Survey Description	1								
Project Name:		Waterbody Nai	me:		W	aterbody ID:			Date:
Atlantic Coast Pipeli	ne	UNT to Lick	Run		sr	raa417			3/29/2016
State:	County:		Company:		Crew N	Member Initials:	:	Photos:	
	Randolph		NRG - ERI		GB, RP			3 photo	os
Tract Number(s):			Nearest Mile	post:		Associated W	etland	ID(s):	
04-002-B001;acces	s road 04-002-	B001.AR6	51.95			wraa432			
Survey Type: (check one)	□Centerline	□Re-F	Route	⊠Access Road		□Other:			
Physical Attributes Stream Classification:	S								
(check one)	□Ephemera	ıl ⊠Inter	mittent	□Perennial					
Waterbody Type: (check one)	River ⊠ Stre	eam 🗆 Dito	ch 🗆 Ca	anal 🗆 Other	:				
OHWM Width: 3.0 ft.	OHWM Indicat (check all that apply		⊠ Clear lin	e □Shelvin	g	□Wrested vegetation	\boxtimes	Scouring	g □Water staining
Height: ft. N/A□	□Bent, n vegetatio	natted, or missin n	g □Wrack li	ne ⊠Litter ar debris	nd	☐ Abrupt plant community ch		□Soil ch	naracteristic change
Width of Waterbody - To Bank to Top of Bank:		of Waterbody - of Slope:	Toe of Slope	Width of Waterb	ody - W		Depth (Approx.)	of Water	:
ft.	_	ft.		 N/A□	<u>2.5 _</u> ft		N/A□	_	<u>0.25</u> ft.
Sinuosity: (check one) ☐Straight	(Approx.)	/elocity: 0.75f	ps	Bank height Right: Left:	3.0 f	t.	Bank s	lope Right Left	90 degrees
	14//\			_	3.0 _ f	ι.			80_ degrees
Qualitative Attribut Water Appearance:	ies								
(check one)	No water ⊠C	Clear □Turb	-	een □Sui surface scu		□Algal [mats	□Other	r:	
Substrate: (check all that apply) % of Substrate:	Bedrock DBo			el ⊠ Sand □ 	⊠ Silt/ c 	clay ⊠ Organic <u>5</u> %	□ C	Other: %	
Width of Riparian Zoneft N/A⊠	(check all that		⊠ Trees: 9.0i		☑ Saplir _1.0	ngs/Shrubs: in.	×	Herbs	
Dominant Bank Vegeta	tion (list):								
Yellow birch, sugar i	agwort, blackb	errv				•	•		
Aquatic Habitats (ex: su Leaf packs	omerged or emerged	aqualic vegetatio	n, overnanging	pariks/roots, lear pac	ks, large	submerged wood,	, mnes, c	deeb book	5):
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):					
Culvert crossing for	existing grave	I road, confin	ed to ditch	in part, on old	strip m	nine bench			
Tributary is: (check one)	□ Natural	□ Art	tificial, man-m	ade 🗵 Manip	ulated				
Stream Quality ^a : (check one)	☐ High	⊠ Mc	oderate	□ 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:

Continues out of access road corridor in both directions; culvert crossing for existing gravel road; receives outflow from wetland wraa432; confined to ditch in part.

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features) SELECTIVELY Mixon HWS ON AN OLD Strip mine bench



Waterbody SRAA417 facing southeast upstream



Waterbody SRAA417 facing north downstream



Waterbody SRAA417 facing northeast across

Survey Description	1							
Project Name:		Waterbody Nai	me:		W	aterbody ID:		Date:
Atlantic Coast Pipeli	ne	UNT to Lick	Run		sr	raa418		3/29/2016
State:	County:	I.	Company:		Crew N	Member Initials:	Phot	os:
	Randolph		NRG - ERI	М	GB, RP		3 pł	notos
Tract Number(s):			Nearest Mile	epost:		Associated We	etland ID(s)):
04-002-B001; acces	ss road 04-002	-B001.AR6	52.1			wraa433		
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 ⊠ Str	eam 🗆 Dito	ch 🗆 Ca	anal 🗆 Other:	:			
OHWM Width: 4.0 ft.	OHWM Indicat (check all that apply			ne □Shelvin	g	□Wrested vegetation	⊠Scou	uring □Water staining
Height: ft. N/A□	□Bent, n vegetatio	natted, or missin n	g □Wrack lii	ne ⊠Litter ar debris	nd	☐ Abrupt plant community cha		oil characteristic change
Width of Waterbody - T Bank to Top of Bank:		of Waterbody - of Slope:	Toe of Slope	Width of Waterbo	ody - W		Depth of W Approx.)	ater:
10.0ft.	_	3.0ft.		; N/A□	3.5 _ft		N/A□	<u>0.30</u> ft.
Sinuosity: (check one) ⊠Straight	(Approx.)	/elocity: 1.0fp	os	Bank height Right: Left:	5.0 _f			ght:70 degrees Left:
□Meanderin	9 N/A□			_	<u>6.0</u> ft.			<u>80</u> degrees
Qualitative Attribu	tes							
Water Appearance: (check one)	No water ⊠C	Clear □Turb		een □Sui surface scu		□Algal □ mats	□Other:	
(check all that apply)	Bedrock □ Bo <u>5</u> %%			el ⊠ Sand □ □	⊠ Silt/ c <u>5_</u> %	elay ⊠ Organic		:-
Width of Riparian Zone			_					
f <u>t</u> . N/A⊠	(check all that Avg. DBH (approx.)	of Dominants:	⊠ Trees: 10.0_		⊴ Saplir <u>1.0</u>	ngs/Shrubs: in.	⊠ Her	bs
Dominant Bank Vegeta	1 1 1 1							
woodland sedge, lou	usewort			•			•	orier, golden ragwort,
Aquatic Habitats (ex: su Leaf packs, woody of		l aquatic vegetatio	n, overhanging	banks/roots, leaf pac	ks, large	submerged wood,	riffles, deep	pools):
Aquatic Organisms Ob	served (list):							
none	(//5//							
T&E Species Observed	(list):							
none								
Disturbances (ex: livesto	ck access, manure in	n waterbody, waste	e discharge pipe	es):				
Culvert crossing for	existing grave	l road, confin	ed to ditch	for long distand	ce, sel	lectively logge	ed old str	ip mine
Tributary is: (check one)	□ Natural	□ Art	tificial, man-m	ade 🗵 Manip	ulated			
Stream Quality ^a : (check one)	☐ High	□ Мо	oderate	⊠ Low				

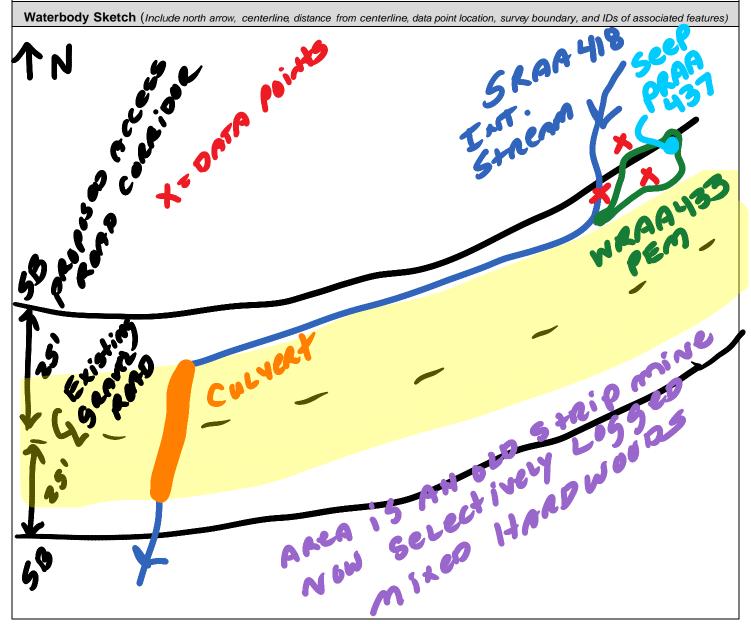
^a High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

Continues out of access road corridor in both directions; connected to wetland wraa433; confined to ditch along existing gravel road for most of mapped length; culvert crossing for existing gravel road; surrounding area is historic strip mine now selectively logged mixed hardwoods.





Waterbody SRAA418 facing north upstream



Waterbody SRAA418 facing southwest downstream



Waterbody SRAA418 facing west across

Survey Description	1								
Project Name:		Waterbody Na	me:		W	aterbody ID:		Dat	e:
Atlantic Coast Pipeli	ne	UNT to Bee	ch Run		sr	aa419		3/2	9/2016
State:	County:		Company:		Crew N	Member Initials	: Ph	otos:	
	Randolph		NRG - ERI		GB, RP			photos	
Tract Number(s):			Nearest Mile	epost:		Associated W	etland ID	(s):	
04-002-B001; acces	ss road 04-002	-B001.AR6	52.1			none			
Survey Type: (check one)	□Centerline	□Re-F	Route	⊠Access Road		□Other:			
Physical Attributes	3								
Stream Classification: (check one)	□Ephemera	l □Inter	mittent	⊠Perennial					
Waterbody Type: (check one)	River ⊠ Str	eam 🗆 Dito	ch □ Ca	anal 🗆 Other:	:				
OHWM Width: 14.0ft.	OHWM Indicat (check all that apply		⊠ Clear lin on bank	e □Shelvin	g	□Wrested vegetation	⊠So	couring	□Water staining
Height: 1.5ft. N/A□	□Bent, n vegetatio	natted, or missin n	g ⊠Wrack lir	ne ⊠Litter ar debris	nd	☐ Abrupt plan community ch		Soil chara	acteristic change
Width of Waterbody - T Bank to Top of Bank:		of Waterbody - of Slope:	Toe of Slope	Width of Waterbo	ody - W	ater Edge to	Depth of (Approx.)	Water:	
ft.	ft.	12.0			13.0 _ f		N/A□	0.	<u>75_</u> ft.
Sinuosity: (check one) ☐Straight	(Арргох.)	/elocity: 1.5fp	os	Bank height Right: <u>c</u> Left:	9.0 _f		Bank slo	Right:	80 degrees
⊠Meanderir	14/1.				7.0f	t.			65 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) % of Substrate:	Bedrock ⊠ Bo				□ Silt/ c	lay □ Organic _% <u></u> %	: □ Oth	er: %	
Width of Riparian Zone 60 ft N/A□	(check all that		⊠ Trees: 10.0		☑ Saplir <u>0.75</u> _	ngs/Shrubs: _in.	⊠H	erbs	
Dominant Bank Vegeta Beech, yellow birch, colts foot, greenbrie	sweet birch, s	•	•			•		•	olet, goldenrod,
Aquatic Habitats (ex: su Step pools, riffles, w	bmerged or emerged	· -	n, overhanging l	banks/roots, leaf pac	ks, large	submerged wood	, riffles, dee	ep pools):	
Aquatic Organisms Ob	served (list):								
Invertebrates, fish									
T&E Species Observed	(list):								
none									
Disturbances (ex: livesto	ck access, manure in	n waterbody, waste	e discharge pipe	es):					
Area is historic mine	e, now selective	ely logged mi	ixed hardwo	oods, culvert ci	rossin	g for existing	gravel	road; re	fuse in channel
Tributary is: (check one)	Natural	□ Art	tificial, man-ma	ade 🗆 Manipu	ulated				
Stream Quality ^a : (check one)	☐ High	⊠ Mo	oderate	□ Low					

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

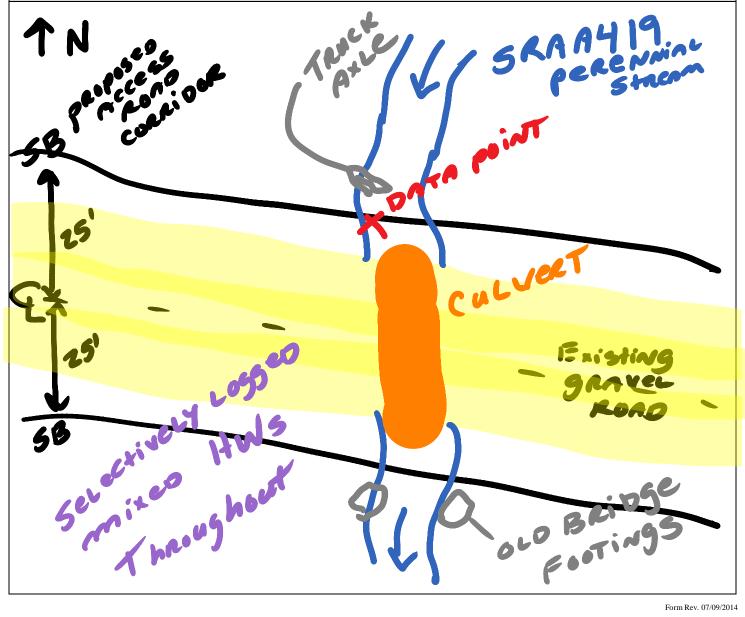
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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

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

Notes:

Continues out of corridor in both directions; culvert crossing for existing gravel road; footings for old bridge crossing downstream; front truck axle in channel; area is an historical strip mine, now selectively logged mixed hardwoods.

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





Waterbody SRAA419 facing north upstream



Waterbody SRAA419 facing southwest downstream



Waterbody SRAA419 facing southeast across

Survey Description	1								
Project Name:		Waterbody Na	me:		W	aterbody ID:			Date:
Atlantic Coast Pipeli	ine	Beech Run			sr	raa420		ļ.	3/29/2016
State:	County:		Company:		Crew N	Member Initials:	: Pł	notos:	
· ·	Randolph		NRG - ERI		GB, RP			photo	os
Tract Number(s):			Nearest Mile	epost:		Associated We	etland ID	D(s):	
04-002-B001; acces	ss road 04-002	-B001.AR6	52.1			none			
Survey Type: (check one)	□Centerline	□Re-F	Route	⊠Access Road		□Other:			
Physical Attributes Stream Classification:	8								
(check one)	□Ephemera	ıl □Inter	mittent	⊠Perennial					
Waterbody Type: (check one)	River ⊠ Str	eam 🗆 Dito	ch □ Ca	anal 🗆 Other:	:				
OHWM Width: ft.	OHWM Indicat (check all that apply		⊠ Clear lin	e □Shelvin	g	□Wrested vegetation	⊠S	couring	□Water staining
Height: ft. N/A□	□Bent, n vegetatio	natted, or missin n	g ⊠Wrack lii	ne ⊠Litter ar debris	nd	☐ Abrupt plant community cha		∃Soil ch	naracteristic change
Width of Waterbody - T Bank to Top of Bank:		of Waterbody - of Slope:	Toe of Slope	Width of Waterbo Water Edge:	ody - W		Depth of (Approx.)	f Water	:
_35.0 ft.	_	_ <u>16.0_</u> ft.		<u></u>	23.0 _ f		N/A□	_	<u>1.5</u> ft.
Sinuosity: (check one) ⊠Straight	(Approx.)	velocity: 1.5fp	os	Bank height Right: 	5.0 _ 1		Bank slo	ppe Right: Left:	65 degrees
□Meanderin	ng N/A□			_1	0.0	ft.			80degrees
Qualitative Attribut	tes								
Water Appearance: (check one)	No water ⊠C	Clear □Turb		een □Sur surface scu		□Algal □ mats	□Other:		
Substrate: (check all that apply) % of Substrate:	Bedrock				□ Silt/ c	clay □ Organic _%%	□ Oth	her: %	
Width of Riparian Zone			D =			(0)			
<u>80_ft</u> ⋅ N/A□	(check all that Avg. DBH (approx.)	of Dominants:	⊠ Trees: 11.0_		⊴ Sapıır <u>_ 1.0 _</u>	ngs/Shrubs: in.	⊠ F	Herbs	
Dominant Bank Vegeta	tion (list):								
Beech, yellow birch, colts foot, greenbrie	r	•	•		•	•		•	-
Aquatic Habitats (ex: su pools, riffles, woody				banks/roots, leaf pac	ks, large	submerged wood,	riffles, de	ep pools	s):
Aquatic Organisms Ob	served (list):								
Invertebrates, fish	()								
T&E Species Observed	(list):								
none									
Disturbances (ex: livesto	ock access, manure in	n waterbody, waste	e discharge pipe	es):					
Area is historic mine	e, now selectiv	ely logged mi	ixed hardwo	oods, box culve	ert cro	ssing for exis	sting gr	avel r	oad
Tributary is: (check one)	Natural	□ Ari	tificial, man-m	ade 🗆 Manipı	ulated				
Stream Quality ^a : (check one)	☐ High	⊠ Mc	oderate	□ Low					

