		il characteristic change
Width of Waterbody - T Bank to Top of Bank:		of Waterbody - of Slope:	Foe of Slope	Width of Waterbo Water Edge:	ody - Wa		Depth of Wa Approx.)	iter:
<u>8</u> ft.		<u>2</u> ft.		N/A□ -	<u>3</u> ft.	1	N/A□	<u>0.3</u> ft.
Sinuosity: (check one) □Straight	Water (Approx	velocity:) 		Bank height Right: Left:	<u>3</u> ft.	E	-	Jht:
⊠Meanderir	ng N/A□				<u>3_</u> ft.		-	<u>80</u> degrees
Qualitative Attribu	tes							
Water Appearance: (check one)	No water	Clear ⊠Turb		leen ⊡Sur i surface scu		□Algal □ mats	∃Other:	
	Bedrock 🛛 B	oulder 🛛 Cobb	le 🛛 Grave	el 🛛 Sand 🛛	⊠ Silt/ cla	ay 🗆 Organic	□ Other:	
(check all that apply) % of Substrate:	%_5_%	% <u>10</u> %	<u>20</u> %	<u> 10 </u> %	<u>55 </u> %	%	%	0
Width of Riparian Zone	Check all the	ve Layers: at apply)	□ Trees	s: D	⊠ Saplino	gs/Shrubs:	⊠ Herb	s
<u>10 ft</u> - N/A□	(approx.)	I of Dominants:		_in	<u>2</u> in.			
Dominant Bank Vegeta		wakla Darajar		0				
Sensitive fern, bitter	•		-			· · · ·		
Aquatic Habitats (ex: su Pools and riffles	bmerged or emerge	ed aquatic vegetation	n, overhanging	banks/roots, leaf pac	ks, large s	submerged wood,	riffles, deep p	ools):
Aquatic Organisms Ob None	served (list):							
T&E Species Observed	(list):							
None		:						
Disturbances (ex: livesto Access by cattle, st								
Tributary is: (check one)	□ Natural	□ Art	ificial, man-m	ade 🛛 Manipi	ulated			
Stream Quality ^a : (check one)	□ High	⊠ Mo	derate	□ Low				

Waterbody ID: SLEC003

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:

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

ti cr	て
28	
covert 25	
	L



Waterbody SLEC003 facing southeast upstream



Waterbody SLEC003 facing northeast across



Waterbody SLEC003 facing northwest downstream

Vaterbody Da	ata Sheet						
Survey Descr	iption				an a darawa na farana da katan na farana da sa mana da s		
Project Name:		Waterbody Name:			1 may 2 mart 1 mart		
ACP)	UNT TO LIFES	RUN		Waterbody ID: SLEHO	79	Date: 9-30-1
State: Coun		Company:	T CORD Large THE STATE AND A THE CASE OF	Crew Me	ember Initials: Ph		
	EWIS	DONES	ST	JD,		01010(8):	
Tract Number(s):	all a	Milepost Entry:	Milepost E		Associated Wetle	and ID(s):	
02 Survey Type:	-07/			3	Wehl	06	
(check one)		Re-Route	Access R	oad .	Other:	an a	
Physical Attrik			n da an	1972-1999 - Talifer Island	Examples of the second se	an a	1950 uman ann an Salainn yn mae an a'r bran yn ar
Stream Classificat (check one)		Intermittent	Perennial	*********		ni ni se filizione di su di statuto di su di	
Waterbody Type; (check one)	Águ El		and the second	THE DESIGN NAME OF TAXABLE			
2 DHWM	The state of the s	Level Law Law	Lake	Conn	ecting swale a	Other:	÷
Width: L/	OHWM Indi (check all that a)	cator: pphy) Clear li on ban	ne As	helving	Wrested	Scou	ring Water
Height: 2	ft. Bent, r			itter and	Abrupt plan	t 🚺	Soil characteristic
Vidth of Waterboo op of Bank at Cer	V - Top of Bank to	Width of Waterbody	Mater Edge	ebris to	Depth of Water a		🕇 change 👘 🔪 🏢
	B _{ft.}	Water Edge at Center	ine: ft.		(Approx.)	11	
inuosity: heck one)	Wate	er velocity:	π. Bank he	iaht		Bank slope	t.
Los parters	Straight (Appro			ight: 3	Υ.	Rigi	nt:
X	Meandering	$\angle 2$ fps		_	ft.		n. <u>60</u> degrees
Jualitative Attr				Left: 5	<u>5</u> ft.	s Le	ft: LIO degrees
later Appearance		A	A VANNES VT COVER 100 Car law Viewe		-		-
heck one)	No water Clea	Englands Control	Darrow d	Surface scum	Algal Comats	ther:	
ubstrate:	Bedrock Gra	vel Sand	Silt/clay			ther:	
of Substrate:	6D % 20	2%%	20 %		and "		<u></u>
/idth of Riparian Z		Layers:	<u> </u>) 			%
<u>20</u> ft.	Avg. DBH c	of Dominants:	2	K	Shrubs:		Herbs 🌑
ominant Bank Veç	getation:	·,	<u>O</u> in.	<u>A.</u>	and a second sec	in.	
Frax!	nus albo	Prunes serge			icaarund		Phytolacca.
iuatic Habitats (ex	submerged or emerged aqua	tlic vegetation, overhanging banks/root	s, leaf packs, large	e submerged	wood, riffles, deep pools)		american
Juatic Organisms	Observed: ter skate-	<	an a				
asive and/or T&E	Species Observed:	n M N		a for the second se			
Z/QCC butary is:	ignus lem	bellete					
sturbances:	Natural	Artificial, man-made	Manip	oulated		ann Christ San Marcal ann an Tagagar a' g a san ann an	anna a shakara ku ana a sana a sana a sana a sa a sa s
℃k all that apply)	Livestock	Manure in waterbody] Waste disc		Other:	2., s	
eam Quality ^b : ^{eck one)}	L] High	Parameter and a second s			the states of th		
		N. Contraction of the second s					State of the second sec

Form	Rev.	2/21/2014

15 8

Waterbody ID: Star SLEHC

^a Connecting swales are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b 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.

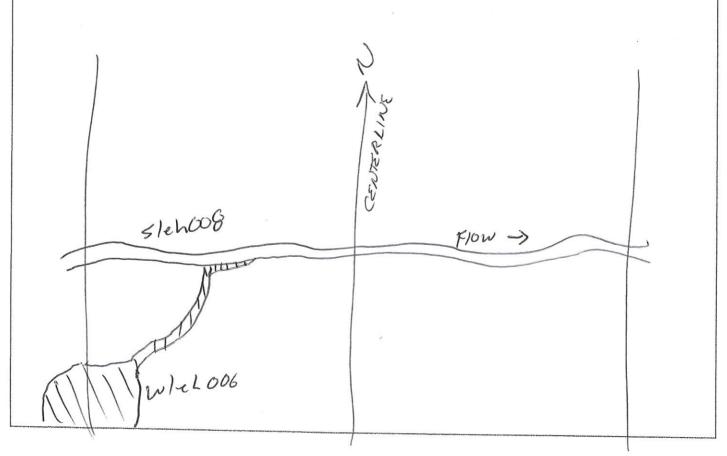
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate 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

Waterbody Sketch

Include north arrow, centerline, distance from centerline, photo locations, survey boundary, and unique IDs of associated features.



Form Rev. 2/21/2014



Waterbody sleh009 facing upstream



Waterbody sleh009 facing downstream



Waterbody sleh009 facing upline cross stream

Linear Waterbody Data Sheet

Survey Description	1	-							
Project Name:		Waterbody Na				aterbody ID:			Date:
Atlantic Coast Pipeli	ne	UNT to Hac	ker's Creel	K	sl	ea081			11/16/2015
State:	County:		Company:		Crew I	Member Initials:	:	Photos:	
West Virginia	Lewis		NRG		GB, D	DQ		3 phot	os
Tract Number(s):			Nearest Mile	epost:		Associated W	etland	ID(s):	
02-094; access road	1 02-092-AR1		14.8			wlea084			
Survey Type: (check one)		e □Re-F	Route	⊠Access Road		□Other:			
Physical Attributes	5								
Stream Classification: (check one)	□ Ephemera	al ⊠Inter	rmittent	Perennial					
Waterbody Type:	•								
	River 🛛 Str	eam 🗆 Dito	ch 🗆 Ca	anal 🗌 Other	:				
онwм	OHWM Indicat						_		
Width: ft.	(check all that apply	/)	Clear lir on bank	ne ⊡Shelvin	g	□Wrested vegetation	\boxtimes	Scouring	g □Water staining
Height:	□Bent, n	natted, or missin	ng ⊡Wrack li	ne ⊠Litter ar	nd	□Abrupt plant		□Soil c	haracteristic change
ft. N/A□	vegetatio	n		debris		community cha	ange		
Width of Waterbody - To Bank to Top of Bank:		of Waterbody - of Slope:	Toe of Slope	Width of Waterb Water Edge:	ody - W		Depth (Approx.)	of Wate	:
		•		water Luge.			(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		0.00 #
<u>8.0</u> ft.		<u>3.0</u> ft.		N/A□	<u>3.0</u> ft.		N/A□	-	<u>0.20</u> ft.
Sinuosity:	Water	velocity:		Bank height			Bank s	slope	
(check one)	(Approx.)			Right:				Right	
		<u>0.50</u> fp	S	Left:	<u>5.0</u> ft.			Left	<u>75</u> degrees
Meanderin	9 N/A□				<u>4.0</u> ft.				60 degrees
Qualitative Attribut	es								
Water Appearance: (check one)	No water ⊠C	Clear 🗆 Turb		neen ⊡Sui n surface sci		□Algal [mats	□Othe	r:	
	Bedrock 🗆 Bo	ulder 🛛 Cobb	ole 🛛 Grav	el 🛛 Sand 🛛	⊠ Silt/ c	lay 🛛 Organic		Other:	
(check all that apply) % of Substrate:	_%	_% <u>25</u> %	<u> 5 </u> %	<u>15</u> %	<u>45_</u> %	<u> 10 </u> %		%	
Width of Riparian Zone	Vegetative	E Layers:							
-	(check all that	apply)	☐ Trees			ngs/Shrubs:		Herbs	
<u>ft</u> . N/A⊠	avg. DBH (approx.)	of Dominants:	<u>8.0</u> in	· -	_ <u>0.50_</u> i	n.			
Dominant Bank Vegetat	tion (list):								
Sycamore, box elde	r, multiflora ros	se, Morrow's	honeysuck	le, greenbrier,	fescue	e, buttercup, o	dock,	aster	
Aquatic Habitats (ex: su	bmerged or emerged	d aquatic vegetatio	n, overhanging	banks/roots, leaf pac	ks, large	submerged wood,	, riffles,	deep pool	s):
Leaf packs									
Aquatic Organisms Obs	served (list):								
none									
T&E Species Observed	(list):								
none									
Disturbances (ex: livesto	ck access, manure i	n waterbody, waste	e discharge pipe	es):					
Livestock access, cu	ulvert crossing	for existing r	road						
Tributary is: (check one)	⊠ Natural	□ Ar	tificial, man-m	ade 🗆 Manip	ulated				
Stream Quality ^a : (check one)	□ High		oderate	⊠ Low					

Waterbody ID:

slea081

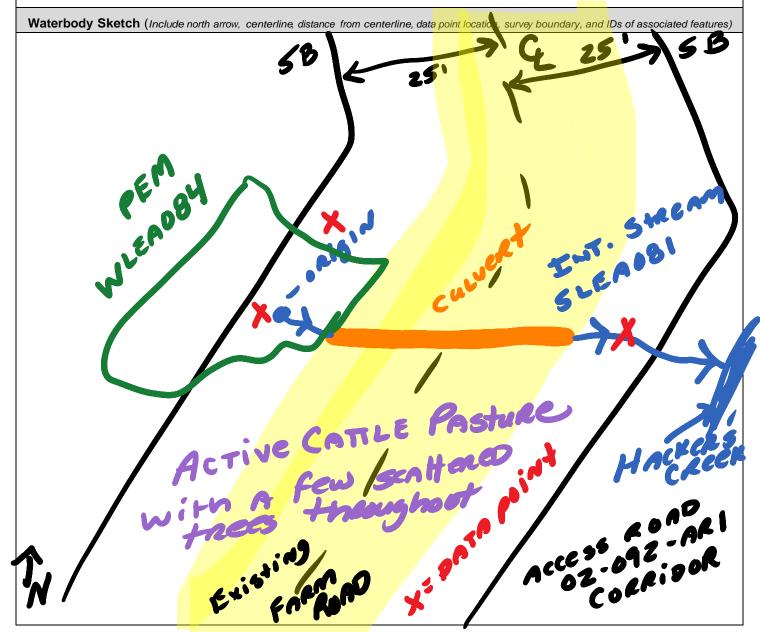
High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

Stream begins within PEM wetland wlea084; downstream continues out of corridor and flows into Hacker's Creek. There is a culvert crossing for existing road. Stream is in very poor condition due to cattle trampling.





Waterbody SLEA081 facing northwest upstream

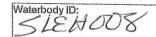


Waterbody SLEA081 facing southeast downstream



Waterbody SLEA081 facing northeast across

Waterbody Data She	et						
Survey Description	n an	ann an Anna Anna Anna Anna Anna		a a to find the grade of the spectral	n mana ay ana ana ang ang ang ang ang ang ang ang		
Project Name:	11.1.~.4	erbody Name:	a Wata Second and American Contra and American	14° al Jugato da Talman de La Cardo			
ACP			RERS		Waterbody ID:		Date:
State: County:		el ci	RERS		SLETID	$\mathcal{O}\mathcal{X}$	9-30-14
WV Lew	15	Company:		Crew Me	mber Initials:	hoto ID(s):	
		DOWEST		20,1			3
Tract Number(s):		Milepost Entry:	Milepost E	1 '	Associated We	fland (B)(a)	an general allow and a balance and a second seco
02-096	1						
Survey Type:	(NON	E	
(chack one)	Centerline	Re-Route	Access R	oad	Other:		na mar ann an an an an an an ann an ann an ann an a
Physical Attributes			an a			ning ang daga ang dag	
Stream Classification:	Ephemeral	/ Intermittent		1967 - 1968 - 1969 - 1979 - 1979 - 1979 - 1979 - 1979 - 1979 - 1979 - 1979 - 1979 - 1979 - 1979 - 1979 - 1979	*******	an an the state of the	
Waterbody Type:		Intermittent	Perennial				
Waterbody Type: (check one)		Ditch Pond	Lake	Conne	ecting swale ^a	Other:	an fa fan skriften fan fan fan fan fan fan fan fan fan fa
онум	OHWIVI Indicator: (check all that apply)					Kanada	
Width:ft.	1	Clear lin on bank	e []s	helving	Wrested vegetatio	n Scou	ring Water staining
Height:ft. Width of Waterbody - Top o	Bent, matted missing vege	etation line	de	tter and ebris	Abrupt pl communi	ant	Soil characteristic change
Top of Bank at Centerline:		Width of Waterbody - V Water Edge at Centerli	Vater Edge i	o	Depth of Wate		
S ft.		2/			(Applox.)	1 10	
Sinuosity:	Water velo	peify:	_ ft.			and a second sec	ft.
(check one)	(Approx.)		Bank he	ight: 1		Bank slope	
		$\underline{<5}_{\text{fps}}$		gin. [ft.	Rigi	ht: $\underline{3D}_{degrees}$
Meanderir Meanderir	ng	fps		Left: 2		le	eft: 20
Qualitative Attributes					<u> </u>		<u>30</u> degrees
Water Appearance:		13					
(check one)	ter 🔲 Clear 🚺	Turbid Sheer	Parament	Surface	Algai	Other:	
Substrate: Bedroc	k 🕅 Gravel		Silt/clay		mats Organic		
	12				Organic	Other:	
% of Substrate:	<u>% 60</u> %	%	40%	,	%		0/
Midth of Riparian Zone:	Vegetative Layer (check all that apply)		Product of the second sec		4	N TO THE TRADUCT OF STATES	%
<u>25</u> ft.	Avg. DBH of Don (approx.)	ninants:	10_in.	X	Shrubs: 2	_ in,	Herbs
Dominant Bank Vegetation:	ba, pol	stichumac	ostend	les. E	Placagn		o Ola. A.
Aquatic Habitatanex: submerged	d on emerged aquatic vege						
Mittle, pour	5						
quatic Organisms Observe		New Concern State And Concerns and Annual State of the Concern Stat	Name a succession of the succession of the	F Street of Landson and Lot SA Albert	97 Y 26 Y 2		and a star where any second star and a star of the second star star and the second star star and the second st
vasive and/or T&E Species	Observed:	Ola Ca	a diga any management of the same of the same of the same	an a garant any social data of the course of the	and a product of the state of the	and a share with the second	
ributary ie.	Natural	Artificial, man-made	[mu]	••••••••••••••••••••••••••••••••••••••	ng Provinsi Santa Sa	WI Service - Decision - To any or any other services	ang panang kanang ka
heck all that apply)	Livestock	Manure in	Manij Waste disc		Other:		
tream Quality ^b :	access	waterbody	pipes	.	learning outlot,		
	High	Moderate D	Low				



^a Connecting swales are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b 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.

