Survey Description Project Name:	1	Motorbody N			Waterbady ID		Data	
Southeast Reliability			Waterbody ID: SLEA001		Date: 6/11/2014			
		Milicileide (						
	County/Parish:		Company	annina Craun	Crew Member Initia	nls: Pho	tos:	
West Virginia	Lewis			'	GB, SK, LE, TP			
Tract Number(s):			Nearest Mile	epost:		Wetland ID(s	s):	
01-016, 01-017			1.15		WLEB00			
Survey Type: (check one)	⊠Centerlin	ne □Re	-Route	□Access Road	□Other:			
Physical Attributes								
Stream Classification: (check one)	Π= .							
,	□Epheme	ral ⊔Int	ermittent	⊠ Perennial				
Waterbody Type: (check one) □	River ⊠ St	tream 🗆 Di	itch 🗆 C	anal   Other	:			
OL BANA	OLDAMA I							
OHWM Width:	OHWM Indic		☐ Clear lii	ne ⊠Shelvin		⊠Sco		
<u>12.0</u> ft.			on bank		vegetation		staining	
Height: 1.5 ft.	⊠Bent, vegetati	matted, or miss	ing □Wrack li	ine □Litter ar debris	nd   Abrupt pl  community		oil characteristic change	
N/A□					•			
Width of Waterbody - To Bank to Top of Bank:		of Waterbody of Slope:	- Toe of Slope	Width of Waterb Water Edge:	ody - Water Edge to	Depth of W (Approx.)	/ater:	
15.0 ft		•			12.0 #		_1.25_ ft.	
<u>_15.0_</u> ft.		8.5ft.		N/A□	<u>12.0_</u> ft.	N/A□		
Sinuosity: (check one)	Water (Approx	r velocity:		Bank height		Bank slope	9	
□Straight	(γιρρισχ		ne	Right:	3.0_ ft.	R	ight: _80_degrees	
⊠Meanderin	0		Left:			Left:		
	1477.2			-	<u>3.0_</u> ft.		<u>45</u> degrees	
Qualitative Attribut Water Appearance:	es							
	No water $\square$	lClear ⊠Tu		neen □Su n surface scu	3	□Other:		
	Bedrock   B	soulder 🗵 Col	oble 🛭 Grav	el ⊠ Sand □	⊠ Silt/ clay □ Orga	nic 🗆 Othe	r:	
(check all that apply) % of Substrate: 25	<u> </u>	% _ <u>5</u> _%	_ <u>15</u> _%	<u>25</u> %	_30_%	%	%	
Width of Riparian Zone	Vegetativ	/e Layers:						
	(check all tha	at apply)		:	⊠ Saplings/Shrubs:	⊠ Her	bs	
<u>20 ft</u> ⋅ N/A□	Avg. DBI (approx.)	H of Dominants	<u>12.0</u> i	n. <u>-</u>	<u>0.50</u> in.		_in.	
Dominant Bank Vegetat	tion (list):							
Sugar maple, black	willow, birch,	jewelweed, ł	Kentucky blu	iegrass, Joe py	ve weed, agrimor	y, curly do	ck, buttercup	
Aquatic Habitats (ex: su	bmerged or emerge	ed aquatic vegetat	ion, overhanging	banks/roots, leaf pac	ks, large submerged wo	od, riffles, deep	pools):	
Pools, riffles, overha	anging banks	and roots						
Aquatic Organisms Obs	served (list):							
Frog								
T&E Species Observed	(list):							
none	,							
Disturbances (ex: livesto	ck access, manure	in waterbody, was	ste discharge pip	es):				
Livestock access	, == ====	-7,	J-117	•				
Tributary is:								
(check one)	Natural		Artificial, man-m	nade 🗆 Manip	ulated			
Stream Quality <sup>a</sup> : (check one)	□ High	<b>⋈ N</b>	Moderate	□ Low				
(onesin one)	— migri	∠ I\	nouerate	⊔ LOW				

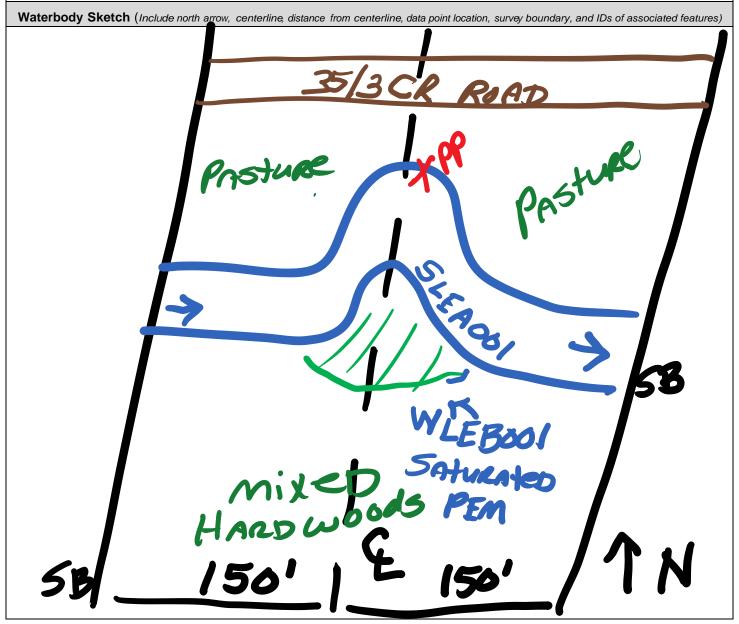
<sup>a</sup> High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no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

Kincheloe Creek, NHD perennial stream line, stream is Harrison/Lewis County line, continues out of corridor in both directions. North side is pasture. Upline and downline recorded.





Waterbody SLEA001 facing west upstream



Waterbody SLEA001 facing east downstream

# Waterbody Photo Page Template



Waterbody SLEA001 facing south across



Waterbody SLEA001 facing west upstream



Waterbody SLEA001 facing east downstream



Waterbody SLEA001 facing south across

Survey Description	1	-						
Project Name:		Waterbody Nar	ne:			aterbody ID:		Date:
Southeast Reliability	/	Sand Fork			SI	LEA002		6/11/2014
State:	County/Parish:		Company		Crew N	Member Initials:	Photos:	
West Virginia	Lewis			source Group	GB, S		3	
Tract Number(s):			Nearest Mile	post:		Associated Wet	land ID(s):	
02-001 Survey Type:			1.5			none		
(check one)	⊠Centerline	e □Re-R	Route	□Access Road	l	□Other:		
Physical Attributes Stream Classification:	3							
(check one)	□Ephemera	al □Inter	mittent	⊠Perennial				
Waterbody Type: (check one)	River ⊠ Str	eam 🗆 Dito	h □ Ca	nal	:			
OHWM Width:	OHWM Indica		☐ Clear line	e ⊠Shelvin	a	⊠Wrested	⊠Scourin	g □Water
			on bank	2 GHOIVIII	9	vegetation	△ Coodiiii	staining
Height: <u>2.5</u> ft. N/A□	⊠Bent, r vegetatio	matted, or missing	g □Wrack lin	e □Litter ar debris	nd	⊠Abrupt plant community char		haracteristic change
Width of Waterbody - To Bank to Top of Bank:		of Waterbody - 7 of Slope:		Width of Waterbo Water Edge:	ody - W	ater Edge to O	epth of Wate	r:
ft.	-	7.0_ft.			<u>13.0_</u> ft.		′A□	ft.
Sinuosity:		velocity:		Bank height		В	ank slope	
(check one) ☐Straight	(Approx.)			Right:			Right	
		<u>_1.0</u> _fps		<u>20.0</u> ft. <b>Left:</b>		•	Lef	<u>65</u> degrees t:
⊠Meanderin	g N/A□				4.0_ft.			80 degrees
Qualitative Attribut	tes							
Water Appearance: (check one)	No water □0	Clear ⊠Turb	-	een □Sui surface scu		□Algal □ mats	Other:	
Substrate:	Bedrock ☐ Bo	oulder 🗵 Cobb	le ⊠ Grave	I ⊠ Sand □	⊠ Silt/ c	lay □ Organic	☐ Other:	
(check all that apply) % of Substrate: _2	<u></u>	_% _ <u>15</u> _%	_ <u>10</u> _%	<u>20</u> %	_ <u>35</u> _%	% _	%	
Width of Riparian Zone	: Vegetative	e Layers:						
_20_ft	(check all that Avg. DBH	of Dominants:			⊠ Saplin _ <u>1.5_</u> in.	ngs/Shrubs:		
N/A 🗆	(approx.)		<u> 12.0 </u> III	· -	<u> </u>		"'''	
Dominant Bank Vegetar Sugar maple, bassw		rch, red oak,	ironwood, v	vitchhazel, Ch	ristma	s fern, woodne	ettle, wildgi	nger, bloodroot
Aquatic Habitats (ex: su	bmerged or emerge	d aquatic vegetation	n, overhanging b	panks/roots, leaf pac	ks, large	submerged wood, ri	ffles, deep poo	ls):
Pools, riffles, overha	anging banks a	and roots, veg	etated hum	nmocks within	chann	el		
Aquatic Organisms Obs	served (list):							
Frog, fish								
T&E Species Observed	(list):							
none								
Disturbances (ex: livesto	ck access, manure i	n waterbody, waste	discharge pipe	s):				
Adjacent existing pip	peline ROW							
Tributary is: (check one)	Natural	□ Art	ificial, man-ma	ade 🗆 Manip	ulated			
Stream Quality <sup>a</sup> : (check one)	□ High	⊠ Mo	derate	□ Low				

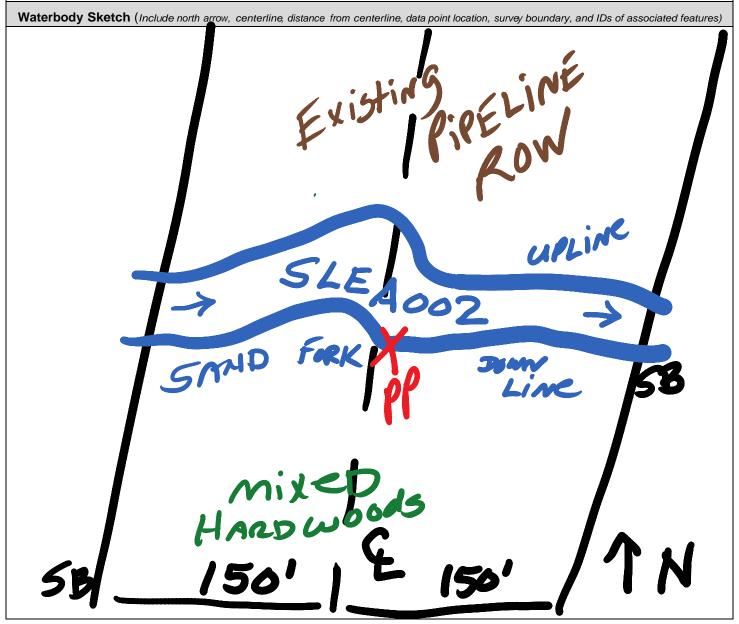
<sup>a</sup> High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no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

Sand Fork, NHD perennial stream line, parallel pipeline ROW, continues out of corridor in both directions.





Waterbody SLEA002 facing west upstream



Waterbody SLEA002 facing east downstream



Waterbody SLEA002 facing south across

Survey Description	1							
Project Name:		Waterbody Na	me:		Wa	aterbody ID:	Date:	
Southeast Reliability		Unnamed Tr	ibutary to k	Kincheloe Cree	k SL	EA003	6/11/2014	
State:	County/Parish:		Company		Crew M	ember Initials	: Photos:	
West Virginia	Lewis			esource Group	,	K, LE, TP	3	
Tract Number(s):			Nearest Mile	epost:	ľ	Associated W	etland ID(s):	
02-007			2.35			none		
Survey Type: (check one)	⊠Centerlin	e □Re-F	Route	□Access Road		□Other:		
Physical Attributes Stream Classification:	3							
(check one)	□Ephemer	al ⊠Inter	mittent	□Perennial				
Waterbody Type: (check one)	River ⊠ St	ream 🗆 Dito	ch □ Ca	anal 🗆 Other	:			
OHWM Width: 5.0 ft.	OHWM Indica (check all that app		□ Clear lir on bank	ne ⊠Shelvin	g	□Wrested vegetation	⊠Scouring □Water staining	
Height:  1.0 ft.	⊠Bent, vegetatio	matted, or missin	g □Wrack li	ne □Litter ar debris	nd	□Abrupt plan community ch	•	į
Width of Waterbody - T			Toe of Slope	Width of Waterb	ody - Wa	ater Edge to	Depth of Water:	
Bank to Top of Bank:	to Toe	of Slope:		Water Edge:			(Approx.)	
<u>9.0</u> ft.	-	_4.0_ft.		N/A□	<u>4.0</u> ft.		<u>0.25_</u> ft. N/A□	
Sinuosity: (check one)	Water (Approx.	velocity:		Bank height			Bank slope	
□Straight	(* 454-5			Right:	3.5_ft.		Right: <u>90</u> degrees	
Moondorin   ✓ Moondorin		<u>1.5_</u> fps	•	Left:			Left:	
⊠Meanderir	ng N/A□			_	<u>4.8_</u> ft.		45 degrees	
Qualitative Attribu	tes							
Water Appearance: (check one)	No water ⊠	Clear □Turb	-	leen □Sul surface scu		□Algal [ mats	□Other:	
	Bedrock 🗆 Be	oulder   Cobb	ole 🗵 Grave	el ⊠ Sand □	⊠ Silt/ cla	ay 🗆 Organic	☐ Other:	
(check all that apply) % of Substrate: 3	0%	% _ <u>30</u> _%	_ <u>10</u> _%	<u>15</u> %	_ <u>15</u> _%	%		
Width of Riparian Zone								
_60_ft	_	t apply)  of Dominants:	⊠ Trees: _ <u>6.0_</u> in.		⊠ Saplino _ <u>0.50</u> in	gs/Shrubs:	⊠ Herbs in.	
N/A□ Dominant Bank Vegeta	(approx.)							
Ash, rose, autumn c	. ,	rry, goldenrod	, fescue, w	oodnettle				
Aquatic Habitats (ex: su	bmerged or emerge	d aquatic vegetatio	n, overhanging	banks/roots, leaf pac	ks, large s	submerged wood	, riffles, deep pools):	
Pools, riffles, overhan	ging banks and	roots						
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):				
Logged								
Tributary is: (check one)	Natural	□ Ari	tificial, man-m	ade 🗆 Manip	ulated			
Stream Quality <sup>a</sup> : (check one)	□ High	⊠ Mo	oderate	☐ Low				_

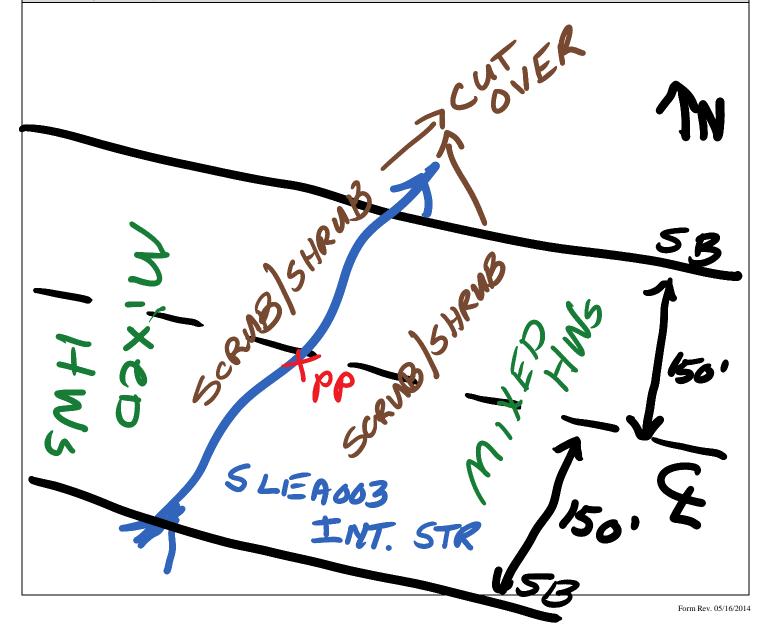
<sup>a</sup> **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat;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

Corridor between toes of slope through which stream runs has been cleared of trees. Feature continues out of corridor in both directions.





Waterbody SLEA003 facing southwest upstream



Waterbody SLEA003 facing northeast downstream



Waterbody SLEA003 facing southeast across

Survey Description									
Project Name:		Waterbody Nar	ne:		W	aterbody ID:			Date:
Atlantic Coast Pipeli	Atlantic Coast Pipeline Kincheloe Creek				S	LEB117		4	1/6/2015
State:	County:		Company:		Crew I	Member Initials	: F	Photos:	
West Virginia	Lewis		NRG		TP, S			01-03	
Tract Number(s):			Nearest Mile	epost:		Associated W	etland l	ID(s):	
02-007, 02-009			2.4			WLEB109			
Survey Type: (check one)	□Centerline	e □Re-F	Route	⊠Access Road		□Other:			
Physical Attributes Stream Classification:									
(check one)	□Ephemera	al □Inter	mittent	⊠Perennial					
Waterbody Type: (check one)	River ⊠ Str	eam 🗆 Dito	h 🗆 Ca	anal 🗆 Other:	:				
OHWM Width: 20.0_ft.	OHWM Indicat (check all that apply			ne ⊠Shelvin	g	□Wrested vegetation		Scouring	□Water staining
Height: <u>3.5</u> ft. N/A□	□Bent, n vegetatio	natted, or missin n	g □Wrack li	ne □Litter ar debris	nd	☐ Abrupt plan community ch		□Soil ch	aracteristic change
Width of Waterbody - To Bank to Top of Bank:		of Waterbody - <sup>-</sup> of Slope:	Toe of Slope	Width of Waterbo	ody - W		Depth (	of Water:	
		<u>15.0</u> ft.			<u>18.0_</u> ft.		N/A□	_	<u>1.5</u> ft.
Sinuosity: (check one) ☐Straight	(Approx.)	velocity:		Bank height Right: Left:	_7_ft.		Bank s	lope Right: Left:	85 degrees
⊠Meanderin	14/1.				_7_ft.				_85_ degrees
Qualitative Attribut	es								
Water Appearance: (check one) □	No water ⊠C	Clear □Turb		een □Sui surface scu		□Algal [ mats	□Other:		
Substrate: (check all that apply)45 % of Substrate:	Bedrock ⊠ Bo %5_%		le ⊠ Grave	el ⊠ Sand □	⊠ Silt/ c	elay □ Organic %		ther: %	
Width of Riparian Zone  10 ft  N/A□	(check all that		⊠ Trees: _10in		□ Saplir in.	ngs/Shrubs:		Herbs	
Dominant Bank Vegetat									
Hay/livestock pastur	• •	v maple, blacl	willow, a	nd fescue alon	g banl	ks.			
Aquatic Habitats (ex: su	omerged or emerged	d aquatic vegetation	n, overhanging	banks/roots, leaf pac	ks, large	submerged wood	, riffles, c	leep pools	):
Cobble, debris piles	, roots along b	ank, downed	logs						
Aquatic Organisms Obs	served (list):								
Caddis fly larvae, sto	onefly, water p	ennies, and,	mayflies.						
T&E Species Observed	(list):								
None									
Disturbances (ex: livesto	ck access, manure i	n waterbody, waste	discharge pipe	es):					
livestock access, rip	o-rap at road c	rossings							
Tributary is: (check one)	⊠ Natural	□ Art	ificial, man-m	ade 🗆 Manip	ulated				
Stream Quality <sup>a</sup> : (check one)	☐ High	⊠ Mc	derate	□ Low					

<sup>a</sup> **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, strong riffle pool sequence, and roots along bank. Stream appears slightly incised. Also observed deer and tracks.

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features) SLEB117 wler 109 Pasturc Access Road SL EA003



Waterbody SLEB117 facing west upstream



Waterbody SLEB117 facing east downstream



Waterbody SLEB117 facing south across

Survey Description									
Project Name: Waterbody Name:				W	aterbody ID:		D	ate:	
Atlantic Coast Pipeli	ne	UNT to Hog	Camp Run		S	LEB118		4	/7/2015
State:	County:		Company:		Crew N	Member Initials:	: P	Photos:	
West Virginia	Lewis		NRG		TP, S			01-03	
Tract Number(s): Nearest Mile			post:		Associated Wo	etland I	ID(s):		
02-013.AR			2.8			WLEB111			
Survey Type: (check one)	□Centerline	□Re-F	Route	⊠Access Road		□Other:			
Physical Attributes Stream Classification:									
(check one)	□Ephemera	l □Inter	mittent	⊠Perennial					
Waterbody Type: (check one)	River ⊠ Stre	eam 🗆 Dito	:h □ Ca	anal 🗆 Other:					
OHWM Width: 4.0 ft.	OHWM Indicat (check all that apply		⊠ Clear lin on bank	e ⊠Shelvin	g	□Wrested vegetation	$\boxtimes 3$	Scouring	□Water staining
<b>Height:</b> ft. N/A□	□Bent, n vegetatio	natted, or missin n	g □Wrack lii	ne □Litter ar debris	nd	☐ Abrupt plant community cha		□Soil cha	aracteristic change
Width of Waterbody - To Bank to Top of Bank:		of Waterbody - Top Slope:	Toe of Slope	Width of Waterbo Water Edge:	ody - W		Depth c	of Water:	
ft.		3.0_ft.			<u>3.0_</u> ft.		N/A□		<u>0.25_</u> ft.
Sinuosity: (check one) ☐Straight	(Approx.)	<b>/elocity:</b> 1.5fps	:	Left:	<u>3_</u> ft.		Bank sl	lope Right: Left:	85 degrees
⊠Meanderin	14/71				_4_ft.				85 degrees
Qualitative Attribut	es								
Water Appearance: (check one)	No water ⊠C	Clear □Turb		een □Sur surface scu		□Algal [ mats	□Other:		
Substrate:  (check all that apply)45 % of Substrate:	Bedrock □ Bo %	ulder ⊠ Cobb	le ⊠ Grave 20_%		⊠ Silt/ c 30_%	clay □ Organic %		other: %	
Width of Riparian Zone:	(check all that Avg. DBH		⊠ Trees: _10in		☑ Saplir <u>2</u> in.	ngs/Shrubs:	$\boxtimes$	Herbs	
N/A □ Dominant Bank Vegetat	(approx.)								
Road and fescue ald	, ,	Sugar maple	, northern r	ed oak, and sy	camoi	re along right	bank.		
Aquatic Habitats (ex: sul	omerged or emerged	l aquatic vegetation	n, overhanging	banks/roots, leaf pacl	ks, large	submerged wood,	riffles, d	leep pools)	:
Cobble, debris piles									
Aquatic Organisms Obs	served (list):								
Caddis fly larvae, sto	onefly, and, ma	ayflies.							
T&E Species Observed	(list):								
None									
Disturbances (ex: livesto	ck access, manure in	n waterbody, waste	discharge pipe	es):					
Road and buildings	along left ban	k							
Tributary is: (check one)	⊠ Natural	□ Art	ificial, man-m	ade 🗆 Manipu	ulated				
Stream Quality <sup>a</sup> : (check one)	☐ High	⊠ Mc	oderate	□ Low					

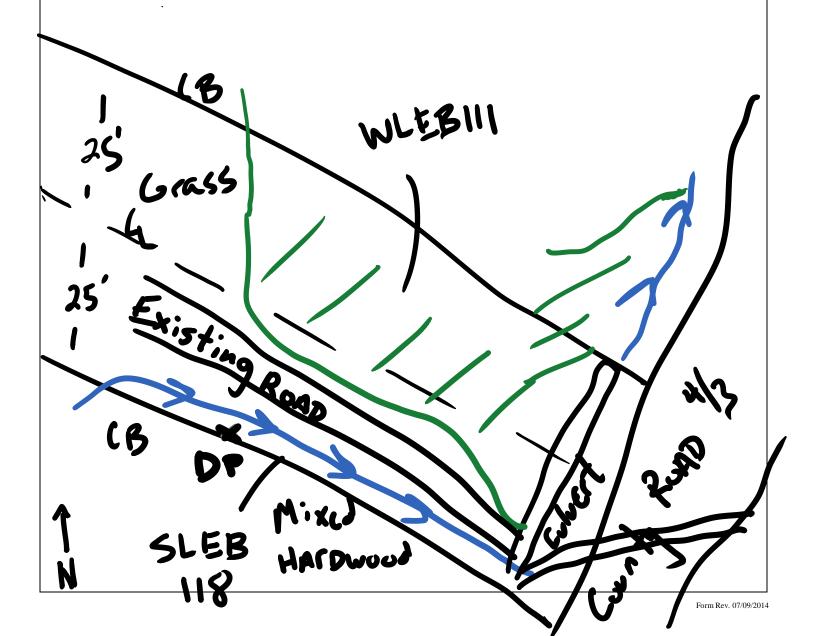
<sup>a</sup> High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no 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 in thalwag of ditch, moderate grade control, debris piles, weak riffle pool sequence, and a few roots along bank. Stream appears slightly incised.