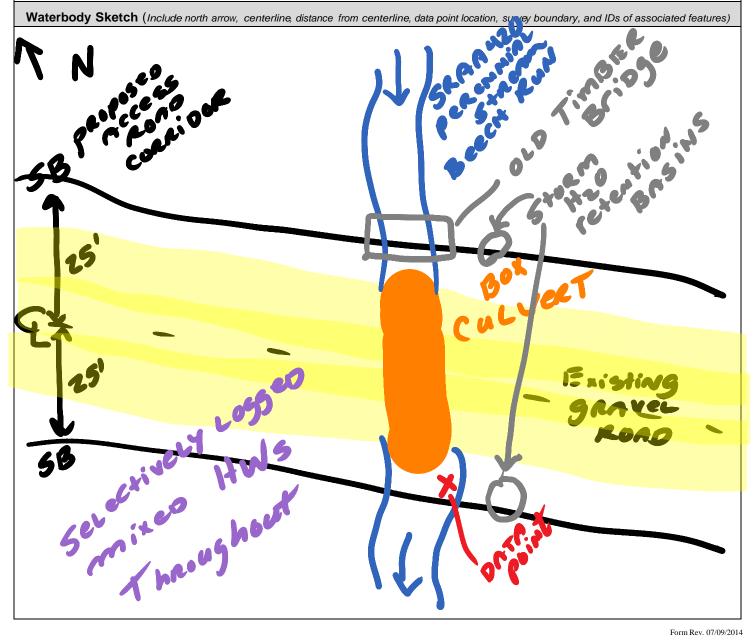
High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

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

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

Notes:

Continues out of corridor in both directions; box culvert crossing for existing gravel road; abandoned timber bridge crossing just upstream of culvert inlet; two storm water retention basins just south of crossing; area is an historical strip mine, now selectively logged mixed hardwoods.





Waterbody SRAA420 facing west upstream



Waterbody SRAA420 facing east downstream



Waterbody SRAA420 facing north across

Survey Description	1								
Project Name:		Waterbody Nai	me:		W	aterbody ID:			Date:
Atlantic Coast Pipeli	ne	Beech Run			sr	aa408		,	3/8/2016
State:	County:		Company:		Crew N	Member Initials	i:	Photos:	
West Virginia	Randolph		NRG		GB, KM			3 photo	os
Tract Number(s):			Nearest Mile	post:		Associated W	etland	ID(s):	
04-002-B001			52.15			wraa420			
Survey Type: (check one)	⊠Centerline	e □Re-F	Route	□ Access Road		□Other:			
Physical Attributes	<u> </u>								
Stream Classification: (check one)	□Ephemera	al □Inter	mittent	⊠Perennial					
Waterbody Type: (check one)	River ⊠ Str	eam □ Dito	ch □ Ca	anal 🗆 Other:					
OHWM Width: ft.	OHWM Indicat (check all that apply			ie □Shelvin	g	□Wrested vegetation	×	Scouring	g □Water staining
Height: ft. N/A□	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 - ' of Slope:	Toe of Slope	Width of Waterbo	ody - W	ater Edge to	Depth (Approx.)	of Water	:
		ft.			<u>20.0_</u> ft.		N/A□		<u>1.75</u> ft.
Sinuosity: (check one)	(Арргох.)	velocity:	s	Left:	6.0_ft.		Bank s	slope Right: Left	35 degrees
⊠Meanderin	14/1.			_	<u>12.0_</u> ft.				_75_ degrees
Qualitative Attribut	es								
Water Appearance: (check one) □	No water ⊠0	Clear □Turb	-	een □Sui surface scu		□Algal [mats	□Othe	r:	
Substrate: (check all that apply) % of Substrate:	Bedrock ⊠ Bo%		le ⊠ Grave	el ⊠ Sand [_10_%		lay □ Organic _%%		Other:	
Width of Riparian Zone 115 ft N/A□	(check all that		⊠ Trees: _10.0_i		☑ Saplin _ <u>1.5</u> _in.	ngs/Shrubs:	×	Herbs	
Dominant Bank Vegetar Hemlock, Frasier Ma wood fern, woodland	agnolia, yellow d sedae	·				•			
Aquatic Habitats (ex: sul Pools, riffles, coarse			n, overhanging	banks/roots, leaf pac	ks, large	submerged wood	, riffles,	deep pools	s):
Aquatic Organisms Obs	served (list):								
Trout, invertebrates,	crayfish								
T&E Species Observed	(list):								
none									
Disturbances (ex: livesto Watershed has been					ridge c	or culvert			
Tributary is:			ificial, man-m						
Stream Quality ^a : (check one)	⊠ High		oderate	□ Low	uiaiEU				

Form Rev. 07/09/2014

^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:

Stream continues out of corridor in both directions; wetland wraa420 is on floodplain but levee prevents direct surface connection; old road crossing present, no culvert or bridge present; surrounding slopes have been selectively logged increases sediment load.

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



Waterbody SRAA408 facing southeast upstream



Waterbody SRAA408 facing northwest downstream



Waterbody SRAA408 facing southwest across

Survey Description	1								
Project Name:		Waterbody Na	ne:		W	aterbody ID:			Date:
Atlantic Coast Pipeli	ine	UNT to Bee	ch Run		sr	aa421			3/30/2016
State:	County:		Company:		Crew N	Member Initials	: Р	hotos:	
	Randolph		NRG - ERI		GB, RP			3 phot	os
Tract Number(s):			Nearest Mile	epost:		Associated W	etland I	D(s):	
04-002-B001; acces	ss rod 04-002-l	3001.AR6	52.4			none			
Survey Type: (check one)	□Centerline	□Re-F	Route	⊠Access Road		□Other:			
Physical Attributes Stream Classification:	S								
(check one)	□Ephemera	ıl ⊠Inter	mittent	□Perennial					
Waterbody Type: (check one)	River ⊠ Str	eam 🗆 Dito	ch □ Ca	anal 🗆 Other:	:				
OHWM Width: _3.0 ft.	OHWM Indicat (check all that apply		⊠ Clear lin	ie ⊠Shelvin	g	□Wrested vegetation		Scourin	g □Water staining
Height:	□Bent, n vegetatio	natted, or missin n	g □Wrack lii	ne ⊠Litter ar debris	nd	☐ Abrupt plan community ch		□Soil c	haracteristic change
Width of Waterbody - T Bank to Top of Bank:		of Waterbody - 'of Slope:	Toe of Slope	Width of Waterbo	ody - W	ater Edge to	Depth c	of Wate	r:
15.0ft.	_	ft.		<u></u>	<u>2.5 </u> ft		N/A□	-	<u>0.20</u> ft.
Sinuosity: (check one) ⊠Straight	(Арргох.)	/elocity: 0.75f	ps	Left:	6.5 _f	t.	Bank sl	lope Right Lef	80 degrees
	3 1471				9.0f	t.			
Qualitative Attribut	tes								
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%				⊠ Silt/ c _ <u>10_</u> %	lay ⊠ Organic <u>10</u> %	: □ O	ther: %	
Width of Riparian Zone	: Vegetative (check all that		⊠ Trees:		⊠ Saplir	ngs/Shrubs:	\boxtimes	Herbs	
<u>ft</u> . N/A⊠	Avg. DBH (approx.)	of Dominants:	10.0	_in	1.0	in.			
Dominant Bank Vegeta	tion (list):								
Ellow birch, northern violet. Christmas fer	'n	•	•		•	•			_
Aquatic Habitats (ex: su Leaf packs, woody of		i aquatic vegetatio	n, overnanging	banks/roots, leaf pac	ks, large	submerged wood	, rimes, a	leep pool	s):
Aquatic Organisms Ob	served (list):								
none									
T&E Species Observed	(list):								
none									
Disturbances (ex: livesto	ock access, manure i	n waterbody, waste	e discharge pipe	es):					
Area is old strip min	e now selectiv	ely logged, c	ulvert cross	sing for existing	grave	el road			
Tributary is: (check one)	☐ Natural	⊠ Art	ificial, man-m	ade 🗆 Manipi	ulated				
Stream Quality ^a : (check one)	☐ High		oderate	⊠ Low					

Waterbody sraa421	ID
sraa421	

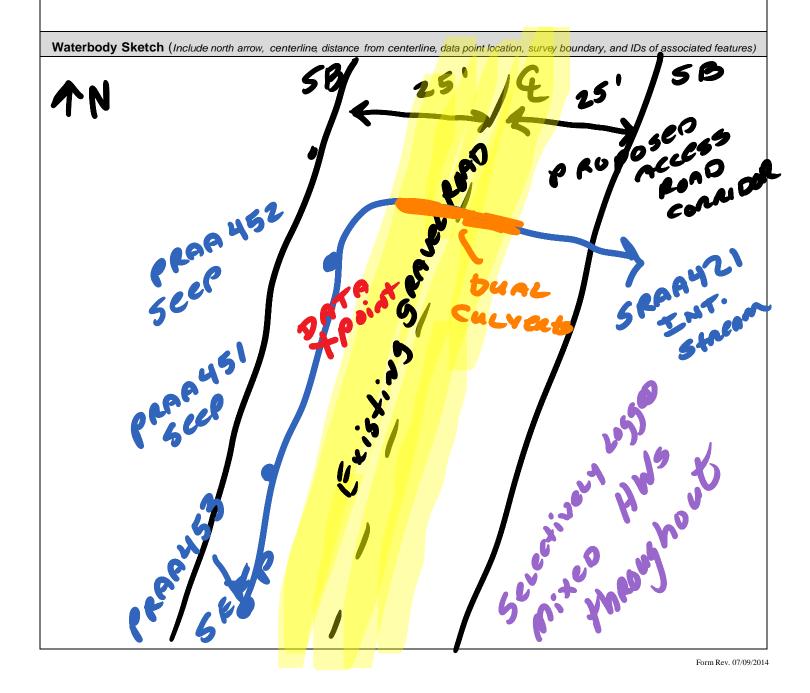
^a High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

Stream is within an excavated ditch created to control water during mining; upstream begins at seep praa453 within access road corridor, downstream continues out of corridor; dual culvert crossing for existing gravel road; also receives water from seeps praa451 & 452 which are on cut face of ditch within bank to bank width of stream.





Waterbody SRAA421 facing southwest upstream



Waterbody SRAA421 facing northeast downstream



Waterbody SRAA421 facing northwest across

Survey Description	1								
Project Name:		Waterbody Nai	me:		W	aterbody ID:		Date:	
Atlantic Coast Pipeli	ne	UNT to Bee	ch Run		sr	aa422		3/31/	/2016
State:	County:		Company:		Crew N	Member Initials:	Ph	otos:	
ū	Randolph		NRG - ERI		GB, RP			photos	
Tract Number(s):			Nearest Mile	epost:		Associated We	tland ID	(s):	
04-002-B001; acces	ss road 04-002	-B001.AR6	52.6			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 ⊠ Str	eam 🗆 Dito	ch □ Ca	anal 🗆 Other:					
OHWM Width:	OHWM Indicat (check all that apply		⊠ Clear lin on bank	ne ⊠Shelvin	g	□Wrested vegetation	□So	couring	□Water staining
Height:	□Bent, n vegetatio	natted, or missin n	g □Wrack lii	ne ⊠Litter ar debris	nd	□Abrupt plant community cha		Soil charact	eristic change
Width of Waterbody - To Bank to Top of Bank:		of Waterbody -	Toe of Slope	Width of Waterbo	ody - W		Depth of	Water:	
ft.	-	_2.0ft.			<u>2.5 </u> ft	i.	J/A□	0.20	ft.
Sinuosity: (check one) ⊠Straight	(Approx.)	velocity: 0.50f	ps	Left:	3.0f	t.	Bank slo	Right: 50 Left:	degrees
	14//.				0.01				uegrees
Qualitative Attribut Water Appearance:	ies								
(check one)	No water ⊠C	Clear □Turb	-	een □Sui surface scu		□Algal □ mats	Other:		
Substrate: (check all that apply) % of Substrate:	Bedrock	ulder ⊠ Cobb <u>30</u> %		el ⊠ Sand □ 	⊠ Silt/ c 	lay ⊠ Organic	□ Oth	ner: %	
Width of Riparian Zone	(check all that		⊠ Trees: 10.0		☑ Saplir _1.0	ngs/Shrubs: in.	⊠ H	lerbs	
Dominant Bank Vegetar yellow birch, norther violet. Christmas fer	n red oak, sug	•	•	•		-			lackberry,
Aquatic Habitats (ex: sul Leaf packs, woody of		l aquatic vegetatio	n, overhanging	banks/roots, leaf pac	ks, large	submerged wood,	riffles, dee	ep 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 pine	es):					
Area is old strip min		•		•	grave	el road			
Tributary is: (check one)	□ Natural	⊠ Art	ificial, man-m	ade 🗆 Manipi	ulated				
Stream Quality ^a : (check one)	☐ High		oderate	⊠ Low					

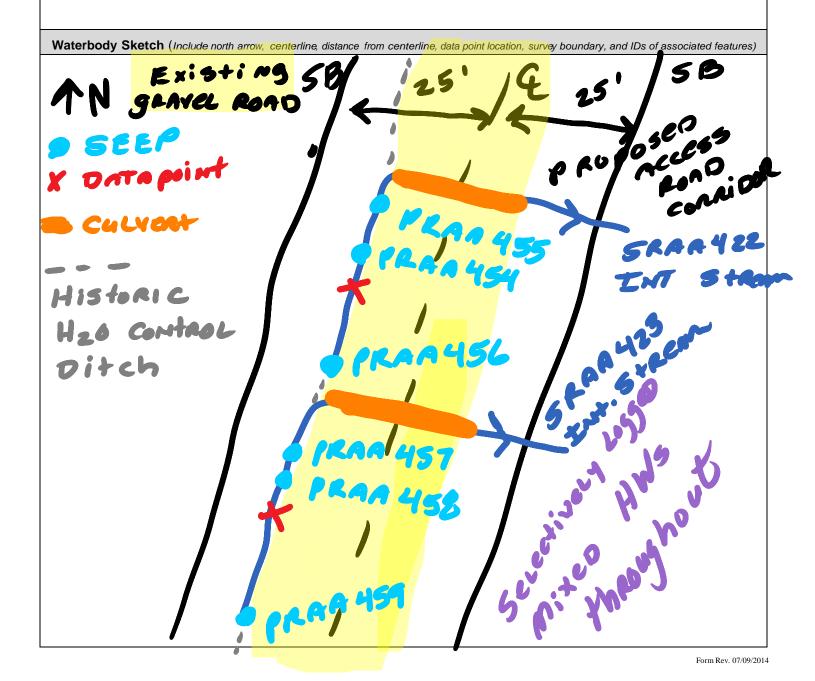
^a High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

Stream is within an excavated ditch created to control water during historic mining, now has characteristics of a stream; upstream begins at seep praa456 within access road corridor at nick point within ditch, downstream continues out of corridor; culvert crossing for existing gravel road; also receives water from seeps praa454 & 455 which are on cut slope above ditch.