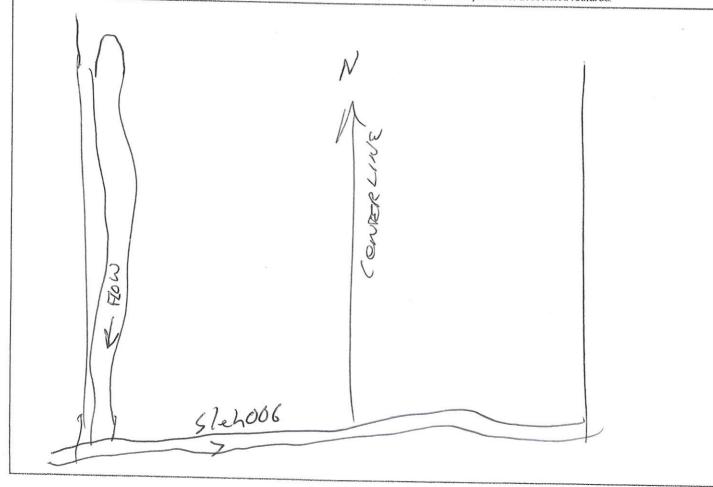
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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

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Notes

Waterbody Sketch

Include north arrow, centerline, distance from centerline, photo locations, survey boundary, and unique IDs of associated features.





Waterbody sleh008 facing upstream



Waterbody sleh008 facing downstream



Waterbody sleh008 facing upline cross stream

Survey Description	I								
Project Name:		Waterbody Nar				aterbody ID:			Date:
Atlantic Coast Pipelir		UNT to Hacl		(ea082			11/17/2015
	County:		Company:		Crew I	Member Initials	5:	Photos:	
Ű	_ewis		NRG		GB, E			3 phote	os
Tract Number(s):			Nearest Mile	epost:		Associated W	etland	ID(s):	
02-094; roads 02-095-	A001-AR1 & 02	-094-AR1	14.95			Discontinuous		wetland,	bank failures due to
Survey Type: (check one)		□Re-F	Route	⊠Access Road		□Other:			
Physical Attributes									
Stream Classification: (check one)	□ Ephemera	l ⊠Inter	mittent	Perennial					
Waterbody Type:									
	River 🛛 Stre	eam 🗆 Ditc	h 🗆 Ca	anal 🗌 Other:	:				
ОНШМ	OHWM Indicat								
Width: <u>5.0</u> ft.	(check all that apply	<i>'</i>)	☑ Clear lir on bank	ne 🗆 Shelving	g	□Wrested vegetation	X	Scouring	g ⊟Water staining
Height:	⊟Bent, n	natted, or missing	g ⊡Wrack li	ne 🛛 Litter ar	nd	□Abrupt plar		□Soil cl	haracteristic change
<u>0.75</u> ft. N/A□	vegetatio	n		debris		community ch	nange		
Width of Waterbody - To Bank to Top of Bank:		of Waterbody - 1 of Slope:	Foe of Slope	Width of Waterbo Water Edge:	ody - W	ater Edge to	Depth (Approx.)	of Water	:
10.0 ft.		4.0 ft.		_	4.0 ft.				0.33 ft.
<u></u> ıı.	-	<u>4.0</u> 11.		N/A□ -	<u>4.0</u> 11.		N/A□	-	<u></u>
Sinuosity:		velocity:		Bank height			Bank s	slope	
(check one)	(Approx.)	<i>(</i>		Right:	20 f			Right	
		<u>0.75</u> fps	3	Left:	<u>3.0</u> ft.			Left	<u>40</u> degrees
Meandering	9 N/A□				<u>4.5_</u> ft.				90 degrees
Qualitative Attribut	es								
Water Appearance: (check one)	No water ⊠C	Clear □Turb		leen ⊡Sui surface sci		□Algal mats	□Othe	r:	
	Bedrock 🗆 Bo	ulder 🛛 Cobb	le 🛛 Grave	el 🛛 Sand 🛛	⊠ Silt/ c	lay 🛛 Organio		Other:	
(check all that apply) % of Substrate: 5	_%	_% <u>35</u> %	<u> 10 </u> %	<u> 10 </u> %	<u>30_</u> %	<u> 10 </u> %		%	
Width of Riparian Zone:		•							
ft.	(check all that	apply) of Dominants:	⊠ Trees			ngs/Shrubs:	\boxtimes	Herbs	
<u>n</u> . N/A⊠	(approx.)	of Dominants.	<u>9.0</u> in		_ <u>0.33_</u> i	n.			
Dominant Bank Vegetat		_							
Sugar maple, black I	ocust, multiflo	ra rose, fescu	ie, orchard	grass, vernal	grass,	chicory, clov	ver, da	andelio	n
Aquatic Habitats (ex: sub	omerged or emerged	aquatic vegetation	n, overhanging	banks/roots, leaf pac	ks, large	submerged wood	l, riffles,	deep pool	s):
Scattered emergent	vegetation, sn	nall pools							
Aquatic Organisms Obs	erved (list):								
none									
T&E Species Observed	(list):								
none									
Disturbances (ex: livestoo	ck access, manure ir	n waterbody, waste	discharge pipe	es):					
Livestock access, cu	Ivert crossing								
Tributary is: (check one)	⊠ Natural	□ Art	ificial, man-m	ade 🗌 Manipi	ulated				
Stream Quality ^a : (check one)	□ High		derate	⊠ Low					

Waterbody ID:

slea082

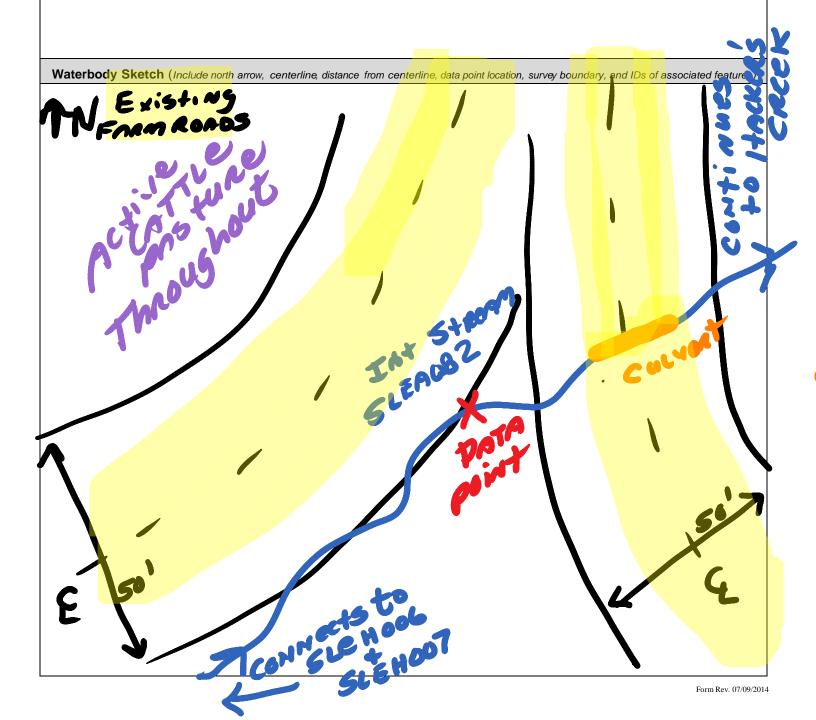
High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

Stream continues out of access road 02-094-AR1 corridor in both directions, culvert crossing for existing farm road (culvert is partially exposed); parallels existing farm road in 02-095-A001-AR1 corridor for long distance; ties to previously delineated streams sleh006 & slea007. Flows through active cattle pasture, stream is severely trampled/degraded with numerous bank failures.





Waterbody SLEA082 facing southwest upstream



Waterbody SLEA082 facing east downstream



Waterbody SLEA082 facing northwest across

Survey Description	n								
Project Name:		Waterbody Na				aterbody ID:			Date:
Atlantic Coast Pipel		UNT to Hack				LEB110			3/30/2015
State:	County:		Company:			Member Initials:	: 1	Photos:	
West Virginia	Lewis		NRG		TP, S			01-03	
Tract Number(s):			Nearest Mile	epost:		Associated W	etland	ID(s):	
02-095			14.55			WLEB106			
Survey Type: (check one)		e ⊠Re-l	Route	□ Access Road		□Other:			
Physical Attributes	S								
Stream Classification: (check one)	⊠Ephemer	al 🗆 Inte	mittent	Perennial					
Waterbody Type:									
(check one)	River St	ream 🗆 Dite	ch 🗆 Ca	anal 🗌 Other	:				
ОНѠМ	OHWM Indica							o .	
Width: <u>2.0 ft</u> .	(check all that app	<i>Y)</i>	⊠ Clear lir on bank	ne ⊡Shelvin	g	□Wrested vegetation	\boxtimes	Scouring	I □Water staining
Height:	□Bent,	matted, or missir	ig	ne 🗆 Litter ar	nd	□Abrupt plant		□Soil ch	naracteristic change
<u>0.25_</u> ft. N/A□	vegetatio	on		debris		community ch	ange		
Width of Waterbody - T Bank to Top of Bank:		of Waterbody - of Slope:	Toe of Slope	Width of Waterb Water Edge:	ody - W		Depth (Approx.)	of Water	:
					40 6				0.1 ft.
<u>4.0</u> ft.	-	<u>1.0</u> ft.		N/A□	<u>1.0</u> ft.	1	N/A□	-	<u>_0.1_</u> n.
Sinuosity:		velocity:		Bank height			Bank s	lope	
(check one)	(Approx.,			Right:	- A			Right:	
		<u>_0.5</u> _fps	3	Left:	<u>5</u> ft.			Left	<u>90</u> degrees
Meanderir	ng N/A□				<u>5</u> ft.				90 degrees
Qualitative Attribu	tes								
Water Appearance: (check one)	No water	Clear □Turb		leen ⊡Sui surface sci		□Algal [mats	□Other	:	
	Bedrock 🗆 Bo	oulder 🛛 Cobl	ole 🛛 Grave	el 🗆 Sand 🛛	⊠ Silt/ c	clay 🗆 Organic		Other:	
(check all that apply)45 % of Substrate:	%	% <u>5</u> %	<u> 5 </u> %	%	<u>90</u> %	%		%	
Width of Riparian Zone									
10 #	(check all tha		□ Trees		•	ngs/Shrubs:		Herbs	
<u>10 ft</u> - N/A□	(approx.)	of Dominants:	in.	-	<u>2</u> in.				
Dominant Bank Vegeta Multiflora rose, red i									
Aquatic Habitats (ex: su		d aquatic vegetatic	n overhanging	banks/roots_leaf.pac	ks large	submerged wood	riffles (deen nools	3):
Cobble			.,		,	,			/-
Aquatic Organisms Ob	served (list):								
None.									
T&E Species Observed	(list):								
None									
Disturbances (ex: livesto		in waterbody, wast	e discharge pipe	es):					
Livestock access, b	ank failures								
Tributary is: (check one)	⊠ Natural	□ Ar	tificial, man-m	ade 🗌 Manip	ulated				
Stream Quality ^a : (check one)	🗆 High		oderate	⊠ Low					

Waterbody ID: SLEB110

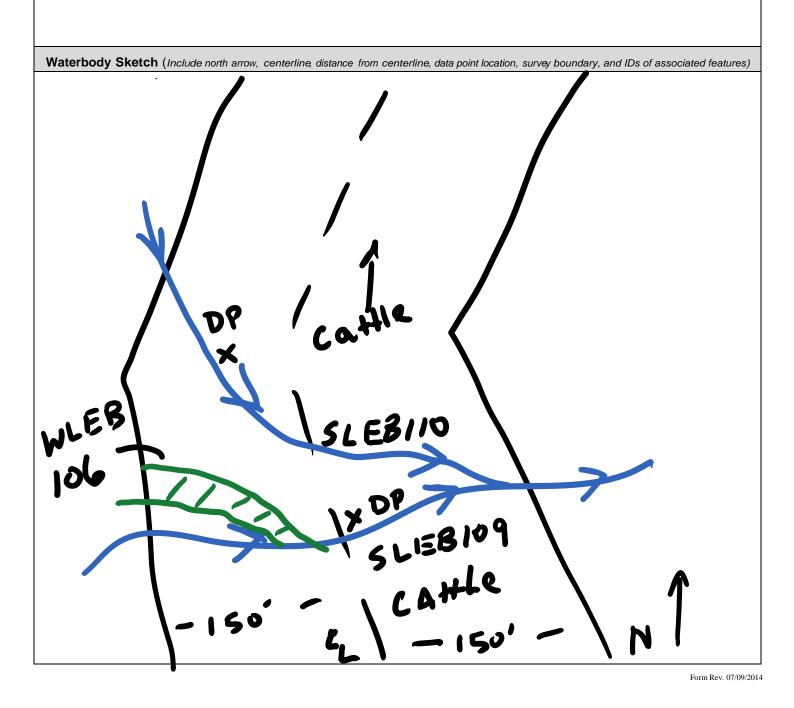
High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

Degraded/erosional gully in cattle pasture. Noted a few bank failures. Rain in last 24 hours contributed to flow. Stream was weakly sinuous, lacked bars and benches, no riffle pool sequence, had moderate grade control, and no roots along bank.