Waterbody SLEB118 facing northwest upstream



Waterbody SLEB118 facing southeast downstream



Waterbody SLEB118 facing southwest across

Survey Description								
Project Name:	-	Waterbody Nai	ne:		W	aterbody ID:		Date:
Atlantic Coast Pipeli	ne	Hog Camp F	Run		sl	ea084		11/18/2015
State:	County:		Company:		Crew N	Member Initials	: Phot	tos:
9	Lewis		NRG		GB, D			hotos
Tract Number(s):			Nearest Mile	epost:		Associated W	etland ID(s	s):
02-016; access road Survey Type:	1 02-015-AR1		4.0			Discontinuous from cattle tran		and due to bank failures
(check one)	□Centerline	e □Re-F	Route	⊠Access Road		□Other:		
Physical Attributes Stream Classification:								
(check one)	□Ephemera	al □Inter	mittent	⊠Perennial				
Waterbody Type: (check one)	River ⊠ Str	eam 🗆 Dito	h 🗆 Ca	anal   Other:				
OHWM Width: ft.	OHWM Indica (check all that apply		⊠ Clear lir on bank	ne □Shelvinç	g	□Wrested vegetation	⊠Sco	uring □Water staining
Height: ft. N/A□	□Bent, n vegetatio	natted, or missin n	g ⊠Wrack li	ne □Litter an debris	nd	□Abrupt plar community ch		oil characteristic change
Width of Waterbody - To Bank to Top of Bank:		of Waterbody - of Slope:	Toe of Slope	Width of Waterbo	ody - W	ater Edge to	Depth of W	/ater:
ft.	_	5.0_ft.			<u>6.0_</u> ft.		N/A□	<u>0.50_</u> ft.
Sinuosity: (check one) ☐Straight	(Approx.)	<b>velocity:</b>	6	Bank height Right: Left:	<u>4.0_</u> ft.			e ight: _75_ degrees Left:
⊠Meanderin	147.2			_	3.0_ft.			<u>85</u> degrees
Qualitative Attribut	es							
Water Appearance: (check one)	No water ⊠0	Clear □Turb	-	een □Sur surface scu		□Algal mats	□Other:	
Substrate: (check all that apply) % of Substrate:	Bedrock DBo	ulder ⊠ Cobb % <u>35</u> %	le ⊠ Grave		⊠ Silt/ c 20_%	lay ⊠ Organio		r: %
Width of Riparian Zone:  _35.0 ft  N/A□	(check all that	-	□ Trees		☑ Saplir _0.30_i	ngs/Shrubs: n.	⊠ Hei	rbs
Dominant Bank Vegetat								
Autumn olive, willow	, fescue, orch	ard grass, da	ndelion, fal	l aster, spearm	int, ye	ellow foxtail,	clover, ba	rnyard grass
Aquatic Habitats (ex: sul Pools, riffles, pocket			n, overhanging	banks/roots, leaf pack	ks, large	submerged wood	, riffles, deep	pools):
Aquatic Organisms Obs	served (list):							
Fish, crayfish								
T&E Species Observed	(list):							
none								
Disturbances (ex: livestock access, ve								
Tributary is:			S. C. DIIO(					
(check one)  Stream Quality a:	Natural	□ Art	ificial, man-m	ade □ Manipu	ulated			
(check one)	☐ High	⊠ Mo	derate	□ Low				

Waterbody ID: slea084

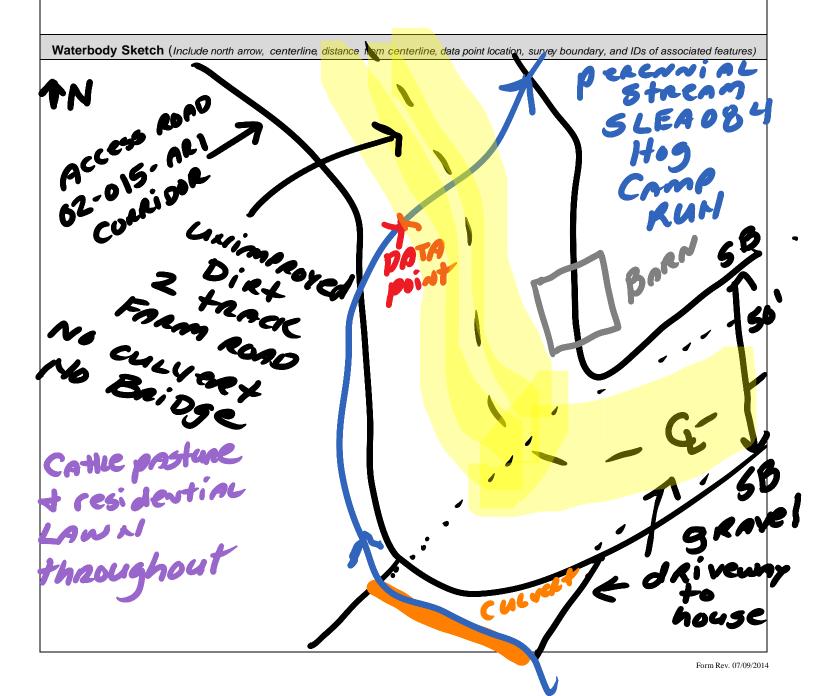
<sup>a</sup> High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no 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; livestock access has resulted in sporadic bank failures due to trampling; culvert crossing for driveway to house; there is no culvert or bridge at the proposed access road crossing, vehicles have been driving through stream.





Waterbody SLEA084 facing southwest upstream



Waterbody SLEA084 facing northeast downstream



Waterbody SLEA084 facing west across

Survey Description	1							1=
Project Name:		Waterbody Nar				aterbody ID:		Date:
Southeast Reliability		Unnamed Tri	butary to F	log Camp Run	SL	_EB001		6/12/2014
State:	County/Parish:		Company:		Crew N	lember Initials:	Photos	s:
9	Lewis			source Group			3	
Tract Number(s):			Nearest Mile	post:		Associated We	etland ID(s):	
02-015			3.9			none		
Survey Type: (check one)	⊠Centerline	e □Re-R	oute	□Access Road		□Other:		
Physical Attributes Stream Classification:	<b>3</b>							
(check one)	□Ephemera	al ⊠Inter	mittent	□Perennial				
Waterbody Type: (check one)	River ⊠ Str	eam □ Ditc	h □ Ca	anal 🗆 Other:	:			
OHWM Width: ft.	OHWM Indica (check all that apply		⊠ Clear lin	e ⊠Shelvin	g	□Wrested vegetation	□Scouri	ng □Water staining
<b>Height:</b> 	□Bent, r vegetatio	natted, or missing	g □Wrack lir	ne □Litter ar debris	nd	☐ Abrupt plant community cha		characteristic change
Width of Waterbody - To Bank to Top of Bank:		of Waterbody - 7	oe of Slope	Width of Waterbo	ody - Wa		Depth of Wat	er:
<u>8.0</u> ft.	_	3.0_ft.			<u>5.0</u> ft.	1	N/A□	ft.
Sinuosity: (check one)  ☐Straight	Water (Approx.)	<b>velocity:</b> 1.5fps		Bank height Right: Left:	<u>4.0_</u> ft.	E	Bank slope Rig	ht: _ <u>90</u> _degrees
⊠Meanderin	9 N/A□				3.0_ft.			70 degrees
Qualitative Attribut	es							
Water Appearance: (check one)	No water □0	Clear ⊠Turb	-	een □Sui surface scu		□Algal □ mats	Other:	
Substrate:  (check all that apply) % of Substrate:	Bedrock □ Bo		le ⊠ Grave % <u>10</u> _%	el ⊠ Sand [ _90 %	□ Silt/ cl %	lay □ Organic %	☐ Other: %	
Width of Riparian Zone	(check all that	•	□ Trees		⊠ Saplin _3.0 in.	gs/Shrubs:	⊠ Herbs	in.
N/A⊠	(approx.)						_	
Dominant Bank Vegetar Willow, hog peanut,		, orchardgras	s, Kentuck	y bluegrass				
Aquatic Habitats (ex: su	bmerged or emerged	d aquatic vegetation	n, overhanging l	banks/roots, leaf pac	ks, large	submerged wood,	riffles, deep po	ools):
Weakly defined poo								
Aquatic Organisms Obs	served (list):							
none								
T&E Species Observed	(list):							
none								
Disturbances (ex: livesto	ck access, manure i	n waterbody, waste	discharge pipe	s):				
Livestock access-ro	tation with hay	r; possible cha	annelizatio	า				
Tributary is:	☐ Natural	☐ Art	ificial, man-ma	ade 🗵 Manipi	ulated			
Stream Quality <sup>a</sup> : (check one)	□ High	⊠ Mo	derate	□ Low				

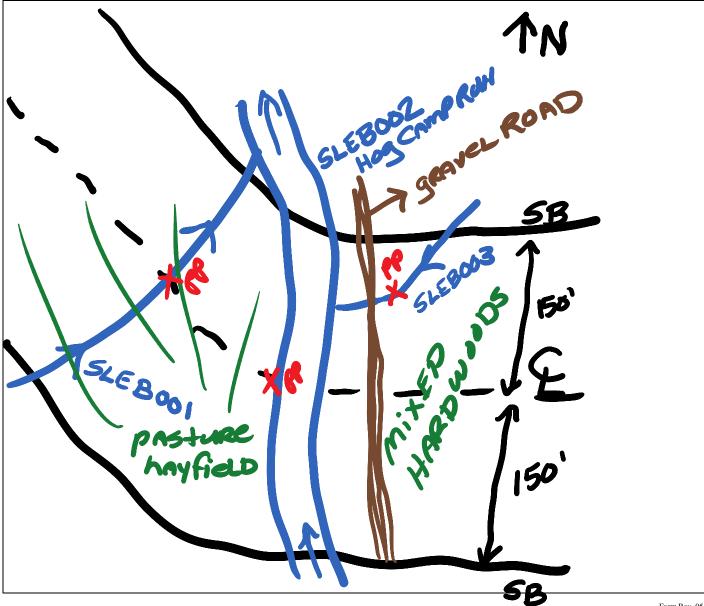
<sup>a</sup> **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat;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

Tributary to Hog Camp Run; flows through the entire corridor; pasture on both sides of the creek





Waterbody SLEB001 facing southwest upstream



Waterbody SLEB001 facing northeast downstream



Waterbody SLEB001 facing northwest across

Survey Description	1							
Project Name:		Waterbody Nar				aterbody ID:		Date:
Southeast Reliability	/	Hog Camp R	un		SI	LEB002		6/12/2014
State:	County/Parish:		Company:		Crew N	lember Initials:	Photos:	
West Virginia	Lewis			•	GB, T	P, SK, LE	3	
Tract Number(s):			Nearest Milep	ost:		Associated Wetla	and ID(s):	
02-015			3.9			WLEB002		
Survey Type: (check one)	⊠Centerline	e □Re-R	loute	□Access Road		□Other:		
Physical Attributes Stream Classification:	3							
(check one)	□Ephemera	al □Inter	mittent	⊠Perennial				
Waterbody Type: (check one)	River ⊠ Str	eam 🗆 Ditc	h □ Cai	nal 🗆 Other	:			
OHWM	OHWM Indica							
<b>Width:</b>	(check all that apply	<i>(</i> )	⊠ Clear line on bank	e ⊠Shelvin	g	□Wrested vegetation	□Scourin	g □Water staining
Height: 1.5 ft. N/A□	□Bent, n vegetatio	natted, or missing n	g □Wrack lin	e □Litter ar debris	nd	☐Abrupt plant community chang		haracteristic change
Width of Waterbody - To				Width of Waterb	ody - W	ater Edge to De	pth of Wate	r:
Bank to Top of Bank:	to loe	of Slope:		Nater Edge:		(Αρμ	orox.)	
<u>20.0_</u> ft.	_	<u>15.0</u> ft.	1		<u>15.0_</u> ft.	N/A	<b>A</b> $\Box$	<u>1.5</u> ft.
Sinuosity:		velocity:		Bank height		Bai	nk slope	
(check one) ☐Straight	(Approx.)			Right:	400 (		Right	
		<u>2.0</u> fps		Left:	<u>10.0_</u> ft.	•	Lef	<u>70</u> degrees t:
⊠Meanderin	g N/A□				<u>5.0_</u> ft.		20.	90 degrees
Qualitative Attribut	tes							
Water Appearance:	No water □C	Clear ⊠Turbi	id □She	en □Sui	rtooo	□Algal □C	Other:	
(Unicon cine)	ino water 🗀 C	oleai 🛆 i uibi		surface scu		mats	ulei.	
	Bedrock ☐ Bo	ulder 🗵 Cobb	le 🛭 Gravel	⊠ Sand	⊠ Silt/ cl	lay   Organic	☐ Other:	
(check all that apply) % of Substrate:	%	_% _ <u>30</u> _%	_ <u>10</u> _%	<u>30</u> %	<u>30</u> _%	%	%	
Width of Riparian Zone	: Vegetative	Layers:						
ft.	(check all that		⊠ Trees:			igs/Shrubs:	⊠ Herbs	
<u></u> . N/A⊠	(approx.)	of Dominants:	<u>7.0</u> in.	-	_ <u>2.0_</u> in.	_	in.	
Dominant Bank Vegeta	tion (list):							
Ash, sycamore, auto	umn olive, mul	tiflora rose, fe	scue, orcha	ardgrass, clove	er			
Aquatic Habitats (ex: su	bmerged or emerged	d aquatic vegetation	n, overhanging b	anks/roots, leaf pac	ks, large	submerged wood, riff	fles, deep poo	ls):
Pools and riffles, wr	•							
Aquatic Organisms Obs	served (list):							
none								
T&E Species Observed	(list):							
none								
Disturbances (ex: livesto	ck access, manure i	n waterbody, waste	discharge pipes	s):				
Livestock access (ro	otation with ha	y)						
Tributary is: (check one)	Natural	☐ Art	ificial, man-ma	de 🗆 Manip	ulated			
Stream Quality <sup>a</sup> : (check one)	☐ High	⊠ Mo	derate	□ Low				

<sup>a</sup> **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.

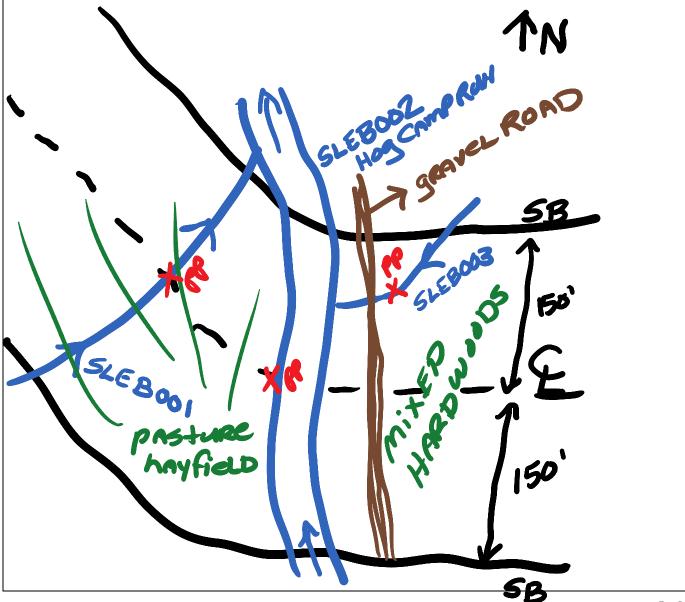
**Moderate Quality:** Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film;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

Hog Camp Run, flows through the entire corridor

Pasture adjacent to creek





Waterbody SLEB002 facing south upstream



Waterbody SLEB002 facing north downstream



Waterbody SLEB002 facing east across

Survey Description	1						
Project Name:		Waterbody Nar				terbody ID:	Date:
Southeast Reliability		Unnamed Tri	butary to F	log Camp Run		.EB003	6/12/2014
State:	County/Parish:		Company:			ember Initials	
West Virginia	Lewis			esource Group	•		3
Tract Number(s):			Nearest Mile	epost:	,	Associated W	etland ID(s):
02-016			3.95			none	
Survey Type: (check one)	⊠Centerline	e □Re-R	loute	□Access Road	[	□Other:	
Physical Attributes Stream Classification:	3						
(check one)	□Ephemera	al ⊠Inter	mittent	□Perennial			
Waterbody Type:	River ⊠ Str	eam 🗆 Ditc	h □ Ca	anal 🗆 Other:	:		
OHWM	OHWM Indica	tor:					
<b>Width:</b>	(check all that apply	y)	⊠ Clear lir on bank	ne ⊠Shelvin	g	□Wrested vegetation	□Scouring □Water staining
<b>Height:</b>	□Bent, r vegetatio	matted, or missing on	g □Wrack li	ne □Litter ar debris	nd	□Abrupt plant community ch	•
Width of Waterbody - To Bank to Top of Bank:			Toe of Slope	Width of Waterbo	ody - Wa	ter Edge to	Depth of Water:
Bank to Top of Bank.	to roe	of Slope:		water Euge.			, ,
<u>6.0</u> ft.	_	<u>3.5</u> ft.		 N/A□	3.0_ft.		<u>0.25_</u> ft. N/A□
Sinuosity:		velocity:		Bank height			Bank slope
(check one) ☐Straight	(Approx.)			Right:	5.0_ft.		Right:
		_1.0_fps		Left:	<u> </u>		<u>85</u> degrees <b>Left:</b>
⊠Meanderin	g N/A□			_	5.0_ft.		<u>80</u> degrees
Qualitative Attribut	tes						
Water Appearance: (check one)	No water ⊠0	Clear □Turb	-	een □Sui surface scu		□Algal [ mats	□Other:
Substrate:	Bedrock □ Bo	oulder 🗵 Cobb	le 🛭 Grave	el □ Sand □	⊠ Silt/ cla	ay 🗆 Organic	☐ Other:
(check all that apply) % of Substrate:	%	_% _ <u>10</u> _%	_ <u>10</u> _%	%	_ <u>80</u> _%		<b>%</b> %
Width of Riparian Zone							
ft.	(check all that		⊠ Trees:			gs/Shrubs:	⊠ Herbs
N/A⊠	(approx.)	of Dominants:	<u>15.0</u> ir	)	_ <u>1.0_</u> in.		in.
Dominant Bank Vegeta	• /						
Sugar maple, sycan			•	· ·			
Aquatic Habitats (ex: su		d aquatic vegetation	n, overhanging	banks/roots, leaf pac	ks, large s	submerged wood,	, riffles, deep pools):
Weakly defined poo							
Aquatic Organisms Obs	served (list):						
none							
T&E Species Observed	(list):						
none							
Disturbances (ex: livesto			discharge pipe	es):			
Culvert conveys stre	eam under roa	a					
Tributary is: (check one)	☐ Natural	□ Art	ificial, man-m	ade ⊠ Manipı	ulated		
Stream Quality <sup>a</sup> : (check one)	□ High	 ⊠ Mo	derate	☐ Low			

<sup>a</sup> **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.

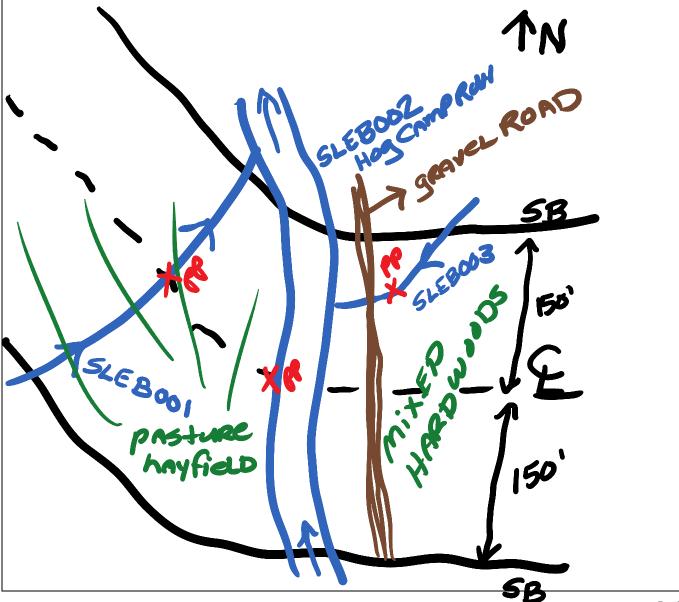
**Moderate Quality:** Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film;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

Tributary to Hog Camp Run, upstream reach continues out of corridor

Crossed by road via culvert





Waterbody SLEB003 facing south upstream



Waterbody SLEB003 facing north downstream



Waterbody SLEB003 facing west across

**Open Waterbody Data Sheet** 

Open Waterboo	iy Data Silee	L .						
Survey Descripti	on							
Project Name:		Waterbody N	lame:		ľ	Waterbody ID:	Date:	
Southeast Reliabi	lity	Unnamed	Pond to Hog C	amp Run		OLEB001	6/12/2014	
State:	County:		Company:		Crew	Member Initials: Photos:		
West Virginia	Lewis		Natural Resou	rce Group	GB,	, TP, LE, SK 1		
Tract Number(s):	<u> </u>		Nearest Milepost	t:	<u> </u>	Associated Wetland	ID(s):	
02-016			4.0			none		
Survey Type: (check one)	⊠Centerlir	ne 🗆 F	Re-Route	□Access Ro	ad	□Other:		
Physical Attribut	es							
Waterbody Type:		al Pond 🗆 La	ke   Reservoir	☐ Impoundme	ent 🗆	Oxbow   Other:		
Hydrologic Regime:	□ Permanently	/ Flooded □	Semipermanently	y Flooded	Seas	sonally Flooded	Temporarily Flooded	
онwм	OHWM Ind		⊠ Class II	\_Ch-	. In other cas			
Height:	(Check all that e	арріу)	⊠ Clear li on bank	ne □She	eiving	□Wrested vegetation	☐Scouring ☐Water staining	
_ <u>3.0_</u> ft.	□Ber vegeta	nt, matted, or mation	nissing □Wrack line	□Litte debris	er and	□Abrupt plant community cha	☐Soil characteristic change inge	
Depth of Water:	I	Bank heig	ht (average):			Bank slope (avera	age):	
	ft.		6.0_	_ft.		_	65_ degrees	
Qualitative Attrib	utes							
Water Appearance: (check one)	□No water □	]Clear ⊠T	urbid □She on sur		Surface	e □Algal □C mats	Other:	
Substrate: (check all that apply)	☐ Bedrock ☐ E	Boulder $\square$ C	obble   Gravel	☐ Sand	⊠ Si	ilt/ clay □ Organic	☐ Other:	
% of Substrate:	%	%	%	%%	10	<u>00</u> %%	%	
Width of Riparian Zor	ne: Vegetativ				⊠ Sar	plings/Shrubs:	⊠ Herbs	
NA ft		,			△ Jap	piirigs/Sriidbs.	A Heibs	
N/A⊠	Avg. DBH (approx.)	of Dominants	<u>10.0</u> in.		_1.0	_in	in.	
Dominant Bank Vege								
Willow, cattail, sug	gar maple, syca	amore, fesci	ue, silverberry					
Aquatic Habitats (ex:	submerged or emerged a	quatic vegetation, c	overhanging banks/roots	, leaf packs, large s	ubmerge	d wood, riffles, deep pools, e	tc.):	
Pool								
Aquatic Organisms C	Observed (list):							
Frogs, red-winged	l blackbird							
T&E Species Observe	ed (list):							
None								
Disturbances (ex: live		•	raste discharge pipes	s):				
Periodic livestock	access (rotatio	n)						
Waterbody is: (check one)	□ Natura	I ⊠ Artifici	al, man-made	☐ Manipulate	d			
Waterbody Quality a: (check one)	☐ High	☐ Moderate	e 🗵 Low					