Waterbody SRAA422 facing southwest upstream



Waterbody SRAA422 facing north downstream



Waterbody SRAA422 facing west across

Survey Description	1								
Project Name:		Waterbody Nai	ne:		W	aterbody ID:			Date:
Atlantic Coast Pipeli	ne	UNT to Bee	ch Run		sı	raa423			3/31/2016
State:	County:		Company:		Crew I	Member Initials	:	Photos:	
•	Randolph		NRG - ERI	М	GB, RP			3 photo	os
Tract Number(s):			Nearest Mile	epost:		Associated W	etland	ID(s):	
04-002-B001; acces	ss road 04-002	-B001.AR6	52.7			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 ⊠ Str	eam 🗆 Dito	ch □ Ca	anal 🗆 Other:	:				
OHWM Width: 3.0ft.	OHWM Indicat (check all that apply		⊠ Clear lin	e ⊠Shelvin	g	□Wrested vegetation]Scouring	g □Water staining
Height: ft. N/A□	□Bent, n vegetatio	natted, or missin n	g □Wrack li	ne ⊠Litter ar debris	nd	☐ Abrupt plan community ch		□Soil cl	haracteristic change
Width of Waterbody - To Bank to Top of Bank:		of Waterbody - of Slope:	Toe of Slope	Width of Waterbo	ody - W		Depth (Approx.)	of Water	r:
ft.	_	ft.			<u>2.5 </u> ff		N/A□	_	<u>0.20</u> _ft.
Sinuosity: (check one) ⊠Straight □Meanderin	(Арргох.)	velocity: 0.50f	ps	Left:	3.0 _ f	t.	Bank s	slope Right Left	45 degrees
	14/1.				10.0	ft.			75_ degrees
Qualitative Attribut Water Appearance:	tes								
(check one)	No water ⊠C	Clear □Turb		een □Sui surface scu		□Algal [mats	□Othei	r:	
Substrate: (check all that apply) % of Substrate:	Bedrock DBo				⊠ Silt/ c 	clay ⊠ Organic <u>10</u> %		Other: %	
Width of Riparian Zone ft N/A⊠	(check all that		⊠ Trees: 10.0_		☑ Saplir 1.0	ngs/Shrubs: in.	×	I Herbs	
pominant Bank Vegetar yellow birch, norther violet. Christmas fer	n red oak, sug	•	•	•		•			•
Aquatic Habitats (ex: su Leaf packs, woody of		d aquatic vegetatio	n, overhanging	banks/roots, leaf pac	ks, large	submerged wood	, riffles,	deep pool	s):
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):					
Area is old strip min	e now selectiv	ely logged, c	ulvert cross	sing for existing	grave	el road			
Tributary is: (check one)	□ Natural	⊠ Art	ificial, man-m	ade 🗆 Manip	ulated				
Stream Quality ^a : (check one)	☐ High	Mc	oderate	⊠ Low					

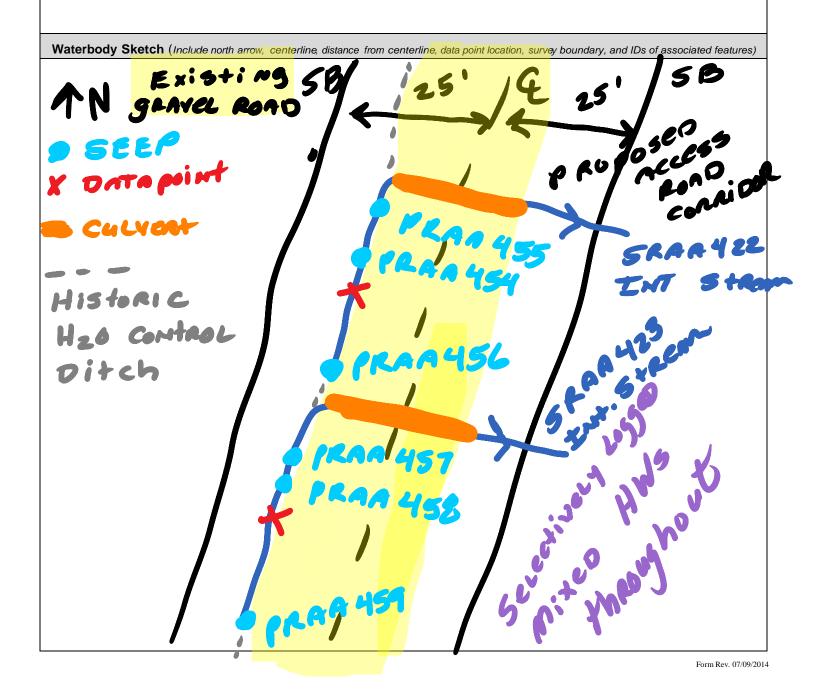
^a High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

Stream is within an excavated ditch created to control water during historic mining, now has characteristics of a stream; upstream begins at seep praa459 within access road corridor at nick point within ditch, downstream continues out of corridor; culvert crossing for existing gravel road; also receives water from seeps praa457 & 458 which are on cut slope above ditch.





Waterbody SRAA423 facing southwest upstream



Waterbody SRAA423 facing north downstream



Waterbody SRAA423 facing west across

Survey Description	1							
Project Name:		Waterbody Nai	me:		W	aterbody ID:		Date:
Atlantic Coast Pipeli	ne	UNT to Bee	ch Run		sı	raa424		3/31/2016
State:	County:		Company:		Crew I	Member Initials:	Photo	os:
•	Randolph		NRG - ERI	М	GB, RP		3 ph	notos
Tract Number(s):			Nearest Mile	epost:		Associated We	tland ID(s)	:
04-002-B001; acces	s road 04-002	-B001.AR6	52.9			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 ⊠ Str	eam 🗆 Dito	ch □ Ca	anal 🗆 Other:				
OHWM Width: ft.	OHWM Indicat (check all that apply			e ⊠Shelvin	g	□Wrested vegetation	□Scou	ring □Water staining
Height: ft. N/A□	□Bent, n vegetatio	natted, or missin n	g □Wrack liı	ne ⊠Litter ar debris	nd	☐Abrupt plant community cha		il characteristic change
Width of Waterbody - T Bank to Top of Bank:		of Waterbody - of Slope:	Toe of Slope	Width of Waterbo	ody - W		epth of Wa	ater:
ft.	_	ft.			<u>1.5 </u> ft		/A□	<u>0.20</u> ft.
Sinuosity: (check one) ⊠Straight	(Арргох.)	velocity: 0.50f	ps	Left:	3.0 _ f	t.		ght: <u>45</u> degrees _eft:
	14//.				12.0	π		<u>75</u> degrees
Qualitative Attribut Water Appearance:	ies							
(check one)	No water ⊠C	Clear □Turb		een □Sui surface scu		□Algal □ mats	Other:	
Substrate: (check all that apply) % of Substrate:	Bedrock DBo				⊠ Silt/ c 15_%	clay ⊠ Organic	□ Other:	%
Width of Riparian Zone ft N/A⊠	(check all that		⊠ Trees: 10.0		☑ Saplir 1.0	ngs/Shrubs: in.	⊠ Herb	os
Dominant Bank Vegeta yellow birch, norther violet. Christmas fer	n red oak, sug	ar maple, be	ech, yellow	poplar, linden	, Japa	nese spiraea,	autumn	olive, blackberry,
Aquatic Habitats (ex: su Leaf packs, woody of	bmerged or emerged	d aquatic vegetatio	n, overhanging	banks/roots, leaf pac	ks, large	submerged wood, i	iffles, deep p	pools):
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):				
Area is old strip min					grave	el road		
Tributary is: (check one)	□ Natural	⊠ Art	ificial, man-m	ade 🗆 Manip	ulated			
Stream Quality ^a : (check one)	☐ High	□ Мо	oderate	⊠ Low				

Waterbody sraa424	ID
sraa424	

^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:

Stream is within an excavated ditch created to control water during historic mining, now has characteristics of a stream; upstream begins at seep praa460 within access road corridor at nick point within ditch, downstream continues out of corridor; culvert crossing for existing gravel road.

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features) storic ItzO COMTROL Form Rev. 07/09/2014



Waterbody SRAA424 facing south upstream



Waterbody SRAA424 facing north downstream



Waterbody SRAA424 facing west across

Survey Description	າ							
Project Name:	-	Waterbody Nai	me:		W	aterbody ID:		Date:
Atlantic Coast Pipeli	ne	Left Fork Bu	ckhannon F	River	SI	RAC113		4/22/2016
State:	County:	•	Company:		Crew N	lember Initials:	Photo	s:
•	Randolph		NRG		CR, A	S	3	
Tract Number(s):			Nearest Mile	epost:		Associated We	etland ID(s):	
04-002-B001.AR7						None		
Survey Type: (check one)	□Centerline	e □Re-F	Route	⊠Access Road		□Other:		
Physical Attributes	3							
Stream Classification: (check one)	Ephemera	al □Inter	mittent	⊠Perennial				
Waterbody Type: (check one)	River 🗵 Str	eam 🗆 Dito	ch □ Ca	anal 🗆 Other:				
OHWM Width: 45 ft.	OHWM Indica (check all that apply			ie □Shelvin	g	□Wrested vegetation	□Scour	ing □Water staining
Height:ft.	⊠Bent, r vegetatio	natted, or missin n	g ⊠Wrack liı	ne ⊠Litter ar debris	nd	☐ Abrupt plant community cha		characteristic change
Width of Waterbody - T			Toe of Slope	Width of Waterbo	ody - W		Depth of Wa	ter:
Bank to Top of Bank: 60 ft.		of Slope: _15ft.		Water Edge: N/A□	<u>25_</u> ft.		Approx.) √A□	<u>0.3</u> ft.
Sinuosity: (check one)	(Approx.)	velocity:		Bank height Right:	_8_ft.		Bank slope Rig	ht:
⊠Meanderin	1 10/12			-	<u>10_</u> ft.			_70_ degrees
Qualitative Attribut	tes							
Water Appearance: (check one)	No water ⊠0	Clear □Turb	-	een □Sur surface scu		□Algal □ mats	Other:	
Substrate: (check all that apply) % of Substrate:	Bedrock ⊠ Bo		le ⊠ Grave	el ⊠ Sand □ _10_%		lay □ Organic %%	□ Other:)
Width of Riparian Zone <u>80 ft</u> ⋅ N/A□	(check all that		[⊠] Trees: _ <u>14</u> _in.		☑ Saplin _ <u>2</u> _in.	gs/Shrubs:	⊠ Herb	S
Dominant Bank Vegeta Eastern hemlock, re	, ,	oirch, america	an beech, r	ed maple, red	clover,	colt's foot, o	ldfield cind	quifoil
Aquatic Habitats (ex: su Riffles and leaf pace		d aquatic vegetatio	n, overhanging	banks/roots, leaf pac	ks, large	submerged wood,	riffles, deep po	pols):
Aquatic Organisms Obs Caddisfly larvae, cra	, ,	riders						
T&E Species Observed	(list):							
None								
Disturbances (ex: livesto	ck access, manure i	n waterbody, waste	e discharge pipe	es):				
Tributary is: (check one)	Natural	□ Art	ificial, man-m	ade 🗆 Manipu	ulated			
Stream Quality ^a : (check one)	☐ High	⊠ Mc	oderate	□ Low				

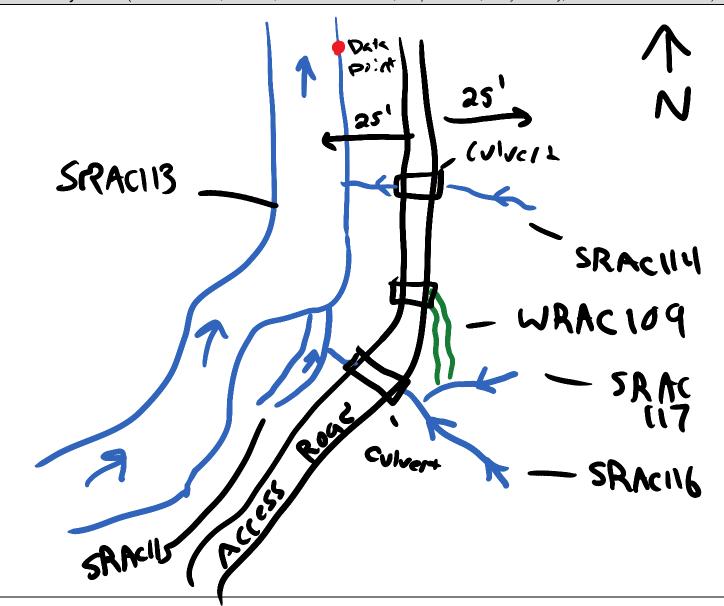
Waterbody	ID:
CD A C 113	

^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:





Waterbody SRAC113 facing south upstream



Waterbody SRAC113 facing north downstream



Waterbody SRAC113 facing west across

Survey Description)							
Project Name:		Waterbody Nai	ne:			aterbody ID:		Date:
Atlantic Coast Pipeli	ne	UNT to Left I	Fork Buckh	annon River	SI	RAC114		4/22/2016
State:	County:		Company:		Crew N	lember Initials:	Photos	:
	Randolph		NRG		CR, A	NS .	3	
Tract Number(s):			Nearest Mile	epost:		Associated We	tland ID(s):	
04-002-B001.AR7						None		
Survey Type: (check one)	□Centerline	e □Re-F	Route	⊠Access Road		□Other:		
Physical Attributes	3							
Stream Classification: (check one)	⊠Ephemera	al □Inter	mittent	□Perennial				
Waterbody Type:	River ⊠ Str	eam 🗆 Dito	:h □ Ca	anal 🗆 Other:	-			
OHWM	OHWM Indica	tor:						
Width: <u>3</u> ft.	(check all that apply		☐ Clear lin on bank	ie □Shelvin	g	□Wrested vegetation	□Scouri	ng □Water staining
Height:	□Bent, r vegetatio	natted, or missin n	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>6</u> ft.	_	_1_ft.		N/A□	<u>3</u> ft.	N	I/A □	<u>0.2_</u> ft.
Sinuosity:		velocity:		Bank height		E	Bank slope	
(check one) ☐Straight	(Approx.)			Right:	2 4		Righ	
		1.5fps	i	Left:	<u>3</u> ft.		Le	<u>70</u> degrees ft:
⊠Meanderin	9 N/A□				<u>3_</u> ft.			_70_ 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/ c	lay Organic	☐ Other:	
(check all that apply) % of Substrate:	% <u>10</u> %	% <u>30</u> %	<u>50</u> %	<u>10</u> %		_%%	%	
Width of Riparian Zone								
<u>10 ft</u> -		apply) of Dominants:	⊠ Trees: _ <u>14</u> _in.		⊠ Saplin _2_in.	ngs/Shrubs:	⊠ Herbs	
N/A Deminant Bank Variation	(approx.)							
Dominant Bank Vegetar Eastern hemlock, re		birch, america	an beech, r	ed maple, red	clover,	, colt's foot, o	ldfield cinq	uifoil
Aquatic Habitats (ex: su	bmerged or emerged	d aquatic vegetatio	n, overhanging	banks/roots, leaf pac	ks, large	submerged wood,	riffles, deep po	ols):
leaf packs								
Aquatic Organisms Obs	served (list):							
None								
T&E Species Observed	(list):							
None								
Disturbances (ex: livesto				es):				
Stream flows throug	h a 2' culvert ı	under the acc	ess road					
Tributary is: (check one)	⊠ Natural	□ Art	ificial, man-m	ade 🗆 Manipı	ulated			
Stream Quality ^a : (check one)	☐ High	⊠ Mo	oderate	□ Low				