Waterbody SLEB110 facing northwest upstream



Waterbody SLEB110 facing southeast downstream



Waterbody SLEB110 facing northeast across

Survey Description	n								
Project Name:		Waterbody Na	me:		W	aterbody ID:			Date:
Atlantic Coast Pipel		UNT to Hack	ker's Creek			LEB109			3/30/2015
State:	County:		Company:		Crew I	Member Initials:	F	hotos:	
West Virginia	Lewis		NRG		TP, S			01-03	
Tract Number(s):			Nearest Mile	epost:		Associated We	etland I	ID(s):	
02-095, 02-095-A00	01, 02-095-A00)2	14.55			WLEB106			
Survey Type: (check one)		e ⊠Re-F	Route	□Access Road		□Other:			
Physical Attribute	S								
Stream Classification: (check one)	□ Ephemera	al 🛛 🖾 Inter	mittent	□Perennial					
Waterbody Type:	-								
	River Str	eam 🗆 Dite	ch 🗆 Ca	anal 🗆 Other	:				
онwм	OHWM Indica						_		
Width:5ft.	(check all that apply	/)	⊠ Clear lir on bank	ne ⊡Shelvin	g	□Wrested vegetation	\boxtimes	Scouring	g □Water staining
Height:		natted, or missin	ig ⊡Wrack li		nd	□Abrupt plant		□Soil cl	naracteristic change
0.51 N/A□	ft. vegetatio	n		debris		community cha	ange		
Width of Waterbody - T			Toe of Slope	Width of Waterb	ody - W		Depth c	of Water	:
Bank to Top of Bank:	to loe	of Slope:		Water Edge:		(Αρριοχ.)		
<u> </u>		<u>3</u> ft.		N/A□	5	ft.	N/A□		<u>0.2</u> _ft.
Sinuosity:	Water	velocity:		Bank height			Bank sl	lope	
(check one)	(Approx.)			Right:				Right	
		<u>1.5</u> fps	3	Left:	<u>4</u> ft.			Left	<u>80</u> degrees
Meanderin	ng N/A□				<u>4_</u> ft.				<u>85</u> degrees
Qualitative Attribu	tes								
Water Appearance: (check one)	[]] No water ⊠0	Clear □Turb		neen ⊡Sui n surface sci		□Algal [mats	Other:		
	Bedrock 🗆 Bo	oulder 🛛 Cobb	ole 🛛 Grav	el 🛛 Sand 🛛	⊠ Silt/ c	clay 🗆 Organic	□ 0	ther:	
(check all that apply)45 % of Substrate:	%	_% <u>5</u> %	<u> 30 </u> %	<u>45</u> %	<u>20_</u> %	%		%	
Width of Riparian Zone	e: Vegetative	e Layers:							
	(check all that		☑ Trees			ngs/Shrubs:		Herbs	
<u>30 ft</u> - N/A□	арргох.)	of Dominants:	<u>_10_</u> in.	-	<u>2</u> in.				
Dominant Bank Vegeta	tion (list):								
Shag-bark hickory,	red maple, yell	ow birch.							
Aquatic Habitats (ex: su	ubmerged or emerged	d aquatic vegetatio	n, overhanging	banks/roots, leaf pac	ks, large	submerged wood,	riffles, d	leep pool	5):
Cobble, a few debri	s piles								
Aquatic Organisms Ob									
Water striders, mido	ge fly larvae.								
T&E Species Observed	(list):								
None									
Disturbances (ex: livesto	ock access, manure i	n waterbody, waste	e discharge pipe	es):					
Livestock access, b	ank failures								
Tributary is: (check one)	⊠ Natural	□ Ar	tificial, man-m	ade 🗆 Manip	ulated				
Stream Quality ^a : (check one)	□ High		oderate	⊠ Low					

Waterbody ID: SLEB109

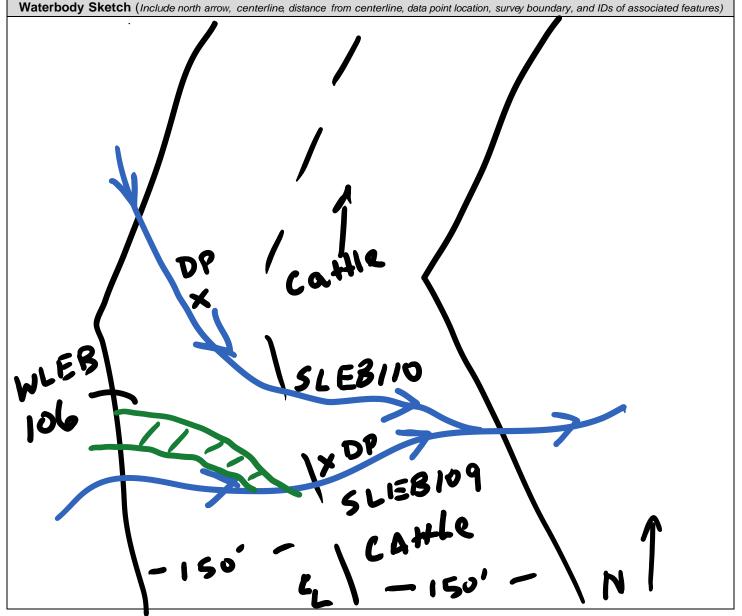
High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

Degraded intermittent stream in cattle pasture. Noted a few bank failures. The only forest buffer is a short segment along the right bank that extends about 100 feet. Rain in last 24 hours contributed to flow. Stream was weakly to moderately sinuous, good bars and benches, weak riffle pool complex, and no roots along bank.





Waterbody SLEB109 facing west upstream



Waterbody SLEB109 facing east downstream



Waterbody SLEB109 facing south across

Survey Descriptio	n								
Project Name:		Waterbody Na	me:		v	Vaterbody ID:			Date:
Atlantic Coast Pipe		UNT to Hac		K		lea079			11/13/2015
State:	County:		Company:		Crew I	Member Initials	:	Photos:	
West Virginia	Lewis		NRG		GB, [DQ, TN		3 Phot	OS
Tract Number(s):			Nearest Mile	epost:		Associated W	etland	ID(s):	
02-096-A001			15.3			none			
Survey Type: (check one)		e □Re-F	Route	⊠Access Road		□ Other:			
Physical Attribute	S								
Stream Classification: (check one)	Ephemera	al 🛛 🖂 Inter	mittent	Perennial					
Waterbody Type: (check one)]River ⊠ Str	eam □ Dito	ch 🗆 Ca	anal 🛛 Other					
					•				
OHWM Width: <u>3 ft</u> .	OHWM Indica (check all that apply		⊠ Clear lir on bank	ne ⊠Shelvin	g	□Wrested vegetation		Scouring	g ⊟Water staining
Height: 0.5 ft.	□Bent, n vegetatio	natted, or missin	ig	ne □Litter ar debris	nd	□Abrupt plar community ch		□Soil cl	naracteristic change
N/A 🗆 👘	Ū.					,	0		
Width of Waterbody - 1 Bank to Top of Bank:		of Waterbody - of Slope:	Toe of Slope	Width of Waterb Water Edge:	ody - W	ater Edge to	Depth (Approx.)	of Water	:
<u>8</u> ft.	-	<u>1.5 ft</u> .		-	<u>2</u> ft.		N/A□	-	<u>0.20_</u> ft.
Sinuosity:	Water	velocity:		N/A□ Bank height			Bank s	lone	
(check one)	(Approx.)	veloony.		Right:			Durin c	Right	:
⊠Straight		<u>_0.5</u> fps	6	Left:	6	_ft.		Left	. <u>65</u> degrees
□Meanderi	ng N/A□				6	_ft.		Len	<u>65</u> degrees
Qualitative Attribu	ites								
Water Appearance: (check one)	[□] No water ⊠0	Clear 🗆 Turb		leen ⊡Su i surface sci		□Algal mats	□Othe	1	
Substrate:	Bedrock 🗆 Bo	ulder 🗆 Cobb	ole 🛛 Grave	el 🛛 Sand 🛛	⊠ Silt/ o	clay 🛛 Organio	: □ (Other:	
(check all that apply) % of Substrate:	%	%	% 10 %			20 %		%	
			70 <u>10</u> 70	%	<u>50</u> %	_20_%		70	
Width of Riparian Zone	e: Vegetative (check all that		⊠ Trees	. 5	⊲ Sapli	ngs/Shrubs:	\boxtimes	Herbs	
<u>ft</u> .	Avg. DBH (approx.)	of Dominants:	<u> 9 </u> in.		in	•			
N/A⊠ Dominant Bank Vegeta	(, , , ,								
Sycamore, yellow p	opular, tree of							-	-
Aquatic Habitats (ex: si Small pool, leaf pac		d aquatic vegetatio	n, overhanging	banks/roots, leaf pac	ks, large	e submerged wood	, riffles,	deep pool	s):
Aquatic Organisms Ob	served (list):								
none									
T&E Species Observed	l (list):								
none									
Disturbances (ex: livest	ock access, manure i	n waterbody, waste	e discharge pipe	es):					
Livestock access, c	culvert crossing	o existing ro	ad, damn t	o create stock	pond	olea076			
Tributary is: (check one)	□ Natural	□ Ar	tificial, man-m	ade 🛛 Manip	ulated				
Stream Quality ^a : (check one)	□ High		oderate	⊠ Low					

Waterbody ID:

slea079

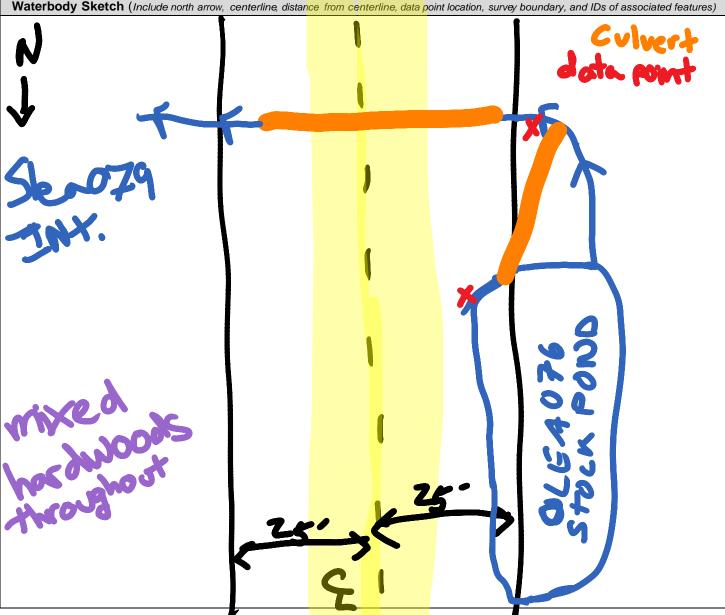
High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

Continues out of access road corridor in both directions





Waterbody SLEA079 facing southwest upstream



Waterbody SLEA079 facing northeast downstream



Waterbody SLEA079 facing southeast across

Open Waterboo	dy Da	ta Sheet										
Survey Descripti	on											
Project Name:		l V	Vaterbody	Name:				Wa	terbody ID:		Date:	
Atlantic Coast Pip	eline	ι	Jnnamed	d Pond				ole	ea075		11/13/2	015
State:	Count	y:		Compa	any:		Crew	/ Me	ember Initials:	Photos:		
West Virginia	Lewis	6		NRG			GB,	DC	Q, TN	1photo		
Tract Number(s):	1			Neares	st Milepost:			Ass	sociated Wetland	d ID(s):		
02-096-A001				15.3				nc	one			
Survey Type: (check one)				Re-Rout	e	⊠Access F	Road		□Other:			
Physical Attribut	es											
Waterbody Type: (check one)	ck Ponc	h 🗆 Natural I		ako 🗆 I	Posonyoir [mont [xbow 🗆 Other:			
								10				
Hydrologic Regime:	⊠P	Permanently F	looded	Semip	ermanently	Flooded	□ Sea	son	ally Flooded] Temporari	ly Floode	d
онwм	,	OHWM Indica	ator:									
Height:		(check all that app	ly)		☑ Clear line on bank	e ⊡S	helving		□Wrested vegetation	□Sco	uring	□Water staining
<u>3.0</u> ft.		⊟Bent, vegetati	matted, or on	0	□Wrack line	□Li deb	itter and ris		⊠Abrupt plan community ch		naracteris	tic change
Depth of Water:			Bank hei	ght (avei	rage):				Bank slope (ave	rage):		
_ <u>2.0</u> N/A□	<u>) ft</u> .				<u>4.5</u> ft					<u>55</u> degree	es	
Qualitative Attrib	outes											
Water Appearance: (check one)	□No w		lear 🛛	Turbid	□Shee		Surface	~	⊠Algal □	Other:		
				Turbia	on surfa		cum	C	mats	iother.		
Substrate: (check all that apply)	□ Bed	Irock 🗆 Bou	ulder 🗆 (Cobble	□ Gravel	⊠ Sand	⊠S	ilt/ c	clay 🛛 Organic	□ Other:		
% of Substrate:		_%	_%	%	%	<u> 10 </u> %	_55	_%	<u>35</u> %		%	
Width of Riparian Zo	ne:	Vegetative (check all that a	•		⊠ Trees:		⊠ Sa	nlin	gs/Shrubs:	⊠ Her	be	
ft.					- nees.		⊠ 3a	pin	195/3111055.		05	
N/A⊠		Avg. DBH o (approx.)	f Dominan	its:	<u>8.0</u> in.		<u>0.7</u>	<u>75</u> ii	n.			
Dominant Bank Vege	etation	(list):										
Sycamore, black I grass, white clove	er.										, Japane	ese stilt
Aquatic Habitats (ex: s			atic vegetation	, overhangin	ng banks/roots, le	eaf packs, large	e submerge	ed wo	ood, riffles, deep pools,	etc.):		
Pool, emergent ve	0											
Aquatic Organisms C	Observe	ed (list):										
none												
T&E Species Observe	ed (list)	:										
none												
Disturbances (ex: live Livestock access	stock ac	cess, manure in	i waterbody,	waste disc	charge pipes):							
Waterbody is:												
(check one)		Natural	2	☑ Artificia	al, man-mad	e 🗆 M	anipulate	ed				
Waterbody Quality ^a : (check one)	:	High	[□ Modera	ate	⊠ Low						

Waterbody ID:

olea075

High Quality: Natural, natural bank vegetation around entire waterbody; 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.

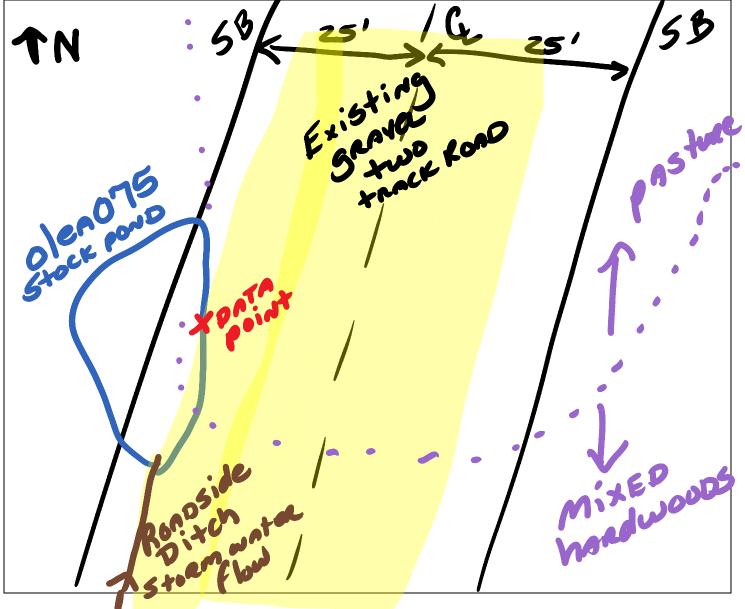
Moderate Quality: Altered by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or bank vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers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

Low Quality: 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:

Small excavated stock pond adjacent to existing two track road; created by damming drainage ditch along existing road; overflow is via dam over flow, no culvert present; livestock access.

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





Waterbody OLEA075 facing southwest

Survey Description									
Project Name:		Waterbody N	lame:		N	aterbody ID:			Date:
Atlantic Coast Pipelir	ne	UNT to Ha	acker's Creel	k	s	lea075			11/12/2015
State:	County:		Company:		Crew I	Member Initials	:	Photos:	
e e	ewis		NRG		GB, 1	FN, DQ		3 phote	os
Tract Number(s):			Nearest Mile	epost:		Associated W	etland	ID(s):	
02-096-A001; AR 02	-096-A001-AF	R1.1	15.5			wlea076			
Survey Type: (check one)		e ⊡R€	e-Route	⊠Access Road		Other:			
Physical Attributes									
Stream Classification: (check one)	Ephemera	ıl ⊠Int	termittent	Perennial					
Waterbody Type: (check one)	River 🖂 Str	eam 🗆 D	itch □ C	anal 🛛 Other					
					-				
OHWM Width: ft.	OHWM Indicat (check all that apply		⊠ Clear liı on bank	ne □Shelvin	g	□Wrested vegetation		Scouring	g ⊟Water staining
Height: ft. N/A□	□Bent, n vegetatio	,	sing □Wrack li	ine ⊠Litter ar debris	nd	□Abrupt plan community ch		□Soil cl	haracteristic change
Width of Waterbody - To			- Toe of Slope	Width of Waterb	ody - W			of Water	:
Bank to Top of Bank:	to Toe	of Slope:		Water Edge:			(Approx.,)	
<u>9.0</u> ft.	-	<u>3.5_</u> ft.		N/A□	<u>3.5</u> ft.		N/A□	-	<u>0.45</u> ft.
Sinuosity: (check one)	Water (Approx.)	velocity:		Bank height			Bank s	•	
□Straight	(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	1.0 f	inc.	Right:	4.0 ft.			Right	: 75 degrees
⊠Meandering		<u>_1.0</u> 1	þa	Left:				Left	:
					<u>5.0</u> ft				<u>70</u> degrees
Qualitative Attribute	es								
Water Appearance: (check one)	No water ⊠C	Clear □Tu		neen ⊡Sui n surface sci		□Algal [mats	□Othe	r:	
	Bedrock 🗆 Bo	ulder 🛛 Co	bble 🛛 Grav	el 🛛 Sand 🛛	⊠ Silt/ d	clay 🛛 Organic		Other:	
(check all that apply) % of Substrate:	%	_% <u>5</u> %	<u> 10 </u> %	<u> 35 </u> %	<u>40</u> %	<u> 10 </u> %		%	
Width of Riparian Zone:	Vegetative (check all that		⊠ Trees	•	🛛 Sanlii	ngs/Shrubs:		Herbs	
<u>40 ft</u> - N/A□		of Dominants			_ <u>0.50_</u> i	•			
Dominant Bank Vegetati	on (list):								
Alder, sycamore, bla golden ragwort, colt's	s foot						•		C
Aquatic Habitats (ex: sub Leaf packs, riffles, sr		l aquatic vegeta	tion, overhanging	banks/roots, leaf pac	ks, large	e submerged wood,	, riffles,	deep pool	s):
Aquatic Organisms Obs	erved (list):								
none									
T&E Species Observed ((list):								
none									
Disturbances (ex: livestoc Livestock access, cu		-		-	d for d	considerable	distar	nce	
Tributary is: (check one)			-						
Stream Quality ^a :	⊠ Natural		Artificial, man-m	nade 🗌 Manip	ulateu				
(check one)	□ High	1 🗆	Moderate	⊠ Low					