Waterbody OLEB001	ID
OLEB001	

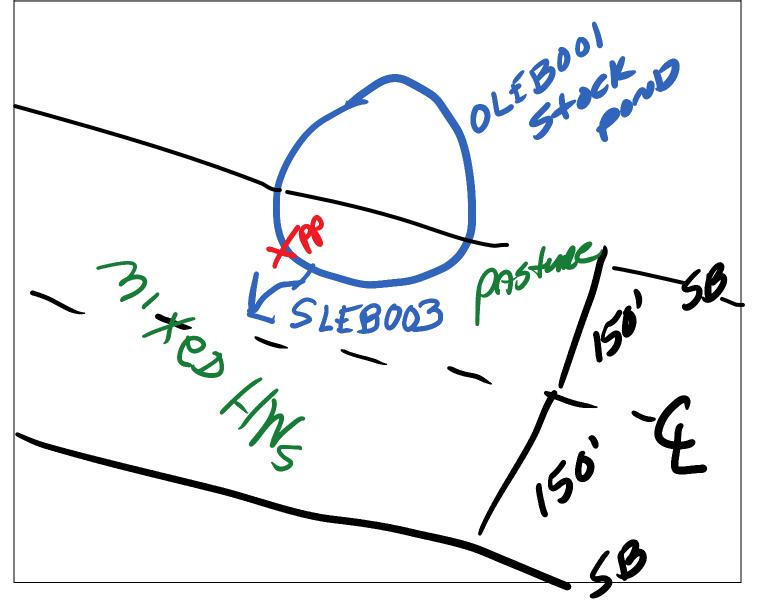
<sup>a</sup> **High Quality:** Natural, natural bank vegetation around entire waterbody; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

**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:

Feature results from damming stream SLEB003





Waterbody OLEB001 facing east

Survey Description	n							
Project Name:		Waterbody N	lame:		Wa	aterbody ID:		Pate:
Southeast Reliability	У	Elk Lick			SL	EB004	ε	5/12/2014
State:	County/Parish:		Company:		Crew M	ember Initials:	Photos:	
West Virginia	Lewis		Natural Re	esource Group			3	
Tract Number(s):			Nearest Mile	epost:	4	Associated We	etland ID(s):	
02-019			4.9			none		
Survey Type: (check one)	⊠Centerlir	ne □Re	e-Route	□Access Road	d	□Other:		
Physical Attributes Stream Classification:	S							
(check one)	□Epheme	ral ⊠In	termittent	□Perennial				
Waterbody Type: (check one)	River ⊠ S	tream 🗆 🗅	itch 🗆 Ca	anal 🗆 Other	:			
OHWM Width: 4.0 ft.	OHWM Indic		☐ Clear lir on bank	ne ⊠Shelvin	ng	□Wrested vegetation	⊠Scouring	□Water staining
Height: ft. N/A□	□Bent, vegetat	·	sing □Wrack li	ne □Litter ai debris	nd	□Abrupt plant community cha		aracteristic change
Width of Waterbody - T Bank to Top of Bank:			- Toe of Slope	Width of Waterb	ody - Wa	ater Edge to	Depth of Water:	
	10 10	e of Slope: 3.5ft.		Water Edge:  N/A□	<u>4.0</u> ft.		,	<u>0.75</u> ft.
Sinuosity: (check one) ☐Straight	Wate (Approx	r velocity: ۵) 1.51	fps	Bank height Right:	3.0_ft.	E	Bank slope Right:	_80_ degrees
⊠Meanderir	ng N/A□	l		Left:	<u>2.5_</u> ft.		Left:	50 degrees
Qualitative Attribu	tes							
Water Appearance: (check one)	<sup>]</sup> No water □	]Clear ⊠Tu	urbid □Sh on		rface um	□Algal □ mats	□Other:	
Substrate: (check all that apply) % of Substrate: 4		Boulder ⊠ Co %15_		el ⊠ Sand 20%	⊠ Silt/ cla _ <u>15</u> _%	ay □ Organic %	□ Other: 	
Width of Riparian Zone	(check all th	ve Layers: at apply) H of Dominants	⊠ Trees <b>6.0</b> in.		⊠ Saplino _ <u>1.0</u> in.	gs/Shrubs:	⊠ Herbs in.	
Dominant Bank Vegeta								
Boxelder, sycamore		•		• •	-	•		
Aquatic Habitats (ex: su Pools and riffles, ov			tion, overhanging	banks/roots, leaf pac	cks, large s	submerged wood,	riffles, deep pools	):
Aquatic Organisms Obnone	served (list):							
T&E Species Observed	(list):							
none	•							
Disturbances (ex: livesto	ock access, manure	e in waterbody, wa	ste discharge pipe	es):				
Adjacent to road								
Tributary is: (check one)	Natural		Artificial, man-m	ade 🗆 Manip	ulated			
Stream Quality <sup>a</sup> : (check one)	□ High	⊠ 1	Moderate	☐ Low				

Waterbody	ID:
SLEB004	

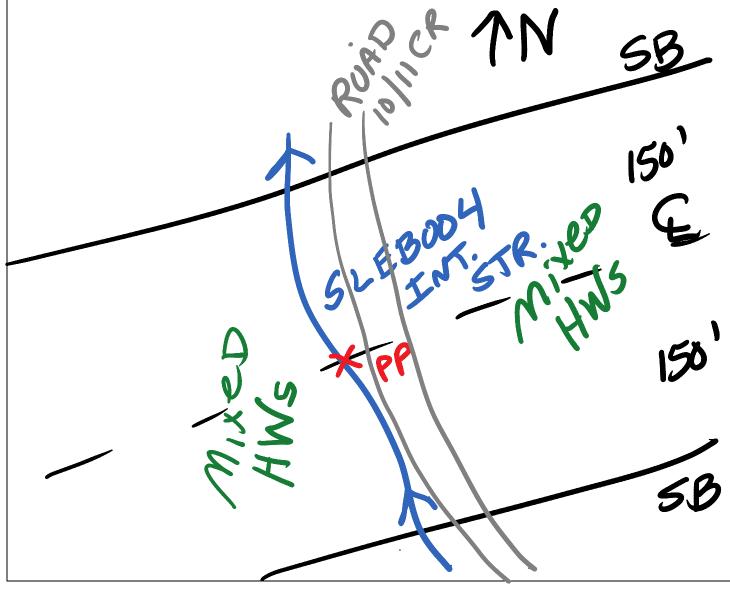
<sup>a</sup> **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat;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

Elk Lick, continues out of corridor both ways





Waterbody SLEB004 facing south upstream



Waterbody SLEB004 facing north downstream



Waterbody SLEB004 facing east across

Survey Description	1								
Project Name:		Waterbody Nar				aterbody ID:			Date:
Atlantic Coast Pipeli	ne	UNT to Elk L	ick		S	LEB119		4	4/7/2015
State:	County:	I.	Company:		Crew I	Member Initials	: F	Photos:	
West Virginia	Lewis		NRG TP,		TP, S	, SA 01-0		01-03	
Tract Number(s):			Nearest Mile	epost:		Associated W	etland	ID(s):	
02-019.AR			4.8			none			
Survey Type: (check one)	□Centerline	□Re-F	Route	⊠Access Road		□Other:			
Physical Attributes Stream Classification:	3								
(check one)	□Ephemera	ıl ⊠Inter	mittent	□Perennial					
Waterbody Type: (check one)	River ⊠ Stre	eam 🗆 Dito	:h □ Ca	anal 🗆 Other:	:				
OHWM Width: ft.	OHWM Indicat (check all that apply		⊠ Clear lin	ne ⊠Shelvin	g	□Wrested vegetation	$\boxtimes$	Scouring	g □Water staining
<b>Height:</b> 	□Bent, n vegetatio	natted, or missin n	g □Wrack lii	ne □Litter ar debris	nd	☐ Abrupt plan community ch		□Soil ch	naracteristic change
Width of Waterbody - To Bank to Top of Bank:		of Waterbody - <sup>-</sup> of Slope:	Toe of Slope	Width of Waterbo Water Edge:	ody - W		Depth (	of Water	:
_ <u>5.0_</u> ft.	_	_ <u>1.0_</u> ft.			<u>1.0_</u> ft.		N/A□	-	<u>0.1</u> ft.
Sinuosity: (check one)  ☐ Straight	(Approx.)	<b>velocity:</b> 2.5fps	1	Bank height Right: Left:	_4_ft.		Bank s	lope Right Left	<u>85</u> degrees :
⊠Meanderin	14//\				_4_ft.				_85_ degrees
Qualitative Attribut	tes								
Water Appearance: (check one) □	No water ⊠C	Clear □Turb		een □Sur surface scu		□Algal [ mats	Other	:	
Substrate: (check all that apply)45 % of Substrate:	Bedrock DBo	ulder ⊠ Cobb	le ⊠ Grave	el ⊠ Sand □	⊠ Silt/ c	clay □ Organic %		other: %	
Width of Riparian Zone			□ <b>T</b>		7 OI	/Ol l		I I - d-	
_ <u>10_ft</u> - N/A□	(check all that Avg. DBH (approx.)	of Dominants:	□ Trees: in.	:	⊴ Saplir _4_in.	ngs/Shrubs:	×	Herbs	
Dominant Bank Vegetat	tion (list):								
Logging road along	right bank. No	ted sycamore	, red maple	e, private, and	wing-s	stem.			
Aquatic Habitats (ex: su	bmeraed or emeraed	d aquatic vegetation	n. overhanging	banks/roots. leaf pac	ks. large	submerged wood	. riffles. c	deep pools	3):
Cobble,			,		-, - <b>3</b> -	<b>3</b>	,		,
Aquatic Organisms Obs	served (list):								
None.									
T&E Species Observed	(list):								
None									
Disturbances (ex: livesto	ck access, manure in	n waterbody, waste	e discharge pipe	es):					
Timber harvest and	logging road a	along right ba	nk.						
Tributary is: (check one)	⊠ Natural	□ Art	ificial, man-m	ade 🗆 Manipu	ulated				
Stream Quality <sup>a</sup> : (check one)	☐ High	⊠ Mc	oderate	□ Low					

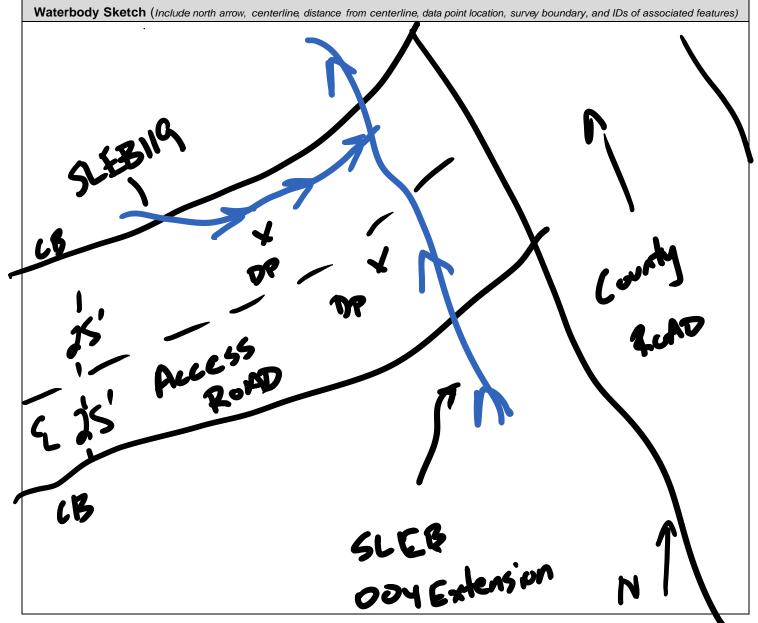
<sup>a</sup> High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no 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, weak sinuosity, good grade control, a few debris piles, no riffle pool sequence. Drains into SLEB004\_extension..





Waterbody SLEB119 facing west upstream



Waterbody SLEB119 facing east downstream



Waterbody SLEB119 facing north across

Survey Description	1							
Project Name:		Waterbody Na	me:		Wate	erbody ID:	Date:	
Southeast Reliability	y	Turkeypen C	Creek		SLE	EB005	6/13/2014	
State:	County/Parish:		Company:		Crew Me	mber Initials:	Photos:	
West Virginia	Lewis		Natural Re	source Group	GB, TP	, SK, LE	3	
Tract Number(s):			Nearest Mile	post:	A	ssociated Wet	land ID(s):	
02-022			5.6		no	one		
Survey Type: (check one)	⊠Centerlin	e □Re-F	Route	□Access Road	d 🗆	Other:		
Physical Attributes Stream Classification:	5							
(check one)	□Ephemer	al □Inter	mittent	⊠Perennial				
Waterbody Type: (check one)	River ⊠ St	ream $\square$ Dito	ch 🗆 Ca	anal 🗆 Other	:			
OHWM	OHWM Indica							
<b>Width:</b> 8.0ft.	(check all that app	ly)		e ⊠Shelvin		□Wrested vegetation	☐Scouring ☐Water staining	
Height: <u>2.0</u> ft. N/A□	□Bent, vegetatio	matted, or missin	g □Wrack lii	ne □Litter ar debris		□Abrupt plant community char	☐Soil characteristic changenge	е
Width of Waterbody - T Bank to Top of Bank:		of Waterbody -	Toe of Slope	Width of Waterb Water Edge:	ody - Wat	er Edge to D	epth of Water:	
_ <u>_15.0_</u> ft.		_ <u>7.0_</u> ft.			<u>6.0</u> _ft.	N	<u>0.5</u> ft. ∕A□	
Sinuosity:	Water	velocity:		Bank height		B	ank slope	
(check one)	(Approx.			Right:			Right:	
□Straight		1.5fps	3		6.0_ft.		45 degrees	
⊠Meanderin	ng N/A□			Left:	5.0_ ft.		<b>Left:</b> <u>90</u> degrees	
Ouglitativa Attribu	<b>1</b> 00						<u> </u>	
Qualitative Attributed Water Appearance:	tes							
	No water ⊠	Clear □Turb	-		rface um	□Algal □ mats	Other:	
Substrate:	Bedrock ⊠ Be	oulder ⊠ Cobb	ole 🗵 Grave	el 🗵 Sand	⊠ Silt/ clay	y 🗆 Organic	☐ Other:	
(check all that apply) % of Substrate:	% <u>_5</u> _	_% _ <u>10</u> _%	_ <u>20</u> _%	_ <u>30_</u> %	_ <u>35</u> _%	%	%	
Width of Riparian Zone	: Vegetativ	e Layers:						
	(check all tha				⊠ Saplings	s/Shrubs:		
<u>ft</u> . N/A⊠	Avg. DBH (approx.)	l of Dominants:	<u>6.0</u> in.	-	<u>2.0</u> in.		in.	
Dominant Bank Vegeta	tion (list)							
Sycamore, autumn	olive, fescue,	orchardgrass	, clover, bla	ick willow, jewe	elweed			
Aquatic Habitats (ex: su	bmerged or emerge	ed aquatic vegetatio	n, overhanging	banks/roots, leaf pac	cks, large su	bmerged wood, r	iffles, deep pools):	
pools and riffles, wr	•							
Aquatic Organisms Ob	served (list):							
none								
T&E Species Observed	(list):							
Autumn olive								
Disturbances (ex: livesto	ock access, manure	in waterbody, waste	e discharge pipe	es):				
Pasture on left bank	<							
Tributary is: (check one)	Natural	□ Ar	tificial, man-m	ade 🗆 Manip	ulated			
Stream Quality <sup>a</sup> : (check one)	☐ High	<u> </u>	oderate	☐ Low				

<sup>a</sup> **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.

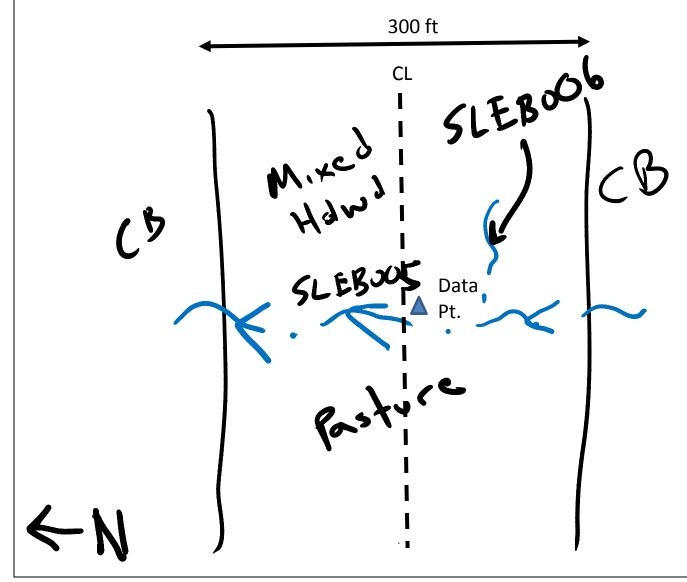
**Moderate Quality:** Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film;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

Turkeypen Creek, flows through entire corridor

Pasture adjacent to creek





Waterbody SLEB005 facing southeast upstream



Waterbody SLEB005 facing northwest downstream



Waterbody SLEB005 facing east across

Survey Description	1	1						
Project Name:		Waterbody Nan				aterbody ID:		Date:
Southeast Reliability	/	Unnamed Tri	butary to I	urkeypen Cree	ek S	LEB006		6/13/2014
State:	County/Parish:		Company:		Crew N	lember Initials	: Ph	otos:
West Virginia	Lewis		Natural Re	source Group	GB, T	P, SK, LE	3	
Tract Number(s):			Nearest Mile	epost:	•	Associated W	etland ID	(s):
02-022			5.6			WLEA004		
Survey Type: (check one)	⊠Centerline	e □Re-R	oute	□Access Road	l	□Other:		
Physical Attributes	3							
Stream Classification: (check one)	□Ephemera	al ⊠Interr	mittent	□Perennial				
Waterbody Type:								
• • •	River ⊠ Str	eam 🗆 Ditc	h □ Ca	anal 🗆 Other	:			
OHWM Width: <u>3.0</u> ft.	OHWM Indica (check all that appl)		⊠ Clear lin on bank	ne ⊠Shelvin	g	□Wrested vegetation	□So	couring
<b>Height:</b> <u>0.25</u> ft. N/A□	□Bent, r vegetatio	natted, or missino n	g □Wrack lin	ne □Litter ar debris	nd	☐ Abrupt plan community ch		Soil characteristic change
Width of Waterbody - To Bank to Top of Bank:		of Waterbody - T of Slope:	oe of Slope	Width of Waterbo Water Edge:	ody - W	ater Edge to	Depth of (Approx.)	Water:
_ <u>4.0_</u> ft.	_	<u>3.5</u> ft.		N/A□	<u>2</u> ft.		N/A□	<u>0.25</u> ft.
Sinuosity: (check one)	Water (Approx.)	velocity:		Bank height			Bank slo	•
□Straight	(драгох.)	<u>1.0</u> fps		Right:	5.0 ft.			Right: 80 degrees
⊠Meanderin	g N/A□	<u>1.0 lps</u>		Left:	3.0 ft.			Left: 60 degrees
	14/12			-	<u> </u>			
Qualitative Attribut Water Appearance:	tes							
	No water ⊠0	Clear □Turbi	-		rface um	□Algal l mats	□Other:	
	Bedrock ☐ Bo	ulder 🗵 Cobb	e 🗵 Grave	el ⊠ Sand 🏻	⊠ Silt/ c	lay   Organic	; □ Oth	er:
(check all that apply) % of Substrate: 6	0_%	% <u>20</u> %	<u>5</u> %	<u>10</u> %	<u>5</u> %		%	%
Width of Riparian Zone								
<u>ft</u> . N/A⊠	(check all that Avg. DBH (approx.)	of Dominants:	⊠ Trees: <u>9.0</u> in.		≚ Saplin _ <u>2.0_</u> in.	ngs/Shrubs:	⊠ He 	erbs in.
Dominant Bank Vegeta	` ′							
Sycamore, red map	le, ironwood, r	nockernut hic	kory, servi	ceberry, Christ	mas fe	ern		
Aquatic Habitats (ex: su		d aquatic vegetation	, overhanging	banks/roots, leaf pac	ks, large	submerged wood	l, riffles, dee	ep pools):
pools and riffles, wra								
Aquatic Organisms Obs	servea (IIST):							
T&E Species Observed	(list):							
none	•							
Disturbances (ex: livesto culvert on downstrea				e):				
Tributary is:	<sup>⊠</sup> Natural	□ Arti	ficial, man-m	ade □ Manip	ulated			
Stream Quality <sup>a</sup> : (check one)	□ High	⊠ Mo	derate	□ Low				

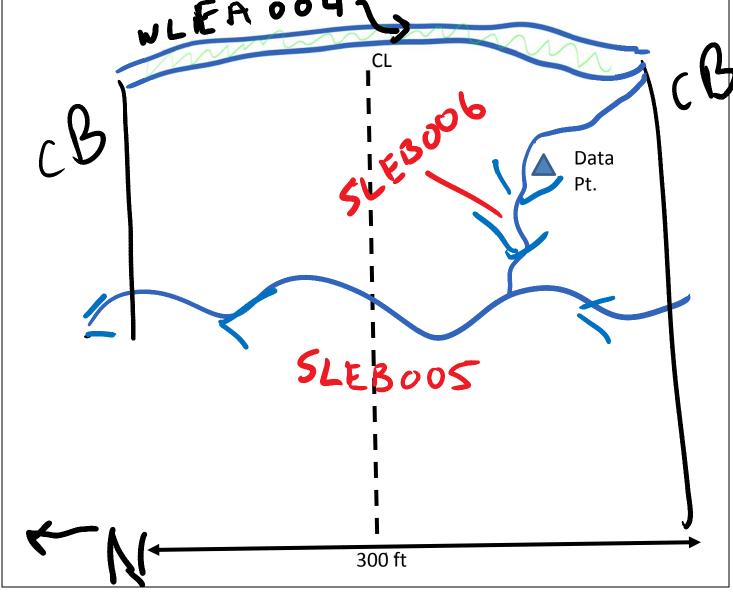
a High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

Fed by WLEB004





Waterbody SLEB006 facing east upstream



Waterbody SLEB006 facing west downstream



Waterbody SLEB006 facing south across

Survey Description									
Project Name:		Waterbody Nar				aterbody ID:			Date:
Atlantic Coast Pipeli	ne	UNT to Hollid	k Run		SI	_EB105			12/15/2014
State:	County:		Company:		Crew N	lember Initials	: F	Photos:	
	Lewis		NRG		TP, R			01-03	
Tract Number(s):			Nearest Mile	post:		Associated W		. ,	==
02-028, 02-030, 02-010 02-032 Survey Type:	032, unlabeled	d tract south	7.0			WLEB102, ' PLFR102	WLEB	3103, V	VLEB104, 
(check one)	□Centerline	e □Re-F	Route	☐Access Road		⊠Other: Comp	ressor	Site 1 (E	rightbill Tract)
Physical Attributes Stream Classification:									
(check one)	□Ephemera	al ⊠Inter	mittent	□Perennial					
Waterbody Type: (check one)	River ⊠ Str	eam 🗆 Dito	h 🗆 Ca	anal 🗆 Other:	:				
OHWM Width: 5.0 ft.	OHWM Indica (check all that apply		⊠ Clear lin on bank	e ⊠Shelvin	g	□Wrested vegetation		Scouring	g □Water staining
Height: ft. N/A□	□Bent, n vegetatio	natted, or missin n	g □Wrack liı	ne □Litter ar debris	nd	□ Abrupt plant community ch		□Soil cl	naracteristic change
Width of Waterbody - To Bank to Top of Bank:		of Waterbody - of Slope:	Toe of Slope	Width of Waterbo	ody - W		Depth (	of Water	:
_ <u>8_f</u> t.		ft.			<u>2.0_</u> ft.		N/A□		ft.
Sinuosity: (check one)	Water (Approx.)	velocity:0.5fps		Bank height Right: Left:	_4_ft.		Bank s	lope Right Left	80 degrees
⊠Meanderin	9 N/A□				<u>5_</u> ft.				80 degrees
Qualitative Attribut	es								
Water Appearance: (check one) □	No water ⊠0	Clear □Turb		een □Sur surface scu		□Algal [ mats	□Other	:	
Substrate:  (check all that apply)5 % of Substrate:	Bedrock □ Bo	oulder ⊠ Cobb <u>10</u> %	le ⊠ Grave _45_%		⊠ Silt/ cl	lay □ Organic %		Other:%	
Width of Riparian Zone:  _>50 ft  N/A□	(check all that		<sup>⊠</sup> Trees: _12_in.		☑ Saplin _2in.	gs/Shrubs:	$\boxtimes$	Herbs	
Dominant Bank Vegetat									
Tulip poplar, norther	n red oak, eas	stern cottonwo	ood, sycam	ore, spice bus	h, Chri	stmas fern			
Aquatic Habitats (ex: sul	omerged or emerged	d aquatic vegetation	n, overhanging	banks/roots, leaf pac	ks, large	submerged wood,	, riffles, c	deep pool	s):
Cobble, debris piles	, leaf packs								
Aquatic Organisms Obs	served (list):								
Caddis flies									
T&E Species Observed	(list):								
none									
Disturbances (ex: livesto	ck access, manure i	n waterbody, waste	discharge pipe	es):					
Four wheeler paths									
Tributary is: (check one)		□ Art	ificial, man-ma	ade 🗆 Manipu	ulated				
Stream Quality <sup>a</sup> : (check one)	☐ High	⊠ Mc	derate	☐ Low					

Form Rev. 07/09/2014

<sup>a</sup> 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:

Noted strong sinuosity, good grade control, wrack lines/debris piles, some stretches with bedrock, well developed bars and benches, weak riffle pool sequence. Saw evidence of deer and raccoon use. .