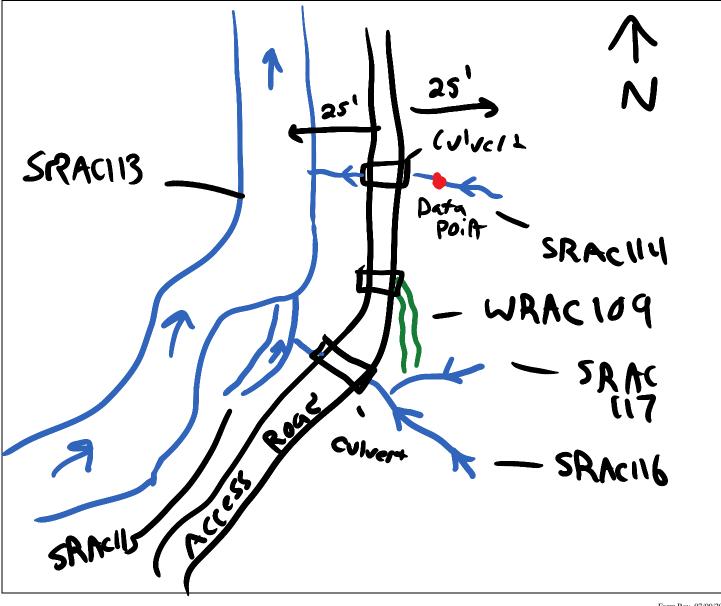
Waterbody	ID:
SRAC114	

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

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

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

Notes:





Waterbody SRAC114 facing east upstream



Waterbody SRAC114 facing west downstream



Waterbody SRAC114 facing north across

Survey Description								
Project Name:		Waterbody Nai	ne:		W	aterbody ID:		Date:
Atlantic Coast Pipeli	ne	UNT to Left I	Fork Buckh	annon River		RAC116		4/22/2016
State:	County:		Company:		Crew N	Member Initials:	Photos	S:
ū	Randolph		NRG		CR, A		3	
Tract Number(s):			Nearest Mile	epost:		Associated We	etland ID(s):	
04-002-B001.AR7						None		
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	OHWM Indica	tor:						
Width:	(check all that apply	<i>(</i>)	⊠ Clear lin on bank	ne □Shelvin	g	□Wrested vegetation	□Scouri	ng □Water staining
Height: ft. N/A□	□Bent, r vegetatio	natted, or missin n	g ⊠Wrack lii	ne ⊠Litter ar debris	nd	☐Abrupt plant community cha		characteristic change
Width of Waterbody - To	op of Width	of Waterbody -	Toe of Slope	Width of Waterbo	ody - W	ater Edge to	Depth of Wat	er:
Bank to Top of Bank:		of Slope:		Water Edge:	•		Approx.)	
_ <u>15_</u> ft.	_	<u>2</u> ft.		 N/A□	<u>8</u> ft.		\ /A□	<u>0.3</u> ft.
Sinuosity:	Water	velocity:		Bank height		E	Bank slope	
(check one) ☐ Straight	(Approx.)	-		Right:			Rig	ht:
		_ <u>1_</u> fps		Left:	<u>3</u> _ft.		1.4	
⊠Meanderin	9 N/A□			Leit.	<u>3_</u> ft.		L	
Qualitative Attribut	·AS							
Water Appearance:	.00							
(check one)	No water ⊠0	Clear □Turb	-	een □Sur surface scu		□Algal □ mats	Other:	
	Bedrock ☐ Bo	ulder 🗵 Cobb	le 🗵 Grave	el 🛭 Sand	□ Silt/ c	lay 🗆 Organic	☐ Other:	
(check all that apply) % of Substrate:	%%	<u>10</u> %	<u>80</u> %	<u>10</u> %	_%	%	%	
Width of Riparian Zone								
_20_ft .	_	apply) of Dominants:	⊠ Trees: _10_in.		☑ Saplin _2_in.	ngs/Shrubs:	⊠ Herbs	3
N/A Deminant Bank Variate	(approx.)							
Dominant Bank Vegetat Eastern hemlock, re		oirch, america	an beech, r	ed maple, red	clover,	, colt's foot, o	ldfield cinc	uefoil, great
rhododendron Aquatic Habitats (ex: su	omerged or emerged	d aquatic vegetatio	n, overhanging	banks/roots, leaf pac	ks, large	submerged wood,	riffles, deep po	ols):
Riffles								
Aquatic Organisms Obs	served (list):							
Caddisfly larvae, ad	ult red-spotted	salamander,	crayfish, w	vater striders				
T&E Species Observed	(list):							
None								
Disturbances (ex: livesto	ck access, manure i	n waterbody, waste	e discharge pipe	es):				
Stream flows throug	h 2' culvert un	der access ro	oad					
Tributary is: (check one)		□ Art	ificial, man-m	ade 🗆 Manipı	ulated			
Stream Quality ^a : (check one)	☐ High	⊠ Mo	derate	□ Low				

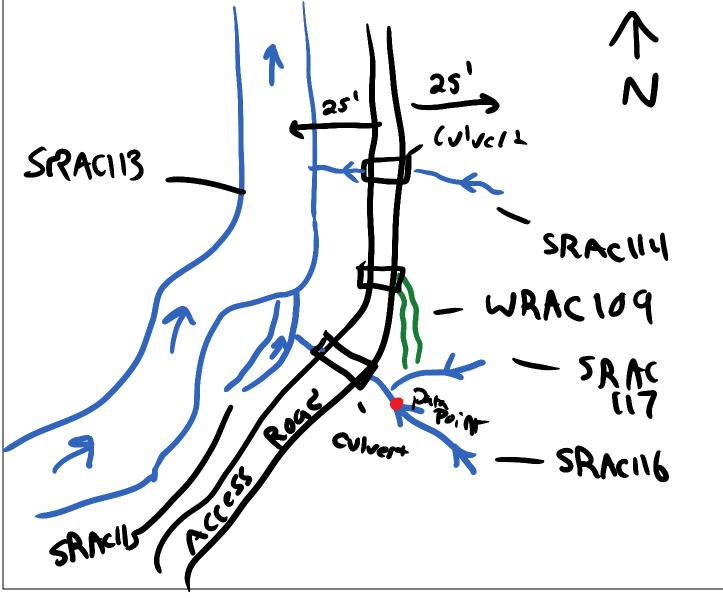
^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

Filamentous algae throughout stream





Waterbody SRAC116 facing south upstream



Waterbody SRAC116 facing north downstream



Waterbody SRAC116 facing east across

Survey Description	on								
Project Name:		Waterbody N	ame:		W	aterbody ID:		D	ate:
Atlantic Coast Pipe	eline	UNT to Lef	t Fork Buckh	nannon River	S	RAC117		4	/22/2016
State:	County:		Company:		Crew N	lember Initials	: PI	hotos:	
West Virginia	Randolph		NRG		CR, A		3		
Tract Number(s):			Nearest Mile	epost:		Associated W	etland II	O(s):	
04-002-B001.AR7						WRAC109			
Survey Type: (check one)	□Centerline	e □Re	-Route	⊠Access Road	I	□Other:			
Physical Attribute	es								
Stream Classification: (check one)	: □Ephemera	al ⊠Int	ermittent	□Perennial					
Waterbody Type:									
	□River ⊠ Str	ream 🗆 D	itch 🗆 C	anal Other	:				
OHWM	OHWM Indica								
Width: _ <u>3_</u> ft.	(check all that apply	y)		ne □Shelvin	g	□Wrested vegetation		Scouring	□Water staining
Height:	□Bent, r	matted, or miss	ing ⊠Wrack li	ine ⊠Litter ar	nd	□Abrupt plan	t [∃Soil cha	aracteristic change
	vegetatio	on		debris		community ch	ange		
Width of Waterbody - Bank to Top of Bank:		of Waterbody of Slope:	- Toe of Slope	Width of Waterb Water Edge:	ody - W	ater Edge to	Depth o	f Water:	
		·		water Euge.			(лрргох.)		0.0.4
_ <u>5</u> ft.	-	_1_ft.		N/A□	_2_ft.		N/A□	-	<u>0.2</u> ft.
Sinuosity:	Water	velocity:		Bank height			Bank slo	оре	
(check one) Straight	(Approx.)			Right:				Right:	
		<u>_1_f</u> p	S	Left:	_3_ft.			Left:	60 degrees
⊠Meander	ing N/A□			2011	<u>3</u> ft.			2011.	60 degrees
Qualitative Attribu	utes								
Water Appearance: (check one)	□No water ⊠0	Clear □Tu			rface um	□Algal I	□Other:		
Substrate:	☐ Bedrock ☐ Bo	oulder Col			⊠ Silt/ c	lay □ Organio	: 🗆 Ot	her:	
(check all that apply) % of Substrate:	% %	%	30 %	50 %	20 %	%		%	
_			_30_76		20_/0	/0		/0	
Width of Riparian Zon	e: Vegetative (check all that		□ Trees	. г	□ Sanlin	ngs/Shrubs:	X I	Herbs	
<u>20 ft</u> ⋅ N/A□	ľ.	of Dominants			in.	193/OHTUD3.		10103	
Dominant Bank Veget									
Canadian goldenro	d, blackberry, y	arrow, mint	, sensitive fe	ern, housework	, violet				
Aquatic Habitats (ex: s	submerged or emerged	d aquatic vegetat	tion, overhanging	banks/roots, leaf pac	ks, large	submerged wood	, riffles, de	ep pools)	:
Leaf packs									
Aquatic Organisms O	bserved (list):								
None									
T&E Species Observe	d (list):								
None									
Disturbances (ex: lives	tock access, manure i	n waterbody, wa	ste discharge pipe	es):					
Stream flows throu	igh 2' culvert un	ider access	road						
Tributary is: (check one)	Natural		Artificial, man-m	nade 🗆 Manip	ulated				
Stream Quality ^a :	☐ High		//oderate	 □ Low					
<u> </u>	_ : "gii			LOW					

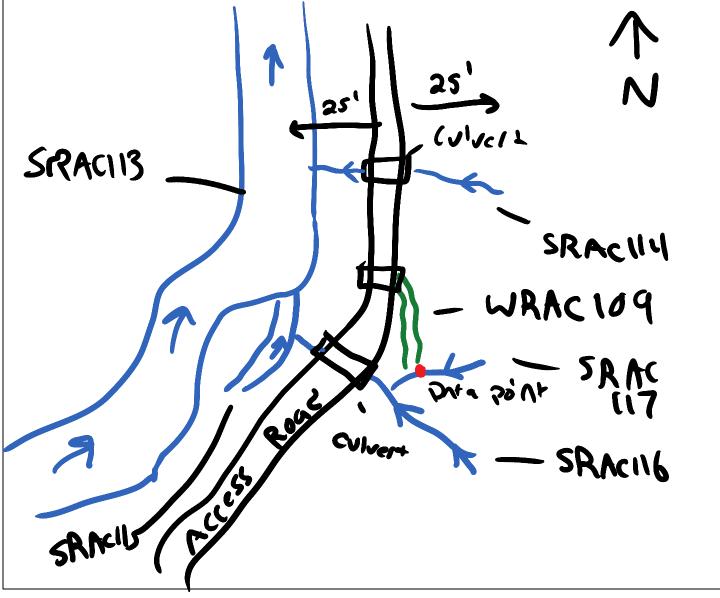
^a High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

Filamentous algae throughout stream





Waterbody SRAC117 facing east upstream



Waterbody SRAC117 facing southwest downstream



Waterbody SRAC117 facing northwest across

Survey Description	1							
Project Name:		Waterbody Nar	ne:		W	aterbody ID:		Date:
Atlantic Coast Pipeli	ine	Left Fork Bud	ckhannon F	River	S	RAC118		4/22/2016
State:	County:		Company:		Crew N	lember Initials:	Photos	:
•	Randolph		NRG		CR, AS			
Tract Number(s):			Nearest Mile	epost:		Associated We	etland ID(s):	
04-002-B001.AR7						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 🗵 Str	eam 🗆 Dito	ch □ Ca	anal 🗆 Other:				
OHWM Width: _35_ft.	OHWM Indicat (check all that apply		⊠ Clear lin	ne □Shelving	g	□Wrested vegetation	□Scourii	ng □Water staining
Height: 1.5_ft. N/A□	⊠Bent, n vegetatio	natted, or missin n	g ⊠Wrack lii	ne ⊠Litter ar debris	nd	□ Abrupt plant community cha		characteristic change
Width of Waterbody - T Bank to Top of Bank:		of Waterbody - To	Toe of Slope	Width of Waterbo	ody - W		Depth of Wate	er:
		10_ft.			<u>30_</u> ft.		N/A□	<u>0.5</u> ft.
Sinuosity: (check one) ☐Straight	Water (Approx.)	velocity:		Bank height Right:	8_ft.	E	Bank slope Righ	nt: _70_ degrees
,ρ3 ⊠Meandering N/A□			Left:	10_ ft.		Le		
Qualitative Attribu	tes							
Water Appearance:								
(check one)	No water ⊠C	Clear □Turb		een □Sur surface scu		□Algal □ mats	∃Other:	
(check all that apply)	Bedrock ⊠ Bo 0_% <u>10_</u> %		le ⊠ Grave _30_%	el □ Sand □ %	□ Silt/ c	lay □ Organic % <u> </u> %	□ Other: %	
Width of Riparian Zone								
_ <u>80_ft</u> - N/A□	(check all that Avg. DBH (approx.)	of Dominants:	⊠ Trees: _ <u>14</u> _in.		ßaplir _2_in.	ngs/Shrubs:	⊠ Herbs	
Dominant Bank Vegeta	tion (list):							
Eastern hemlock, re	ed oak, yellow b	oirch, america	an beech, r	ed maple, red	clover,	colt's foot, o	ldfield cinq	uifoil
Aquatic Habitats (ex: su	bmerged or emerged	l aquatic vegetation	n, overhanging	banks/roots, leaf pacl	ks, large	submerged wood,	riffles, deep poo	ols):
Riffles, downed woo	ody debris, leaf	packs						
Aquatic Organisms Ob	served (list):							
Caddisfly larvae, cra	ayfish, water st	riders						
T&E Species Observed	(list):							
None								
Disturbances (ex: livesto	ock access, manure i	n waterbody, waste	e discharge pipe	es):				
Tributary is: (check one)	Natural		ificial, man-m	ade □ Manipı	ulated			
Stream Quality ^a : (check one)	☐ High	⊠ Mc	oderate	□ Low				

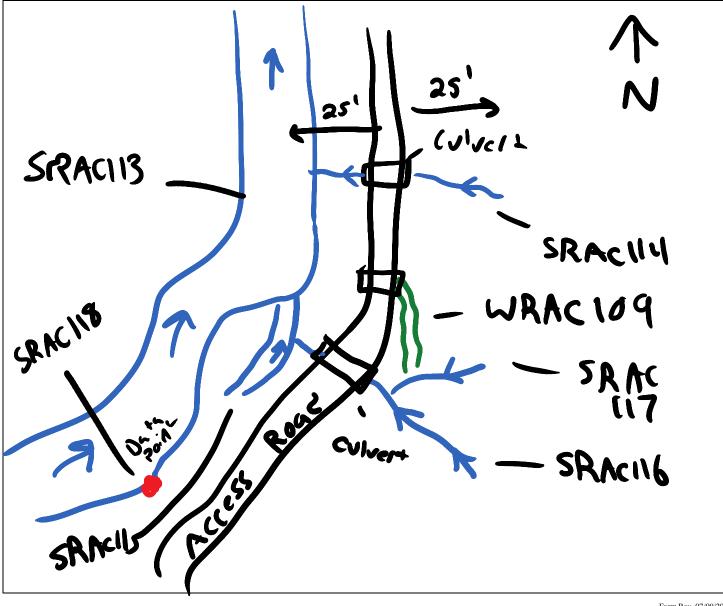
Waterbody	ID:
SRAC118	

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

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

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

Notes:





Waterbody SRAC118 facing southwest upstream



Waterbody SRAC118 facing northeast downstream



Waterbody SRAC118 facing northwest across

Survey Description	1							
Project Name:	I	Waterbody Na	ne:		W	aterbody ID:		Date:
Atlantic Coast Pipeli	ine	Left Fork Bu		River		RAC125		4/23/2016
State:	County:		Company:		Crew N	Member Initials:	Photo	os:
West Virginia	Randolph		NRG		CR, A	NS	3	
Tract Number(s):			Nearest Mile	post:		Associated We	etland ID(s)	:
04-002-B001.AR9						None		
Survey Type: (check one)	□Centerline	e □Re-F	Route	⊠Access Road		□Other:		
Physical Attributes Stream Classification:	3							
(check one)	□Ephemera	al □Inter	mittent	⊠Perennial				
Waterbody Type: (check one)	River Str	eam 🗆 Dito	:h □ Ca	anal 🗆 Other:	:			
OHWM Width: _25_ft.	OHWM Indica (check all that apply		⊠ Clear lin on bank	e □Shelvin	g	□Wrested vegetation	□Scou	ring □Water staining
Height: 1.5_ft. N/A□	⊠Bent, r vegetatio	natted, or missin on	g ⊠Wrack lii	ne ⊠Litter ar debris	nd	□ Abrupt plant community cha		il characteristic change
Width of Waterbody - T Bank to Top of Bank:		of Waterbody - of Slope:	Toe of Slope	Width of Waterbo Water Edge:	ody - W		Depth of Wa	ater:
<u>35_</u> ft.		10_ft.			<u>18_</u> ft.	1	√A□	<u>0.4</u> ft.
Sinuosity: (check one)	(Арргох.)	velocity:		Bank height Right: Left:	_3_ft.	E	·	ght:
⊠Meanderin	· · · · · · ·				_5_ft.			<u>70</u> degrees
Qualitative Attribut	tes							
Water Appearance: (check one)	No water ⊠0	Clear □Turb	-	een □Sur surface scu		□Algal □ mats	Other:	
(check all that apply)	Bedrock ⊠ Bo		le ⊠ Grave	el □ Sand □ % _		lay □ Organic _%%	☐ Other:	%
Width of Riparian Zone 80 ft N/A□	(check all that		[⊠] Trees: _ <u>14</u> _in.		☑ Saplin _2_in.	ngs/Shrubs:	⊠ Herb	os
Dominant Bank Vegeta	, ,							
Eastern hemlock, re	d oak, yellow l	oirch, america	an beech, r	ed maple, red o	clover,	, colt's foot, o	ldfield cin	quitoil
Aquatic Habitats (ex: su Riffles, downed woo			n, overhanging	banks/roots, leaf pacl	ks, large	submerged wood,	riffles, deep p	pools):
Aquatic Organisms Ob	served (list):							
Caddisfly larvae, cra	, ,	riders						
T&E Species Observed	(list):							
None								
Disturbances (ex: livesto	ock access, manure i	n waterbody, waste	discharge pipe	es):				
Flows across acces	s road							
Tributary is: (check one)	⊠ Natural	□ Ari	ificial, man-m	ade 🗆 Manipu	ulated			
Stream Quality ^a : (check one)	☐ High	⊠ Mo	oderate	□ Low				

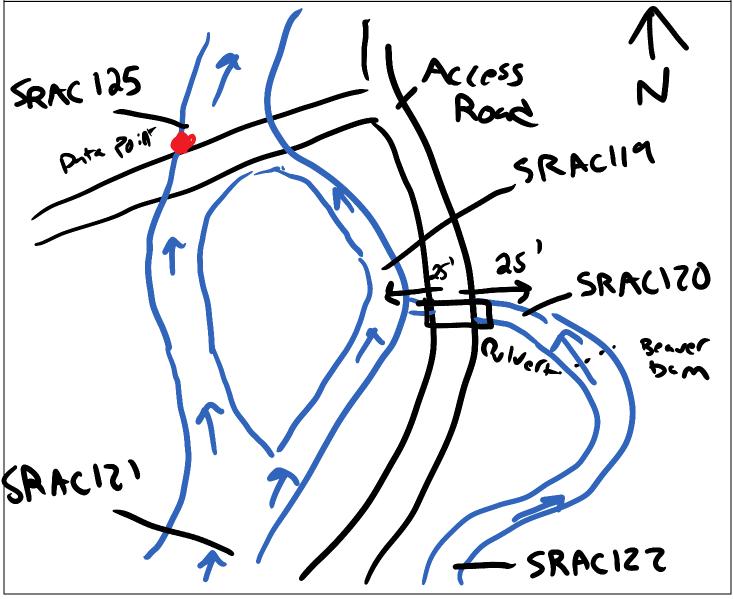
^a High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

Road runs through about 100 feet of the stream





Waterbody SRAC125 facing south upstream



Waterbody SRAC125 facing north downstream



Waterbody SRAC125 facing east across

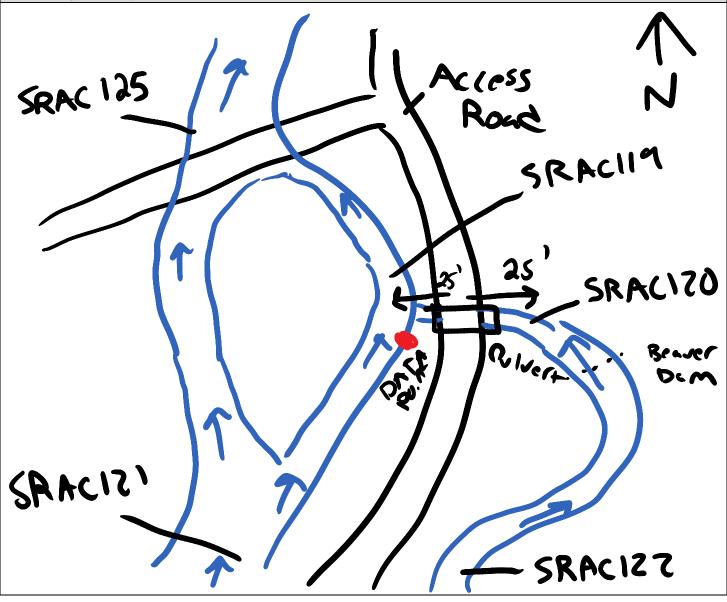
Survey Description	1							
Project Name:	•	Waterbody Na	ne:		W	aterbody ID:		Date:
Atlantic Coast Pipeli	ne	Left Fork Bu	ckhannon F	River	S	RAC119		4/22/2016
State:	County:		Company:		Crew N	lember Initials:	Phot	os:
	Randolph		NRG		CR, A		3	
Tract Number(s):			Nearest Mile	epost:		Associated Wo	etland ID(s):
04-002-B001.AR7 Survey Type:						None		
(check one)	□Centerline	e □Re-F	Route	⊠Access Road		□Other:		
Physical Attributes Stream Classification:	3							
(check one)	Ephemera	al □Inter	mittent	⊠Perennial				
Waterbody Type: (check one)	River ⊠ Str	eam 🗆 Dito	:h □ Ca	anal 🗆 Other:				
OHWM Width: _18 ft.	OHWM Indica (check all that appl)		⊠ Clear lin	ne □Shelvin	9	□Wrested vegetation	□Sco	uring □Water staining
Height: ft. N/A□	⊠Bent, r vegetatio	natted, or missin	g ⊠Wrack liı	ne ⊠Litter ar debris	nd	□Abrupt plant community cha		oil characteristic change
Width of Waterbody - To			Toe of Slope	Width of Waterbo	ody - W		Depth of W	ater:
Bank to Top of Bank:	to Toe	of Slope:		Water Edge:		((Approx.)	
<u>25</u> ft.	_	<u>8</u> ft.		_ N/A□	<u>16_</u> ft.	ı	N/A□	<u>0.8</u> ft.
Sinuosity:		velocity:		Bank height			Bank slope)
(check one) ☐Straight	(Approx.)			Right:	4 4		R	ight:
		_1_fps		Left:	<u>4</u> _ft.			70 degrees
⊠Meanderin	9 N/A□				_4_ft.			70 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)	% <u>10</u> %		<u>20</u> %	%		%%		%
Width of Riparian Zone								
_ <u>60_ft</u> - N/A□	(check all that Avg. DBH (approx.)	of Dominants:	⊠ Trees: _ <u>14</u> _in.		⊠ Saplir _2_in.	ngs/Shrubs:	⊠ Her	bs
Dominant Bank Vegeta	tion (list):							
Eastern hemlock, re	d oak, yellow l	birch, america	an beech, r	ed maple, red	clover,	, colt's foot, c	oldfield cir	nquifoil
Aquatic Habitats (ex: su	bmerged or emerged	d aquatic vegetatio	n, overhanging	banks/roots, leaf pac	ks, large	submerged wood,	riffles, deep	pools):
Riffles, downed woo	•	f packs						
Aquatic Organisms Obs	served (list):							
Caddisfly larvae, cra	ryfish, water st	riders						
T&E Species Observed None	(list):							
	 							
Disturbances (ex: livesto None	ck access, manure i	n waterbody, waste	uischarge pipe	es):				
Tributary is:	Natural	□ Ari	ificial, man-m	ade □ Manipı	ulated			
Stream Quality ^a : (check one)	☐ High	⊠ Mo	oderate	□ 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:





Waterbody SRAC119 facing south upstream



Waterbody SRAC119 facing north downstream



Waterbody SRAC119 facing west across

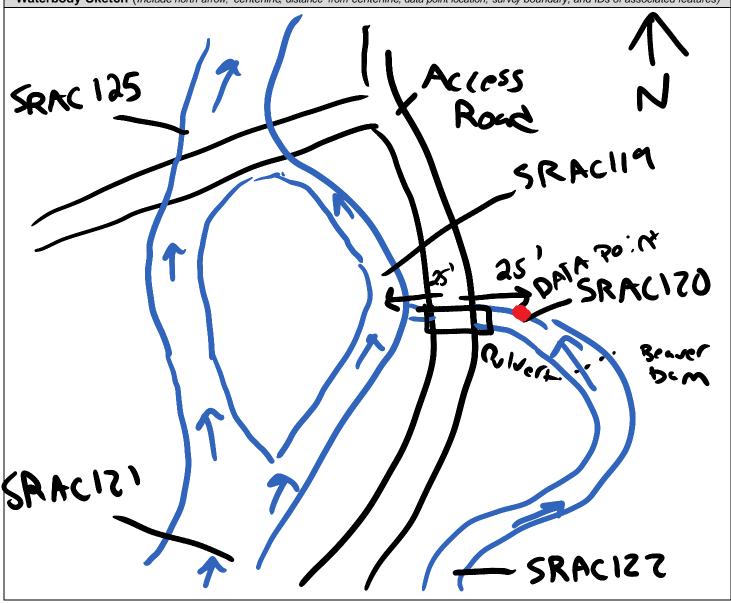
Cumran Dagarintian								
Survey Description Project Name:	1	Waterbody Nar	ne:		lW:	aterbody ID:		Date:
Atlantic Coast Pipeli	ine	UNT to Left F		annon River		RAC120		4/22/2016
State:	County:		Company:		Crew N	lember Initials:	Photos	:
West Virginia	Randolph		NRG		CR, A	S	3	
Tract Number(s):			Nearest Mile	post:	•	Associated We	etland ID(s):	
04-002-B001.AR7						None		
Survey Type: (check one)	□Centerline	e □Re-F	Route	⊠Access Road		□Other:		
Physical Attributes Stream Classification:	5							
(check one)	Ephemera	al ⊠Inter	mittent	□Perennial				
Waterbody Type: (check one)	River Str	eam 🗆 Dito	h □ Ca	nal Other:				
OHWM Width: _12_ft.	OHWM Indica (check all that apply		□ Clear line on bank	e □Shelvin	g	□Wrested vegetation	□Scouri	ng □Water staining
Height: _1_ft. N/A□	□Bent, r vegetatio	natted, or missin	g □Wrack lin	ne ⊠Litter ar debris	nd	☐ Abrupt plant community cha		characteristic change
Width of Waterbody - T Bank to Top of Bank:		of Waterbody - 7		Width of Waterbo	ody - Wa		Depth of Wate	er:
	-	<u>6</u> ft.		J	<u>12_</u> ft.		\/A □	ft.
Sinuosity: (check one)	Water (Approx.)	velocity: 0.5fps		Bank height Right: Left:	<u>3_</u> ft.		Bank slope Righ Le	70 degrees
⊠Meanderir	ng N/A□				<u>3_</u> ft.			_70_ degrees
Qualitative Attribu	tes							
Water Appearance: (check one)	No water ⊠0	Clear □Turb		een □Sur surface scu		□Algal □ mats	☐Other:	
(check all that apply)	Bedrock □ Bo	oulder ⊠ Cobb	le ⊠ Grave _50_%	I ⊠ Sand □		ay □ Organic %%	☐ Other:	
Width of Riparian Zone 30 ft N/A□	(check all that		⊠ Trees: _14_in.		☑ Saplin _2_in.	gs/Shrubs:	⊠ Herbs	
Dominant Bank Vegeta Eastern hemlock, re		birch, america	an beech, re	ed maple, red	clover,	colt's foot, o	ldfield cinq	uifoil
Aquatic Habitats (ex: sulleaf packs	bmerged or emerged	d aquatic vegetation	n, overhanging b	oanks/roots, leaf pac	ks, large	submerged wood,	riffles, deep po	ols):
Aquatic Organisms Ob- Caddisfly larvae, cra	, ,	riders						
T&E Species Observed None	(list):							
Disturbances (ex: livesto	ock access. manure i	n waterbody, waste	discharge pipes	s):				
Stream flow across				-,				
Tributary is: (check one)	Natural	□ Art	ificial, man-ma	ade □ Manipu	ulated			
Stream Quality ^a : (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:





Waterbody SRAC120 facing south upstream



Waterbody SRAC120 facing north downstream



Waterbody SRAC120 facing east across

Survey Description	1							
Project Name:	•	Waterbody Nai	ne:		W	aterbody ID:		Date:
Atlantic Coast Pipeli	ine	Left Fork Bu	ckhannon F	River	SI	RAC121		4/23/2016
State:	County:	1	Company:		Crew N	lember Initials:	Photo	s:
•	Randolph		NRG		CR, A		3	
Tract Number(s):			Nearest Mile	post:		Associated We	tland ID(s):	
04-002-B001.AR9 Survey Type:						None		
(check one)	□Centerline	e □Re-F	Route	⊠Access Road		□Other:		
Physical Attributes Stream Classification:	3							
(check one)	Ephemera	al □Inter	mittent	⊠Perennial				
Waterbody Type: (check one)	River ⊠ Str	eam 🗆 Dito	:h □ Ca	anal 🗆 Other:				
OHWM Width: _50_ft.	OHWM Indica (check all that apply		⊠ Clear lin	e □Shelvin	g	□Wrested vegetation	□Scour	ing □Water staining
Height: ft. N/A□	⊠Bent, r vegetatio	matted, or missin	g ⊠Wrack lir	ne ⊠Litter ar debris	nd	☐ Abrupt plant community cha		characteristic change
Width of Waterbody - T Bank to Top of Bank:		of Waterbody - of Slope:	Toe of Slope	Width of Waterbo	ody - W		Depth of Wa	ter:
60_ft.		ft.			_45ft.		I/A□	<u>0.4</u> ft.
Sinuosity: (check one)	(Approx.)	velocity:		Bank height Right:	_ <u>5_</u> ft.	E	Bank slope Rig L	ht:
⊠Meanderin	14712				_ <u>5_</u> ft.			_70_ degrees
Qualitative Attribu	tes							
Water Appearance: (check one)	No water ⊠0	Clear □Turb	-	een □Sur surface scu		□Algal □ mats	Other:	
(check all that apply)	Bedrock ⊠ Bo	oulder ⊠ Cobb % <u>50</u> %	lle ⊠ Grave	el □ Sand □ % _		lay □ Organic _%%	☐ Other:	,
Width of Riparian Zone 60 ft N/A□	(check all that		[⊠] Trees: _ <u>14</u> _in.		☑ Saplin _2_in.	ngs/Shrubs:	⊠ Herb	5
Dominant Bank Vegeta	, ,							
Eastern hemlock, re	· ·			•				•
Aquatic Habitats (ex: su Riffles, downed woo			n, overhanging l	banks/roots, leaf pacl	ks, large	submerged wood,	riffles, deep po	pols):
Aquatic Organisms Ob	served (list):							
Caddisfly larvae, cra	ayfish, water st	triders						
T&E Species Observed None	(list):							
	ok access manura i	n waterbady west	disabarga nina	201				
None Disturbances (ex: livesto	on access, manure i	ıı waterbuuy, Waste	alsonarge pipe	·o).				
Tributary is: (check one)	Natural	□ Art	ificial, man-ma	ade 🗆 Manipu	ulated			
Stream Quality ^a : (check one)	☐ High	⊠ Mc	derate	□ Low				