Waterbody ID:

slea075

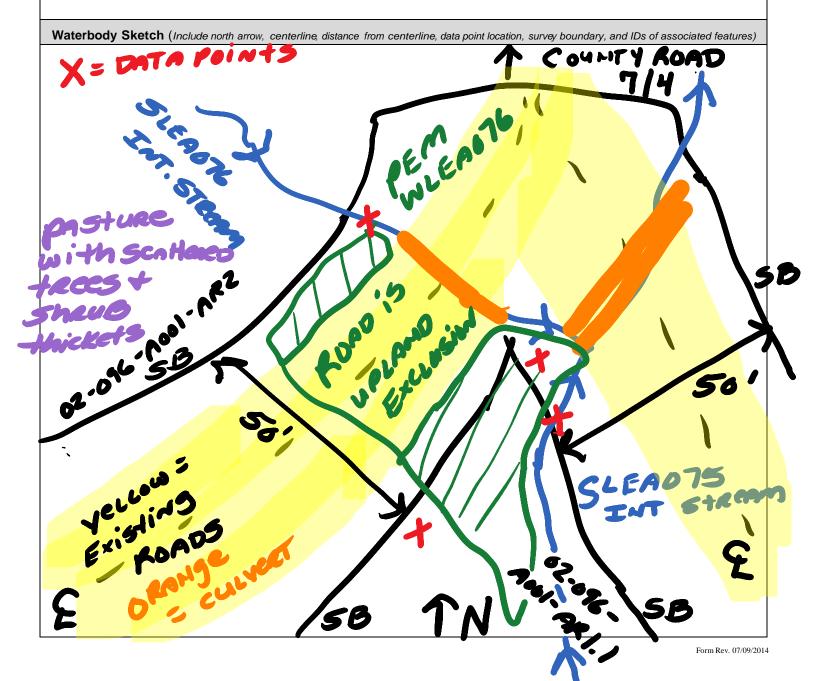
High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

Continues out of corridor in both directions; parallels existing road for considerable distance; connected to wetland wlea076; slea076 is a tributary; culvert crossing for existing road; severely degraded due to livestock access.





Waterbody SLEA075 facing south upstream



Waterbody SLEA075 facing north downstream



Waterbody SLEA075 facing west across

Survey Description	n								
Project Name:		Waterbody Nar				aterbody ID:			Date:
Atlantic Coast Pipel	ine	UNT to Hac	ker's Creek	K	sl	lea076			11/12/2015
State:	County:		Company:		Crew I	Member Initials	: 1	Photos:	
West Virginia	Lewis		NRG		GB, T	ſN, DQ		3 photo	os
Tract Number(s):			Nearest Mile	epost:		Associated W	etland	ID(s):	
02-096-A001; AR 0	2-096-A001-AI	R2	15.5			wlea076			
Survey Type: (check one)		e □Re-F	Route	⊠Access Road		□Other:			
Physical Attribute	s								
Stream Classification: (check one)	Ephemera	al ⊠Inter	mittent	Perennial					
Waterbody Type:									
(check one)	River ⊠ Str	ream 🗆 Dito	h □ Ca	anal 🗌 Other:					
OHWM	OHWM Indica (check all that appl		🛛 Clear lir		~	⊠Wrested		Coouring	
Width: _ <u>2.0_</u> ft.	(oncon an that appr	*/	on bank	ne 🗆 Shelvin	y	vegetation		Scouring	g ⊟Water staining
Height:	· · · · · · · · · · · · · · · · · · ·	matted, or missin	g		nd	□Abrupt plan		□Soil cl	naracteristic change
ft. N/A□	vegetatio	n		debris		community ch	ange		
Width of Waterbody - T Bank to Top of Bank:		of Waterbody - ⁻ of Slope:	Toe of Slope	Width of Waterbe Water Edge:	ody - W		Depth (Approx.)	of Water	:
	to 10e	•					(Approx.)		0.05 %
<u>_5.0</u> ft.	-	<u>1.0</u> ft.		N/A□	<u>1.5_</u> ft.		N/A□	-	<u>0.25</u> ft.
Sinuosity:	Water	velocity:		Bank height			Bank s	lope	
(check one)	(Approx.)			Right:				Right	
		<u>_1.0</u> _fps		Left:	<u>3.5_</u> ft.			Left	<u>90</u> degrees
Meanderin	ng N/A□			-	<u>3.0_</u> ft.				60 degrees
Qualitative Attribu	tes								
Water Appearance: (check one)	No water	Clear ⊠Turb		leen ⊡Sui surface scu		□Algal [mats	□Other	:	
	Bedrock 🗆 Bo	oulder 🛛 Cobb	le 🛛 Grave	el 🛛 Sand 🛛	⊠ Silt/ c	clay 🛛 Organic		Other:	
(check all that apply) % of Substrate:	%	% <u>5</u> %	<u> 10 </u> %	<u>35</u> %	<u>40_</u> %	<u> 10 </u> %		_%	
Width of Riparian Zone	e: Vegetative	e lavers:							
-	(check all that		⊠ Trees:	: D	⊴ Saplir	ngs/Shrubs:	\boxtimes	Herbs	
<u>ft</u> . N/A⊠	Avg. DBH (approx.)	of Dominants:	<u> 5.0 </u> in.	· _	_ <u>0.50_</u> i	n.			
Dominant Bank Vegeta	tion (list):								
Alder, sycamore, bl golden ragwort, colf	's foot	-				• •			-
Aquatic Habitats (ex: su Emergent vegetation		d aquatic vegetation	n, overhanging	banks/roots, leaf pac	ks, large	submerged wood	, riffles, o	deep pool	s):
Aquatic Organisms Ob	served (list):								
none									
T&E Species Observed	(list):								
none									
Disturbances (ex: livesto	ock access, manure i	n waterbody, waste	e discharge pipe	es):					
Livestock access, c	ulvert crossing	for existing r	oad						
Tributary is: (check one)	⊠ Natural	□ Art	ificial, man-m	ade 🗆 Manipi	ulated				
Stream Quality ^a : (check one)	□ High		oderate	⊠ Low					

Waterbody ID:

slea076

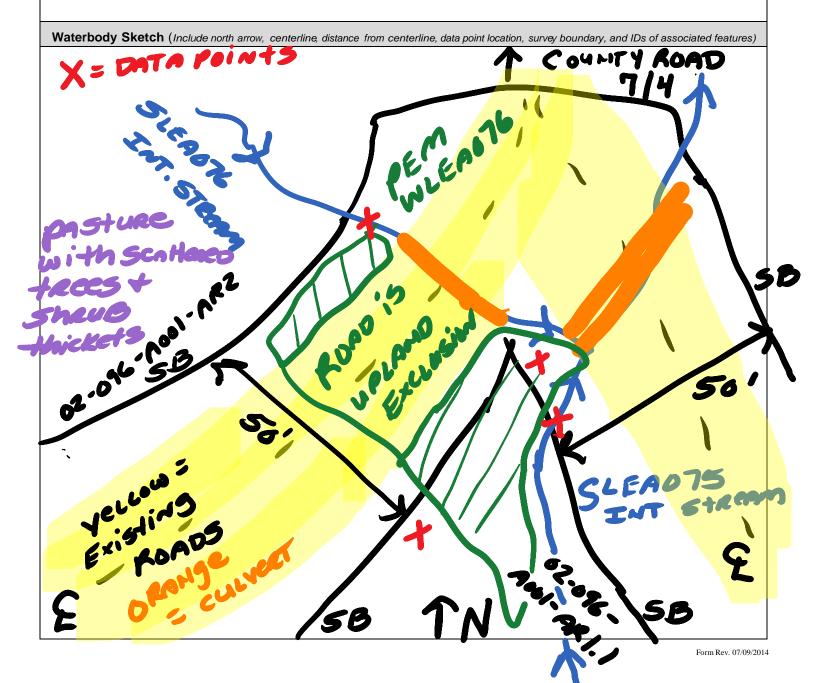
High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

Upstream continues out of corridor, downstream flows into slea075; connected to wetland wlea076; culvert crossing for existing road; severely degraded due to livestock access.





Waterbody SLEA076 facing northwest upstream



Waterbody SLEA076 facing east downstream



Waterbody SLEA076 facing north across

Survey Descriptio	n							
Project Name:		Waterbody Na	me:		w	/aterbody ID:		Date:
Atlantic Coast Pipe		UNT to Hacl				LEB111		3/30/2015
State:	County:		Company:			Member Initials:	Photo	
West Virginia	Lewis		NRG		TP, S		01-0	
Tract Number(s):			Nearest Mile	epost:		Associated We	tland ID(s):	
02-096-A001			15.05			none		
Survey Type: (check one)		e ⊠Re-	Route	□ Access Road		□Other:		
Physical Attribute	S							
Stream Classification: (check one)	Ephemera	al □Inte	rmittent	⊠Perennial				
Waterbody Type:								
(check one)	River Str	ream 🗆 Dite	ch 🗆 Ca	anal 🛛 Other	:			
онwм	OHWM Indica							
Width: <u>10.0</u> ft.	(check all that appl	<i>y)</i>	⊠ Clear lir on bank	ne ⊡Shelvin	g	□Wrested vegetation	⊠Scou	ring □Water staining
Height:	□Bent, r	matted, or missir	ng ⊡Wrack li	ne 🗆 Litter ar	nd	□Abrupt plant	□So	il characteristic change
<u>1.0</u> ft. N/A□	vegetatio	n		debris		community cha	nge	Ŭ
Width of Waterbody - 1 Bank to Top of Bank:		of Waterbody - of Slope:	Toe of Slope	Width of Waterb Water Edge:	ody - W		epth of Wa	ater:
					00 0			0.4 ft.
<u>12_</u> ft.	-	<u>6.0</u> ft.		N/A□ -	<u>9.0</u> ft.		/A□	<u>_0.4_</u> n.
Sinuosity:		velocity:		Bank height		В	ank slope	
(check one)	(Approx.)			Right:			Rig	ght:
_		<u>_2.0</u> _fp:	6	Left:	<u>4_</u> ft.		L	_ <u>80</u> degrees
Meanderi	ng N/A□				<u>3</u> ft.			<u>85</u> degrees
Qualitative Attribu	tes							
Water Appearance: (check one)	No water ⊠0	Clear □Turt			rface um	□Algal □ mats	Other:	
	Bedrock 🗆 Bo	oulder 🛛 Cobl	ole 🛛 Grave	el 🛛 Sand 🛛	⊠ Silt/ c	clay 🗆 Organic	□ Other:	
(check all that apply)45 % of Substrate:	%	_% <u>30</u> %	<u> 30 </u> %	<u> 30 </u> %	<u>10_</u> %	%	9	6
Width of Riparian Zone	e: Vegetative	e lavers						
Whath of Ripanan 2010	(check all that		⊠ Trees	: 0	🛛 Saplir	ngs/Shrubs:	Herb	os
<u>>50 ft</u> - N/A□	Avg. DBH (approx.)	of Dominants:	<u>12</u> ir	ı. <u>-</u>	<u>2</u> in.			
Dominant Bank Vegeta	tion (list):							
Yellow birch, sugar	maple, multiflo	ora rose, gold	en ragwort,	, red maple.				
Aquatic Habitats (ex: se			on, overhanging	banks/roots, leaf pac	ks, large	submerged wood, r	iffles, deep p	pools):
Cobble, debris piles	s, roots along b	bank						
Aquatic Organisms Ob	served (list):							
Caddis fly larvae, st	onefly, and, m	ayflies.						
T&E Species Observed	(list):							
None								
Disturbances (ex: livest	ock access, manure i	in waterbody, wast	e discharge pipe	es):				
Possible livestock a	access							
Tributary is: (check one)	⊠ Natural	□ Ar	tificial, man-m	ade 🛛 Manip	ulated			
Stream Quality ^a : (check one)	□ High	⊠ M	oderate	□ Low				

Waterbody ID: SLEB111

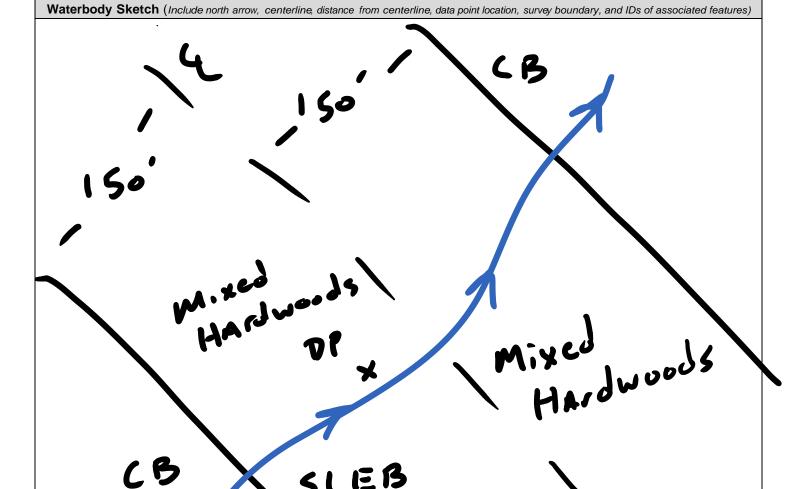
High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

Perennial stream. Noted strong bars and benches, cobble, moderate sinuosity, good grade control, mostly one long riffle with a few pools. Rain in last 24 hours contributed to flow.