Waterbody SLEB105 facing west upstream



Waterbody SLEB105 facing east downstream



Waterbody SLEB105 facing north across

Survey Description Project Name:	1	Matauka du Alas			lva.	atauka da IDa		Deter
1	ino	Waterbody Nar				aterbody ID: LEB105e		Date:
Atlantic Coast Pipeli	ne	UNT to Hollid	K Run					12/17/2014
State:	County:		Company:		Crew N	lember Initials	: Photo	os:
West Virginia	Lewis		NRG		TP, R	Н	01-0	03
Tract Number(s):			Nearest Mile	post:		Associated W	etland ID(s)	:
02-028			6.7			WLEA005		
Survey Type: (check one)	□Centerline	e □Re-F	Route	☐Access Road		⊠Other: Comp	ressor Site	1 (Brightbill Tract)
Physical Attributes Stream Classification:	3							
(check one)	⊠Ephemera	al □Inter	mittent	□Perennial				
Waterbody Type: (check one)	River 🗵 Stı	ream   Ditc	h 🗆 Ca	anal 🗆 Other:				
OHWM Width:	OHWM Indica (check all that appl			e ⊠Shelvin	g	□Wrested vegetation	□Scou	ring □Water staining
Height: ft. N/A□	□Bent, r vegetatio	matted, or missin	g □Wrack lii	ne □Litter ar debris	nd	□ Abrupt plan community ch		il characteristic change
Width of Waterbody - T			Toe of Slope	Width of Waterbo	ody - W		Depth of Wa	ater:
Bank to Top of Bank:		of Slope:		Water Edge:			(Approx.)	
<u>6</u> ft.	-	_ <u>1.0_</u> ft.		 N/A□	<u>1.0_</u> ft.		N/A□	<u>0.1</u> ft.
Sinuosity: (check one)	Water (Approx.)	velocity:		Bank height			Bank slope	
□Straight				Right:		Ri	ght: <u>80</u> degrees	
⊠Meanderin	ng N/A□	<u>1.0</u> ipo		Left:	6_ft. 6_ft.		ı	_eft:
	1,712				_ <u></u>			<u>80</u> degrees
Qualitative Attributed Water Appearance:	tes							
	No water ⊠0	Clear □Turb		een □Sui surface scu		□Algal [ mats	□Other:	
	Bedrock 🗆 Bo	oulder 🗵 Cobb	le 🗵 Grave	el 🛭 Sand	⊠ Silt/ c	lay   Organic	☐ Other:	
(check all that apply)5 % of Substrate:	%%	<u>5</u> %	<u>10</u> %	<u>10</u> %	<u>75_</u> %	%		%
Width of Riparian Zone								
_> <u>50_ft</u> - N/A□	(check all that Avg. DBH (approx.)	t apply)  of Dominants:	⊠ Trees: <u>12</u> in.		☑ Saplin <u>_2</u> _in.	ngs/Shrubs:	⊠ Herb	OS
Dominant Bank Vegeta								
Tulip poplar, norther	n red oak, syd	camore, white	oak, spice	e bush, multiflo	ra rose	e, Christmas	fern	
Aquatic Habitats (ex: su	bmerged or emerge	d aquatic vegetation	n, overhanging	banks/roots, leaf pac	ks, large	submerged wood	, riffles, deep p	pools):
debris piles, leaf pa								
Aquatic Organisms Ob	served (list):							
none								
T&E Species Observed	(list):							
none								
Disturbances (ex: livestor None noted	ck access, manure	in waterbody, waste	e discharge pipe	es):				
Tributary is:								
(check one)	Natural	□ Art	ificial, man-m	ade 🗆 Manipı	ulated			
Stream Quality <sup>a</sup> : (check one)	☐ High	⊠ Mo	derate	□ Low				

### Waterbody ID: SLEB105e

Form Rev. 07/09/2014

<sup>a</sup> 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:

This is an ephemeral stream located in an erosional gully, with a weak to absent OHWM. Fed by WLEA005, becomes intermittent at SLEB105. Noted weak sinuosity, bank failures, good grade control, wrack lines/debris piles, weak riffle pool sequence. Flows into SLEB105. Note, heavy rains in the last 24 hours, water present at time of survey, but absent on 12/15. SLEB105a was changed to SLEB105e.



Stream SLEB105e facing north upstream



Stream SLEB105e facing south downstream



Stream SLEB105e facing east across

# **Open Waterbody Data Sheet**

Opon materiou	y Bata Giloot								
Survey Description									
Project Name:		Waterbody N	Name:		W	/aterbody ID:		Date:	
Atlantic Coat Pipe	line	UNT to Kir	ncheloe Creek		С	LEB100		12/15/2014	
State:	County:		Company:	C	rew N	Member Initials:	Photos:		
West Virginia	Lewis		NRG	Т	P, R	Н	001-002		
Tract Number(s):			Nearest Milepost	:	A	ssociated Wetlan	d ID(s):		
02-031.AR, and u	nlabeled tract to	Northeast	7.2		r	none			
Survey Type: (check one)	□Centerline	e □F	Re-Route	□Access Road	l	⊠Other: Com	pressor St	ation 1	
Physical Attribut	es								
Waterbody Type: (check one) ⊠Stoo	ck Pond   Natural	Pond □ La	ake 🗆 Reservoir	☐ Impoundmen	t 🗆 (	Oxbow   Other:			
Hydrologic Regime:  ☑ Permanently Flooded □ Semipermanently Flooded □ Seasonally Flooded □ Temporarily Flooded									
OHWM Height:	OHWM India (check all that ap		⊠ Clear lir	ne □Shelv	ing	□Wrested	□Sco	· ·	
10_ft.	□Bent vegeta	, matted, or m tion	or missing □Wrack □Litter and ⊠			⊠Abrupt pla	vegetation staining  ⊠Abrupt plant □Soil characteristic change community change		
Depth of Water:		Bank heig	ht (average):			Bank slope (av	erage):		
	_ft.		<u>5</u> ft				85 degree	es	
Qualitative Attrib	utes	L							
Water Appearance:		Clear □1	Γurbid □Shee on surf			□Algal [ mats	Other:		
Substrate: (check all that apply)	□ Bedrock □ Bo	oulder $\square$ C	Cobble	☐ Sand	⊠ Silt/	/ clay □ Organic	☐ Other:		
% of Substrate:	%	<u></u> %	%	% <u></u> %	100	_%%		%	
Width of Riparian Zor	_	-	_						
<u>5</u> ft.	(check all that	apply)	☐ Trees:		Sapl	ings/Shrubs:	⊠ Her	bs	
N/A□	Avg. DBH (approx.)	of Dominant	<b>s:</b> in.	· _	-	in.			
Dominant Bank Vege	tation (list):								
Cattails, fescue, c	leared pipeline I	ROW and p	pasture adjacen	nt to pond					
Aquatic Habitats (ex: s		uatic vegetation, o	overhanging banks/roots,	leaf packs, large sub	merged	wood, riffles, deep pools	, etc.):		
Aquatic Organisms C									
None	(//St/)1								
T&E Species Observe	ed (list):								
none	( 2,7								
Disturbances (ex: lives Pipeline, pasture	stock access, manure	in waterbody, w	vaste discharge pipes)	):					
Waterbody is: (check one)	□ Natural		Artificial, man-mad	de □ Manip	ulated	I			
Waterbody Quality <sup>a</sup> : (check one)	□ High		Moderate	⊠ Low					

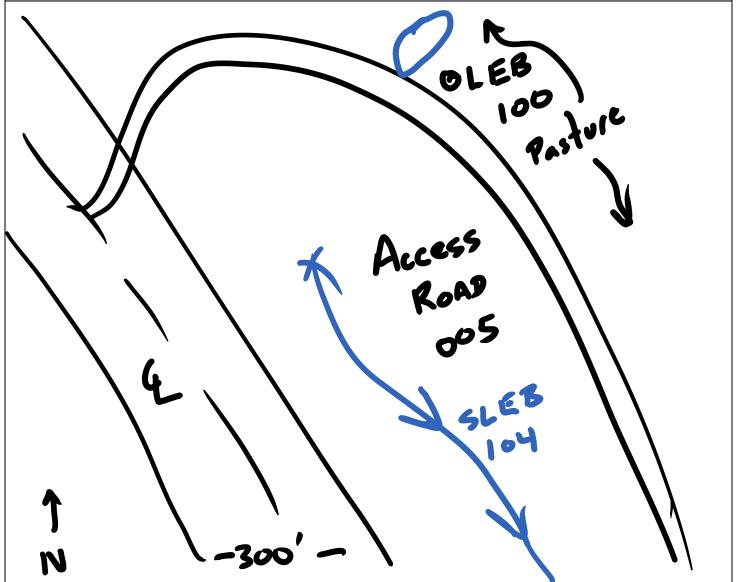
<sup>a</sup> **High Quality:** Natural, natural bank vegetation around entire waterbody; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

**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:

Stock pond constructed in high ground





Open waterbody OLEB100 facing north upstream



Open waterbody OJOB100 facing west across

Survey Description	1						
Project Name:		Waterbody Nar	ne:		Waterbody ID:		Date:
Southeast Reliability		Unnamed Tri	butary to H	lollick Run	SLEB008		6/14/2014
State:	County/Parish:		Company:		Crew Member Initial	ls: Photo	os:
West Virginia	Lewis			•	GB, TP, SK, LE	3	
Tract Number(s):			Nearest Mile	post:	Associated V	Wetland ID(s):	
02-024 Survey Type:			7.65		none		
(check one)	⊠Centerline	e □Re-R	loute	□Access Road	□Other:		
Physical Attributes Stream Classification:	3						
(check one)	□Ephemera	al ⊠Inter	mittent	□Perennial			
Waterbody Type: (check one)	River ⊠ Str	eam 🗆 Ditc	h □ Ca	nal 🗆 Other	:		
OHWM	OHWM Indica						
<b>Width:</b> ft.	(check all that apply	<i>(</i> )	☐ Clear line on bank	e ⊠Shelvin	g	⊠Scou	ring □Water staining
Height: 0.5 ft. N/A□	□Bent, r vegetatio	natted, or missing	g □Wrack lin	ne □Litter ar debris	nd		il characteristic change
Width of Waterbody - To Bank to Top of Bank:		of Waterbody - 7 of Slope:		Width of Waterbo	ody - Water Edge to	Depth of Wa	iter:
·	10 100	от оторе.		rrate: Lage.		, , ,	0.05 (
<u>10.0_</u> ft.	-	<u>3.0</u> ft.		<u>3.</u> N/A□	<u>.5</u> ft.	N/A□	<u>0.25</u> ft.
Sinuosity: (check one)		velocity:		Bank height		Bank slope	
Straight	(Approx.)			Right:	8.0_ft.	Rig	ght:
		_ <u>1.0_</u> fps		Left:	<u>  0.0_</u> 1t.	L	_ <u>70</u> _degrees .eft:
⊠Meanderin	9 N/A□			-	<u>2.0_</u> ft.		20 degrees
Qualitative Attribut	tes						
Water Appearance: (check one)	No water ⊠0	Clear □Turb	-	een □Sui surface scu	0	□Other:	
Substrate:	Bedrock □ Bo	ulder 🗵 Cobb	le ⊠ Grave	I ⊠ Sand □	⊠ Silt/ clay □ Organ	ic   Other:	
(check all that apply) % of Substrate:	%	% _ <u>10</u> _9	% <u>_10</u> _%		<u>40</u> _%		%
Width of Riparian Zone	: Vegetative	Lavers:					
	(check all that	apply)			☑ Saplings/Shrubs:	☐ Herbs	3
<u>50 ft</u> ⋅ N/A□	Avg. DBH (approx.)	of Dominants:	<u>12.0</u> in	· <u>-</u>	_ <u>2.0_</u> in.		in.
Dominant Bank Vegeta	tion (list)						
Tulip poplar, sycam	ore, sugar ma	ole, ironwood	, spice bus	h, stinging net	tle, multiflora rose	)	
Aquatic Habitats (ex: su	bmerged or emerged	d aquatic vegetation	n, overhanging b	oanks/roots, leaf pac	ks, large submerged woo	od, riffles, deep p	ools):
Riffle pool complex,	•	lines, leaf pac	ks, tree roo	ots			
Aquatic Organisms Obs	served (list):						
none							
T&E Species Observed	(list):						
none							
Disturbances (ex: livesto	ck access, manure i	n waterbody, waste	discharge pipe	):			
Existing gas pipeline	e runs parallel	to stream					
Tributary is: (check one)	<sup>⊠</sup> Natural	□ Art	ificial, man-ma	ade 🗆 Manip	ulated		
Stream Quality <sup>a</sup> : (check one)	☐ High	⊠ Mo	derate	□ Low			

Waterbody	ID:
SLEBUUS	

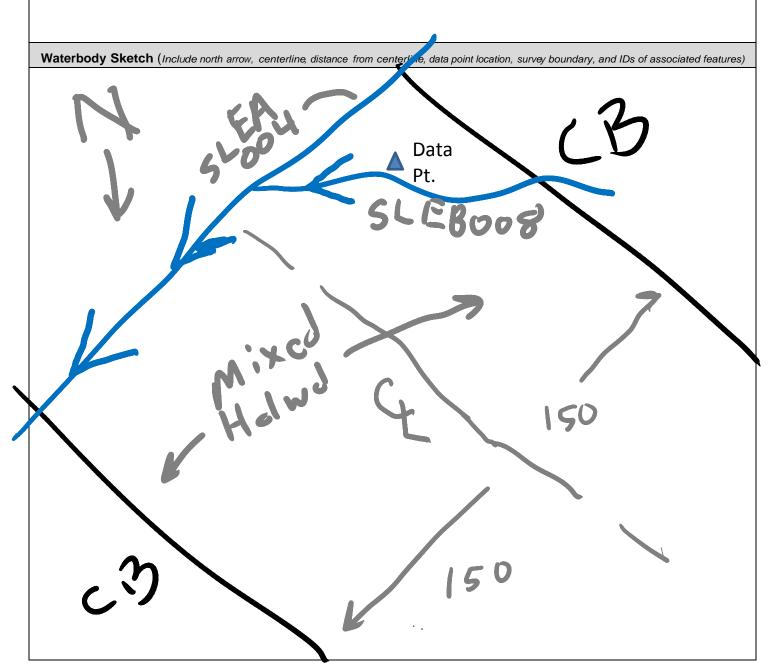
<sup>a</sup> **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat;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





Waterbody SLEB008 facing west upstream



Waterbody SLEA008 facing east downstream



Waterbody SLEB008 facing south across



Waterbody SLEB008 facing west upstream



Waterbody SLEB008 facing east downstream



Waterbody SLEB008 facing north across

Survey Description	1							
Project Name:		Waterbody Na	ne:		W	aterbody ID:		Date:
Southeast Reliability	/	UNT to Holli	ck Run		SI	LEB104		8/5/2014
State:	County:		Company:		Crew N	Member Initials:	Photos	<u> </u>
S S	Lewis		NRG		TP, S		01-03	
Tract Number(s):			Nearest Mile	post:		Associated W	etland ID(s):	
02-034			7.65			none		
Survey Type: (check one)	□Centerline	e □Re-l	Route	⊠Access Road		□Other:		
Physical Attributes Stream Classification:	5							
(check one)	□Ephemera	al ⊠Inte	mittent	□Perennial				
Waterbody Type: (check one)	River ⊠ Str	ream   Dito	:h □ Ca	anal 🗆 Other:				
OHWM Width: 2.0 ft.	OHWM Indica (check all that appl			e ⊠Shelvin	g	□Wrested vegetation	□Scourir	ng □Water staining
Height:ft.	□Bent, r vegetatio	matted, or missin	g □Wrack lii	ne □Litter ar debris	nd	□ Abrupt plant community cha		characteristic change
Width of Waterbody - To			Toe of Slope	Width of Waterbo	ody - W		Depth of Water	er:
Bank to Top of Bank:	to Toe	of Slope:		Water Edge:		(	(Approx.)	
_ <u>3_</u> ft.	-	_ <u>1.0_</u> ft.		 N/A□	<u>1.0_</u> ft.	I	N/A□	<u>0.1</u> ft.
Sinuosity: (check one)		velocity:		Bank height			Bank slope	
⊠Straight	(Approx.)			Right:	<u>3</u> ft.		Righ	t: _85_ degrees
□ Ma and arin		0.5fps	•	Left:			Let	ft:
□Meanderin	9 N/A 🗆				<u>3</u> ft.			<u>85</u> degrees
Qualitative Attribut	tes							
Water Appearance: (check one)	No water ⊠0	Clear □Turb		een □Sur surface scu		□Algal [ mats	□Other:	
Substrate:	Bedrock ☐ Bo	oulder   Cobb	le ⊠ Grave	el 🛭 Sand 🖺	⊠ Silt/ c	lay   Organic	☐ Other:	
(check all that apply)5 % of Substrate:	%%	%	<u>30</u> %	<u>35</u> %	<u>35_</u> %	%	%	
Width of Riparian Zone								
<u>0 ft</u> ⋅ N/A□	(check all that Avg. DBH (approx.)	t apply)  of Dominants:	□ Trees: in.	:	∃ Saplin in.	igs/Shrubs:	⊠ Herbs	
Dominant Bank Vegetat								
Stream flows in ditch	n along drivew	ay. Bordered	by fescue	on both side				
Aquatic Habitats (ex: su	bmerged or emerge	d aquatic vegetatio	n, overhanging	banks/roots, leaf pac	ks, large	submerged wood,	riffles, deep poo	ols):
none								
Aquatic Organisms Obs	served (list):							
none								
T&E Species Observed	(list):							
none								
Disturbances (ex: livesto	ck access, manure	in waterbody, wast	discharge pipe	es):				
Stream has been di	verted into dite	ch along drive	way. Buffe	r consists of fe	scue ,			
Tributary is: (check one)	□ Natural	☐ Ar	ificial, man-m	ade 🗵 Manipu	ulated			
Stream Quality <sup>a</sup> : (check one)	☐ High	□Мо	oderate	⊠ Low				

Waterbody SI FR104	ID:
SLEB104	

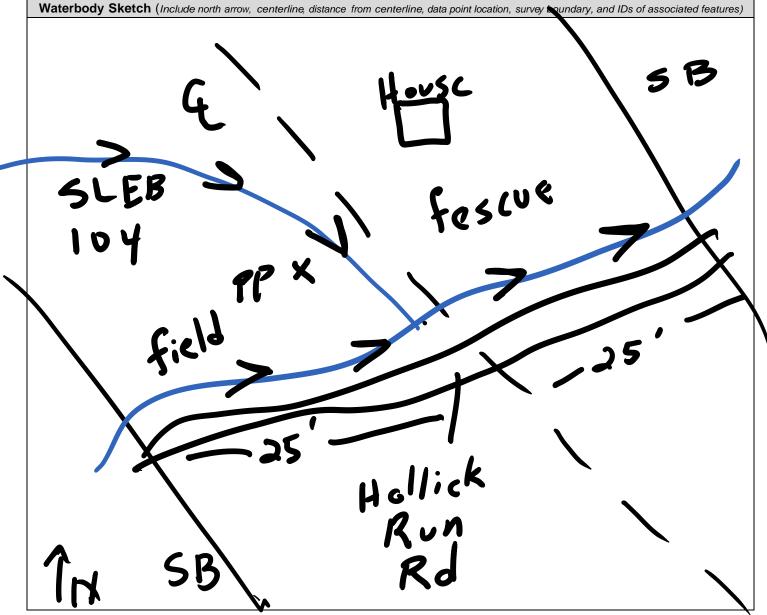
<sup>a</sup> High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no 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 originates just outside of corridor and has been diverted into ditch along the driveway.