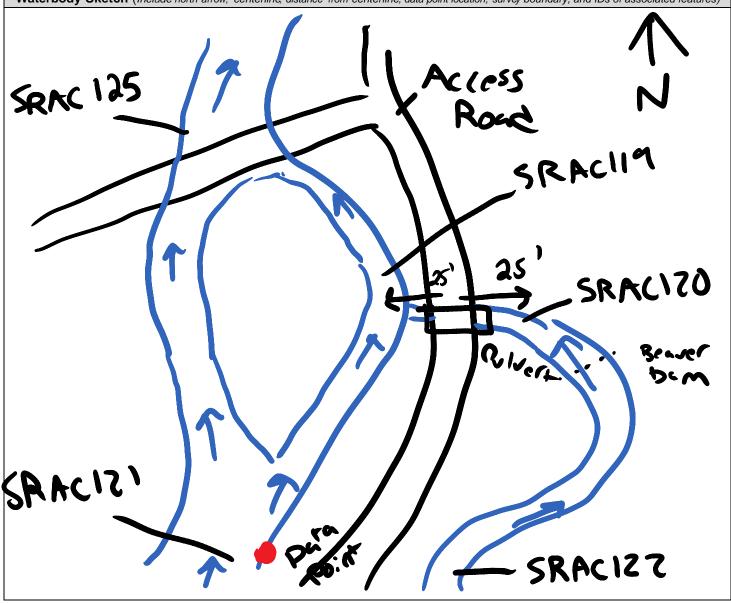
Waterbody	ID:
SRAC121	

^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:





Waterbody SRAC121 facing southwest upstream



Waterbody SRAC121 facing northeast downstream



Waterbody SRAC121 facing northwest across

Survey Description	n							
Project Name:		Waterbody Na	ne:		W	aterbody ID:		Date:
Atlantic Coast Pipel	ine	UNT to Left I	Fork Buckh	annon River	SI	RAC122		4/23/2016
State:	County:	•	Company:		Crew N	Member Initials:	Photos	s:
	Randolph		NRG		CR, A		3	
Tract Number(s):			Nearest Mile	epost:		Associated We	etland ID(s):	
04-002-B001.AR9						None		
Survey Type: (check one)	□Centerline	e □Re-F	Route	⊠Access Road		□Other:		
Physical Attributes Stream Classification:	8							
(check one)	□Ephemera	al ⊠Inter	mittent	□Perennial				
Waterbody Type: (check one)	River 🛭 Str	eam 🗆 Dito	ch □ Ca	anal 🗆 Other:	:			
OHWM Width: _10_ft.	OHWM Indica (check all that apply		⊠ Clear lin	e □Shelvin	9	□Wrested vegetation	□Scouri	ng □Water staining
Height:ft.	□Bent, r vegetatio	matted, or missin	g □Wrack lir	ne ⊠Litter ar debris	nd	☐ Abrupt plant community cha		characteristic change
Width of Waterbody - T Bank to Top of Bank:			Toe of Slope	Width of Waterbo	ody - W		Depth of Wat	er:
		of Slope: 3_ft.		Water Edge: N/A□	<u>10_</u> ft.		N/A□	ft.
Sinuosity: (check one)	(Approx.)	velocity:	;	Bank height Right: Left:	_3_ft.	E	Bank slope Rigl Le	70 degrees
⊠Meanderin	11//12				_3_ft.			_70_ degrees
Qualitative Attributed Water Appearance:	tes							
(check one)	No water ⊠0	Clear □Turb	-	een □Sur surface scu		□Algal □ mats	□Other:	
Substrate: (check all that apply) % of Substrate:	Bedrock □ Bo	oulder ⊠ Cobb _20_%	le ⊠ Grave	el ⊠ Sand □	⊠ Silt/ cl	lay □ Organic %	☐ Other:	
Width of Riparian Zone 30 ft N/A□	(check all that		[⊠] Trees: _ <u>12</u> _in.		⊠ Saplin _2_in.	ngs/Shrubs:	⊠ Herbs	,
Dominant Bank Vegeta Eastern hemlock, re	• •	birch, Americ	an beech, r	ed maple, red	clover	, colt's foot, o	oldfield cind	quifoil
Aquatic Habitats (ex: sulleaf packs	bmerged or emerge	d aquatic vegetatio	n, overhanging l	banks/roots, leaf pac	ks, large	submerged wood,	riffles, deep po	ols):
Aquatic Organisms Ob Caddisfly larvae, cra	• •	riders						
T&E Species Observed None	(list):							
Disturbances (ex: livesto None	ock access, manure i	n waterbody, waste	e discharge pipe	es):				
Tributary is: (check one)	Natural	□ Art	ificial, man-ma	ade 🗆 Manipu	ulated			
Stream Quality ^a : (check one)	□ High	 ⊠ Mo	oderate	□ Low				

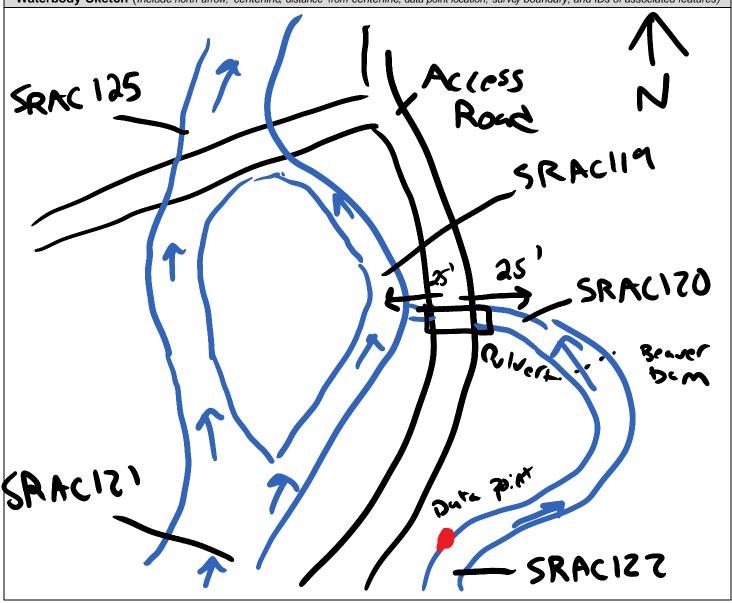
Waterbody ID: SRAC122

^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:





Waterbody SRAC122 facing south upstream



Waterbody SRAC122 facing north downstream



Waterbody SRAC122 facing east across

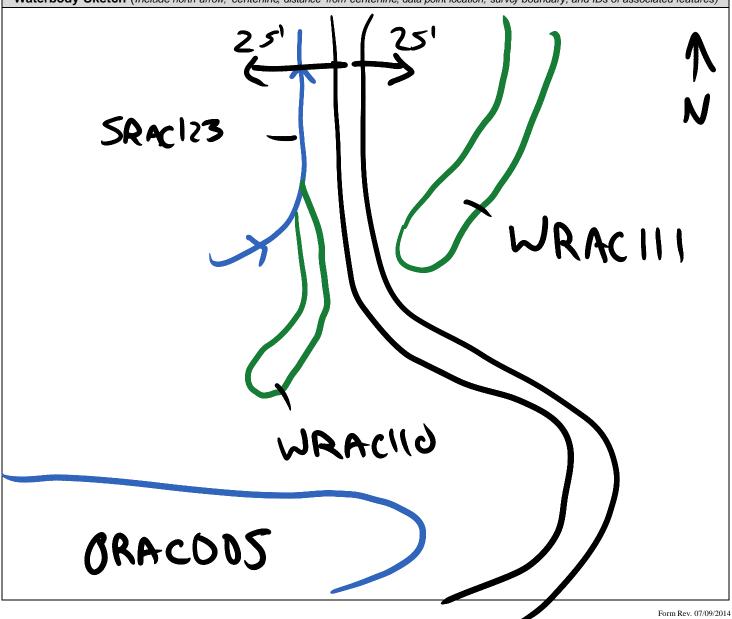
Survey Description	1							
Project Name:		Waterbody Name:			W	Waterbody ID:		Date:
Atlantic Coast Pipeli	ne	UNT to Left I	Fork Buckh	annon River	SI	RAC123		4/23/2016
State:	County:		Company:		Crew N	lember Initials:	: Photos	s:
•	Randolph		NRG		CR, A		3	
Tract Number(s):			Nearest Mile	epost:		Associated Wo	etland ID(s):	
04-002-B001.AR9						WRAC110		
Survey Type: (check one)	□Centerline	e □Re-F	Route	⊠Access Road		□Other:		
Physical Attributes Stream Classification:	s							
(check one)	Ephemera	al □Inter	mittent	⊠Perennial				
Waterbody Type: (check one)	River ⊠ Str	eam 🗆 Dito	h 🗆 Ca	anal 🗆 Other:	:			
OHWM Width:	OHWM Indica (check all that appl)		⊠ Clear lin	e □Shelvin	g	□Wrested vegetation	□Scouri	ng □Water staining
Height: ft. N/A□	□Bent, r vegetatio	natted, or missin on	g □Wrack liı	ne ⊠Litter ar debris	nd	☐ Abrupt plant community ch		characteristic change
Width of Waterbody - T Bank to Top of Bank:		of Waterbody - of Slope:	Toe of Slope	Width of Waterbo	ody - W		Depth of Wat	er:
_ <u>10_</u> ft.		ft.		N/A□	_4_ft.	ı	N/A□	<u>0.2</u> ft.
Sinuosity: (check one)	(Approx.)	velocity:1_fps		Bank height Right: Left:	_3_ft.		Bank slope Rigi Le	ht:60_ degrees
⊠Meanderin	1 10/12				<u>3</u> ft.			60 degrees
Qualitative Attribut	tes							
Water Appearance: (check one)	No water □0	Clear □Turb	-	een □Sur surface scu		⊠Algal [mats	□Other:	
(check all that apply)	Bedrock □ Bo	oulder ⊠ Cobb	le ⊠ Grave	el ⊠ Sand □	⊠ Silt/ cl 20_%	ay □ Organic%		
Width of Riparian Zone 30 ft N/A□	(check all that		[⊠] Trees: _ <u>12</u> _in.		☑ Saplin _2_in.	gs/Shrubs:	⊠ Herbs	3
Dominant Bank Vegeta Eastern hemlock, re	, ,	birch, america	an beech, r	ed maple, red	clover,	colt's foot, c	oldfield cinq	uifoil
Aquatic Habitats (ex: su leaf packs	bmerged or emerge	d aquatic vegetation	n, overhanging	banks/roots, leaf pac	ks, large	submerged wood,	, riffles, deep po	ols):
Aquatic Organisms Obs None	served (list):							
T&E Species Observed None	(list):							
	al :		ana an	-\-				
None Disturbances (ex: livesto	ick access, manure i	n waterbody, waste	uischarge pipe	es):				
Tributary is: (check one)	Natural	□ Art	ificial, man-m	ade □ Manipu	ulated			
Stream Quality ^a : (check one)	☐ High	⊠ Mo	derate	□ Low				

Waterbody	ID
SRAC123	

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

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

Notes:





Waterbody SRAC123 facing south upstream



Waterbody SRAC123 facing north downstream



Waterbody SRAC123 facing east across

Survey Description Project Name:	1	Waterbody Nor	no.		l\A/	latarhady ID:		Data
1		Waterbody Nar		2		aterbody ID:		Date:
Atlantic Coast Pipeli	ne	UNT to Phill	ips Camp i	kun	sr	aa410		3/11/2016
State:	County:		Company:		Crew N	Member Initials	: Photo	s:
	Randolph		NRG		GB, KM		3 ph	
Tract Number(s):			Nearest Mile	post:		Associated W	etland ID(s):	
04-002-B001 Survey Type:			54.35			none		
(check one)	⊠Centerline	□Re-F	Route	□Access Road	ł	□Other:		
Physical Attributes Stream Classification:	3							
(check one)	□Ephemera	al ⊠Inter	mittent	□Perennial				
Waterbody Type: (check one)	River ⊠ Str	eam □ Ditc	h 🗆 Ca	ınal 🗆 Other	:			
ОНWМ	OHWM Indicat							
Width: ft.	(check all that apply	<i>'</i>)		e □Shelvin	ıg	□Wrested vegetation	□Scou	ring □Water staining
Height: 1.0_ft. N/A□	□Bent, n vegetatio	natted, or missing	g □Wrack lir	ne ⊠Litter a debris	nd	□ Abrupt plan community ch		I characteristic change
Width of Waterbody - To			Toe of Slope	Width of Waterb	ody - W		Depth of Wa	ter:
Bank to Top of Bank:	to Toe	of Slope:		Water Edge:			(Approx.)	
_ <u>15.0_</u> ft.	-	<u>5.5</u> ft.		_ N/A□	<u>6.0</u> ft.		N/A□	_0.33_ft.
Sinuosity:		velocity:		Bank height			Bank slope	
(check one) ⊠Straight	(Approx.)	0.50 (Right:	<u>5.5_</u> ft.		Rig	•
		0.50fps	3	Left:	<u>5.5_</u> II.		L	60 degrees
□Meanderin	lg N/A□			-	6.0_ft.			_75_ degrees
Qualitative Attribut	tes							
Water Appearance: (check one)	No water ⊠C	Clear □Turb			rface um	□Algal [mats	□Other:	
Substrate:	Bedrock ☐ Bo	ulder ⊠ Cobb			⊠ Silt/ c		□ Other:	
(check all that apply) % of Substrate:								,
	%%	<u>30</u> %	<u>35</u> %	<u>15</u> %	<u>10</u> %	<u>10</u> %	%	0
Width of Riparian Zone	: Vegetative (check all that			C	⊠ Saplin	ngs/Shrubs:	⊠ Herb	S
<u>ft</u> . N/A⊠	Avg. DBH (approx.)	of Dominants:	<u>9.0</u> in.		0.75_i	_		
Dominant Bank Vegeta	tion (list):							
Beech, eastern hem	llock, yellow bi	rch, sugar ma	aple, green	brier, wood fer	n, hay	-scented ferr	า.	
Aquatic Habitats (ex: su	bmerged or emerged	d aquatic vegetation	n, overhanging l	oanks/roots, leaf pac	cks, large	submerged wood	, riffles, deep p	ools):
woody debris, leaf p	acks							
Aquatic Organisms Obs	served (list):							
invertebrates								
T&E Species Observed	(list):							
none								
Disturbances (ex: livesto	ck access, manure i	n waterbody, waste	discharge pipe	s):				
Old strip mine on bo	oth sides							
Tributary is: (check one)	⊠ Natural	□ Art	ificial, man-ma	ade 🗆 Manip	ulated			
Stream Quality ^a : (check one)	☐ High	⊠ Mo	derate	☐ Low				

Waterbody ID: sraa410

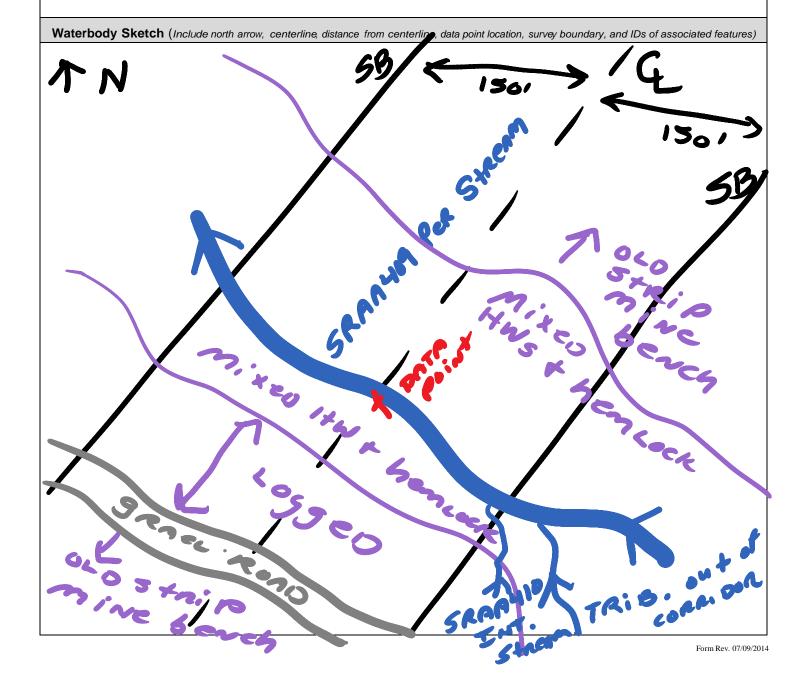
^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

Stream flows into sraa409 at edge of corridor, upstream continues out. Origin is a seep on old road cut outside the corridor.