Waterbody SLEB111 facing southwest upstream



Waterbody SLEB111 facing northeast downstream



Waterbody SLEB111 facing southeast across

Survey Description	n								
Project Name:		Waterbody				Vaterbody ID:			Date:
Atlantic Coast Pipel		Hacker's (Creek			lea080			11/14/2015
State:	County:		Company:		Crew I	Member Initials	:	Photos:	
West Virginia	Lewis		NRG		GB, I	DQ		5 phote	os
Tract Number(s):			Nearest Mil	epost:		Associated W	etland	ID(s):	
02-096; access road	d 02-096-AR	1	15.3			wlea078			
Survey Type: (check one)		ne 🗆 R	e-Route	⊠Access Road		□Other:			
Physical Attributes	S								
Stream Classification: (check one)	Epheme	eral □Ir	ntermittent	⊠Perennial					
Waterbody Type:	I								
	River 🛛 S	Stream 🗆 🛙	Ditch 🗆 C	anal 🗌 Other	:				
онwм	OHWM India								
Width: <u>30.0</u> ft.	(check all that ap	yly)	Clear li on bank	ne 🗆 Shelvin	g	☐Wrested vegetation	\boxtimes	Scouring	g ⊠Water staining
Height:	□Bent	, matted, or mis	sing ⊠Wrack I	ine 🗆 Litter ar	nd	□Abrupt plan		□Soil cl	naracteristic change
<u>3.5_</u> ft. N/A□	vegetat	ion	-	debris		community ch	ange		-
Width of Waterbody - T			/ - Toe of Slope	Width of Waterb	ody - W	ater Edge to	Depth (Approx.)	of Water	:
Bank to Top of Bank:	to Io	e of Slope:		Water Edge:			(Approx.)		
<u>_40.0</u> ft.		<u>20.0</u> ft.			<u>25.0_</u> ft		N/A□	-	<u>2.5</u> ft.
Sinuosity:	Wate	r velocity:		Bank height			Bank s	lope	
(check one)	(Appro.	x.)		Right:				Right	
		1.0	fps	Left:	<u>8.0</u> ft.			Left	80 degrees
Meanderir	ng N/A□]			<u>8.0</u> ft.				65 degrees
Qualitative Attribu	tes								
Water Appearance: (check one)	No water	IClear □T		neen ⊡Sui n surface sci		□Algal [mats	□Other	<u>.</u>	
	Bedrock 🗆 E	Boulder 🛛 🗠 Co	obble 🛛 Grav	el 🛛 Sand 🛛	⊠ Silt/ o	clay 🗆 Organic		Other:	
(check all that apply) % of Substrate:	15_%	%15	% <u>10</u> %	<u>25</u> %	<u>35_</u> %	%		%	
Width of Riparian Zone		ve Layers:							
<u>_300_ft</u> -	(check all th Avg. DB	^{nat apply)} H of Dominant	⊠ Trees s: _ <u>12.0_</u>		⊠ Sapliı _ <u>0.50_</u> i	ngs/Shrubs: in.		Herbs	
N/A 🗆 Dominant Bank Vanata	(approx.)			-					
Dominant Bank Vegeta Red maple, winged	. ,	a rose, fesci	ue, orchard g	rass, ironweed	, Cana	ada thistle, do	ock, cl	lover, g	round ivy
Aquatic Habitats (ex: su	Ibmerged or emerg	ed aquatic vegeta	ation, overhanging	banks/roots, leaf pac	ks, large	e submerged wood	, riffles, o	deep pool	s):
Pools, riffles, wrack									
Aquatic Organisms Ob	served (list):								
fish									
T&E Species Observed	l (list):								
none									
Disturbances (ex: livesto	ock access, manure	e in waterbody, w	aste discharge pip	es):					
Bridge crossing for	existing road	, livestock ad	cess						
Tributary is: (check one)	⊠ Natural		Artificial, man-m	nade 🗆 Manip	ulated				
Stream Quality ^a : (check one)	□ High	\boxtimes	Moderate	□ Low					

Waterbody ID: slea080

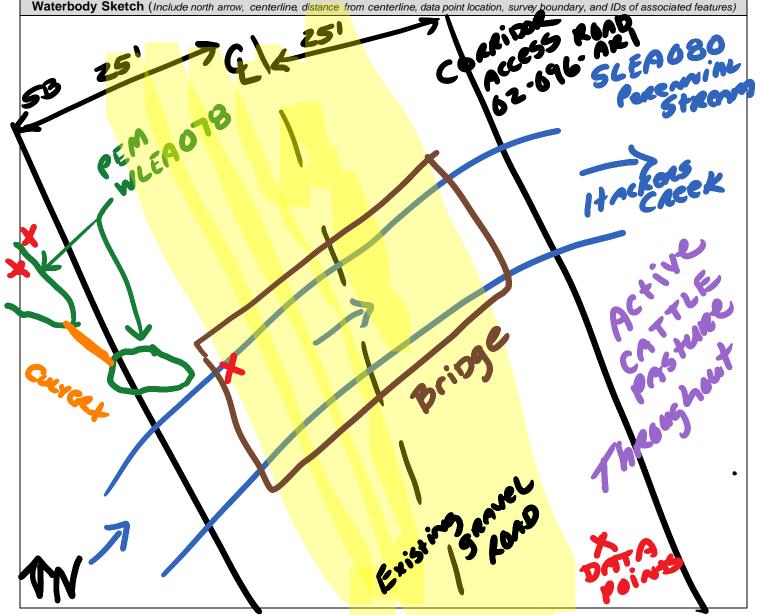
High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

Stream continues out of access road corridor in both directions; bridge crossing for existing gravel two track road; surrounded by active cattle pasture – numerous bank failures caused by livestock. Bridge abutments and supports do not appear structurally sound.





Waterbody SLEA080 facing south upstream



Waterbody SLEA080 facing northeast downstream



Waterbody SLEA080 facing east across

Survey Description	n								
Project Name:		Waterbody Na				laterbody ID:			Date:
Atlantic Coast Pipel	ine	UNT to Hac	ker's Creel	<	sl	lea077			11/12/2015
State:	County:		Company:		Crew I	Member Initials:	:	Photos:	
West Virginia	Lewis		NRG		GB, T	ſN, DQ		3 photo	os
Tract Number(s):			Nearest Mile	epost:		Associated W	etland	ID(s):	
02-096-A001; AR 0	2-096-A001-A	R1.1	15.6			none			
Survey Type: (check one)		e □Re-l	Route	⊠Access Road		□Other:			
Physical Attribute	S								
Stream Classification: (check one)	⊠Ephemera	al 🗆 Inte	rmittent	Perennial					
Waterbody Type:	•								
	River Str	ream 🗆 Dite	ch 🗆 Ca	anal 🗌 Other:	:				
ОНѠМ	OHWM Indica						_		
Width: <u>2.0</u> ft.	(check all that appl	<i>y)</i>	Clear lir on bank	ne 🗆 Shelvin	g	□Wrested vegetation	\boxtimes	Scouring	g ⊟Water staining
Height:	□Bent, r	natted, or missir	ng ⊡Wrack li	ne 🛛 Litter ar	nd	□Abrupt plant	t	□Soil cl	naracteristic change
ft. N/A□	vegetatio	n		debris		community ch	ange		
Width of Waterbody - T Bank to Top of Bank:		of Waterbody - of Slope:	Toe of Slope	Width of Waterbo Water Edge:	ody - W		Depth (Approx.)	of Water	:
		•					,		0.10 ft.
<u>_5.0</u> ft.	-	<u>1.0</u> ft.		N/A□	<u>0.75</u> ft		N/A□	_	<u>_0.10_</u> 1t.
Sinuosity:		velocity:		Bank height			Bank s	lope	
(check one)	(Approx.)			Right:	00 8			Right	
		<u>_0.20</u> fp	S	Left:	<u>6.0_</u> ft.			Left	<u>70</u> degrees
Meanderir	ng N/A□				<u>5.0_</u> ft.				<u>70</u> degrees
Qualitative Attribu	tes								
Water Appearance: (check one)	No water ⊠0	Clear 🗆 Turb		leen ⊡Sui i surface sci		□Algal [mats	□Other	-	
	Bedrock 🗆 Bo	oulder 🛛 Cobl	ole 🛛 Grav	el 🛛 Sand 🛛	□ Silt/ c	clay 🛛 Organic		Other:	
(check all that apply) % of Substrate:	<u>15_</u> %	% 10 %	15 %	5 %	%	55 %		%	
Width of Riparian Zone									
Math of Ripanan Zone	(check all that		⊠ Trees	: D	⊠ Saplir	ngs/Shrubs:	\boxtimes	Herbs	
<u>ft</u> - N/A⊠	Avg. DBH (approx.)	of Dominants:	<u>8.0</u> in	· _	<u>1.0</u> in				
Dominant Bank Vegeta	,								
White oak, sugar m	aple, northern	red oak, iron	wood, mult	tiflora rose, aut	umn o	live, Christma	as fer	n, viole	t
Aquatic Habitats (ex: su	ubmerged or emerge	d aquatic vegetatic	on, overhanging	banks/roots, leaf pac	ks, large	submerged wood,	riffles,	deep pool	5):
leaf packs									
Aquatic Organisms Ob	served (list):								
none									
T&E Species Observed	(list):								
none									
Disturbances (ex: livesto	ock access, manure i	n waterbody, wast	e discharge pipe	es):					
Flow terminates at o	ditch and road	bed							
Tributary is: (check one)	□ Natural	□ Ar	tificial, man-m	ade 🛛 Manipi	ulated				
Stream Quality ^a : (check one)	🗆 High		oderate	⊠ Low					

Waterbody ID:

slea077

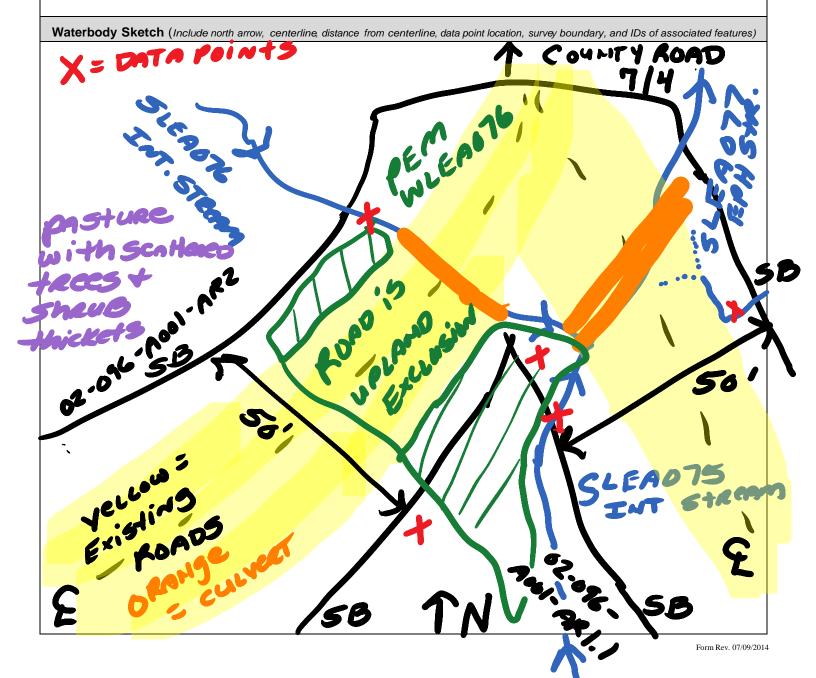
High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

Upstream continues out of corridor, downstream dissipates and ends as outflow splits between sheet flow across existing road bed and roadside ditch.





Waterbody SLEA077 facing east upstream



Waterbody SLEA077 facing west downstream



Waterbody SLEA077 facing south across

Survey Description	า								
Project Name:		Waterbody Na	ne:		W	aterbody ID:			Date:
Atlantic Coast Pipeli		UNT to Hac		K		lea078			11/12/2015
State:	County:		Company:			Member Initials	: F	Photos:	
West Virginia	Lewis		NRG		GB, T	ſN, DQ		3 photo	DS
Tract Number(s):			Nearest Mile	epost:		Associated W	etland	ID(s):	
02-096-A001; AR 02	2-096-A001-AF	R1.1	15.6			none			
Survey Type: (check one)		□Re-F	Route	⊠Access Road		□Other:			
Physical Attributes	6								
Stream Classification: (check one)	⊠Ephemera	I 🗆 Inter	mittent	Perennial					
Waterbody Type:									
	River 🛛 Str	eam 🗆 Dito	h □Ca	anal 🗌 Other:					
ОНШМ	OHWM Indicat						_		
Width: <u>2.0 f</u> t.	(check all that apply	9	Clear lir on bank	ne 🗆 Shelvin	g	□Wrested vegetation	\boxtimes	Scouring	g □Water staining
Height:	□Bent, n	natted, or missin	g ⊡Wrack li	ne 🛛 Litter ar	nd	□Abrupt plan		□Soil cł	naracteristic change
_ <u>0.25_</u> ft. N/A□	vegetatio			debris		community ch	lange		
Width of Waterbody - T Bank to Top of Bank:		of Waterbody - ⁻ of Slope:	Toe of Slope	Width of Waterbo Water Edge:	ody - W	ater Edge to	Depth ((Approx.)	of Water	:
5.0 ft.		1.0 ft.			0.75 ft				0.10 ft.
<u></u> n.	-	<u>1.0</u> 11.		N/A□	<u>5.75_</u> IL		N/A□	_	
Sinuosity: (check one)		velocity:		Bank height			Bank s	lope	
	(Approx.)	0.00 6	_	Right:	6.0 ft.			Right	80 degrees
		<u>0.20</u> fp	5	Left:	<u>0.0</u> n.			Left	
Meanderin	ng N/A□				<u>6.0_</u> ft.				<u>75</u> degrees
Qualitative Attribut	tes								
Water Appearance: (check one)	No water 🛛 🖾	Clear □Turb		neen ⊡Sui i surface scu		□Algal [mats	□Other	:	
	Bedrock 🗆 Bo	ulder 🛛 Cobb	le 🛛 Grave	el 🛛 Sand 🛛	□ Silt/ c	clay 🛛 Organic	: 🗆 C)ther:	
(check all that apply) % of Substrate: _1	5_%	<u>% 15</u> %	<u> 10 </u> %	<u> 5 </u> %	_%	<u> 55 </u> %		_%	
Width of Riparian Zone	: Vegetative	Lavers:							
	(check all that	apply)	☑ Trees	: 2	Saplir	ngs/Shrubs:	\boxtimes	Herbs	
<u>ft</u> - N/A⊠	Avg. DBH (approx.)	of Dominants:	<u>8.0</u> in	· -	<u>1.0</u> in				
Dominant Bank Vegeta	tion (list):								
White oak, sugar ma	aple, yellow bir	ch, northern	red oak, irc	on wood, multif	ora ro	ose, autumn o	olive, C	Christm	as fern, violet
Aquatic Habitats (ex: su	bmerged or emerged	l aquatic vegetatio	n, overhanging	banks/roots, leaf pac	ks, large	submerged wood	, riffles, c	deep pools	s):
leaf packs									
Aquatic Organisms Ob	served (list):								
none									
T&E Species Observed	(list):								
none									
Disturbances (ex: livesto	ock access, manure i	n waterbody, waste	e discharge pipe	es):					
Culvert crossing for	existing road;	culvert outlet	too high, s	evere down cu	t dowr	nstream of cu	ulvert,	livesto	ck access
Tributary is: (check one)	⊠ Natural	hA 🗆	ificial, man-m	ade 🗆 Manipi	ulated				
Stream Quality ^a : (check one)	🗆 High		oderate	⊠ Low					

Waterbody ID:

slea078

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.

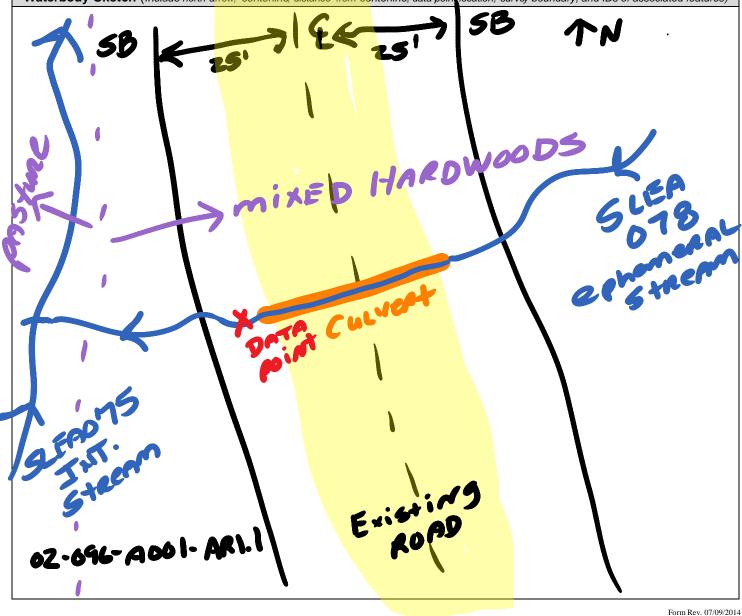
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate 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:

Upstream continues out of corridor, downstream continues out of corridor where it flows into slea075