Waterbody SLEB104 facing north upstream



Waterbody SLEB104 facing south downstream



Waterbody SLEB104 facing east across

Survey Description Project Name:	n	Matarbady Na	ma a .		l\A/	latarha du ID.		Deta	
1	·	Waterbody Na				aterbody ID:		Date:	1004.4
Atlantic Coast Pipel	ine	UNT to Holli	ck Run		5	LEB104i		12/15	/2014
State:	County:		Company:		Crew N	Member Initials	: Phot	tos:	
West Virginia	Lewis		NRG		TP, R	Н	01-	03	
Tract Number(s):			Nearest Mile	epost:		Associated W	etland ID(s	s):	
02-034.AR			7.65			none			
Survey Type: (check one)	□Centerlin	ıe □Re-	Route	□Access Road		⊠Other: Comp	ressor Site	1 (Brightbi	II Tract)
Physical Attributes Stream Classification:	S								
(check one)	□Ephemer	ral ⊠Inte	rmittent	□Perennial					
Waterbody Type: (check one)	River ⊠ St	tream   Dit	ch 🗆 Ca	anal   Other	:				
OHWM Width:	OHWM Indica (check all that app		⊠ Clear lir on bank	ne ⊠Shelvin	g	□Wrested vegetation	□Sco	uring	□Water staining
4.0_ft. <b>Height:</b> 0.5_ft.	□Bent, vegetatio	matted, or missir		ne □Litter ar debris	nd	□ Abrupt plan community ch		oil characte	eristic change
N/A□			T (0)		1 14/				
Width of Waterbody - T Bank to Top of Bank:		of Waterbody - of Slope:	Toe of Stope	Width of Waterbo	oay - w		Depth of W (Approx.)	rater:	
_ <u>5_</u> ft.		3.0ft.			<u>3.0</u> ft.		N/A□	_0.1_	ft.
Sinuosity: (check one)	Water (Approx.	velocity:		Bank height Right:			Bank slope R	e ight:	
		<u>0.5</u> fp	S	Left:	<u>3</u> _ft.				degrees
⊠Meanderir	ng N/A□				<u>3</u> ft.			_80_	degrees
Qualitative Attribu	tes								
Water Appearance: (check one)	<sup>]</sup> No water ⊠	lClear □Turl		leen □Sul l surface scu		□Algal [ mats	□Other:		
Substrate:	Bedrock 🗆 Be	oulder ⊠ Cob	ble ⊠ Grave	el 🛭 Sand 🗓	⊠ Silt/ c	lay □ Organic	☐ Other	r:	
(check all that apply)5 % of Substrate:	%%	<u>20</u> %	<u>15</u> %	<u>30</u> %	<u>35_</u> %	%		_%	
Width of Riparian Zone		ve Layers:							
_>50_ft· N/A□	(check all that Avg. DBH (approx.)	at apply) I of Dominants:	⊠ Trees <u>8</u> in.		⊠ Saplir _2in.	ngs/Shrubs:	⊠ Her	rbs	
Dominant Bank Vegeta	tion (list):								
Tulip poplar, black o	cherry, red ma	ple, spice bus	sh						
Aquatic Habitats (ex: su	ibmerged or emerge	ed aquatic vegetation	on, overhanging	banks/roots, leaf pac	ks, large	submerged wood	, riffles, deep	pools):	
Aquatic Organisms Ob	served (list):								
none									
T&E Species Observed	(list):								
none									
Disturbances (ex: livesto	ock access, manure	in waterbody, wast	e discharge pipe	es):					
Ditched downstrear	n of data point	t							
Tributary is: (check one)	⊠ Natural	Aı	tificial, man-m	ade 🗆 Manip	ulated				
Stream Quality <sup>a</sup> : (check one)	☐ High	 ⊠ M	oderate	□ Low					

## Waterbody ID: SLEB104i

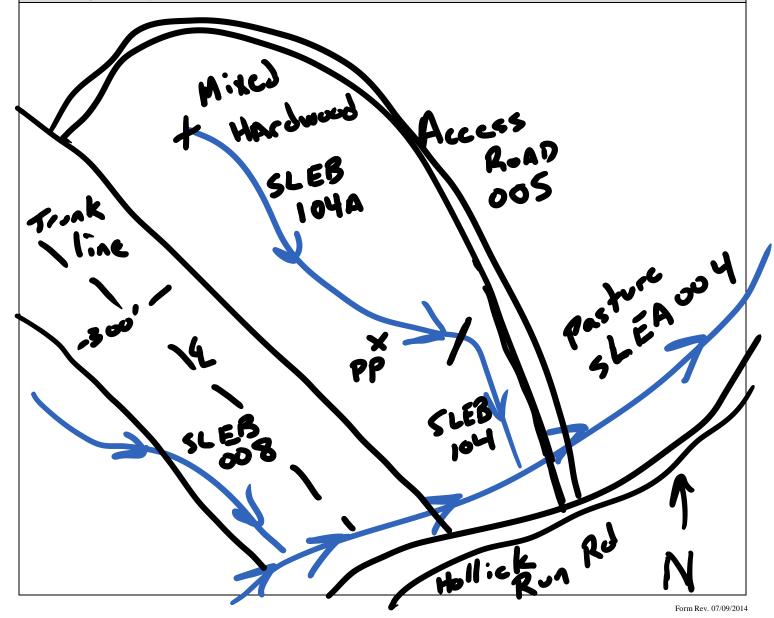
<sup>a</sup> High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no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

This is an extension of SLEB104. The original data point was taken along a driveway and the stream had been ditched. The extension includes an undisturbed reach. Noted moderate sinuosity, good grade control, wrack lines/debris piles, and some stretches with bedrock. SLEB104a was changed to SLEB104i.





Stream SLEB104i facing north upstream



Stream SLEB104i facing south downstream



Stream SLEB104i facing east across

Survey Description	1							
Project Name:		Waterbody Na	ne:		W	aterbody ID:		Date:
Southeast Reliability	/	UNT to Holli	ck Run		SI	LEB104		8/5/2014
State:	County:		Company:		Crew N	Member Initials:	Photos	<u> </u>
S S	Lewis		NRG		TP, S		01-03	
Tract Number(s):			Nearest Mile	post:		Associated W	etland ID(s):	
02-034			7.65			none		
Survey Type: (check one)	□Centerline	e □Re-l	Route	⊠Access Road		□Other:		
Physical Attributes Stream Classification:	5							
(check one)	□Ephemera	al ⊠Inte	mittent	□Perennial				
Waterbody Type: (check one)	River ⊠ Str	ream   Dito	:h □ Ca	anal 🗆 Other:				
OHWM Width: 2.0 ft.	OHWM Indica (check all that appl			e ⊠Shelvin	g	□Wrested vegetation	□Scourir	ng □Water staining
Height:ft.	□Bent, r vegetatio	matted, or missin	g □Wrack lii	ne □Litter ar debris	nd	□ Abrupt plant community cha		characteristic change
Width of Waterbody - To			Toe of Slope	Width of Waterbo	ody - W		Depth of Water	er:
Bank to Top of Bank:	to Toe	of Slope:		Water Edge:		(	(Approx.)	
_ <u>3_</u> ft.	-	_ <u>1.0_</u> ft.		 N/A□	<u>1.0_</u> ft.	I	N/A□	<u>0.1</u> ft.
Sinuosity: (check one)		velocity:		Bank height			Bank slope	
⊠Straight	(Approx.)			Right:	<u>3</u> ft.		Righ	t: _85_ degrees
□ Ma and arin		0.5fps	•	Left:			Let	ft:
□Meanderin	9 N/A 🗆				<u>3</u> ft.			<u>85</u> degrees
Qualitative Attribut	tes							
Water Appearance: (check one)	No water ⊠0	Clear □Turb		een □Sur surface scu		□Algal [ mats	□Other:	
Substrate:	Bedrock ☐ Bo	oulder   Cobb	le ⊠ Grave	el 🛭 Sand 🖺	⊠ Silt/ c	lay   Organic	☐ Other:	
(check all that apply)5 % of Substrate:	%%	%	<u>30</u> %	<u>35</u> %	<u>35_</u> %	%	%	
Width of Riparian Zone								
<u>0 ft</u> ⋅ N/A□	(check all that Avg. DBH (approx.)	t apply)  of Dominants:	□ Trees: in.	:	∃ Saplin in.	igs/Shrubs:	⊠ Herbs	
Dominant Bank Vegetat								
Stream flows in ditch	n along drivew	ay. Bordered	by fescue	on both side				
Aquatic Habitats (ex: su	bmerged or emerge	d aquatic vegetatio	n, overhanging	banks/roots, leaf pac	ks, large	submerged wood,	riffles, deep poo	ols):
none								
Aquatic Organisms Obs	served (list):							
none								
T&E Species Observed	(list):							
none								
Disturbances (ex: livesto	ck access, manure	in waterbody, wast	discharge pipe	es):				
Stream has been di	verted into dite	ch along drive	way. Buffe	r consists of fe	scue ,			
Tributary is: (check one)	□ Natural	☐ Ar	ificial, man-m	ade 🗵 Manipu	ulated			
Stream Quality <sup>a</sup> : (check one)	☐ High	□Мо	oderate	⊠ Low				

Waterbody SI FR104	ID:
SLEB104	

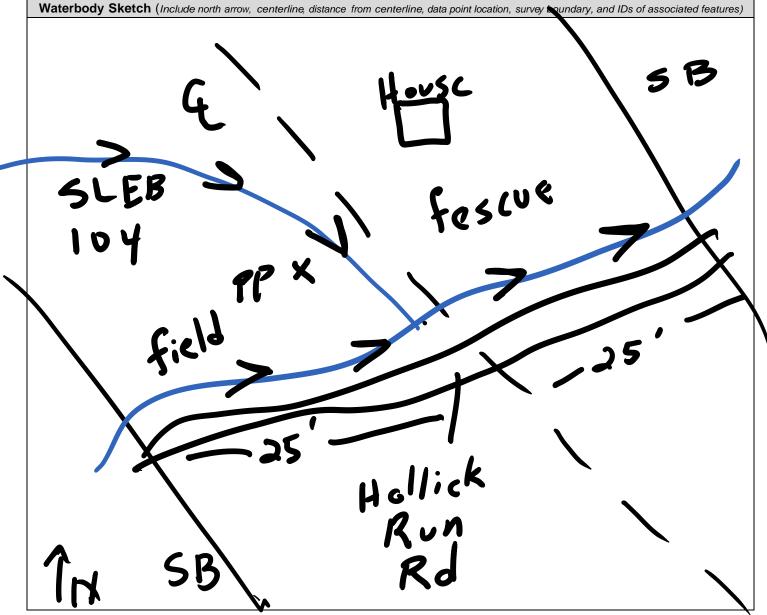
<sup>a</sup> High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no 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 originates just outside of corridor and has been diverted into ditch along the driveway.





Waterbody SLEB104 facing north upstream



Waterbody SLEB104 facing south downstream



Waterbody SLEB104 facing east across

Survey Description Project Name:	n	Matarbady Na	ma a .		l\A/	latarha du ID.		Deta	
1	·	Waterbody Na				aterbody ID:		Date:	1004.4
Atlantic Coast Pipel	ine	UNT to Holli	ck Run		5	LEB104i		12/15	/2014
State:	County:		Company:		Crew N	Member Initials	: Phot	tos:	
West Virginia	Lewis		NRG		TP, R	Н	01-	03	
Tract Number(s):			Nearest Mile	epost:		Associated W	etland ID(s	s):	
02-034.AR			7.65			none			
Survey Type: (check one)	□Centerlin	ıe □Re-	Route	□Access Road		⊠Other: Comp	ressor Site	1 (Brightbi	II Tract)
Physical Attributes Stream Classification:	S								
(check one)	□Ephemer	ral ⊠Inte	rmittent	□Perennial					
Waterbody Type: (check one)	River ⊠ St	tream   Dit	ch 🗆 Ca	anal   Other	:				
OHWM Width:	OHWM Indica (check all that app		⊠ Clear lir on bank	ne ⊠Shelvin	g	□Wrested vegetation	□Sco	uring	□Water staining
4.0_ft. <b>Height:</b> 0.5_ft.	□Bent, vegetatio	matted, or missir		ne □Litter ar debris	nd	□ Abrupt plan community ch		oil characte	eristic change
N/A□			T (0)		1 14/				
Width of Waterbody - T Bank to Top of Bank:		of Waterbody - of Slope:	Toe of Stope	Width of Waterbo	oay - w		Depth of W (Approx.)	rater:	
_ <u>5_</u> ft.		3.0ft.			<u>3.0</u> ft.		N/A□	_0.1_	ft.
Sinuosity: (check one)	Water (Approx.	velocity:		Bank height Right:			Bank slope R	e ight:	
		<u>0.5</u> fp	S	Left:	<u>3</u> _ft.				degrees
⊠Meanderir	ng N/A□				<u>3</u> ft.			_80_	degrees
Qualitative Attribu	tes								
Water Appearance: (check one)	<sup>]</sup> No water ⊠	lClear □Turl		leen □Sul l surface scu		□Algal [ mats	□Other:		
Substrate:	Bedrock 🗆 Be	oulder ⊠ Cob	ble ⊠ Grave	el 🛭 Sand 🗓	⊠ Silt/ c	lay □ Organic	☐ Other	r:	
(check all that apply)5 % of Substrate:	%%	<u>20</u> %	<u>15</u> %	<u>30</u> %	<u>35_</u> %	%		_%	
Width of Riparian Zone		ve Layers:							
_>50_ft· N/A□	(check all that Avg. DBH (approx.)	at apply) I of Dominants:	⊠ Trees <u>8</u> in.		⊠ Saplir _2in.	ngs/Shrubs:	⊠ Her	rbs	
Dominant Bank Vegeta	tion (list):								
Tulip poplar, black o	cherry, red ma	ple, spice bus	sh						
Aquatic Habitats (ex: su	ibmerged or emerge	ed aquatic vegetation	on, overhanging	banks/roots, leaf pac	ks, large	submerged wood	, riffles, deep	pools):	
Aquatic Organisms Ob	served (list):								
none									
T&E Species Observed	(list):								
none									
Disturbances (ex: livesto	ock access, manure	in waterbody, wast	e discharge pipe	es):					
Ditched downstrear	n of data point	t							
Tributary is: (check one)	⊠ Natural	Aı	tificial, man-m	ade 🗆 Manip	ulated				
Stream Quality <sup>a</sup> : (check one)	☐ High	 ⊠ M	oderate	□ Low					

## Waterbody ID: SLEB104i

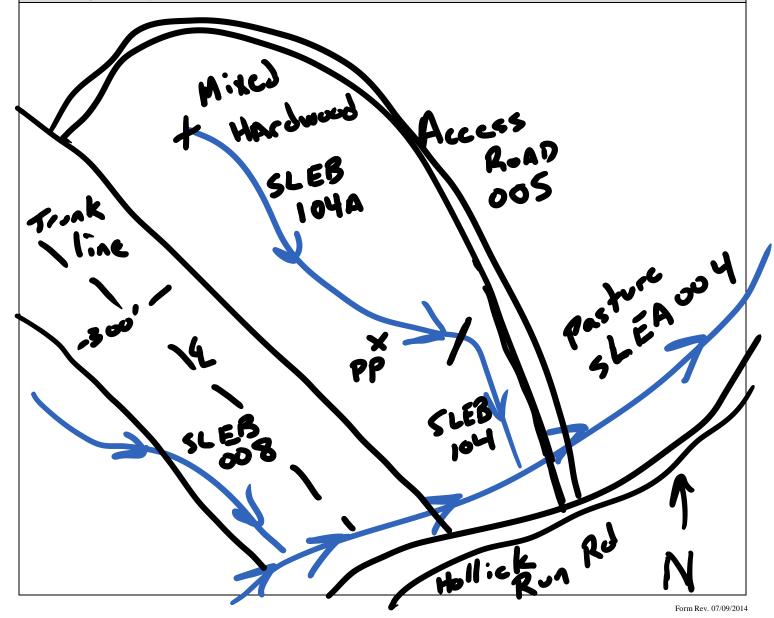
<sup>a</sup> High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no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

This is an extension of SLEB104. The original data point was taken along a driveway and the stream had been ditched. The extension includes an undisturbed reach. Noted moderate sinuosity, good grade control, wrack lines/debris piles, and some stretches with bedrock. SLEB104a was changed to SLEB104i.





Stream SLEB104i facing north upstream



Stream SLEB104i facing south downstream



Stream SLEB104i facing east across

Survey Description	1						
Project Name:		Waterbody Nar	ne:		Waterbody I	D:	Date:
Southeast Reliability	1	Hollick Run			SLEA004		6/14/2014
State:	County/Parish:		Company		Crew Member In	itials:	Photos:
West Virginia	Lewis		Natural Re	source Group	GB, SK, LE, T	Р	3
Tract Number(s):			Nearest Mile	post:	Associate	ed Wetland	ID(s):
02-034			7.65		none		
Survey Type: (check one)	⊠Centerline	e □Re-F	Route	□Access Road	□Other:		
Physical Attributes Stream Classification:	<u> </u>						
(check one)	□Ephemera	al □Inter	mittent	⊠Perennial			
Waterbody Type: (check one)	River ⊠ Str	eam 🗆 Dito	:h □ Ca	ınal 🗆 Other	:		
OHWM Width: <u>9.0</u> ft.	OHWM Indica (check all that apply		⊠ Clear lin on bank	e ⊠Shelvin	g □Wreste vegetatio		Scouring □Water staining
<b>Height:</b> ft. N/A□	⊠Bent, r vegetatio	matted, or missin	g □Wrack lir	ne □Litter ar debris		plant ty change	☐Soil characteristic change
Width of Waterbody - To Bank to Top of Bank:		of Waterbody - <sup>-</sup> of Slope:		Width of Waterbo Water Edge:	ody - Water Edge	to Depth (Approx.	of Water:
<u>15.0_</u> ft.	_	<u>7.0</u> ft.		_ N/A□	<u>8.5</u> ft.	N/A□	<u>1.0</u> ft.
Sinuosity: (check one) ☐Straight	(Approx.)	<b>velocity:</b> fps		Bank height Right: Left:	3.5_ft.	Bank s	slope Right:
⊠Meanderin	i iiva			-	3.0_ft.		45 degrees
Qualitative Attribut	tes						
Water Appearance: (check one)	No water ⊠0	Clear □Turb		een □Sui surface scu	9	□Othe	r:
Substrate:    (check all that apply)   % of Substrate:    15		oulder ⊠ Cobb %65%	le ⊠ Grave _ <u>10</u> _%	el ⊠ Sand [ 10_%	□ Silt/ clay □ Org	ganic 🗆 ( % _	Other: %
Width of Riparian Zone	_	•		_			
_ <u>25_ft</u> . N/A□	(check all that Avg. DBH (approx.)	of Dominants:	⊠ Trees: <u>8.0</u> in.	<u>-</u>	⊠ Saplings/Shrubs _ <u>0.75_</u> in.	: ⊠ - <del></del>	Herbs in.
Dominant Bank Vegeta							
rose, fescue, ground	l ivv. svcamor	е	-			•	veed, wingstem, multiflora
Aquatic Habitats (ex: su Pools, riffles, overha	-		n, overhanging l	oanks/roots, leaf pac	ks, large submerged	wood, riffles,	deep pools):
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	s):			
Paralleled by road							
Tributary is: (check one)	Natural	☐ Art	ificial, man-ma	ade 🗆 Manip	ulated		
Stream Quality <sup>a</sup> : (check one)	□ High	⊠ Mo	oderate	□ Low			

## Waterbody ID: SLEA004

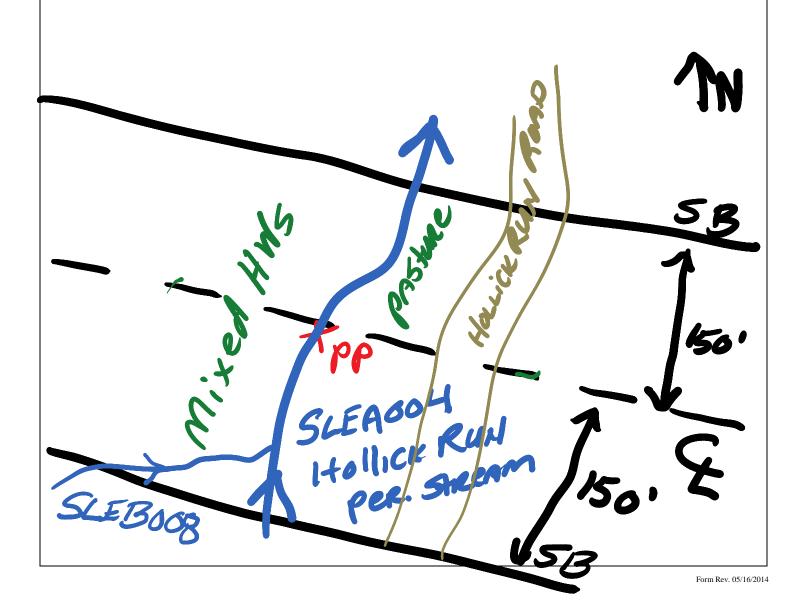
<sup>a</sup> **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat;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

Appears as a NHD perennial stream line; flows into Kincheloe Creek outside of corridor. Feature continues out of corridor in both directions.





Waterbody SLEA004 facing southwest upstream



Waterbody SLEA004 facing northeast downstream



Waterbody SLEA004 facing northwest across

Survey Description	1						
Project Name:		Waterbody Nar	ne:			erbody ID:	Date:
Southeast Reliability		Unnamed Tr	ibutary to F	Hollick Run	SLE	EA005	6/14/2014
State:	County/Parish:		Company		Crew Me	ember Initials:	Photos:
West Virginia	Lewis			source Group			3
Tract Number(s):			Nearest Mile	epost:	A	ssociated We	tland ID(s):
02-036			7.75		r	none	
Survey Type: (check one)	⊠Centerline	e □Re-F	Route	□Access Road	i [	□Other:	
Physical Attributes Stream Classification:	3						
(check one)	□Ephemera	al ⊠Inter	mittent	□Perennial			
Waterbody Type:	River ⊠ Str	ream   Dito	:h □ Ca	anal 🗆 Other	<del>.</del>		
OHWM	OHWM Indica	itor:					
<b>Width:</b> ft.	(check all that appl		☐ Clear lin	ne ⊠Shelvin		□Wrested vegetation	
Height: ft. N/A□	□Bent, ı vegetatio	matted, or missin on	g ⊠Wrack li	ne ⊠Litter ar debris		□Abrupt plant community cha	☐Soil characteristic change
Width of Waterbody - T			Toe of Slope	Width of Waterb	ody - Wat	ter Edge to	Pepth of Water:
Bank to Top of Bank:	to Toe	of Slope:		Water Edge:		()	Approx.)
<u>7.0_</u> ft.	-	<u>2.0</u> ft.		 N/A□	3.0_ft.	<b>N</b>	<u>0.5</u> ft. I/A□
Sinuosity:		velocity:		Bank height		E	Bank slope
(check one) □Straight	(Approx.,	)		Right:			Right:
		0.75fp:	6	Left:	<u>4.0_</u> ft.		<u>70</u> degrees <b>Left:</b>
⊠Meanderin	g N/A□				<u>8.0_</u> ft.		<u>55</u> degrees
Qualitative Attribut	tes						
Water Appearance:							
(check one)	No water ⊠	Clear □Turb	-		rface um	□Algal □ mats	Other:
	Bedrock ☐ Bo	oulder 🗵 Cobb	le 🛭 Grave	el ⊠ Sand □	⊠ Silt/ cla	y 🗆 Organic	☐ Other:
(check all that apply) % of Substrate: 25	5_%	% _ <u>45</u> _%	_ <u>10</u> _%	<u>10</u> %	_ <u>10</u> _%	%	%
Width of Riparian Zone							
4	(check all tha				⊠ Sapling:	s/Shrubs:	⊠ Herbs
<u>ft</u> ⋅ N/A⊠	(approx.)	of Dominants:	<u>11.0</u> ir	n. <u>-</u>	<u>0.5</u> in.		in.
Dominant Bank Vegeta	tion (list):						
fern			•			. •	creeper, sanicle, Christmas
Aquatic Habitats (ex: su		d aquatic vegetation	n, overhanging	banks/roots, leaf pac	cks, large su	ubmerged wood,	riffles, deep pools):
Small step pools, le	af packs						
Aquatic Organisms Obs	served (list):						
none							
T&E Species Observed	(list):						
none							
Disturbances (ex: livesto	ck access, manure	in waterbody, waste	discharge pipe	es):			
Paralleled by road							
Tributary is: (check one)	Natural	□ Art	ificial, man-m	ade 🗆 Manip	ulated		
Stream Quality <sup>a</sup> : (check one)	□ High	 ⊠ Mc	derate	☐ Low			

## Waterbody ID: SLEA005

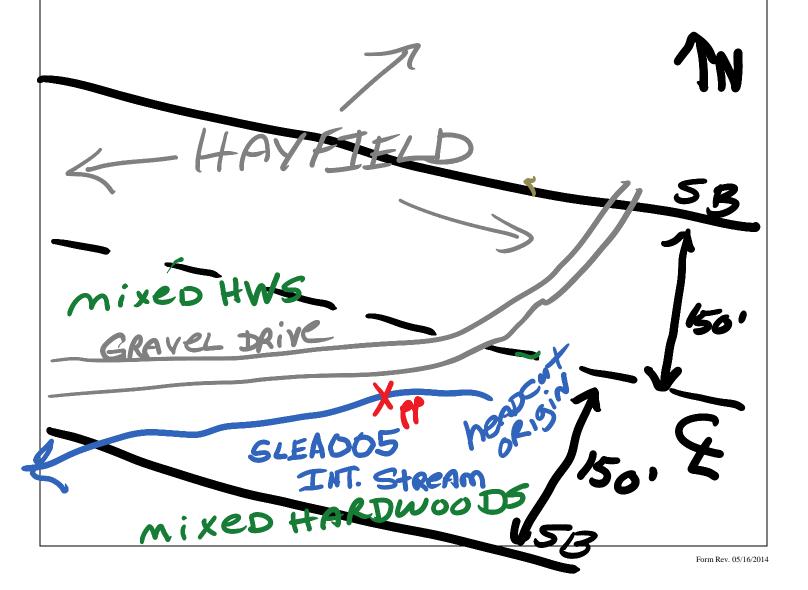
<sup>a</sup> **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat;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

Feature begins at a headcount within the corridor; flows into Hollick Run outside the corridor.