Waterbody SRAA410 facing southeast upstream



Waterbody SRAA410 facing northwest downstream



Waterbody SRAA410 facing southwest across

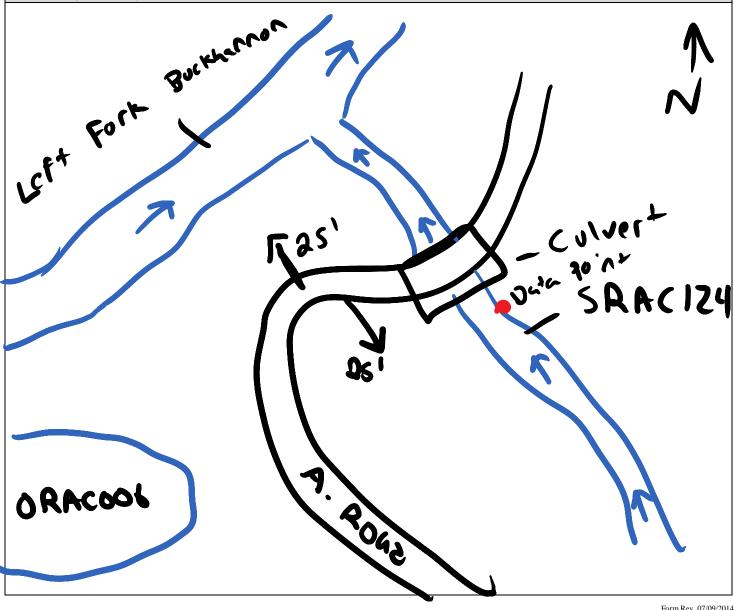
Survey Description	1								
Project Name:		Waterbody Name:				aterbody ID:		Da	
Atlantic Coast Pipeli	ne	UNT to Left I	Fork Buckh	annon River	S	RAC124		4/2	23/2016
State:	County:		Company:		Crew N	Member Initials	: Р	hotos:	
ū	Randolph		NRG		CR, A			3	
Tract Number(s):			Nearest Mile	epost:		Associated W	etland I	D(s):	
04-002-B001.AR9						None			
Survey Type: (check one)	□Centerline	e □Re-F	Route	⊠Access Road	<u> </u>	□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: _22 ft.	OHWM Indicat (check all that apply		⊠ Clear lin	e □Shelvin	g	□Wrested vegetation		Scouring	□Water staining
Height: _1_ft. N/A□	⊠Bent, n vegetatio	natted, or missin n	g ⊠Wrack li	ne ⊠Litter ar debris	nd	☐ Abrupt plan community ch		□Soil char	acteristic change
Width of Waterbody - To Bank to Top of Bank:		of Waterbody - of Slope:	Toe of Slope	Width of Waterb	ody - W		Depth o	of Water:	
		<u>10</u> ft.			<u>20</u> ft.		N/A□	_0	<u>.3_</u> ft.
Sinuosity: (check one) ☐Straight	(Approx.)	velocity:1_fps		Bank height Right: Left:	_ <u>5_</u> ft.		Bank sl	Right:	70 degrees
⊠Meanderin	14//.				<u>5</u> _ft.				70 degrees
Qualitative Attribut	tes								
Water Appearance: (check one)	No water ⊠C	Clear □Turb	-	een □Sui surface scu		□Algal [mats	□Other:		
(check all that apply)	Bedrock □ Bo % <u>_</u> %	ulder ⊠ Cobb _10_%	le ⊠ Grave	el ⊠ Sand [_20_%	□ Silt/ c	lay □ Organic _%%		ther: %	
Width of Riparian Zone 60 ft N/A□	(check all that		⊠ Trees: _ <u>10</u> _in.		⊠ Saplir _2_in.	ngs/Shrubs:		Herbs	
Dominant Bank Vegetat	, ,								
Eastern hemlock, re	• •	oirch, america	an beech, r	ed maple, red	clover,	, colt's foot, c	oldfield	cinquifo	il
Aquatic Habitats (ex: su	bmerged or emerged	d aquatic vegetatio	n, overhanging	banks/roots, leaf pac	ks, large	submerged wood,	riffles, d	eep pools):	
Riffles, downed woo	ody debris, leaf	packs							
Aquatic Organisms Obs	served (list):								
Caddisfly larvae, cra	ayfish, water st	riders							
T&E Species Observed	(list):								
None									
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes):									
Stream flows throug	h a 5' diamete	r culvert unde	er the acce	ss road					
Tributary is: (check one)		□ Art	ificial, man-m	ade Manip	ulated				
Stream Quality ^a : (check one)	☐ High	⊠ Mo	oderate	□ Low					

Waterbody	ID:
SRAC124	

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

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

Notes:





Waterbody SRAC124 facing southeast upstream



Waterbody SRAC124 facing northwest downstream



Waterbody SRAC124 facing southwest across

Survey Description	1								
Project Name:		Waterbody Name:			W	Waterbody ID:			:
Atlantic Coast Pipeli	ne	Phillips Cam	np Run		sr	aa409		3/10/2016	
State:	County:		Company:		Crew N	lember Initials	:	Photos:	
ū	Randolph		NRG		GB, KM	T		3 photos	
Tract Number(s):			Nearest Mile	epost:		Associated W		ID(s):	
04-002-B001			54.35			WRAA430s	3		
Survey Type: (check one)	⊠Centerline	□Re-F	Route	□Access Road		□Other:			
Physical Attributes Stream Classification:	.								
(check one)	□Ephemera	ıl □Inter	mittent	⊠Perennial					
Waterbody Type: (check one)	River ⊠ Str	eam □ Dito	:h □ Ca	anal 🗆 Other:					
OHWM Width: 25.0 ft.	OHWM Indicat (check all that apply		⊠ Clear lin on bank	ne □Shelvin	g	□Wrested vegetation	×	Scouring	□Water staining
Height: 2.5 ft.	□Bent, n vegetatio	natted, or missin n	g ⊠Wrack lii	ne □Litter ar debris	nd	☐ Abrupt plan		□Soil charac	cteristic change
N/A□ Width of Waterbody - To			Toe of Slope	Width of Waterbo	ody - W	ater Edge to		of Water:	
Bank to Top of Bank:	to Toe	of Slope:		Water Edge:			(Approx.))	
_ <u>35.0</u> ft.	_	<u>15.0</u> ft.			20.0_ft.		N/A□	1.75	<u>5_</u> ft.
Sinuosity:		velocity:		Bank height			Bank s	slope	
(check one) ☐Straight	(Approx.)	. 75 (Right:	<u>5.0_</u> ft.			Right:	dograns
57.14		1.75fp	5	Left:	<u>J.U_</u> It.			Left:	<u>degrees</u>
⊠Meanderin	9 N/A□			_	<u>5.0</u> ft.			_70	degrees
Qualitative Attribut	tes								
Water Appearance: (check one) □	No water ⊠C	Clear □Turb	-	een □Sur surface scu		□Algal mats	□Othe	r:	
	Bedrock ⊠ Bo	ulder 🗵 Cobb	le 🗵 Grave	el 🗵 Sand 🛭	□ Silt/ c	lay 🗆 Organio	: 🗆 (Other:	
(check all that apply) % of Substrate:	% <u>15</u> %	60_%	<u>15</u> %	<u>10</u> %		<u></u> %%		%	
Width of Riparian Zone									
150_ft		apply) of Dominants:	⊠ Trees: _ <u>9.0</u> _in.		☑ Saplir _ <u>0.75</u> _iı	ngs/Shrubs: n.	×	☑ Herbs	
N/A □ Dominant Bank Vegetat	(approx.)								
Beech, eastern hem		rch, sugar ma	aple, green	brier, wood feri	n, hay	-scented feri	٦.		
Aquatic Habitats (ex: su	bmerged or emerged	d aquatic vegetation	n, overhanging	banks/roots, leaf pacl	ks, large	submerged wood	, riffles,	deep pools):	
Pools, riffles, woody	debris, overh	anging banks	and roots						
Aquatic Organisms Obs	served (list):								
invertebrates, fish, c	rayfish								
T&E Species Observed	(list):								
none									
Disturbances (ex: livesto		n waterbody, waste	e discharge pipe	es):					
Old strip mine on bo	7111 31UU3								
Tributary is: (check one)	Natural	□ Art	ificial, man-m	ade □ Manipu	ulated				
Stream Quality ^a : (check one)	☐ High	⊠ Mo	oderate	□ Low					

Waterbody ID: sraa409

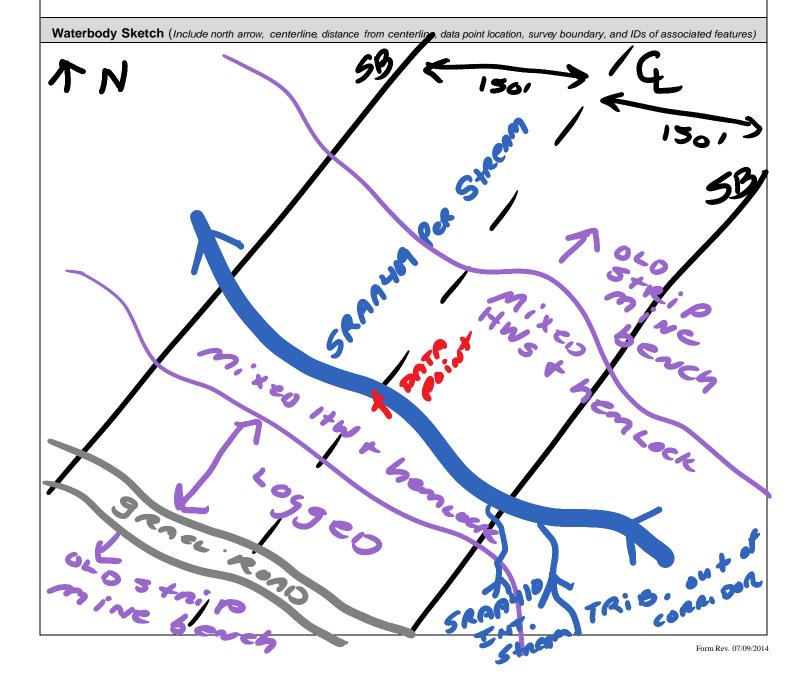
a High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

Stream continues out of corridor in both directions; forested buffer to old strip mine 120 feet to the N and 75 feet to the south to clearcut. Intermittent stream sraa410 is a tributary at edge of corridor.





Waterbody SRAA409 facing southeast upstream



Waterbody SRAA409 facing northwest downstream



Waterbody SRAA409 facing northeast across

Survey Description								
Project Name:		Waterbody Nar	ne:		W	aterbody ID:		Date:
Atlantic Coast Pipeli	ne	Short Run				aa411		3/11/2016
State:	County:		Company:		Crew N	lember Initials	: Photo	os:
West Virginia	Randolph		NRG		GB, KM		3 ph	notos
Tract Number(s):			Nearest Mile	post:		Associated W	etland ID(s)	:
04-002-B001			55.0			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	ınal 🗆 Other:				
OHWM Width: 13.0ft.	OHWM Indicat (check all that apply		⊠ Clear lin on bank	e □Shelvin	g	□Wrested vegetation	⊠Scou	ıring □Water staining
Height: ft. N/A□	□Bent, n vegetatio	natted, or missing	g □Wrack lir	ne ⊠Litter ar debris	nd	□Abrupt plan community ch		il characteristic change
Width of Waterbody - T Bank to Top of Bank:		of Waterbody - 7		Width of Waterbo Water Edge:	ody - W		Depth of Wa	ater:
ft.	_	10.0_ft.		· ·	<u>11.0_</u> ft.		N/A□	_ <u>0.75_</u> ft.
Sinuosity: (check one) ☐Straight	Water (Approx.)	/elocity : 1.75fps		Bank height Right: Left:	<u>12.0</u> ft.			ght:65_ degrees _eft:
⊠Meanderin	g N/A□				<u>15.0_</u> ft.			_75_ 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) % of Substrate:	Bedrock ⊠ Bo		le ⊠ Grave	sl ⊠ Sand □ _5_% _	□ Silt/ cl	lay ⊠ Organic % <u>5</u> %		%
Width of Riparian Zone 50 ft N/A□	(check all that		[⊠] Trees: _ <u>9.0</u> _in.		☑ Saplin _ <u>1.5</u> _in.	ngs/Shrubs:	⊠ Hert	os
Dominant Bank Vegeta	, ,							
Beech, eastern hem	llock, yellow bi	rch, sugar ma	aple, greenl	orier, wood feri	n, hay	-scented ferr	٦.	
Aquatic Habitats (ex: su Pools, riffles, woody				oanks/roots, leaf pacl	ks, large	submerged wood	, riffles, deep p	pools):
Aquatic Organisms Obsinvertebrates, crayfi	• •							
T&E Species Observed	(list):							
none								
Disturbances (ex: livesto Surrounding area ha		-		·				
Tributary is: (check one)	⊠ Natural		ificial, man-ma		ulated			
Stream Quality ^a :			derate	□ Low				

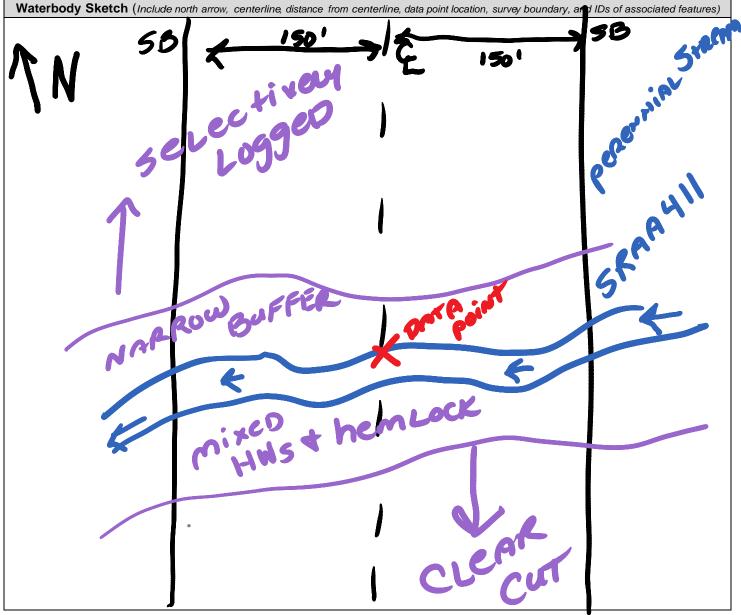
Waterbody sraa411	ID
sraa411	

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

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

Notes:

Stream continues out of corridor in both directions; narrow forested buffer intact; clear cut to south, selectively logged to north; numerous road cuts in logged areas.