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





Waterbody SLEA078 facing east upstream



Waterbody SLEA078 facing west downstream



Waterbody SLEA078 facing south across

Survey Description	า								
Project Name:		Waterbody Na	me:		N	Vaterbody ID:		D	ate:
Atlantic Coast Pipeli		UNT to Hack				LEB113			/31/2015
State:	County:		Company:			Member Initials:	Pł	notos:	
West Virginia	Lewis		NRG		TP, S		•	1-03	
Tract Number(s):			Nearest Mile	epost:		Associated We	etland ID	D(s):	
02-096-A005			15.8			WLEB108			
Survey Type: (check one)		e ⊠Re-l	Route	□Access Road	1	□Other:			
Physical Attributes	6								
Stream Classification: (check one)	□ Ephemera	al 🛛 🖾 Inter	rmittent	Perennial					
Waterbody Type:	-								
	River 🛛 Str	eam 🗆 Dito	ch 🗆 C	anal 🛛 Other	:				
ОНШМ	OHWM Indicat								
Width: _ <u>2.0_</u> ft.	(crieck all triat apply	()	Clear lir on bank	ne ⊡Shelvin	ig	□Wrested vegetation	⊠5	couring	□Water staining
Height:	⊟Bent, n	natted, or missir	ng ⊡Wrack li		nd	□Abrupt plant		Soil cha	aracteristic change
ft. N/A□	vegetatio	n		debris		community cha	ange		
Width of Waterbody - T			Toe of Slope	Width of Waterb	ody - W			f Water:	
Bank to Top of Bank:	to Toe	of Slope:		Water Edge:		(-	Approx.)		
<u>5_</u> ft.	-	<u>1.0</u> ft.			<u>1.0</u> ft.		I/A□	_	<u>0.1_</u> ft.
Sinuosity:	Water	velocity:		N/A Bank height			Bank slo	ppe	
(check one)	(Approx.)			Right:				Right:	
		<u>_1.0</u> _fps	6	Left:	<u>3_</u> ft.			Left:	85 degrees
⊠Meanderir	ng N/A□			Lon.	<u>3_</u> ft.			Lent.	85 degrees
Qualitative Attribu	tes								
Water Appearance: (check one)	No water 🛛 🖾	Clear □Turt	oid ⊡Sh	neen ⊡Su	rface	□Algal □	Other:		
			or	n surface sc	um	mats			
Substrate:	Bedrock 🗆 Bo	oulder 🛛 Cobb	ole 🛛 Grav	el 🛛 Sand	⊠ Silt/ o	clay 🗆 Organic	□ Otl	her:	
% of Substrate:	%	% <u>5</u> %	<u>20</u> %	<u> 25 </u> %	<u>50</u> %	%		_%	
Width of Riparian Zone	: Vegetative	e Lavers:							
-	(check all that	apply)	☑ Trees	: 0	🛛 Saplii	ngs/Shrubs:		Herbs	
<u>>50 ft</u> - N/A□	Avg. DBH (approx.)	of Dominants:	<u>12</u> ir	ו	<u>2</u> in.				
Dominant Bank Vegeta	tion (list):								
Yellow birch, sugar	maple, witchha	azel, golden r	agwort, reo	d maple, black	locust				
Aquatic Habitats (ex: su	bmerged or emerged	d aquatic vegetatio	on, overhanging	banks/roots, leaf pac	cks, large	e submerged wood,	riffles, de	ep pools)	:
Debris piles									
Aquatic Organisms Ob	served (list):								
None									
T&E Species Observed	(list):								
None									
Disturbances (ex: livesto	ock access, manure i	n waterbody, wast	e discharge pipe	es):					
None									
Tributary is: (check one)	⊠ Natural	□ Ar	tificial, man-m	nade 🗆 Manip	ulated				
Stream Quality ^a : (check one)	□ High	⊠ Mo	oderate	□ Low					

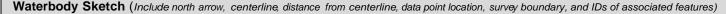
High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

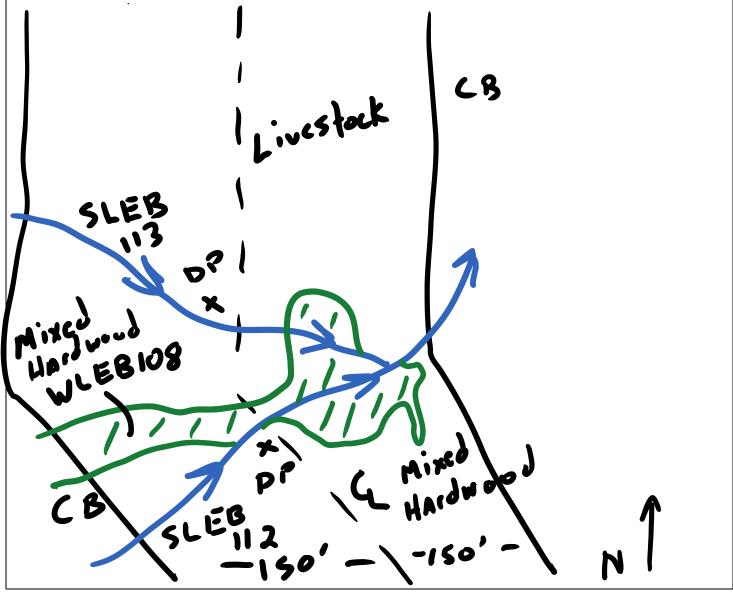
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate 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:

Intermittent stream. Noted weak bars and benches, cobble, weak sinuosity, strong grade control. Basically an erosional gully in a natural drainage way. Rain in last 48 hours contributed to flow. Additionally, wetland WLEB108 is abutting stream channel.







Waterbody SLEB113 facing northwest upstream



Waterbody SLEB113 facing east downstream



Waterbody SLEB113 facing north across

Survey Description	า										
Project Name:		Waterboo	-					aterbody ID:			Date:
Atlantic Coast Pipeli	-	UNT to I	Hacke	rs Creek				LEB112			3/31/2015
State:	County:		С	ompany:			Crew I	Member Initials	5:	Photos:	
West Virginia	Lewis			IRG			TP, S			01-03	
Tract Number(s):				earest Mile	epost:			Associated W	etland	ID(s):	
02-096-A003, 02-09	96-A005		1	5.8				WLEB108			
Survey Type: (check one)		ne D	∃Re-Ro	ute	□Ac	cess Road		□Other:			
Physical Attributes	6										
Stream Classification: (check one)	Epheme	ral 🛛	Intermi	ittent	⊠Pe	erennial					
Waterbody Type:											
	River 🛛 S	tream [Ditch	□ Ca	anal	□ Other	:				
ОНѠМ	OHWM India										
Width: <u>4.0</u> ft.	(check all that ap	oly)		☑ Clear lir on bank	ne	□Shelvin	g	☐Wrested vegetation	Þ	Scouring	g ⊟Water staining
Height:	□Bent,	matted, or r	nissing	□Wrack li	ne	□Litter ar	nd	□Abrupt plar	nt	□Soil cl	haracteristic change
ft. N/A□	vegetat	ion				debris		community ch	nange		
Width of Waterbody - T			ody - To	e of Slope			ody - W	ater Edge to		of Water	r:
Bank to Top of Bank:	to To	e of Slope:			Water	Edge:			(Approx.)	
<u>5</u> ft.		<u>2.0</u> ft.				-	<u>2.0</u> ft.		N/A□		<u>0.3</u> ft.
Sinuosity:	Wate	r velocity:			N/A 🗆	height			Bank	slone	
(check one)	(Approx				Dank	Right:			Dank	Right	:
□Straight		1.0	<u>0_</u> fps			Left:	<u>3_</u> ft.			•	85 degrees
⊠Meanderir	ng N/A□					Leit.	<u>3</u> ft.			Left	degrees
Qualitative Attribut	tes										
Water Appearance: (check one)	No water	Clear	□Turbid	□Sh	een surface	⊡Su sci	rface um	□Algal mats	□Othe	r:	
Substrate:	Bedrock 🗆 E	Boulder 🖂	Cobble					lay 🗆 Organio	: □	Other:	
(check all that apply)45 % of Substrate:	0/	0/ 4	0.0/	20.0/				, ,		0/	
	%		<u>0_</u> %	<u>30</u> %		<u>50 </u> %	<u>10 </u> %	%		%	
Width of Riparian Zone	: Vegetati (check all th	ve Layers:		⊠ Trees		Γ	Soplir	aa/Shruba	Г	Horbo	
<u>>50 ft</u> -	·	H of Domina	ants:	<u> 12 </u> in			⊴ Sapiii _ <u>2_</u> in.	ngs/Shrubs:	L] Herbs	
N/A 🗆 Dominant Bank Vasata	(approx.)					-					
Dominant Bank Vegeta Yellow birch, sugar	. ,	nazel, golo	len rag	gwort, rec	d map	le. Pleas	e note	that no strea	am bu	iffer is p	present in tract
A003. this is a cattle Aquatic Habitats (ex: su	e pasture.	-	-								
Cobble, debris piles	, roots along	bank, dov	vned lo	ogs							
Aquatic Organisms Ob	served (list):										
Caddis fly larvae, st	onefly, salam	ander, an	d, may	/flies.							
T&E Species Observed	(list):										
None											
Disturbances (ex: livesto	ock access, manure	e in waterbody	, waste d	ischarge pipe	es):						
livestock access											
Tributary is: (check one)	⊠ Natural		Artific	cial, man-m	ade	Manip	ulated				
Stream Quality ^a : (check one)	🗆 High		⊠ Mode	erate		□ Low					

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.

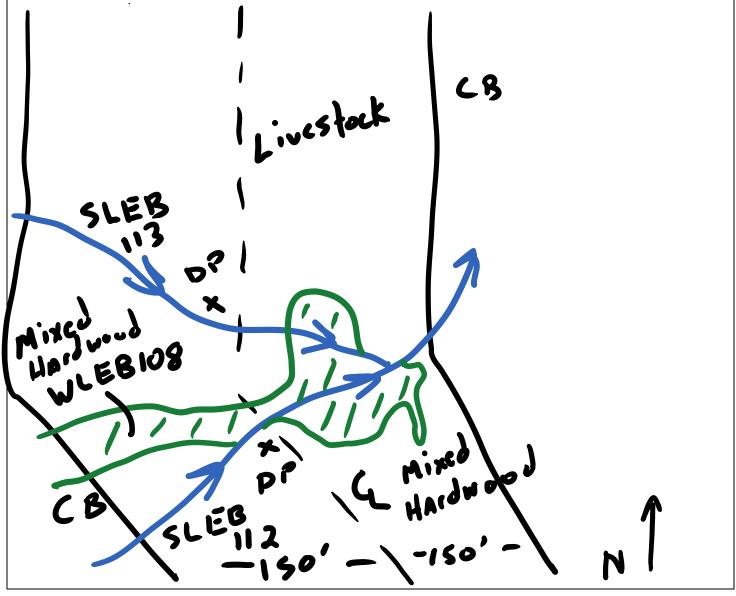
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate 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:

Perennial stream. Noted strong bars and benches, cobble, moderate sinuosity, good grade control, debris piles, and a few roots along bank. Mostly one long riffle with a few pools. Rain in last 48 hours contributed to flow. Additionally, wetland WLEB108 is abutting stream channel.

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





Waterbody SLEB112 facing west upstream



Waterbody SLEB112 facing east downstream



Waterbody SLEB112 facing south across

Survey Description	า										
Project Name:		Waterbo	•					aterbody ID:			Date:
Atlantic Coast Pipeli	-	UNT to		rs Creek				LEB114			4/1/2015
State:	County:		C	company:				Member Initials	5:	Photos:	
West Virginia	Lewis			IRG			TP, S			01-03	
Tract Number(s):				learest Mile	epost:			Associated W	etland	ID(s):	
02-096-A013, 02-09	96-A014		1	6.6				none			
Survey Type: (check one)		ne	⊠Re-Ro	oute	□Ac	cess Road		□Other:			
Physical Attributes	8										
Stream Classification: (check one)	Epheme	eral	□Interm	ittent	⊠Pe	erennial					
Waterbody Type:											
(check one)	River 🛛 S	Stream	□ Ditch	🗆 Ca	anal	□ Other	:				
OHWM Width: 5.0 ft.	OHWM Indic (check all that ap			☑ Clear lir on bank	ie	□Shelvin	g	□Wrested vegetation		Scouring	g ⊟Water staining
Height: <u>1.0</u> ft.	□Bent, vegetat		missing	□Wrack li	ne	□Litter ar debris	nd	□Abrupt plar community ch		□Soil cł	naracteristic change
N/A□ Width of Waterbody - T	on of Width	n of Waterk	ody - To	e of Slone	Width	of Waterb	ody - W	ater Edge to	Denth	of Water	•
Bank to Top of Bank:		e of Slope:			Water		ouy n	aler Luge lo	(Approx.)		•
<u>10_</u> ft.		<u>4.0</u> ft.				-	<u>5.0</u> ft.		N/A□	-	<u>0.5</u> ft.
Sinuosity:	Wate	r velocity:			N/A□ Bank I	height			Bank s	slope	
(check one)	(Approx					Right:				Right	:
			<u>3.0_</u> fps			Left:	<u>4</u> ft.			Left	<u>85</u> degrees
Meanderin	ng N/A⊏]					<u>4_</u> ft.				<u>85</u> degrees
Qualitative Attribut	tes										
Water Appearance: (check one)	No water	⊡Clear	□Turbid		een surface	⊟Sui e scu		□Algal mats	□Othe	r:	
Substrate:	Bedrock 🗆 E	Boulder D	Cobble	e 🛛 Grave	el 🛛	Sand [⊠ Silt/ c	lay 🗆 Organic	; □(Other:	
(check all that apply)45 % of Substrate:	%	%	<u>35_</u> %	<u>35</u> %		<u>20 </u> %	<u>10 %</u>	%		%	
Width of Riparian Zone	: Vegetati	ve Layers:									
<u>0 ft</u> -	(check all th			□ Trees: in.	:		☐ Saplir in.	ngs/Shrubs:	\geq	Herbs	
N/A 🗆 Dominant Bank Varata	(approx.)					-					
Dominant Bank Vegeta Grassed yard/livesto		a few ma	ple and	black loc	ust al	ong bank	s.				
Aquatic Habitats (ex: su	bmerged or emerg	ged aquatic v	egetation,	overhanging	banks/rc	oots, leaf pac	ks, large	submerged wood	l, riffles,	deep pools	5):
Cobble, debris piles											
Aquatic Organisms Ob	served (list):										
Caddis fly larvae, st	onefly, and, r	nayflies.									
T&E Species Observed	(list):										
None											
Disturbances (ex: livesto	ock access, manure	e in waterbod	ly, waste c	lischarge pipe	es):						
livestock access, re	esidential yard	d, grasse	d bank	S.							
Tributary is: (check one)	⊠ Natural		□ Artifi	cial, man-m	ade	□ Manip	ulated				
Stream Quality ^a : (check one)	□ High		⊠ Mod	erate		□ Low					

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:

Degraded perennial stream, possibly straightened/modified due to livestock and residences. Noted moderate bars and benches, bank failures, cobble, moderate sinuosity, moderate grade control, debris piles, and a weak riffle pool complex. Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features) CB catock 5LEB114 CB



Waterbody SLEB114 facing southwest upstream



Waterbody SLEB114 facing northeast downstream



Waterbody SLEB114 facing southeast across

Survey Descriptio	n							
Project Name:		Waterbody Na				aterbody ID:		Date:
Atlantic Coast Pipel	line	UNT to Laur	el Lick		S	LEB116		4/1/2015
State:	County:	1	Company:		Crew M	Member Initials:	Photo	S:
West Virginia	Lewis		NRG		TP, S	A	01-03	3
Tract Number(s):	1		Nearest Mile	epost:		Associated We	tland ID(s):	
02-096-A023,			17.5			none		
Survey Type: (check one)		e ⊠Re-	Route	□Access Road		□Other:		
Physical Attribute	S							
Stream Classification: (check one)	Ephemer	al ⊠Inte	rmittent	Perennial				
Waterbody Type:								
	River St	ream 🗆 Dite	ch 🗆 C	anal 🗌 Other	:			
онwм	OHWM Indica							
Width: <u>2.0 f</u> t.	(check all that app	(y)	⊠ Clear lir on bank	ne ⊡Shelvin	g	□Wrested vegetation	⊠Scour	ing □Water staining
Height:	□Bent,	matted, or missir	ng ⊡Wrack li	ine 🗆 Litter ar	nd	□Abrupt plant		characteristic change
ft. N/A□	vegetatio	on		debris		community cha	nge	
Width of Waterbody - 1			Toe of Slope	Width of Waterb	ody - W		epth of Wa	er:
Bank to Top of Bank:	to Toe	of Slope:		Water Edge:		(7	Approx.)	
<u>_3_</u> ft.	_	<u>1.0</u> ft.			<u>1.0</u> ft.	N	I/A□	<u>0.1</u> ft.
Sinuosity:	Water	velocity:		N/A Bank height			ank slope	
(check one)	(Approx.)			Right:		-	Rig	ht:
		_0.5_fp	S	Left:	<u>2</u> ft.		-	<u>85</u> degrees
Meanderi	ng N/A□			Len.	<u>3</u> ft.			<u>85</u> degrees
Qualitative Attribu	ites							
Water Appearance: (check one)	[□] No water ⊠	Clear ⊡Turt	oid ⊡Sh	neen 🗆 Su	rface	□Algal □	Other:	
				n surface sci		mats	ourer.	
Substrate:	Bedrock 🗆 Bo	oulder 🛛 Cobl	ole 🛛 Grav	el 🛛 Sand 🛛	⊠ Silt/ c	clay 🗆 Organic	□ Other:	
% of Substrate:	%	%%	<u> 5 </u> %	<u>35</u> %	<u>60</u> %	%	%	
Width of Riparian Zone	e: Vegetativ	e Layers:						
5 ft-	(check all tha		□ Trees			ngs/Shrubs:	⊠ Herbs	3
<u> </u>	(approx.)	of Dominants:	in.	-	in.			
Dominant Bank Vegeta	ation (list):							
Grassed yard/livest	ock pasture. N	oted a few su	igar maple,	, sycamore and	l fescu	e along bank	S.	
Aquatic Habitats (ex: se	ubmerged or emerge	d aquatic vegetatio	on, overhanging	banks/roots, leaf pac	ks, large	submerged wood,	riffles, deep po	pols):
A few aquatic plant	S							
Aquatic Organisms Ob	served (list):							
None.								
T&E Species Observed	l (list):							
None								
Disturbances (ex: livest	ock access, manure	in waterbody, wast	e discharge pipe	es):				
livestock access, g	rassed yard							
Tributary is: (check one)	⊠ Natural	□ Ar	tificial, man-m	nade 🗆 Manip	ulated			
Stream Quality ^a : (check one)	□ High	× M	oderate	□ Low				