Waterbody SLEA005 facing southeast upstream



Waterbody SLEA005 facing northwest downstream



Waterbody SLEA005 facing northeast across

Survey Description	n				1				
Project Name:		Waterbody Nar				/aterbody ID:		Date:	
Southeast Reliability	У	West Fork R	iver		S	LEB009		6/14/2014	
State:	County/Parish:		Company:		Crew I	Member Initials:	Photos:		
West Virginia	Lewis			source Group	GB, T		3		
Tract Number(s):			Nearest Mile	epost:		Associated Wetla	ind ID(s):		
02-037			7.95			none			
Survey Type: (check one)	⊠Centerline	e □Re-F	Route	□Access Road		□Other:			
Physical Attributes	S								
Stream Classification: (check one)	□Ephemera	al ∏Inter	mittent	⊠Perennial					
Waterbody Type:									
	River □ Str	ream 🗆 Dito	ch □ Ca	anal   Other	:				
OHWM	OHWM Indica	tor:							
<b>Width:</b> 65.0ft.	(check all that appl	y)		e □Shelvin	g	□Wrested vegetation	□Scourin	g □Water staining	
Height:	⊠Bent. r	natted, or missin	α □Wrack liı	ne □Litter ar	nd	☐Abrupt plant	∏Soil c	haracteristic change	
<u>5.0</u> ft. N/A□	vegetatio	,	9	debris		community chang			
Width of Waterbody - T			Toe of Slope	Width of Waterb	ody - W	later Edge to Dep	oth of Wate	r:	
Bank to Top of Bank:	to I oe	of Slope:		Water Edge:		(Αρμ	iiox.)		
<u>75.0</u> ft.	_	<u>60.0</u> ft.		<u>60</u> N/A□	0.0ft.	N/A		<u>5.0</u> ft.	
Sinuosity:	Water	velocity:		Bank height		-	nk slope		
(check one)	(Approx.)			Right:			Right	t:	
		_ <u>1.0_</u> fps		Left:	<u>20.0_</u> ft	t.	Lef	<u>70</u> degrees	
⊠Meanderin	ng N/A□				<u>45.0_</u> ft	t.	Loi	_ <u>80_</u> degrees	
Qualitative Attributes									
Water Appearance: (check one)	<sup>]</sup> No water □0	Clear ⊠Turb	-	een □Sui surface sci		□Algal □O mats	ther:		
Substrate:	Bedrock □ Bo	oulder   Cobb	le □ Grave	el □ Sand □	⊠ Silt/ c	clay   Organic	☐ Other:		
(check all that apply) % of Substrate:	%	%	%	_ 100_% _	0	% %	9	,	
_	<u> </u>	/0	_/0	<u>100</u> _%		/6/6		0	
Width of Riparian Zone	c: Vegetative (check all that	•	⊠ Trees:	Г	☑ Caplir	ngs/Shrubs:	☐ Herbs		
ft.	ľ	of Dominants:	<u>13.0</u> in		⊴ Зарііі _ <u>2.0_</u> in	=	_ in	ı.	
N/A⊠ Dominant Bank Vegeta	(approx.)			-					
Sycamore, ash, bas	, ,	oush, buckeye	e, ironwood	, poison ivy, da	aylily				
Aquatic Habitats (ex: su	ibmeraed or emerae	d aquatic vegetation	n. overhanging	banks/roots, leaf pac	ks. large	submerged wood, riff	les, deep poo	ls):	
Overhanging trees				, p	, 3 -	,	,		
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	e):					
Road on left bank, p	oasture on left	bank							
Tributary is: (check one)	Natural	□ Art	ificial, man-m	ade 🗆 Manipi	ulated				
Stream Quality <sup>a</sup> : (check one)	□ High	 ⊠ Mo	oderate	☐ Low					
1									

Waterbody ID: SLEB009

<sup>a</sup> **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.

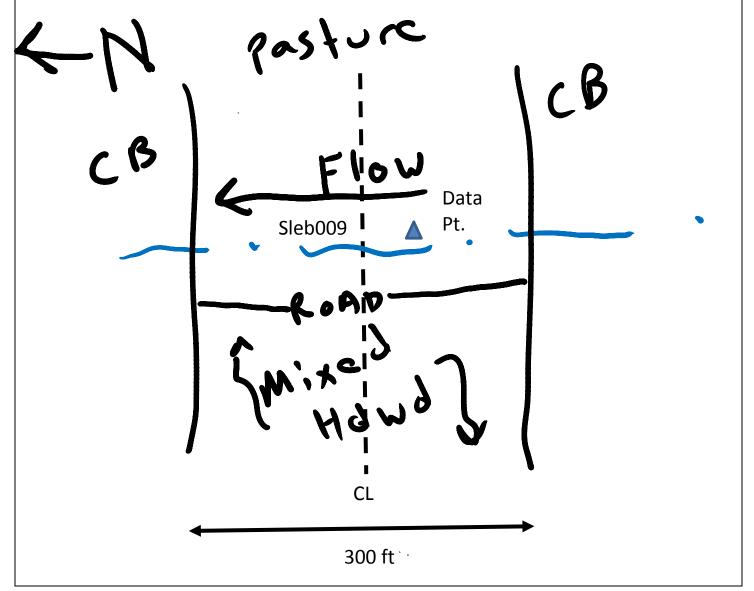
**Moderate Quality:** Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film;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

West Fork River, flows throughout corridor.

Note: water depth is an estimate; stream was very turbid.





Waterbody SLEB009 facing south upstream



Waterbody SLEA009 facing north downstream



Waterbody SLEB009 facing east across

Survey Description	1							T <sub>-</sub>	
Project Name:		Waterbody Nar				aterbody ID:		Date:	
Southeast Reliability		Unnamed Tri	ibutary to V	Vest Fork Rive	r Sl	LEA006		6/16/2	2014
State:	County/Parish:		Company		Crew N	lember Initials	: Ph	otos:	
9	Lewis			source Group	GB, L		3		
Tract Number(s):			Nearest Mile	post:		Associated W	etland ID	(s):	
02-044			8.3			none			
Survey Type: (check one)	⊠Centerline	e □Re-R	Route	□Access Road		□Other:			
Physical Attributes Stream Classification:									
(check one)	⊠Ephemera	al □Inter	mittent	□Perennial					
Waterbody Type: (check one)	River ⊠ Str	eam 🗆 Ditc	h □ Ca	anal 🗆 Other	:				
OHWM Width:	OHWM Indica (check all that apply		☐ Clear lin	e □Shelvin	g	□Wrested	⊠So		□Water
2.0 ft. Height:	⊠ Ront r	natted, or missing	on bank	ne □Litter ar	ad	vegetation   ☐ Abrupt plan	· 🗆	Soil characte	staining
<u>0.33</u> ft. N/A□	vegetatio		y	debris	iu	community ch		Son Characte	nsic change
Width of Waterbody - To Bank to Top of Bank:		of Waterbody - 7	Toe of Slope	Width of Waterb	ody - W		Depth of (Approx.)	Water:	
<u>5.0</u> ft.	_	_ <u>1.5_</u> ft.			<u>0.8_</u> ft.		N/A□	0.1f	t.
Sinuosity:	Water	velocity:		Bank height			Bank slo	pe	
(check one) ☐Straight	(Approx.)			Right:				Right:	
		<u>_0.1_</u> fps		Left:	<u>4.5_</u> ft.				degrees
⊠Meanderin	9 N/A□			-	2.5_ft.			<u>80</u> c	legrees
Qualitative Attribut	tes								
Water Appearance: (check one)	No water ⊠0	Clear □Turb		een □Sui surface sci		□Algal [ mats	□Other:		
Substrate:	Bedrock ☐ Bo	ulder 🗵 Cobb				lay ⊠ Organic	: 🗆 Oth	ner:	
(check all that apply) % of Substrate: 30	<u> </u>	_% _ <u>30</u> _%	_ <u>10</u> _%	<u>10</u> %	_ <u>10</u> _%	_ <u>10_</u> %		<u></u> %	
Width of Riparian Zone	: Vegetative	Layers:							
ft.	(check all that	apply) of Dominants:	☑ Trees:			igs/Shrubs:	⊠ He		
N/A⊠	(approx.)	or Dominiants.	<u>12.0</u> in.	-	_ <u>0.75</u> ir	1.		in.	
Dominant Bank Vegeta	, ,								
Black oak, red elm,							•		
Aquatic Habitats (ex: su	bmerged or emerged	d aquatic vegetation	n, overhanging l	banks/roots, leaf pac	ks, large	submerged wood	, riffles, de	ep pools):	
none									
Aquatic Organisms Obs	served (list):								
none									
T&E Species Observed	(list):								
none									
Disturbances (ex: livesto	ck access, manure i	n waterbody, waste	discharge pipe	s):					
none apparent									
Tributary is: (check one)	Natural	□ Art	ificial, man-ma	ade 🗆 Manip	ulated				
Stream Quality <sup>a</sup> : (check one)	□ High	⊠ Mo	derate	☐ Low					

Waterbody ID: SLEA006

<sup>a</sup> 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:

Begins within corridor where two erosional rills converge; downstream continues out of corridor where it is a tributary to West Fork River





Waterbody SLEA006 facing south upstream



Waterbody SLEA006 facing north downstream



Waterbody SLEA006 facing east across

**Open Waterbody Data Sheet** 

Open waterboo	iy Data Sileet	1						
Survey Descripti	on							
Project Name:		Waterbody N	lame:		1	Waterbody ID:	[0	Date:
Southeast Reliabi	lity	Unnamed	Pond to West I	Fork River		OLEB002	6	6/16/2014
State:	County:		Company:		Crew	Member Initials:	Photos:	
West Virginia	Lewis		Natural Resou	rce Group	TP,	SH	1	
Tract Number(s):			Nearest Milepost	t:	1	Associated Wetland	ID(s):	
02-046			9.0			WLEB004		
Survey Type: (check one)	⊠Centerlin	e □R	Re-Route	□Access Ro	ad	□Other:		
Physical Attribut	es							
Waterbody Type: (check one) ⊠Sto	ck Pond ☐ Natura	l Pond □ La	ke □ Reservoir	☐ Impoundm	ent 🗆	Oxbow Dother:		
Hydrologic Regime:	□ Permanently	Flooded $\square$	Semipermanently	y Flooded	□ Seas	sonally Flooded	Temporarily	/ Flooded
ОНWМ	OHWM Indi		□ OII		. 1. 2			da a
Height:	(Crieck all triat a	ρριγ)	⊠ Clear li on bank	ne ⊠She	eiving	□Wrested vegetation	□Scou	ring □Water staining
<u>0.5</u> ft.	t, matted, or mation	nissing □Wrack line	□Litte debris	er and	□ Abrupt plant community ch		aracteristic change	
Depth of Water:	I	Bank heig	ht (average):			Bank slope (aver	age):	
N/A□	_ft.		1.0	ft.		-	5 degrees	3
Qualitative Attrib	outes							
Water Appearance: (check one)	□No water □	Clear ⊠T	urbid □She on sur		Surface	e □Algal □ mats	Other:	
Substrate: (check all that apply)	□ Bedrock □ B	oulder 🗆 C	obble   Gravel	☐ Sand	⊠ Si	ilt/ clay □ Organic	☐ Other:	
% of Substrate:	%	%	%%	%%	100	_%% _		
Width of Riparian Zo	ne: Vegetative	e Layers:						
ft.	(check all that	apply)	☐ Trees:		⊠ Sap	plings/Shrubs:	⊠ Herbs	
	Avg. DBH	of Dominants	s:in	).	_2_ir	n	in.	
N/A⊠	(approx.)		· <u> </u>					
Dominant Bank Vege Multiflora rose, tul	` ′	berrv. soft n	eedle rush					
Aquatic Habitats (ex:				leaf nacks large s	uhmerge	d wood riffles deep pools a	etc )*	
none	ouzmergeu er emergeu u	quano rogonanon, c	Tomanging Same, Toolo	, roai paono, raigo o	abilio.go	a need, imee, deep peele, t	3.0.,•	
Aquatic Organisms (	Observed (list):							
Tadpoles, crawfish								
T&E Species Observe								
none	()-							
Disturbances (ex: live	stock access, manure	in waterbody, w	aste discharge pipes	s):				
Surrounded by ca	ttle pasture, but	fenced off	to restrict acce	ess				
Waterbody is:								
(check one)	☐ Natural		al, man-made	☐ Manipulate	d			
Waterbody Quality <sup>a</sup> : (check one)	: □ High	☐ Moderate	e 🗵 Low					

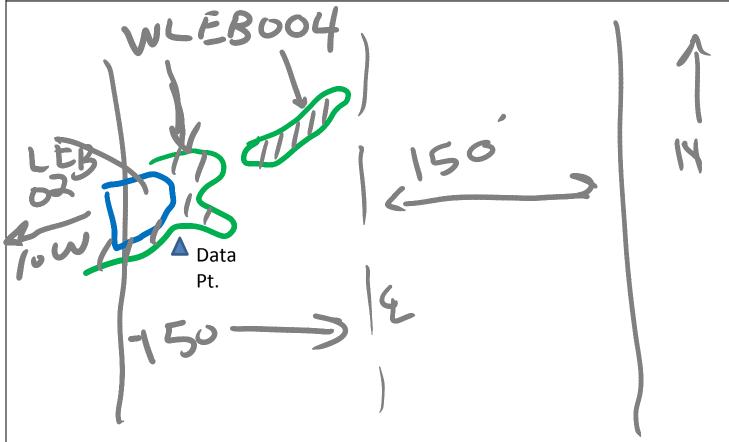
Waterbody	ID
OLEB002	

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 OLEB002 facing south

**Open Waterbody Data Sheet** 

Open Waterboo	iy Data Sileet							
Survey Descripti	on							
Project Name:		Waterbody N	lame:			Waterbody ID:	Date	e:
Southeast Reliabi	lity	Unnamed	Pond			OLEA001	6/1	6/2014
State:	County:		Company:		Crew	/ Member Initials:	Photos:	
West Virginia	Lewis		Natural Resou	rce Group	GB,	LE	1	
Tract Number(s):			Nearest Milepost	l:		Associated Wetland	ID(s):	
02-046			8.95			none		
Survey Type: (check one)	⊠Centerlin	e □R	e-Route	□Access Ro	ad	□Other:		
Physical Attribut	es							
Waterbody Type: (check one) ⊠Stoo	ck Pond □ Natura	I Pond □ La	ke   Reservoir	☐ Impoundme	ent 🗆	☐ Oxbow ☐ Other:		
Hydrologic Regime:	□ Permanently	Flooded	Semipermanentl	y Flooded	∃ Sea	sonally Flooded	Temporarily FI	ooded
ОНWМ	OHWM Indi							
Height:	(check all that a	oply)	⊠ Clear li on bank	ne □She	elving	□Wrested vegetation	□Scouring	y □Water staining
<u>3.0</u> ft.	□Beni vegeta	t, matted, or m tion	issing □Wrack line	□Litte debris	er and	☐Abrupt plant community cha		cteristic change
Depth of Water:		Bank heigl	ht (average):			Bank slope (aver	age):	
	ft.		5.5	ft.		_	65 degrees	
Qualitative Attrib	utes							
Water Appearance:		Clear ⊠T	urbid □She on sur		Surfac um	e □Algal □0 mats	Other:	
Substrate: (check all that apply)	□ Bedrock □ B	oulder 🗆 Co	obble   Gravel	⊠ Sand	⊠ S	Silt/ clay □ Organic	☐ Other:	
% of Substrate:	%	%	%%	% <u>20</u> %		80_%%	%	
Width of Riparian Zor	ne: Vegetative	Layers:						
ft.	(check all that	apply)	☐ Trees:		⊠ Sa	aplings/Shrubs:	⊠ Herbs	
 N/A⊠	Avg. DBH (approx.)	of Dominants	<b>3:</b> in		_ 1.0	_in	in.	
Dominant Bank Vege								
Indian hemp, orch	ardgrass, willow	ı, blackberr	y, clover, soft r	ush, multiflo	ra ro	se, autumn olive		
Aquatic Habitats (ex:	submerged or emerged ac	quatic vegetation, o	verhanging banks/roots,	leaf packs, large s	ubmerge	ed wood, riffles, deep pools, e	tc.):	
Pool								
Aquatic Organisms C	Observed (list):							
Frogs								
T&E Species Observe	ed (list):							
none								
Disturbances (ex: live fenced off from ca		in waterbody, w	aste discharge pipes	):				
Waterbody is: (check one)	□ Natural	⊠ Artificia	al, man-made	☐ Manipulate	d			
Waterbody Quality <sup>a</sup> : (check one)	□ High		e 🗆 Low					

Waterbody	ID
Waterbody OLEA001	

<sup>a</sup> **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.

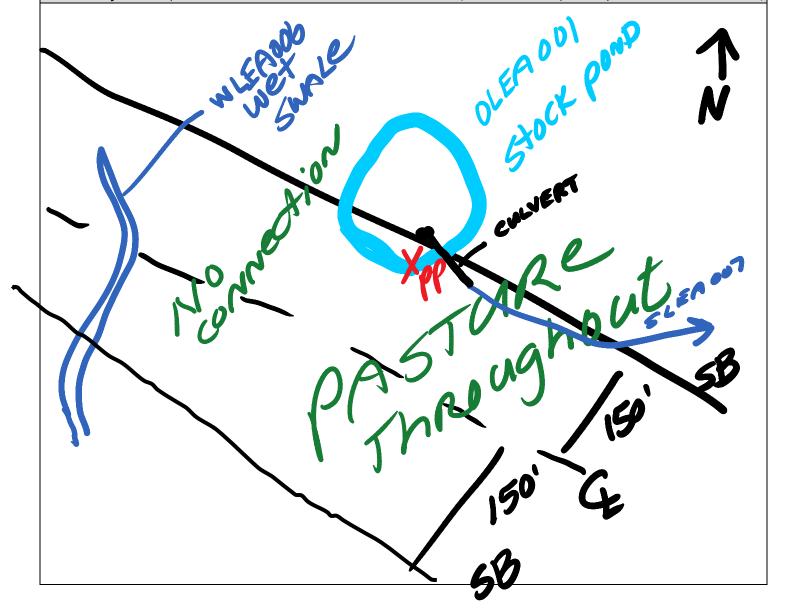
**Moderate Quality:** Altered by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or bank vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor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

Intermittent stream (SLEA007) is outflow from pond via culvert

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





Waterbody OLEA001 facing southeast

Survey Description	1				<b></b>				
Project Name:		Waterbody N				aterbody ID:			Date:
Southeast Reliability	/	Unnamed T	ributary to E	Broad Run	S	LEA007			6/16/2014
State:	County/Parish:	-1	Company		Crew N	Member Initials:	:	Photos:	
West Virginia	Lewis			esource Group	GB, L			3	
Tract Number(s):			Nearest Mile	epost:		Associated W	etland	ID(s):	
02-046			9.0-9.05			none			
Survey Type: (check one)	⊠Centerline	e □Re	-Route	□Access Road	l	□Other:			
Physical Attributes	3								
Stream Classification: (check one)	Ephemer	ral ⊠Inte	ermittent	□Perennial					
Waterbody Type:	·								
	River ⊠ Str	ream 🗆 Di	tch 🗆 Ca	anal 🗆 Other	:				
OHWM	OHWM Indica								
<b>Width:</b> <u>2.0</u> ft.	(check all that appl	lly)		ne □Shelvin	g	□Wrested vegetation		Scouring	g □Water staining
Height:	⊠Bent, ı	matted, or missi	ng □Wrack li	ne □Litter ar	nd	□ Abrupt plant	t	□Soil c	haracteristic change
<u>0.5</u> ft. N/A□	vegetation	on		debris		community ch	ange		_
Width of Waterbody - T Bank to Top of Bank:		of Waterbody	Toe of Slope	Width of Waterb Water Edge:	ody - W		Depth (Approx.)	of Water	r:
·	10 100	oi Siope.		water Euge.			( <i>r</i> (pprox.)	,	0.05 %
<u>3.0</u> ft.	-	_ <u>1.5_</u> ft.			<u>1.5_</u> ft.		N/A□	_	<u>0.25</u> ft.
Sinuosity:	Water	velocity:		Bank height			Bank s	slope	
(check one)	(Approx.)			Right:				Right	:
		0.1fp	os	Left:	2.0_ft.			Left	<u>80_</u> degrees
⊠Meanderin	g N/A□				2.0_ft.			Len	<u>80</u> degrees
Qualitative Attribut	tes								
Water Appearance: (check one)	No water ⊠	Clear □Tui			rface um	□Algal [ mats	□Othe	r:	
Substrate:	Bedrock ☐ Bo	oulder   Cot	ble □ Grave	el 🗵 Sand [	⊠ Silt/ c	lay 🗆 Organic		Other:	
(check all that apply) % of Substrate:	%	%	%	% <u>10</u> %	90_%	%		%	
_				_/0 _10_/0	<u>30</u> /0				
Width of Riparian Zone	: Vegetative (check all tha		□ Trees	. г	□ Sanlin	ngs/Shrubs:	Ø	Herbs	
ft·	Avg. DBH	l of Dominants			_	igs/Officios.		in.	
N/A 🗵	(approx.)							·	
Dominant Bank Vegeta Fescue, soft rush, c	, ,	grass, dogba	ane, ragwee	d, timothy gras	ss				
Aquatic Habitats (ex: su	bmerged or emerge	ed aquatic vegetati	on, overhanging	banks/roots, leaf pag	ks. large	submerged wood.	. riffles.	deep pool	s):
none	zmerged er emerge	a aquano rogonan	on, overnanging	24	me, iai ge	ouzo.gouoou,	,	асор рос.	<i>-</i> ,.
Aquatic Organisms Ob	served (list):								
none									
T&E Species Observed	(list):								
none									
Disturbances (ex: livesto	ck access, manure	in waterbody, was	te discharge pipe	es):					
Culvert, mowed veg	etation								
Tributary is: (check one)	Natural		rtificial, man-m	ade 🗵 Manip	ulated				
Stream Quality <sup>a</sup> : (check one)	□ High		loderate	⊠ Low					

### Waterbody ID: SLEA007

<sup>a</sup> 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.

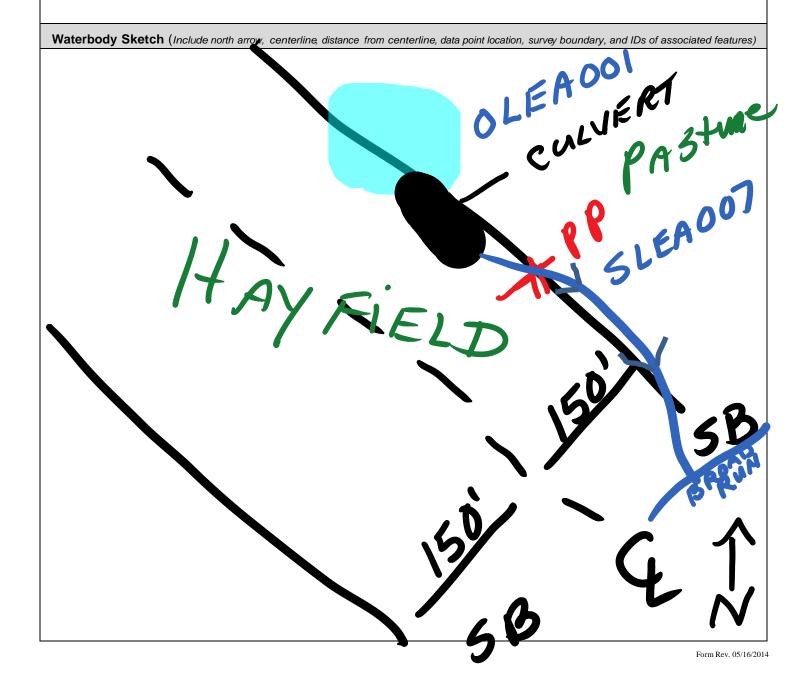
**Moderate Quality:** Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film;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

Begins within corridor at overflow culvert from pond OLEA001; downstream continues out of corridor, reenters corridor, and flows into Broad Run.

Update: Photos are missing from this day.



Survey Description	n								
Project Name:		Waterbody Na	me:			aterbody ID:			Date:
Southeast Reliability	У	Broad Run			S	LEA008			6/16/2014
State:	County/Parish:	1	Company		Crew I	Member Initials:	: F	Photos:	
West Virginia	Lewis			esource Group	GB, L			3	
Tract Number(s):			Nearest Mile	epost:		Associated W	etland	ID(s):	
02-048; 02-043 Survey Type:			9.15			none			
(check one)	⊠Centerline	e □Re-F	Route	□Access Road		□Other:			
Physical Attributes	S								
Stream Classification: (check one)	□Ephemera	al □Inter	rmittent	⊠Perennial					
Waterbody Type:	River ⊠ Str	ream □ Dito	ch □ Ca	anal □ Other	-				
(encon enc)	ikivei 🖂 Sti	ream 🗆 Ditt	JI 🗆 Co		•				
OHWM Width:	OHWM Indica (check all that appl		☐ Clear lin	e ⊠Shelvin	g	□Wrested vegetation	$\boxtimes$	Scouring	g □Water staining
<u>9.0</u> ft.						-	_		•
Height: <u>1.25</u> ft. N/A□	⊔Bent, r vegetatio	matted, or missin on	ig □Wrack III	ne □Litter ar debris	nd	☐Abrupt plant community ch		⊔Soil cl	haracteristic change
Width of Waterbody - T			Toe of Slope	Width of Waterbo	ody - W	later Edge to		of Water	:
Bank to Top of Bank:	to Toe	of Slope:		Water Edge:			(Approx.)		
<u>14.0</u> ft.	_	_ <u>7.5_</u> ft.			<u>6.0_</u> ft.		N/A□		_ <u>0.5_</u> ft.
Sinuosity:	Water	velocity:		N/A□ Bank height			Bank s	lone	
(check one)	(Approx.)			Right:			Dalik S	Right	<u>.</u>
□Straight		<u>1.0_</u> fps	3	_	4.5_ft.			•	30 degrees
⊠Meanderin	ng N/A□			Left:	5.0_ft.			Left	: <u>80</u> degrees
Qualitative Attribu	tes								
Water Appearance: (check one)	No water ⊠0	Clear □Turb	oid □Sh	een □Sui	rface	□Algal [	□Other		
				surface scu		mats			
Substrate:  (check all that apply)	Bedrock □ Bo	oulder 🗵 Cobb	ole ⊠ Grave	el 🛭 Sand 🗓	⊠ Silt/ c	clay ⊠ Organic		Other:	
% of Substrate: 1	5%	% _ <u>25</u> _%	_ <u>30</u> _%	<u>5</u> %	<u>25</u> %	%			
Width of Riparian Zone	: Vegetative	e Layers:							
	(check all that	t apply)	⊠ Trees:		⊠ Saplir	ngs/Shrubs:	$\boxtimes$	Herbs	
<u>ft</u> . N/A⊠	(approx.)	of Dominants:	<b>8.0</b> _in.	-	<u>0.5</u> in			in.	
Dominant Bank Vegeta Sycamore, Morrow's		multiflora ro	se fescue	orchardorass					
-				_			200		
Aquatic Habitats (ex: su Pools, riffles, overha			n, overnanging	banks/roots, leat pac	ks, large	submerged wood,	, rittles, d	aeep pool	s):
Aquatic Organisms Ob	served (list):								
Fish	, ,								
T&E Species Observed	(list):								
none									
Disturbances (ex: livesto	ock access, manure	in waterbody, waste	e discharge pipe	es):					
Mowed vegetation,	adjacent to roa	ad							
Tributary is: (check one)	Natural	□ Ar	tificial, man-m	ade   Manip	ulated				
Stream Quality <sup>a</sup> : (check one)	□ High	⊠ Mo	oderate	☐ Low					

Waterbody	ID:
SLEADOR	

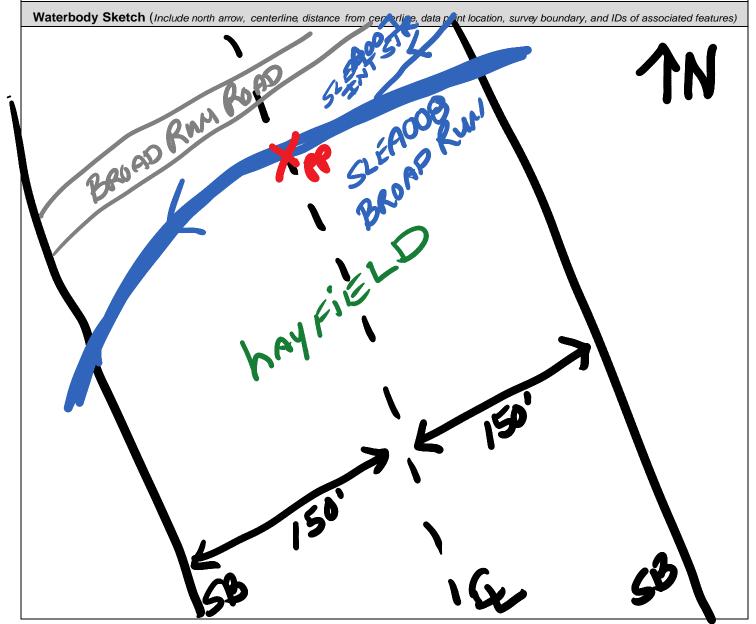
<sup>a</sup> **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat;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

We were asked to leave the property before stream GPS mapping could be completed. Mapping finished in the office.





Waterbody SLEA008 facing southeast upstream



Waterbody SLEA008 facing northwest downstream



Waterbody SLEA008 facing southwest across

Survey Description	1				bar				
Project Name:		Waterbody Nar				aterbody ID:		Dat	
Atlantic Coast Pipeli	ne	UNT to Broa	d Run		SI	LEB121		4/1	1/2015
State:	County:	1	Company:		Crew N	Member Initials:	Ph	otos:	
West Virginia	Lewis		NRG		TP, S			1-03	
Tract Number(s):			Nearest Mile	post:		Associated W	etland ID	(s):	
02-063.AR			10.1			None			
Survey Type: (check one)	□Centerline	□Re-F	Route	⊠Access Road		□Other:			
Physical Attributes Stream Classification:	<b>3</b>								
(check one)	□Ephemera	ıl ⊠Inter	mittent	□Perennial					
Waterbody Type: (check one)	River ⊠ Stre	eam 🗆 Dito	h □ Ca	ınal 🗆 Other:					
OHWM Width: 2.0 ft.	OHWM Indicat (check all that apply		⊠ Clear lin on bank	e ⊠Shelvin	g	□Wrested vegetation	⊠So	couring	□Water staining
<b>Height:</b> <u>0.25</u> ft. N/A□	□Bent, n vegetatio	natted, or missin n	g □Wrack lir	ne □Litter ar debris	nd	☐ Abrupt plant community ch		Soil char	acteristic change
Width of Waterbody - To Bank to Top of Bank:		of Waterbody - <sup>-</sup> of Slope:		Width of Waterbo Water Edge:	ody - W		Depth of (Approx.)	Water:	
_ <u>4.0_</u> ft.	-	<u>1.0</u> ft.		 N/A□	<u>2.0_</u> ft.	I	N/A□	0.:	<u>25_</u> ft.
Sinuosity: (check one) ⊠Straight	(Approx.)	<b>velocity:</b> fps		Bank height Right: Left:	<u>2</u> ft.		Bank slo	Right:	30 degrees
□Meanderin	1,77.				<u>2</u> ft.			_ 8	30 degrees
Qualitative Attribut	es								
Water Appearance: (check one) □	No water □C	Clear ⊠Turb	-	een □Sur surface scu		□Algal [ mats	☐Other:		
Substrate:  (check all that apply)45 % of Substrate:	Bedrock DBo	ulder □ Cobb %	le ⊠ Grave	el ⊠ Sand □	⊠ Silt/ c	lay □ Organic %		ner: %	
Width of Riparian Zone	(check all that		□ Trees:	Ε		ngs/Shrubs:	⊠ H	lerbs	
N/A⊠	(approx.)		in.	_	in.				
Dominant Bank Vegetar Livestock pasture or		ad on left bar	nk.						
Aquatic Habitats (ex: su	bmerged or emerged	d aquatic vegetation	n, overhanging h	oanks/roots, leaf pac	ks, large	submeraed wood	riffles, de	ep pools):	
None.			,	,,	-, - J-	,	,	-1 1/	
Aquatic Organisms Obs	served (list):								
None.									
T&E Species Observed	(list):								
None									
Disturbances (ex: livesto	ck access, manure ir	n waterbody, waste	discharge pipe	s):					
Road culvert and live			•						
Tributary is: (check one)		□ Art	ificial, man-ma	ade 🗆 Manipı	ulated				
Stream Quality <sup>a</sup> : (check one)	☐ High	□ Мо	derate	⊠ Low					

### Waterbody ID: SLEB121

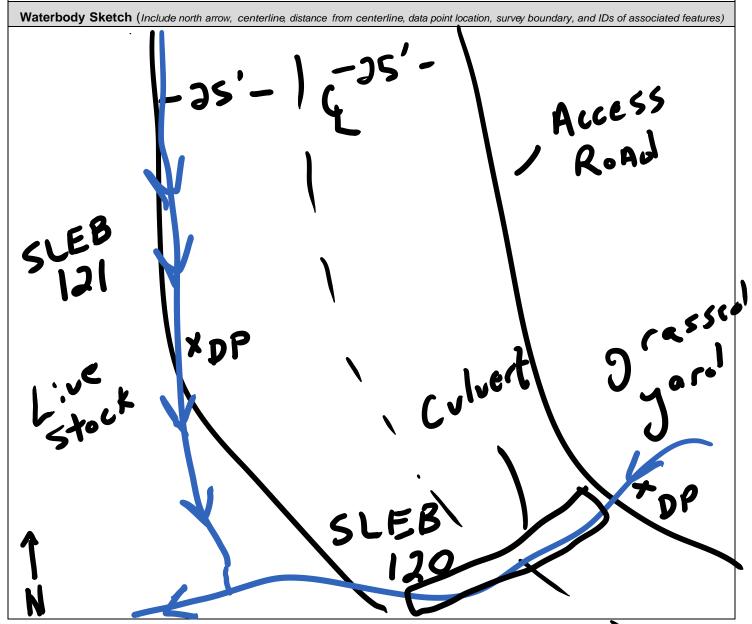
<sup>a</sup> High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no 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 livestock pasture. Noted bank failures, week grade control, no sinuosity, and no macrobenthos. Conveys storm water from county road.





Waterbody SLEB121 facing northeast upstream



Waterbody SLEB121 facing southwest downstream



Waterbody SLEB121 facing northwest across

Survey Description	)							
Project Name:		Waterbody Na	me:		W	aterbody ID:		Date:
Atlantic Coast Pipeli	ne	Broad Run			SI	LEB120		4/11/2015
State:	County:	•	Company:		Crew N	Member Initials	: Photos	
<b>3</b> 33	Lewis		NRG		TP, S		01-03	
Tract Number(s):			Nearest Mile	epost:		Associated W	etland ID(s):	
02-063.AR			10.1			None		
Survey Type: (check one)	□Centerline	e □Re-l	Route	⊠Access Road	l	□Other:		
Physical Attributes Stream Classification:	3							
(check one)	□Ephemer	al □Inte	mittent	⊠Perennial				
Waterbody Type: (check one)	River 🛭 St	ream   Dito	ch 🗆 Ca	anal 🗆 Other	:			
OHWM Width: 4.0 ft.	OHWM Indica (check all that app			ne ⊠Shelvin	g	□Wrested vegetation	⊠Scourir	ng □Water staining
Height: 1.0 ft.	□Bent, i vegetatio	matted, or missir on	ig □Wrack lii	ne □Litter ar debris	nd	□Abrupt plan community ch		characteristic change
N/A□ Width of Waterbody - To			Toe of Slope	Width of Waterb	ody - W		Depth of Wate	er:
Bank to Top of Bank:	to Toe	of Slope:		Water Edge:			(Approx.)	
<u>6.0</u> ft.	-	_ <u>3.0_</u> ft.		 N/A□	<u>4.0</u> ft.		N/A□	<u>0.75</u> ft.
Sinuosity:		velocity:		Bank height			Bank slope	
(check one) ☐Straight	(Approx.,			Right:	_4_ft.		Righ	
		2.0fps	Left:	<u>4_</u> II.		Le	<u>80</u> degrees ft:	
⊠Meanderin	9 N/A□				_4_ft.			80 degrees
<b>Qualitative Attribut</b>	es							
Water Appearance: (check one)	No water □	Clear ⊠Turb	-	een □Sui surface sci		□Algal [ mats	□Other:	
Substrate:	Bedrock ☐ Bo	oulder ⊠ Cobb	ole ⊠ Grave	el 🗵 Sand 🗓	⊠ Silt/ c	lay 🗆 Organic	☐ Other:	
(check all that apply)45 % of Substrate:	%%	<u>10</u> %	<u>10_</u> %	40 %	40 %	%	%	
Width of Riparian Zone	: Vegetativ	e Lavers:						
<u>ft</u> .	(check all tha		□ Trees: in.	: [	□ Saplir in.	ngs/Shrubs:	⊠ Herbs	
N/A⊠ Dominant Bank Vegetat	(approx.)							
Livestock pasture or	• •	f stream.						
Aquatic Habitats (ex: su	bmerged or emerge	ed aquatic vegetation	n, overhanging	banks/roots, leaf pac	ks, large	submerged wood	, riffles, deep poo	ols):
Cobble.								
Aquatic Organisms Obs	served (list):							
None.								
T&E Species Observed	(list):							
None								
Disturbances (ex: livesto	ck access, manure	in waterbody, waste	e discharge pipe	es):				
Road culvert and live	estock							
Tributary is: (check one)	Natural	□ Ar	tificial, man-m	ade 🗆 Manip	ulated			
Stream Quality <sup>a</sup> : (check one)	☐ High	⊠ Mo	oderate	□ Low				

Waterbody ID: SLEB120

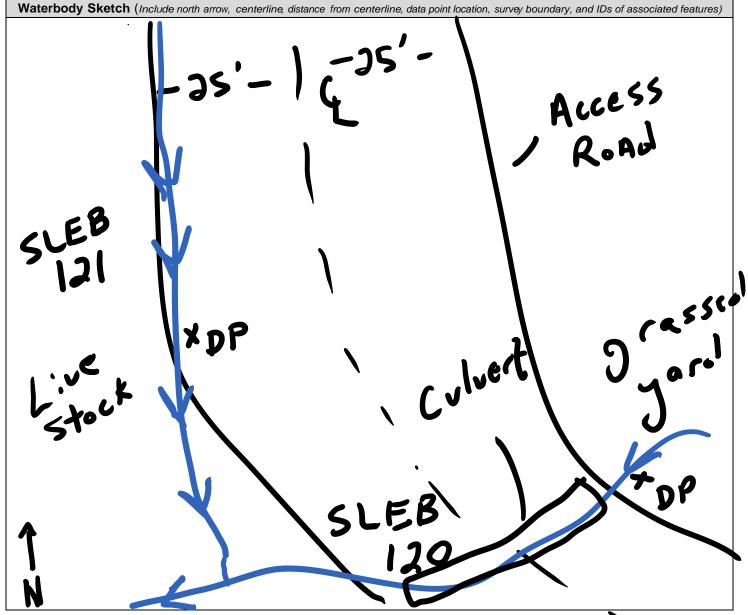
<sup>a</sup> High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no 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. Noted bank failures, weak grade control, weak sinuosity, moderate bars and benches, and no macrobenthos.





Waterbody SLEB120 facing southeast upstream



Waterbody SLEB120 facing northwest downstream



Waterbody SLEB120 facing northeast across

Survey Description								
Project Name:		Waterbody Nar	ne:			aterbody ID:		Date:
Atlantic Coast Pipeli	ne	Broad Run			SI	LEB120i		4/11/2015
State:	County:		Company:		Crew N	Member Initials:	Pho	tos:
West Virginia	Lewis		NRG		TP, S	A	01-	03
Tract Number(s):			Nearest Mile	post:		Associated We	etland ID(s	s):
02-065 Survey Type:			10.4			None		
(check one)	□Centerline	□Re-F	Route	⊠Access Road		□Other:		
Physical Attributes Stream Classification:	<b>.</b>							
(check one)	□Ephemera	ıl ⊠Inter	mittent	□Perennial				
Waterbody Type: (check one)	River ⊠ Stre	eam 🗆 Dito	:h □ Ca	ınal 🗆 Other:				
OHWM Width: 3.0 ft.	OHWM Indicat (check all that apply		⊠ Clear lin on bank	e ⊠Shelvin	g	□Wrested vegetation	⊠Sco	uring
<b>Height:</b> <u>0.75</u> ft. N/A□	□Bent, n vegetatio	natted, or missing	g □Wrack lir	ne □Litter ar debris	nd	☐ Abrupt plant community cha		oil characteristic change
Width of Waterbody - To Bank to Top of Bank:		of Waterbody - 7 of Slope:		Width of Waterbo Water Edge:	ody - W		Depth of W Approx.)	/ater:
_ <u>5.0</u> ft.	_	ft.		 N/A□	<u>3.0_</u> ft.	1	N/A□	<u>0.75</u> ft.
Sinuosity: (check one) ☐Straight	Water (Approx.)	velocity: 2.0fps		Bank height Right: Left:	_3_ft.	E		e ight: _85_ degrees Left:
⊠Meanderin	9 N/A□				_2_ft.			<u>85</u> degrees
Qualitative Attribut	es							
Water Appearance: (check one) □	No water □C	Clear ⊠Turb		een □Sur surface scu		□Algal □ mats	Other:	
Substrate:  (check all that apply)45 % of Substrate:	Bedrock DBo	ulder □ Cobb	le ⊠ Grave	el ⊠ Sand □	⊠ Silt/ cl	lay □ Organic%	□ Other	r: _%
Width of Riparian Zone:	(check all that		□ Trees: in.		□ Saplin in.	ngs/Shrubs:	⊠ He	rbs
N/A⊠	(approx.)			<del>-</del>				
Dominant Bank Vegetat Livestock pasture or		stream.						
Aquatic Habitats (ex: sul	omerged or emerged	d aquatic vegetation	n, overhanging b	panks/roots, leaf pac	ks, large	submerged wood,	riffles, deep	pools):
None.						•		
Aquatic Organisms Obs	served (list):							
None.								
T&E Species Observed	(list):							
None								
Disturbances (ex: livesto	ck access, manure ir	n waterbody, waste	discharge pipe	s):				
Road culvert and live		2,	5 113					
Tributary is: (check one)		□ Art	ificial, man-ma	ade 🗆 Manipu	ulated			
Stream Quality <sup>a</sup> : (check one)	☐ High	⊠ Mo	oderate	□ Low				

### Waterbody ID: SLEB120i

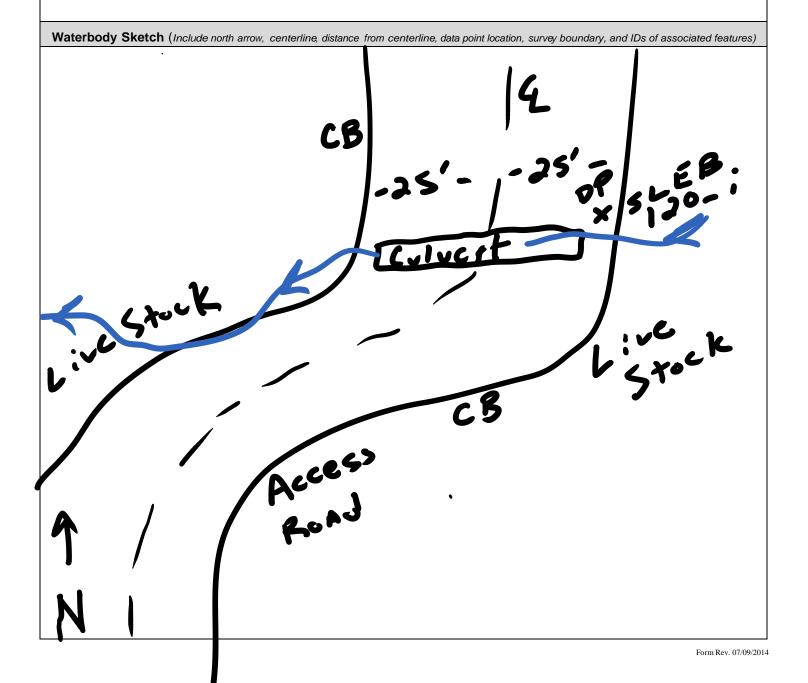
<sup>a</sup> High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no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

<b>Survey Description</b>								
Project Name:		Waterbody Na	me:			aterbody ID:		Date:
Southeast Reliability		Unnamed Tr	ibutary to E	Broad Run	SI	LEA009		6/16/2014
State:	County/Parish:	1	Company		Crew M	lember Initials:	Photos:	l
3	_ewis			esource Group	·		3	
Tract Number(s):			Nearest Mile	epost:		Associated We	tland ID(s):	
02-058			9.7 – 9.8			WLEB006		
Survey Type: (check one)	⊠Centerline	e □Re-l	Route	□Access Road	<u> </u>	□Other:		
<b>Physical Attributes</b>								
Stream Classification: (check one)	□Ephemer	al ⊠Inte	rmittent	□Perennial				
Waterbody Type:								
(check one)	River ⊠ St	ream 🗆 Dito	ch □ Ca	anal 🗆 Other	:			
OHWM	OHWM Indica							
<b>Width:</b> <u>3.0</u> ft.	(спеск ан тат арр	y)	☐ Clear lir on bank	ie □Shelvin	g	⊠Wrested vegetation	□Scourin	g □Water staining
Height:		matted, or missin	ng □Wrack li		nd	⊠Abrupt plant		haracteristic change
<u>0.5</u> ft. N/A□	vegetation	on		debris		community cha	nge	
Width of Waterbody - To Bank to Top of Bank:		of Waterbody - of Slope:	Toe of Slope	Width of Waterb Water Edge:	ody - Wa	ater Edge to D	epth of Wate	r:
	10 100	or Stope.				(*	,pprosity	0.05 (
<u>8.0</u> ft.	-	_ <u>2.0_</u> ft.		<u>.</u> N/A□	<u>2.0_</u> ft.	N	I/A□	_ <u>0.25_</u> ft.
Sinuosity:	Water	velocity:		Bank height			ank slope	
(check one) Straight	(Approx.	)		Right:			Righ	t:
		<u>0.25</u> fp	S	Left:	2.8_ft.		Lef	30 degrees
⊠Meandering	N/A□				<u>2.0_</u> ft.		201	30 degrees
Qualitative Attribut	es							
Water Appearance: (check one) □	No water $\Box$	Clear ⊠Turb			rface um	□Algal □ mats	Other:	
Substrate:	Bedrock ☐ Bo	oulder   Cobb	ole   Grave	el ⊠ Sand □	⊠ Silt/ cl	lay 🗆 Organic	☐ Other:	
(check all that apply) % of Substrate:	0/	0/				,	0/	
	%	%	%%	6 <u>10</u> %	90 9	%%	%	
Width of Riparian Zone:	Vegetativ (check all tha	•	□ Trees:	: ⊠ Saplir	ogo/Chru	ıbs: ⊠ Herb	20	
<u>ft</u> .	· ·	of Dominants:	in.	. ⊿ Sapiii _1.0_i	-		in.	
N/A⊠	(approx.)							
Dominant Bank Vegetati Autumn olive, Morro	. ,	kle, multiflora	rose, fesci	ue, orchardgra	ss, iron	nweed, wings	tem, soft ru	sh
Aquatic Habitats (ex: sub		d aquatic vegetation	n, overhanging	banks/roots, leaf pac	ks, large	submerged wood,	riffles, deep poo	ls):
	merged or emerge							
None, highly degrad								
None, highly degrad  Aquatic Organisms Obs	ed							
	ed							
Aquatic Organisms Obs	ed erved (list):							
Aquatic Organisms Obs	ed erved (list):							
Aquatic Organisms Obs none T&E Species Observed	erved (list): (list):		e discharge pipe	es):				
Aquatic Organisms Obs none T&E Species Observed none	erved (list): (list):	in waterbody, wast	•	•				
Aquatic Organisms Obs none T&E Species Observed none Disturbances (ex: livestoo	erved (list): (list):	in waterbody, wast bed and bank	•	trampled	ulated			

Waterbody	ID:
SIEANNO	

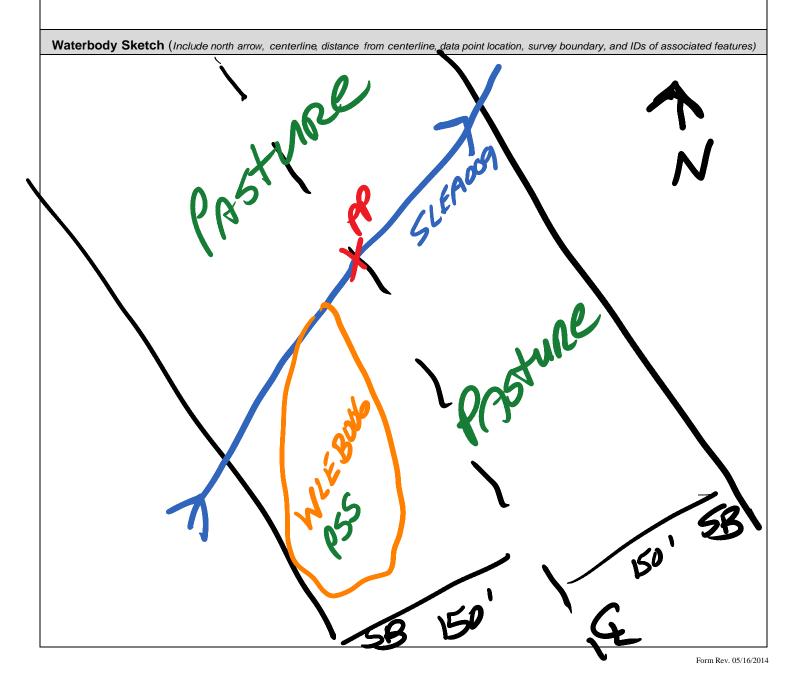
<sup>a</sup> **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; 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 severely impacted by cattle trampling; NDH int. stream which is a tributary to Broad Run.