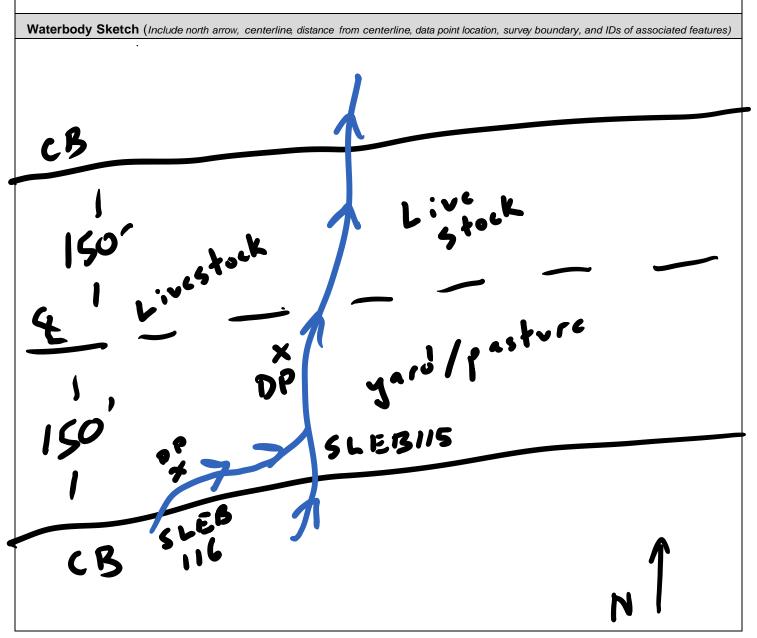
High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

Degraded intermittent stream. Stream appears slightly incised and possibly straightened due to livestock. Noted a weakly developed bed/bank, weak to absent bars and benches, no riffle pool complex, no grade control, and weak sinuosity.





Waterbody SLEB116 facing west upstream



Waterbody SLEB116 facing east downstream



Waterbody SLEB116 facing north across

Survey Description	า										
Project Name:		Waterboo	dy Nam	e:				aterbody ID:			Date:
Atlantic Coast Pipeli		Laurel L						LEB115			4/1/2015
State:	County:		C	Company:			Crew I	Member Initials	:	Photos:	
West Virginia	Lewis		٢	NRG			TP, S	A		01-03	
Tract Number(s):				learest Mile	epost:			Associated W	etland	ID(s):	
02-096-A023, 02-09	6-A024		1	17.5				none			
Survey Type: (check one)		ne D	⊠Re-Ro	oute	□Ac	cess Road		□Other:			
Physical Attributes	6										
Stream Classification: (check one)	Epheme	eral [Interm	nittent	⊠Pe	erennial					
Waterbody Type:											
	River 🛛 S	Stream	Ditch	□ Ca	anal	□ Other:					
ОНШМ	OHWM India								5	10 ·	
Width: <u>15.0</u> ft.	(check all that ap	יטיטי)		Clear lin on bank	ie	Shelving	g	□Wrested vegetation	×	Scouring	g □Water staining
Height:		, matted, or r	missing	□Wrack lin	ne	□Litter ar	nd	□Abrupt plan		□Soil cł	naracteristic change
_ <u>2.0_</u> ft. N/A□	vegetat	tion				debris		community ch	nange		
Width of Waterbody - To			ody - To	be of Slope			ody - W			of Water	:
Bank to Top of Bank:	to 10	e of Slope:			Water	Eage:			(Approx.)		
<u>_20_</u> ft.		<u>_10.0</u> ft.			N/A□		<u>10.0</u> ft		N/A□	-	<u>1.0</u> ft.
Sinuosity:	Wate	r velocity:				height			Banks	slope	
(check one)	(Appro.					Right:				Right	:
		1.	<u>5_</u> fps			Left:	<u>8_</u> ft.			Left	<u>90</u> degrees
⊠Meanderin	9 N/A□]					<u>8_</u> ft.			2011	<u>85</u> degrees
Qualitative Attribut	tes										
Water Appearance: (check one)	No water	Clear [□Turbic		een surface	⊡Sur e scu		□Algal mats	□Othe	r:	
	Bedrock 🗆 E	Boulder 🛛	Cobble	e 🛛 Grave	el 🛛	Sand 2	⊠ Silt/ c	lay 🗆 Organic	; 🗆 (Other:	
(check all that apply)45 % of Substrate:	_%	%1	<u>0_</u> %	<u> 35 </u> %		<u>25_</u> %	<u>30_</u> %	%		%	
Width of Riparian Zone	: Vegetati	ve Layers:									
	(check all th	nat apply)		☑ Trees:	:		Saplir	ngs/Shrubs:		Herbs	
<u>_10_ft</u> - N/A□	Avg. DB (approx.)	H of Domina	ants:	<u> 10 in</u>	I.	-	in.				
Dominant Bank Vegeta	tion (list):										
Grassed yard/livesto	ock pasture. I	Noted a fe	w sug	ar maple,	sycar	more and	fescu	ie along banl	ks.		
Aquatic Habitats (ex: su	bmerged or emerg	ged aquatic ve	getation,	overhanging	banks/rc	oots, leaf pac	ks, large	submerged wood	, riffles,	deep pools	s):
Cobble, debris piles	, few roots al	long bank,	dowr	ed logs							
Aquatic Organisms Obs	served (list):										
Caddis fly larvae, st	onefly, water	pennies,	musse	els, and, n	nayflie	es.					
T&E Species Observed	(list):										
None											
Disturbances (ex: livesto	ck access, manure	e in waterbody	, waste o	discharge pipe	es):						
livestock access, gr	assed yard										
Tributary is: (check one)	⊠ Natural		□ Artif	icial, man-m	ade	🗆 Manipu	ulated				
Stream Quality ^a : (check one)	🗆 High		⊠ Mod	erate		□ Low					

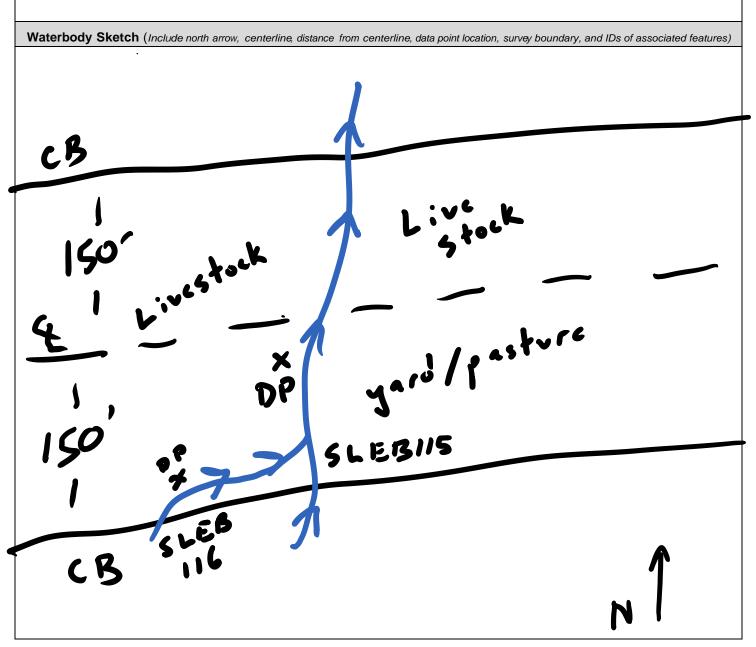
High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

Perennial stream. Noted strong bars and benches, bank failures, cobble, moderate sinuosity, good grade control, debris piles, moderate riffle pool sequence, and a few roots along bank. Mostly one long riffle with a few pools. Stream appears incised and possibly straightened due to livestock. Also observed deer and raccoon tracks.





Waterbody SLEB115 facing southwest upstream



Waterbody SLEB115 facing northeast downstream



Waterbody SLEB115 facing southeast across

Project Name: Waterbody Name: Waterbody ID: Date: Southeast Reliability Unnamed Tributary to Buckhannon Run SLEA023 6/20/2014 State: County/Parish: Company Crew Member Initials: Photos: West Virginia Lewis Natural Resource Group GB, LE 3 Tract Number(s): Nearest Milepost: Associated Wetland ID(s) 02-122 18.8 WLEB012 Survey Type: Centerline Re-Route Access Road Other:	
State: County/Parish: Company Crew Member Initials: Photos: West Virginia Lewis Natural Resource Group GB, LE 3 Tract Number(s): Nearest Milepost: Associated Wetland ID(s) 02-122 18.8 WLEB012 Survey Type: Survey Type:	
West Virginia Lewis Natural Resource Group GB, LE 3 Tract Number(s): Nearest Milepost: Associated Wetland ID(s) 02-122 18.8 WLEB012 Survey Type: Survey Type:	
Tract Number(s): Nearest Milepost: Associated Wetland ID(s) 02-122 18.8 WLEB012 Survey Type: Survey Type:	
02-122 18.8 WLEB012 Survey Type:	
Survey Type:	
Physical Attributes	
Stream Classification: (check one) □ Ephemeral ☑ Intermittent □ Perennial	
Waterbody Type:	
(<i>check one</i>) \Box River \boxtimes Stream \Box Ditch \Box Canal \Box Other:	
OHWM OHWM Indicator:	
Width: (check all that apply) □ Clear line □ Shelving ☑ Wrested □ Scouring □ Wat 4.0 ft. on bank on bank vegetation staining	
Height: Bent, matted, or missing Wrack line Litter and Abrupt plant Soil characteristic c	nange
0.5 ft. vegetation debris community change N/A□	
Width of Waterbody - Top of Width of Waterbody - Toe of Slope Width of Waterbody - Water Edge to Depth of Water: Bank to Top of Bank: to Toe of Slope Water Edge: (Approx.)	
Bank to Top of Bank: to Toe of Slope: Water Edge: (Approx.)	
Sinuosity: Water velocity: Bank height Bank slope	
(check one) (Approx.) Right: Right:	
<u>0.25 fps</u> <u>2.5 ft.</u> <u>85 degre</u> Left: Left:) S
□Meandering N/A□ <u>2.5_ft.</u> <u>85_</u> degree	;
Qualitative Attributes	
Water Appearance:	
Water Appearance:	
Water Appearance: (check one) No water Clear Invite	
Water Appearance: (check one) □No water □Clear ⊠Turbid □Sheen □Surface □Algal □Other: on surface scum mats	
Water Appearance: (check one) No water Clear Invite Clear Sheen Surface Algal Other: (check one) Invite Clear Invite Clear Invite Clear Sheen Surface Algal Other: Substrate: Invite Bedrock Boulder Cobble Gravel Sand Silt/ clay Organic Other: (check all that apply) % _% _% _% _% _% _% Width of Riparian Zone: Vegetative Layers: Vegetative Layers: Vegetative Layers: Vegetative Layers:	
Water Appearance: (check one) No water Clear Image: Strutbid Sheen Surface Algal Other: Substrate: Bedrock Boulder Cobble Gravel Sand Silt/ clay Organic Other: (check all that apply) %	
Water Appearance: (check one) No water Clear Image: Turbid Sheen Sufface Algal Other: Substrate: Bedrock Boulder Cobble Gravel Sand Silt/ clay Organic Other: (check all that apply) % % % 10 % 90 % % % of Substrate: % % % 10 % 90 % % Width of Riparian Zone: Vegetative Layers: (check all that apply) Trees: Saplings/Shrubs: Image: Herbs ft. Avg. DBH of Dominants: in. in. in.	
Water Appearance: (check one) No water Clear Image: Turbid Sheen Surface Algal Other: Substrate: Bedrock Boulder Cobble Gravel Sand Silt/ clay Organic Other: (check all that apply) % % % 10 % 90 % % Width of Riparian Zone: Vegetative Layers: % % % % ft. Avg. DBH of Dominants: in. in. in. N/A ⊠ Dominant Bank Vegetation (list): E	
Water Appearance: (check one) No water Clear Image: Turbid Sheen Sufface Algal Other: Substrate: Bedrock Boulder Cobble Gravel Sand Silt/ clay Organic Other: (check all that apply) % % % 10 % 90 % % % of Substrate: % % % 10 % 90 % % Width of Riparian Zone: Vegetative Layers: (check all that apply) Trees: Saplings/Shrubs: Image: Herbs ft. Avg. DBH of Dominants: in. in. in.	
Water Appearance: No water Clear XTurbid Sheen Surface Algal Other: (check one) Bedrock Boulder Cobble Gravel Sand Silt/ clay Organic Other: (check all that apply) Bedrock Boulder Cobble Gravel Sand Silt/ clay Organic Other: (check all that apply) % % % % % % Width of Riparian Zone: Vegetative Layers:	
Water Appearance: Image: Clear indicator in the image: Clear	
Water Appearance: No water Clear XTurbid Sheen Surface Algal Other: (check one) Bedrock Boulder Cobble Gravel Sand Silt/ clay Organic Other: (check all that apply) Bedrock Boulder Cobble Gravel Sand Silt/ clay Organic Other: (check all that apply) % % % % % % Width of Riparian Zone: Vegetative Layers:	
Water Appearance: Image: Clear indicator inditerator inditeratore indicator indicator indicator inditerator in	
Water Appearance: Image: Clear image:	
Water Appearance: Image: Clear Interview of the construction	
Water Appearance: (check one) No water Clear XTurbid Sheen Surface Algal Other: Substrate: Bedrock Boulder Cobble Gravel Sand Slit/ clay Organic Other: (check all that apply) %	
Water Appearance: (check one) No water Clear Inrbid Sheen Sufface Algal Other: Substrate: Bedrock Boulder Cobble Gravel Sand Silt/ clay Organic Other: (check all that apply) Bedrock Boulder Cobble Gravel Sand Silt/ clay Organic Other: % of Substrate: % % % 90 % % _% Width of Riparian Zone: Vegetative Layers: Check all that apply) Trees: Saplings/Shrubs: X Herbs (check all that apply) ITrees: Saplings/Shrubs: X Herbs (naprox.) Avg. DBH of Dominants: in. in. in. N/A Mominant Bank Vegetation (<i>list</i>): Fescue, orchardgrass, milkweed, soft rush, reed grass Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Emergent vegetation Aquatic Organisms Observed (<i>list</i>): none T&E Species Observed (<i>list</i>): none T&E Species Observed (<i>list</i>): none Itacobserved (<i>list</i>): Itacobserved (<i>list</i>	
Water Appearance: Image: Clear Image:	

Waterbody ID:

SLEA023

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.

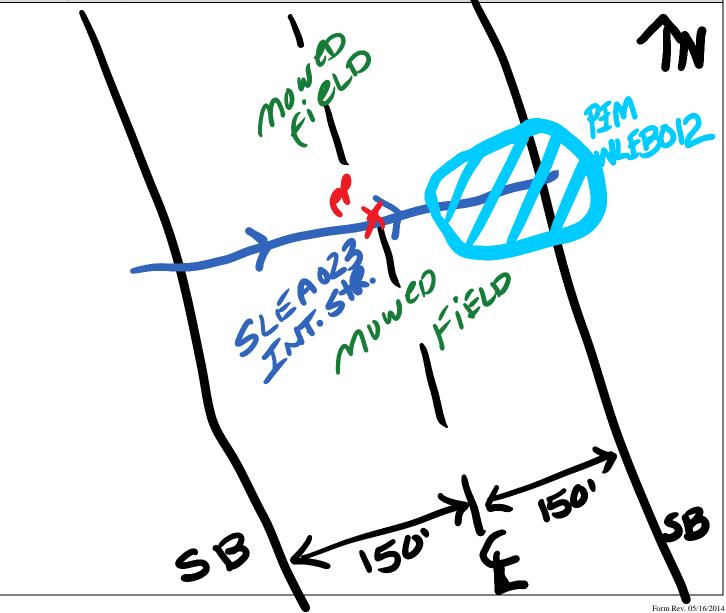
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate 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:

Upstream continues out of corridor, downstream flows into PEM wetland WLEB012

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





Waterbody SLEA023 facing west upstream



Waterbody SLEA023 facing east downstream



Waterbody SLEA023 facing north across

Survey Description	า								
Project Name:		Waterbody Na				/aterbody ID:		Date	
Southeast Reliability	/	Buckhannor	n Run		S	LEB018		06/2	20/2014
State:	County/Parish:	•	Company:		Crew I	Member Initials	: Ph	otos:	
West Virginia	Lewis		Natural Re	esource Group	ΤP		3		
Tract Number(s):			Nearest Mile	epost:		Associated W	etland ID)(s):	
02-126			19.1			none			
Survey Type: (check one)	⊠Centerline	e □Re-I	Route	□Access Road		□Other:			
Physical Attributes	6								
Stream Classification: (check one)	Ephemer	al 🛛 Inter	rmittent	⊠Perennial					
Waterbody Type:	•								
	River 🛛 Str	ream 🗆 Dito	ch 🗆 C	anal 🗌 Other:	:				
онwм	OHWM Indica								
Width: <u>6.0</u> ft.	(check all that appl	ly)	Clear lii on bank	ne ⊠Shelvin	g	☐Wrested vegetation	□Se	couring	□Water staining
Height:	⊟Bent, i	matted, or missir	ng ⊡Wrack li	ine 🛛 Litter ar	nd	□Abrupt plan		Soil chara	cteristic change
<u>0.75</u> ft. N/A□	vegetatio	on	-	debris		community ch	lange		-
Width of Waterbody - To			Toe of Slope	Width of Waterb	ody - W	ater Edge to	Depth of	Water:	
Bank to Top of Bank:	to Toe	of Slope:		Water Edge:			(Approx.)		
<u>_12.</u> ft.		<u>8</u> ft.		N/A□	<u>3.5 ft</u> .		N/A□	0.7	<u>′5 f</u> t.
Sinuosity:	Water	velocity:		Bank height			Bank slo	pe	
(check one)	(Approx.)			Right:				Right:	
		<u>_1.0</u> fps	5	Left:	<u>5</u> ft.			8	5_degrees
⊠Meanderin	Ig N/A□				<u>5</u> ft.				5_degrees
Qualitative Attribut	tes								
Water Appearance: (check one)	No water	Clear ⊡Turb	oid ⊡Sh	neen ⊡Sui	rface	□Algal	□Other:		
				i surface scu		mats			
Substrate:	Bedrock 🗆 Bo	oulder 🛛 Cobb	ole 🛛 Grav	el 🗆 Sand 🛛	⊠ Silt/ c	clay 🗆 Organic	: 🗆 Oth	ner:	
% of Substrate:	%	_% _10	_% <u>_35_</u> %	<u>%</u>	<u>55 %</u>	»%		_%	
Width of Riparian Zone									
ft-	(check all tha	t apply) of Dominants:	□ Trees	: [ngs/Shrubs:	⊠ He		
<u>n</u> . N/A⊠	(approx.)	of Dominants.	in.	-	in.			in.	
Dominant Bank Vegeta									
Orchardgrass, red c	lover								
Aquatic Habitats (ex: su	bmerged or emerge	d aquatic vegetatio	on, overhanging	banks/roots, leaf pac	ks, large	submerged wood	, riffles, dee	ep pools):	
Fringe wetland on e	ither side of cl	hannel, mode	erate riffle/p	ool complex					
Aquatic Organisms Obs	served (list):								
Fish									
T&E Species Observed	(list):								
none									
Disturbances (ex: livesto	ck access, manure	in waterbody, waste	e discharge pip	es)					
Pasture on either sid	de of channel,	bank failures	, possibly (grazed by cattle	e in the	e pas.			
Tributary is: (check one)	[⊠] Natural	□ Ar	tificial, man-m	nade 🗆 Manipi	ulated				
Stream Quality ^a : (check one)	□ High		oderate	□ Low					
	riigii		Jacialo						

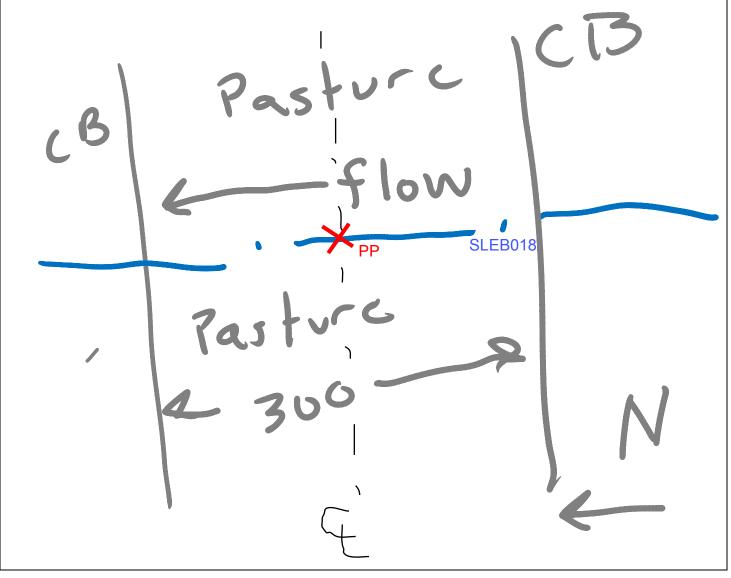
High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

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





Waterbody SLEB018 facing south upstream



Waterbody SLEB018 facing north downstream



Waterbody SLEB018 facing east across

Survey Description	n							-
Project Name:		Waterbody Na				Vaterbody ID:		Date:
Southeast Reliability	у	Unnamed T	ributary to E	Buckhannon Ru	ın S	SLEB019		6/21/2014
State:	County/Parish:		Company:		Crew	Member Initials	: Pho	otos:
West Virginia	Lewis		Natural Re	esource Group	ΤP		3	
Tract Number(s):			Nearest Mile	epost:		Associated W	etland ID(s	s):
02-124			19.4			none		
Survey Type: (check one)	⊠Centerlin	e □Re-	Route	□Access Road		□Other:		
Physical Attribute:	s							
Stream Classification:								
(check one)	Ephemer	al 🛛 Inte	ermittent	Perennial				
Waterbody Type: (check one)	River 🛛 St	ream 🗆 Dit	tch 🗆 Ca	anal 🛛 Other:	:			
онwм	OHWM Indica							
Width: <u>3</u> ft.	(check all that appl	<i>lY)</i>	Clear lir on bank	ne ⊠Shelving	g	☐Wrested vegetation	⊠Sco	ouring DWater staining
Height:	□Bent, i	matted, or missi	ng 🗆 Wrack li	ne 🗆 Litter ar	nd	□Abrupt plan	t ⊡S	Soil characteristic change
ft. N/A□	vegetatio	on		debris		community ch	ange	
Width of Waterbody - T			Toe of Slope	Width of Waterbo	ody - W	Vater Edge to	Depth of V	Vater:
Bank to Top of Bank:	to Toe	of Slope:		Water Edge:			(Approx.)	
<u>6</u> ft.	-	_4_ft.			<u>1.5_</u> ft.		N/A□	<u>0.2</u> ft.
Sinuosity:	Water	velocity:		N/A□ Bank height			Bank slop	
(check one)	(Approx.)			Right:		I	•	e Right:
□Straight		_ <u>1_</u> fps	5	-	<u>4_</u> ft.			85 degrees
⊠Meanderir	ng N/A 🗆			Left:	<u>4</u> ft.			Left: <u>85</u> degrees
Qualitative Attribu	tes							
Water Appearance:								
(check one)	No water	Clear □Tur		leen ⊡Sui I surface scu		□Algal [mats	□Other:	
Substrate:	Bedrock 🗆 Bo	oulder 🛛 Cob	ble 🛛 Grave	el 🛛 Sand 🛛	⊠ Silt/ o	clay 🗆 Organic	Othe	er:
% of Substrate:	%	% _ <u>10</u> _%	_ <u>40</u> _%	<u>30</u> %	<u>10</u> %	_ <u>10</u> _%		_%
Width of Riparian Zone	: Vegetativ	e Lavers:						
	(check all tha	t apply)	⊠ Trees	: 2	🛛 Sapli	ngs/Shrubs:	🗆 Her	bs
<u>>50 ft</u> · N/A□	Avg. DBH (approx.)	l of Dominants:	<u>9.</u> in.	-	<u>2</u> in.			in.
Dominant Bank Vegeta	tion (list):							
Black cherry, sycam	nore, jewel we	ed, autumn c	olive, wingst	em, microstegi	um, b	lack walnut		
Aquatic Habitats (ex: su	ubmerged or emerge	ed aquatic vegetati	on, overhanging	banks/roots, leaf pac	ks, large	e submerged wood,	, riffles, deep	pools):
Week riffle pool, mo	ostly one long	riffle, no over	hanging ve	getation , no ni	ck poi	ints, good seo	diment so	orting
Aquatic Organisms Ob	served (list):							
none								
T&E Species Observed	(list):							
none								
Disturbances (ex: livesto	ock access, manure	in waterbody, was	te discharge pipe	es):				
none evident								
Tributary is: (check one)	☑ Natural		rtificial, man-m	ade 🗆 Manipi	ulated			
Stream Quality ^a : (check one)	\Box High	⊠ N	loderate	□ Low				

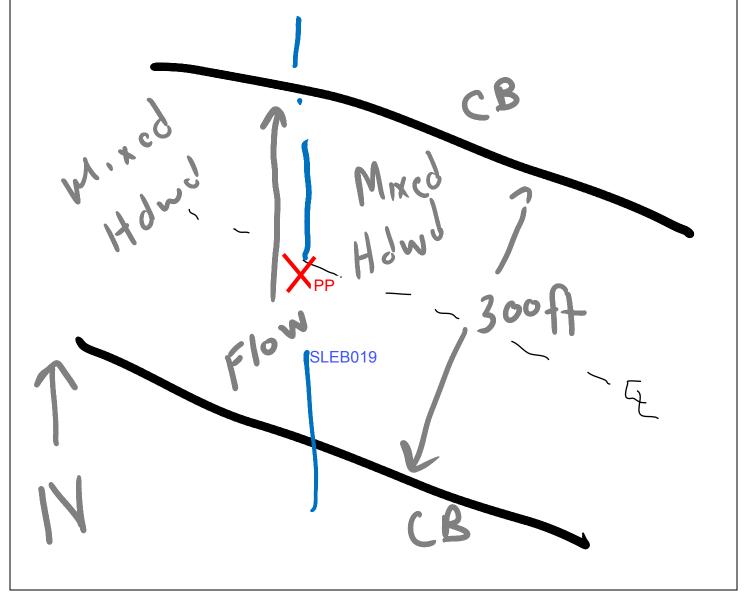
High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

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





Waterbody SLEB019 facing south upstream



Waterbody SLEB019 facing north downstream



Waterbody SLEB019 facing west across

Open Waterbod	ly Dat	a Sheet									
Survey Description	on										
Project Name:		V	Vaterbody I	Name:				Waterbody ID:		Date:	
Southeast Reliabil	lity	L	Innamed	Pond				OLEA003		6/21/20	014
State:	County	/:		Compa	any:		Crew	Member Initials:	Photos:		
West Virginia	Lewis			Natur	al Resour	ce Group	GB,	LE	3		
Tract Number(s):				Neares	st Milepost:			Associated Wetlan	d ID(s):		
02-127				19.5				WLEA012			
Survey Type: (check one)		⊠Centerline		Re-Rout	e	□Access Ro	bad	□Other:			
Physical Attribut	es										
	ck Pond	□ Natural F	Pond 🗆 La	ake 🗆	Reservoir] Impoundm	ient 🗆	Oxbow DOther:			
Hydrologic Regime:	⊠ Po	ermanently F	looded] Semip	permanently	Flooded	□ Sea	sonally Flooded	Tempora	rily Floode	d
онwм		OHWM Indica									
Height: <u>3.0</u> ft.	(*	check all that appl	(y)		☑ Clear line on bank	e ⊡Sh	elving	□Wrested vegetation	□Sco	ouring	□Water staining
<u> </u>		□Bent, i vegetatio	matted, or n	nissing	□Wrack line	□ Litt debri	ter and s	⊠Abrupt pla community c		haracterist	tic change
Depth of Water:			Bank heig	jht (ave	rage):			Bank slope (av	erage):		
_ <u>_2.5</u> N/A□	ft.				<u>3.5</u> ft	t.			<u>75</u> degi	rees	
Qualitative Attrib	utes							·			
Water Appearance: (check one)	□No w	ater □Cl	ear □ ⁻	Turbid	□Shee on surfa		Surfac um	e ⊠Algal [mats	∃Other:		
Substrate: (check all that apply)	Bedr	rock 🗆 Bou	Ilder 🗆 C	obble	□ Gravel	⊠ Sand	⊠ S	ilt/ clay 🛛 Organic	Other:		
% of Substrate:		%	_%	%	%	<u> 20 </u> %	_ 8	<u>0_%%</u>	%		
Width of Riparian Zor	ne:	Vegetative L (check all that ap			[⊠] Trees:		⊠ Sa	aplings/Shrubs:	⊠ Herbs		
<u>ft</u> .			Dominant								
N/A⊠		Avg. DBH of (approx.)	Dominant	.5.	<u>9.0</u> in.		1.0	<u>i</u> n.	in.		
Dominant Bank Vege	tation (list):									
Black cherry, boxe	elder, b	lack locust	, elderbe	rry, do	gwood, so	oft rush, mi	ultiflor	ra rose, autumn	olive, hop	sedge, v	woodnettle
Aquatic Habitats (ex: s	submergeo	d or emerged aqua	tic vegetation,	overhangir	ng banks/roots, le	eaf packs, large s	submerge	ed wood, riffles, deep pools	, etc.) :		
Pool											
Aquatic Organisms O)bserve	d (list):									
Frogs											
T&E Species Observe	ed (list):										
none											
Disturbances (ex: lives On an old strip min			waterbody, v	vaste dis	charge pipes):						
Waterbody is:											
(check one)		Natural	⊠ Artific	ial, man	-made	Manipulate	ed				
Waterbody Quality ^a : (check one)		□ High	⊠ Moderat	e 🗆	Low						

Waterbody ID:

OLEA003

High Quality: Natural, natural bank vegetation around entire waterbody; 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.

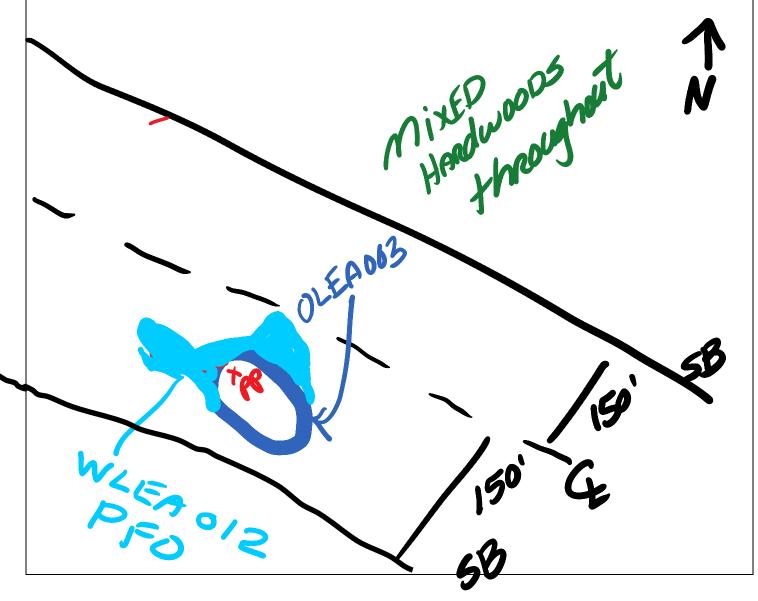
Moderate Quality: Altered by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or bank vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers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

Low Quality: 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:

WLEA012 from seepage out of this feature

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





Waterbody OLEA003 facing east