Waterbody SLEA009 facing west upstream



Waterbody SLEA009 facing east downstream



Waterbody SLEA009 facing north across

Survey Description	1	_						
Project Name:		Waterbody Na	me:		Wa	aterbody ID:		Date:
Southeast Reliability		Unnamed Tr		Sycamore Lick		-EA010		6/17/2014
State:	County/Parish:		Company		Crew M	lember Initials	: Photos:	
9	Lewis			source Group			3	
Tract Number(s):			Nearest Mile	epost:		Associated W	etland ID(s):	
02-065			10.25			none		
Survey Type: (check one)	⊠Centerline	e □Re-F	Route	□ Access Road	d	□Other:		
Physical Attributes Stream Classification:	<u> </u>							
(check one)	⊠Ephemera	al □Inter	mittent	□Perennial				
Waterbody Type:	River ⊠ Str	ream 🗆 Dito	ch 🗆 Ca	anal 🗆 Other	r:			
OHWM	OHWM Indica	tor:						
<b>Width:</b> <u>2.0</u> ft.	(check all that apply		☐ Clear lir on bank	ne □Shelvir	ng	□Wrested vegetation	⊠Scourin	g □Water staining
Height: 0.33 ft. N/A□	⊠Bent, r vegetatio	matted, or missin on	g ⊠Wrack li	ne □Litter a debris	nd	□ Abrupt plan community ch		characteristic change
Width of Waterbody - To			Toe of Slope	Width of Waterb	ody - Wa	ater Edge to	Depth of Wate	r:
Bank to Top of Bank:	to roe	of Slope:		Water Edge:			(Арргох.)	
<u>5.0</u> ft.	-	<u>1.0</u> ft.		N/A⊠	ft.		N/A⊠	ft.
Sinuosity:		velocity:		Bank height			Bank slope	
(check one)  ☐Straight	(Approx.)			Right:			Righ	
		fps		Left:	_4.0ft.		Let	<u>75</u> degrees
⊠Meanderin	9 N/A⊠				<u>3.0</u> _ft.			45 degrees
<b>Qualitative Attribut</b>	es							
Water Appearance: (check one)	No water □0	Clear □Turb	-		ırface	0	□Other:	
Substrata:	Dodrook Do	ulder M Cobb			cum	mats	Othor:	
Substrate:	Bedrock ☐ Bo	oulder 🛭 Cobb	ole ⊠ Grave	el ⊠ Sand	⊠ Silt/ cl	ay ⊠ Organio	○ □ Other:	
% of Substrate: 30	)%	<u>_</u> % <u>_30</u> _%	_ <u>10_</u> %	<u>10</u> %	<u>_10</u> _%	_ <u>10_</u> %		
Width of Riparian Zone:	Vegetative (check all that		⊠ Trees:	: [	⊠ Saplin	gs/Shrubs:	⊠ Herbs	
<u>ft</u> . N/A⊠	Avg. DBH (approx.)	of Dominants:	<u>12.0</u> in		0.75_in	-	in.	
Dominant Bank Vegetat	ion (list):							
Yellow poplar, Amer	ican beech, sı	ugar maple, g	reenbrier, ı	multiflora rose,	, black (	cherry, woo	dnettle, Chri	stmas fern
Aquatic Habitats (ex: sul	omerged or emerge	d aquatic vegetatio	n, overhanging	banks/roots, leaf pad	cks, large s	submerged wood	l, riffles, deep poo	ls):
none								
Aquatic Organisms Obs	served (list):							
none								
T&E Species Observed	(list):							
none								
None apparent	ck access, manure i	n waterbody, waste	e discharge pipe	es):				
Tributary is:								
(check one)	Natural	□ Ar	tificial, man-m	ade 🗆 Manip	oulated			
Stream Quality <sup>a</sup> : (check one)	□ High	□ Мо	oderate	⊠ Low				

### Waterbody ID: SLEA010

<sup>a</sup> 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.

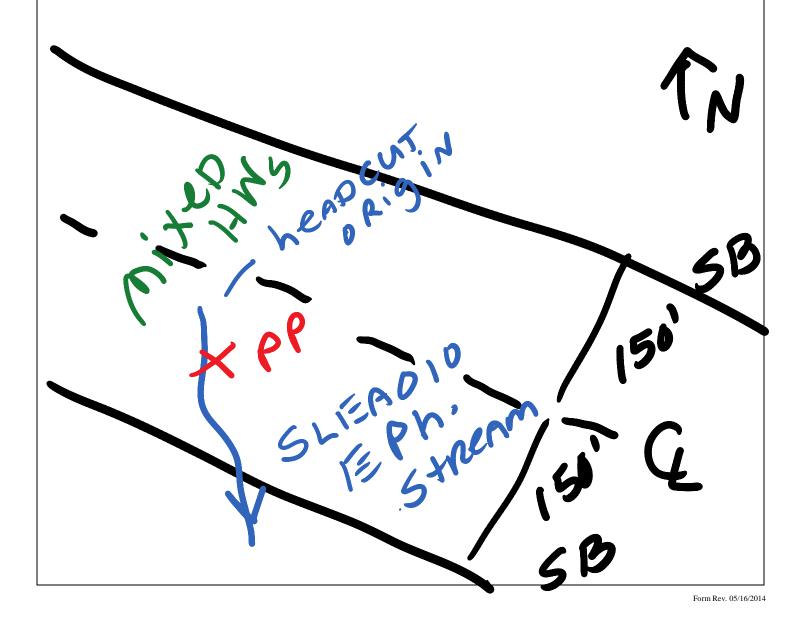
**Moderate Quality:** Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film;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

Begins within corridor at headcut; downstream continues out of corridor where it is a tributary to Sycamore Lick

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





Waterbody SLEA010 facing north upstream



Waterbody SLEA010 facing south downstream



Waterbody SLEA010 facing east across

**Open Waterbody Data Sheet** 

Open Waterboo	iy Data Sileet							
Survey Descripti	on							
Project Name:		Waterbody N	lame:			Waterbody ID:		Date:
Southeast Reliabi	lity	Unnamed	Pond			OLEA002		6/17/2014
State:	County:		Company:		Crew	/ Member Initials:	Photos:	
West Virginia	Lewis		Natural Resou	rce Group	GB,	LE	1	
Tract Number(s):	<u> </u>		Nearest Milepost	<b>:</b>	I	Associated Wetland	ID(s):	
02-065			10.25			none		
Survey Type: (check one)	⊠Centerlin	e □F	Re-Route	□Access Ro	ad	□Other:		
Physical Attribut	es							
Waterbody Type: (check one) ⊠Stoo	ck Pond □ Natura	I Pond □ La	ke □ Reservoir	☐ Impoundme	ent 🗆	☐ Oxbow ☐ Other:		
Hydrologic Regime:	□ Permanently	Flooded	Semipermanently	y Flooded	Sea	sonally Flooded	Temporar	ily Flooded
ОНWМ	OHWM Indi							
Height:	(check all that a	oply)	⊠ Clear li on bank	ne □She	elving	□Wrested vegetation	□Sco	ouring □Water staining
<u>2.5</u> ft.	□Bent vegeta	t, matted, or m tion	nissing □Wrack line	□Litte debris		☐ Abrupt plant community cha		haracteristic change
Depth of Water:		Bank heig	ht (average):			Bank slope (aver	age):	
	<u>)</u> ft.		5.0	_ft.		_	<u>60</u> degr	ees
Qualitative Attrib	utes					<b>'</b>		
Water Appearance: (check one)	□No water □	Clear ⊠T	urbid □She on sur		Surfac	e ⊠Algal □0 mats	Other:	
Substrate: (check all that apply)	□ Bedrock □ Be	oulder $\square$ C	obble   Gravel	⊠ Sand	⊠ S	Silt/ clay □ Organic	☐ Other:	
% of Substrate:	%	%	%9	% <u>20</u> %		<u>80_</u> %%		%
Width of Riparian Zor	_	•						
ft-	(check all that	apply)	☐ Trees:		□ Sa	aplings/Shrubs:		
N/A⊠	Avg. DBH (approx.)	of Dominants	<b>3</b> :in			in.	i	n.
Dominant Bank Vege	1 1 1 1							
Cattail, fescue, so	ft rush, poverty	rush, orcha	rdgrass, blackt	erry, Indian	hem	np, wingstem, iron	weed	
Aquatic Habitats (ex:	submerged or emerged ac	quatic vegetation, o	overhanging banks/roots,	leaf packs, large s	ubmerge	ed wood, riffles, deep pools, e	tc.):	
Pool, emergent ve	egetation							
Aquatic Organisms C	Observed (list):							
Frogs								
T&E Species Observe	ed (list):							
none								
Disturbances (ex: live.	stock access, manure	in waterbody, w	raste discharge pipes	):				
Waterbody is:								
(check one)	☐ Natural	⊠ Artifici	al, man-made	☐ Manipulate	d			
Waterbody Quality <sup>a</sup> : (check one)	☐ High		e 🗆 Low					

Waterbody	ID
Waterbody OLEA002	

<sup>a</sup> **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.

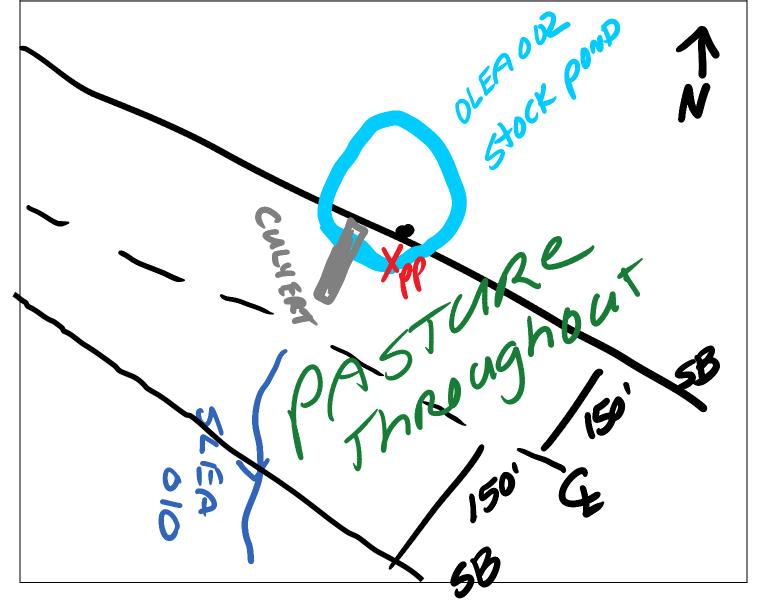
**Moderate Quality:** Altered by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or bank vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor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

Ephemeral stream (SLEA010) is outflow from pond via culvert

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





Waterbody OLEA002 facing east

Survey Description	1	-						
Project Name:		Waterbody Nar	ne:		w	aterbody ID:		Date:
Southeast Reliability		Unnamed Tr	ibutary to S	Sycamore Lick	SI	LEA011		6/17/2014
State:	County/Parish:		Company		Crew N	lember Initials	: Photo	os:
3	Lewis			source Group	GB, L		3	
Tract Number(s):			Nearest Mile	epost:		Associated W	etland ID(s):	
02-065			10.3			none		
Survey Type: (check one)	⊠Centerline	e □Re-F	Route	□Access Road	l <u> </u>	□Other:		
Physical Attributes Stream Classification:	3							
(check one)	⊠Ephemera	al □Inter	mittent	□Perennial				
Waterbody Type:	River ⊠ Str	eam 🗆 Dito	:h □ Ca	anal 🗆 Other	:			
OHWM Width: _2.0_ft.	OHWM Indica (check all that apply		☐ Clear lin	e □Shelvin	g	□Wrested vegetation	⊠Scou	ring □Water staining
Height: 0.33 ft. N/A□	⊠Bent, r vegetatio	natted, or missin n	g ⊠Wrack lii	ne □Litter ar debris	nd	☐ Abrupt plan community ch		il characteristic change
Width of Waterbody - To Bank to Top of Bank:		of Waterbody - of Slope:	Toe of Slope	Width of Waterb Water Edge:	ody - W	ater Edge to	Depth of Wa	iter:
Bank to Top of Bank.	to roe	or Stope.		water Euge.			(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
<u>7.0</u> ft.	-	_ <u>1.5_</u> ft.		N/A⊠	ft.		N/A⊠	ft.
Sinuosity:		velocity:		Bank height			Bank slope	
(check one) ☐Straight	(Approx.)			Right:	0.0 (		Rig	ght:
		fps		Left:	3.0_ft.		L	_ <u>45</u> _degrees .eft:
⊠Meanderin	9 N/A⊠				3.8_ft.			65 degrees
<b>Qualitative Attribut</b>	tes							
Water Appearance: (check one)	No water □0	Clear □Turb	-	een □Su surface sci		□Algal mats	□Other:	
	Bedrock ☐ Bo	ulder 🗵 Cobb	le 🗵 Grave	el ⊠ Sand □	⊠ Silt/ c	lay ⊠ Organio	: 🗆 Other:	
(check all that apply) % of Substrate: 30	)%	_% _ <u>30</u> _%	_ <u>10</u> _%	<u>10</u> %	_ <u>10</u> _%	_ <u>10</u> _%		
Width of Riparian Zone	: Vegetative	Layers:						
<u>ft</u> -	(check all that Avg. DBH	apply) of Dominants:	⊠ Trees: _12.0_in		⊠ Saplin _ <u>0.75</u> iı	ngs/Shrubs:	⊠ Herbs _	
N/A⊠	(approx.)		<u></u>	-				
Dominant Bank Vegetat Yellow poplar, Amer	, ,	ugar maple, g	reenbrier, ı	multiflora rose,	black	cherry, woo	dnettle, Ch	ristmas fern
Aquatic Habitats (ex: su	bmerged or emerged	d aquatic vegetation	n, overhanging	banks/roots, leaf pac	ks, large	submerged wood	l, riffles, deep p	ools):
none								
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, se	everely trample	ed						
Tributary is: (check one)	Natural	□ Art	ificial, man-m	ade □ Manip	ulated			
Stream Quality <sup>a</sup> : (check one)	□ High	□ Mc	oderate	⊠ Low				

### Waterbody ID: SLEA011

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.

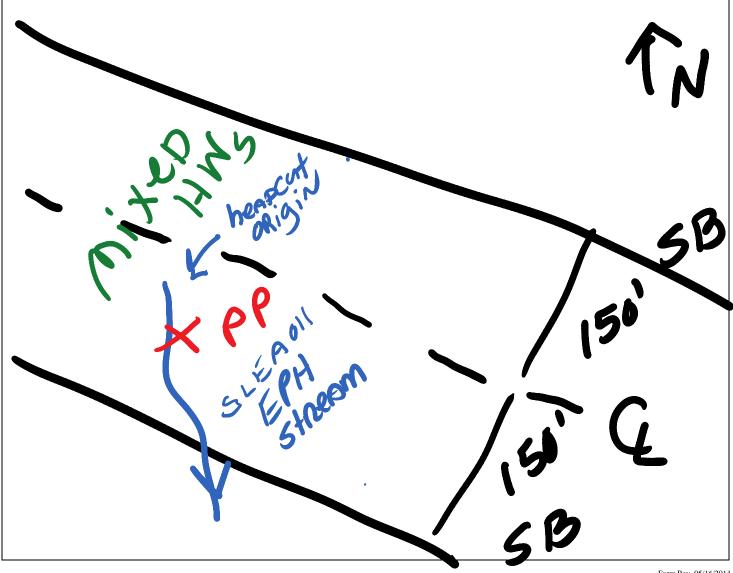
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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

Begins within corridor at a headcut; downstream continues out of corridor where it is a tributary to Sycamore Lick

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





Waterbody SLEA011 facing north upstream



Waterbody SLEA011 facing south downstream



Waterbody SLEA011 facing east across

Survey Description	)							
Project Name:		Waterbody Na	me:		W	aterbody ID:		Date:
Atlantic Coast Pipeli	ne	Broad Run			SI	LEB120		4/11/2015
State:	County:	•	Company:		Crew N	Member Initials	: Photos	
<b>3</b> 33	Lewis		NRG		TP, S		01-03	
Tract Number(s):			Nearest Mile	epost:		Associated W	etland ID(s):	
02-063.AR			10.1			None		
Survey Type: (check one)	□ Centerlin	e □Re-l	Route	⊠Access Road	l	□Other:		
Physical Attributes Stream Classification:	3							
(check one)	□Ephemer	al □Inte	mittent	⊠Perennial				
Waterbody Type: (check one)	River ⊠ St	ream   Dito	ch 🗆 Ca	anal 🗆 Other	:			
OHWM Width: 4.0 ft.	OHWM Indica (check all that app			ne ⊠Shelvin	g	□Wrested vegetation	⊠Scourir	ng □Water staining
Height: 1.0 ft.	□Bent, vegetatio	matted, or missir on	ig □Wrack lii	ne □Litter ar debris	nd	□Abrupt plan community ch		characteristic change
N/A□ Width of Waterbody - To			Toe of Slope	Width of Waterb	ody - W		Depth of Wate	er:
Bank to Top of Bank:	to Toe	of Slope:		Water Edge:			(Approx.)	
<u>6.0_</u> ft.	-	_3.0_ft.		 N/A□	<u>4.0</u> ft.		N/A□	<u>0.75_</u> ft.
Sinuosity:		velocity:		Bank height			Bank slope	
(check one) ☐Straight	(Approx.			Right:	1 4		Righ	
		2.0fps	3	Left:	_4_ft.		Let	<u>80</u> degrees ft:
⊠Meanderin	9 N/A□				_4_ft.			80 degrees
<b>Qualitative Attribut</b>	es							
Water Appearance: (check one)	No water □	Clear ⊠Turb	-	een □Sui surface sci		□Algal [ mats	□Other:	
Substrate:	Bedrock ☐ Be	oulder ⊠ Cobb	ole ⊠ Grave	el 🗵 Sand 🗓	⊠ Silt/ c	lay □ Organic	☐ Other:	
(check all that apply)45 % of Substrate:	%%	<u>10</u> %	<u>10_</u> %	40 %	40 %	%	%	
Width of Riparian Zone	Vegetativ	e Lavers:						
<u>ft</u> .	(check all that Avg. DBH		□ Trees: in.	: [	□ Saplir in.	ngs/Shrubs:	⊠ Herbs	
N/A⊠ Dominant Bank Vegetat	(approx.)							
Livestock pasture or		f stream.						
Aquatic Habitats (ex: su	bmerged or emerge	ed aquatic vegetation	n, overhanging	banks/roots, leaf pac	ks, large	submerged wood	, riffles, deep poo	ols):
Cobble.								
Aquatic Organisms Obs	served (list):							
None.								
T&E Species Observed	(list):							
None								
Disturbances (ex: livesto	ck access, manure	in waterbody, waste	e discharge pipe	es):				
Road culvert and live	estock							
Tributary is: (check one)	Natural	□ Ar	tificial, man-m	ade 🗆 Manip	ulated			
Stream Quality <sup>a</sup> : (check one)	☐ High	⊠ Mo	oderate	□ Low				

Waterbody ID: SLEB120

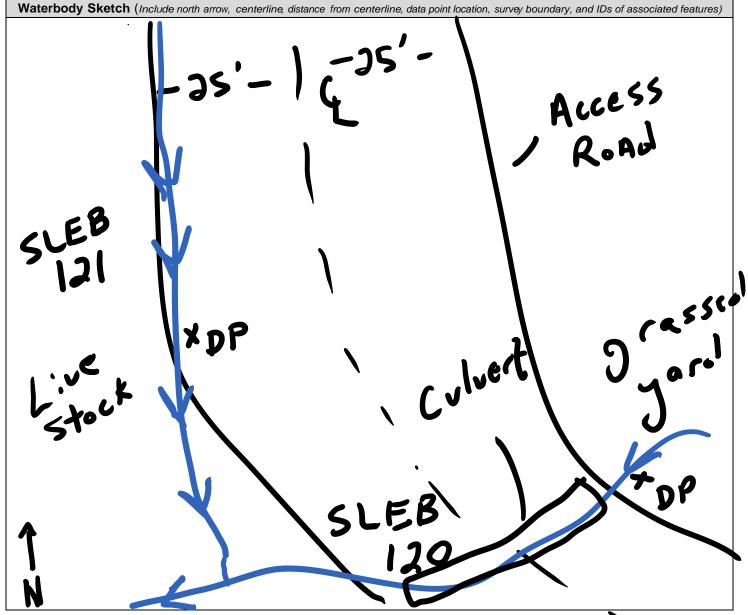
<sup>a</sup> High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no 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. Noted bank failures, weak grade control, weak sinuosity, moderate bars and benches, and no macrobenthos.





Waterbody SLEB120 facing southeast upstream



Waterbody SLEB120 facing northwest downstream



Waterbody SLEB120 facing northeast across