Waterbody SRAA411 facing south upstream



Waterbody SRAA411 facing north downstream



Waterbody SRAA411 facing west across

Survey Description	1							
Project Name:		Waterbody Nar	ne:		W	aterbody ID:		Date:
Atlantic Coast Pipeli	ine	UNT to Left I	Fork Buckh	annon River	S	RAC128		4/25/2016
State:	County:		Company:		Crew N	Member Initials:	Photos:	
· ·	Randolph		NRG		CR, A		3	
Tract Number(s):	Nearest Mile	epost:		Associated We	tland ID(s):			
04-002-B001.AR7						None		
Survey Type: (check one)	□Centerline	□Re-F	Route	⊠Access Road		□Other:		
Physical Attributes Stream Classification:	S							
(check one)	Ephemera	ıl □Inter	mittent	⊠Perennial				
Waterbody Type: (check one)	River ⊠ Str	eam 🗆 Dito	:h □ Ca	anal 🗆 Other:	:			
OHWM Width: 10_ft.	OHWM Indicat (check all that apply			ne □Shelvin	g	□Wrested vegetation	□Scourin	ng □Water staining
Height: 1_ft. N/A□	□Bent, n vegetatio	natted, or missin n	g □Wrack li	ne ⊠Litter ar debris	nd	□Abrupt plant community cha		characteristic change
Width of Waterbody - T Bank to Top of Bank:		of Waterbody - ⁻	Toe of Slope	Width of Waterbo	ody - W		epth of Wate	er:
ft.		<u>3_</u> ft.			<u>10_</u> ft.	N	I/A□	ft.
Sinuosity: (check one) ☐Straight	Water (Approx.)	/elocity : 0.5fps		Bank height Right: Left:	<u>3_</u> ft.	В	ank slope Righ Lef	70 degrees
⊠Meanderir	ng N/A□				<u>3</u> ft.			70 degrees
Qualitative Attribu	tes							
Water Appearance: (check one)	No water ⊠C	Clear □Turb		een □Sui surface scu		□Algal □ mats	Other:	
(check all that apply)	Bedrock ⊠ Bo _% <u>10</u> %		le ⊠ Grave 40_%	el ⊠ Sand [□ Silt/ c _%	elay □ Organic%	☐ Other:	
Width of Riparian Zone	: Vegetative		⊠ Trees:		Z Sanlin	ngs/Shrubs:	⊠ Herbs	
_ <u>30_ft</u> - N/A□	ľ	of Dominants:	_ <u>12_in.</u>		⊴ 3apııı _2_in.	igs/Siliubs.	⊠ Heibs	
Dominant Bank Vegeta	tion (list):							
Yellow birch, Americ	can elm, red m	aple, beech,	violet, blac	kberry				
Aquatic Habitats (ex: su	bmerged or emerged	l aquatic vegetation	n, overhanging	banks/roots, leaf pac	ks, large	submerged wood, i	riffles, deep poo	ıls):
leaf packs, riffles, ro	ock piles, deep	pools, overha	anging root	ts/ banks, dowr	ned co	arse woody d	ebris	
Aquatic Organisms Ob	served (list):							
Caddisfly larvae, sa	lamander, drag	gonfly nymph	, water stric	ders, mosquito	larvae	9		
T&E Species Observed	(list):							
None								
Disturbances (ex: livesto	ock access, manure in	n waterbody, waste	discharge pipe	es):				
Flows over six 3' dia directly over the roa		s. As a result	of all six cu	llverts being bl	ocked	by gravel and	d cobble, th	e stream flows
Tributary is: (check one)	Natural	□ Art	ificial, man-m	ade 🗆 Manipi	ulated			
Stream Quality ^a : (check one)	☐ High	⊠ Mc	oderate	□ Low				

Waterbody	ID:
SRAC128	

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

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

Notes:



Waterbody SRAC128 facing southwest upstream



Waterbody SRAC128 facing northeast downstream



Waterbody SRAC128 facing southeast across

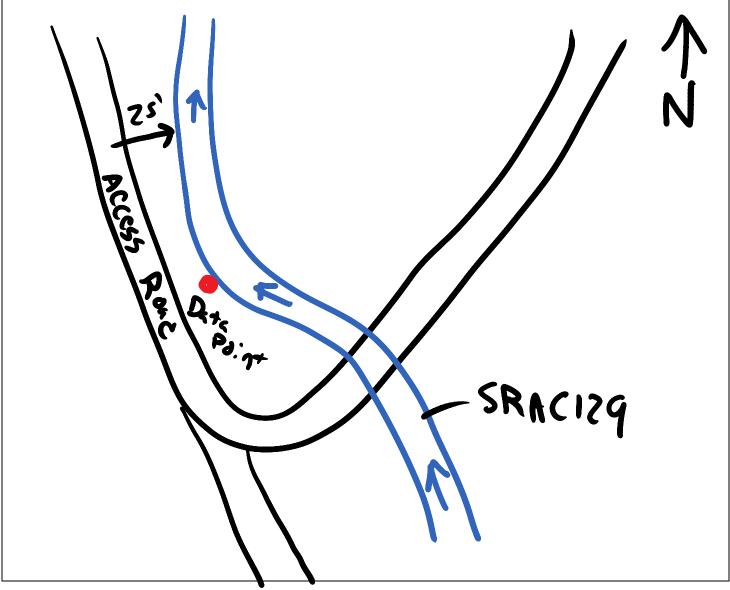
Survey Description Project Name:	<u> </u>	Waterbody Nai	ma:		l\A/	aterbody ID:		Date:
Atlantic Coast Pipel	ino	Long Run				RAC129		4/23/2016
		Long Kun						
State:	County:		Company:		Crew N	Member Initials:	Photos:	
West Virginia	Randolph		NRG		CR, A	\S	3	
Tract Number(s):			Nearest Mile	post:	•	Associated We	tland ID(s):	
04-002-B001.AR7						None		
Survey Type: (check one)	□Centerline	e □Re-F	Route	⊠Access Road		□Other:		
Physical Attributes Stream Classification:	8							
(check one)	Ephemera	al ⊠Inter	mittent	□Perennial				
Waterbody Type: (check one)	River ⊠ Str	eam 🗆 Dito	:h □ Ca	anal 🗆 Other:				
OHWM Width: 20 ft.	OHWM Indica (check all that apply			e □Shelvin	g	□Wrested vegetation	□Scourin	g □Water staining
Height: ft. N/A□	⊠Bent, r vegetatio	natted, or missin in		ne ⊠Litter ar debris	nd	☐ Abrupt plant community cha		haracteristic change
Width of Waterbody - T			Toe of Slope	Width of Waterbo	ody - W		epth of Wate	r:
Bank to Top of Bank:	to Toe	of Slope:		Water Edge:		(A	pprox.)	
<u>25</u> ft.	-	<u>5</u> ft.		_ N/A□	<u>18_</u> ft.	N	/A□	<u>0.4</u> ft.
Sinuosity:		velocity:		Bank height		В	ank slope	
(check one) ☐Straight	(Approx.)			Right:	_3ft.		Right	t: <u>70</u> degrees
⊠ Maandarin		_1_fps	Left:	Left:			Left:	
⊠Meanderir	ng N/A□				_ <u>5_</u> ft.			70 degrees
Qualitative Attribu	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) % of Substrate:	<u></u>	% <u>30</u> %	<u>40</u> %	<u>20 </u> %	_%	%	%	
Width of Riparian Zone	: Vegetative	e Layers:						
<u>30 ft</u> -		apply) of Dominants:			☑ Saplin _2_in.	ngs/Shrubs:		
N/A □ Dominant Bank Vegeta	(approx.)		_ _					
Yellow birch, easter		d maple, beed	h, red oak,	violet, blackbe	rry			
Aquatic Habitats (ex: su	bmerged or emerged	d aquatic vegetatio	n, overhanging l	banks/roots, leaf pac	ks, large	submerged wood, r	iffles, deep poo	ls):
leaf packs, riffles, ro	ock piles, dowr	ned coarse wo	ody debris					
Aquatic Organisms Ob	served (list):							
Caddisfly larvae, wa	ater striders							
T&E Species Observed	(list):							
None								
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes):								
Flows through acce	ss road 04-002	2-B001.AR10						
Tributary is: (check one)	Natural	□ Ari	ificial, man-ma	ade 🗆 Manipı	ulated			
Stream Quality ^a : (check one)	☐ High	⊠ Mo	oderate	□ Low				

Waterbody	ID:
SRAC129	

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

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

Notes:





Waterbody SRAC129 facing north upstream



Waterbody SRAC129 facing southeast downstream



Waterbody SRAC129 facing northeast across

Linear Waterbody	Data Sheet		SANCORYTHING-D	38465344		AST 5 () 5 () 5 () 5 ()		
Survey Description		Waterbody Nar	ne:	SECTION S	Wa	terbody ID:	C	Date:
roject Name: ACP			my Run			rap ool		3/14/16
ALBERT CHARLESTER INCOME OF		ULLES				ember Initials:	Photos:	
	ounty/Parish:		Company:		250000000000000000000000000000000000000	AS	NE.	W, N
WV	Randolph		ESI		TO COURSE OF SHEET SHEET	Associated Wetl		
ract Number(s): 04-002 -8001	į.		Nearest Milepos 55,3			Wrap00	3 e	
Survey Type: check one)	□Centerline	□Re-F	Route [1Access Road	1	□Other:	e serve her or or	FF FERENCE P. 709-329
Physical Attributes	在國際開發						Dielegan	HAZ G TO MANTENIA
Stream Classification: check one)	□Ephemera	ıl ⊠ınter	mittent [∃Perennial				
Naterbody Type: check one) □Ri	ver 🗹 Str	eam 🗆 Dito	h 🗆 Cana	□ Other				
OHWM . Width: 3 ft.	OHWM Indica (check all that apply		Clear line on bank	□Shelvin	g	□Wrested vegetation	Scouring	staining
Height:ft.	☑Bent, n vegetatio	natted, or missin n	g ⊠Wrack line	□Litter ar debris	nd	☐Abrupt plant community chan	ige	naracteristic change
V/A□ Width of Waterbody - Top	of Width	of Waterbody -	Toe of Slope Wi	dth of Waterb	ody - Wa	iter Edge to De	pth of Water	:
Bank to Top of Bank:	to Toe	of Slope:	Wa	iter Eage:				0.5 ft.
	_	T_ft.	N/		ft.	N/	A□ -	
1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	Water	velocity:	DESCRIPTION OF SHORE SALAR	nk height		Ва	ank slope	
Sinuosity: check one)	(Арргох.)			Right:	2		Right	: 40 degrees
□Straight		_ Z_f	ps	Left:	2 ft		Left	CA
	N/A□				L n			degrees
			(C)	HI SHE				
Qualitative Attribute Water Appearance:	S				CONTRACTOR OF THE STATE OF THE			The state of the s
check one)	o water	Člear □Turb	oid □Sheer on su	face sc	rface um	mats	Other:	
Substrate: D B	edrock □ Bo	ulder E Cobb	ole Gravel	☐ Sand	Silt/ cl	ay 🗆 Organic	☐ Other:	
check all that apply) % of Substrate:	%	% 5	% 10%	40 %	45%	6%	%	
76 Of Substrate.				A TOWNS OF THE STATE OF				Approximate the state of the st
Width of Riparian Zone:	Vegetativ	AND THE LOCAL CONTRACTOR AND ADDRESS OF THE PARTY OF THE	□ Trees:		□ Sanlin	gs/Shrubs:	Herbs	
40 ft	(check all that	of Dominants:	in.		<u> Зарши</u>	두세명에게 사용하다 아니저 사용하다	N/A in	.
VAC	(approx.)			gental de la	entrocter en			A TO A DESCRIPTION OF THE RESERVE
Dominant Bank Vegetation								
Rubus arguins, ?	Juneus ef	fusus, Lei	ersia Virgi	nica			Man Harran	le)•
Aquatic Habitats (ex subr	nerged or emerge	d aquatic vegetation	on, overhanging bar	ks/roots, leaf pa	cks, large	submerged wood, r	mes, deep poo	13):
submerged wo								Section of the section
Aquatic Organisms Obse				7 ya 100 130 2000 2017 - 131 131 131				
None observed								
T&E Species Observed (list):							
None observed								
Disturbances (ex. livestoc	k access, manure	in waterbody, was	te discharge pipes):					
Logging activ								And the second s
Tributary is: (check one)	□ Natural	ΠA	rtificial, man-mad	e 🖬 Manij	pulated			
Stream Quality :: (check one)	□ High	EV.M	oderate	□ Low				THE RESERVE
periorn unul	1 40411	NAME OF TAXABLE PARTY OF TAXABLE PARTY.	THE PERSON NAMED IN COLUMN 2 I	THE RESERVE THE PARTY OF THE PA			The Person of th	COUNTY OF CASE OF THE PARTY AND SERVICE OF THE

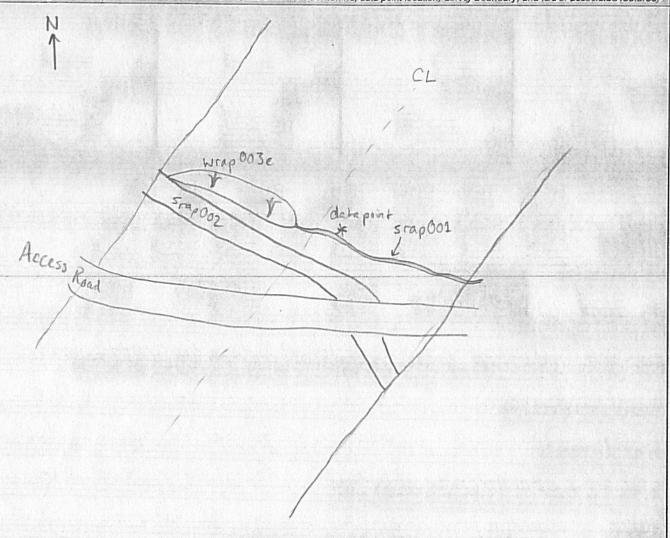
Wa	iter	bo	dy	ID:	
5	ra	P	0	01	

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:

Channel altered by logging road



Environmental Field Surveys Waterbody Photo Page



Waterbody srap001 facing northeast upstream.



Waterbody srap001 facing west downstream.

Environmental Field Surveys Waterbody Photo Page



Waterbody srap001 facing north across bank.

Linear Waterbody Data Shee					AND STREET STREET, STREET STREET
Survey Description	Waterbody Na	y-amoral-state	2.4526542	Waterbody ID:	Date:
Project Name:				3/14/2016	
ACP	Long R	un		srap 002	Charles of the control of the contro
State: County/Parish:		Company:		Crew Member Initial	
WV Randolph		ESI		RT, AS	F,W, S, Road
Tract Number(s): 04-002-8001	Nearest Milepost: Associated Wetland ID(s):				
Company of the Compan					
Survey Type: (check one)	e □Re-F	Route \square	Access Road	□Other:	AND
Physical Attributes					
Stream Classification: (check one) □Ephemer	al □Inter	mittent 4	Perennial		
Waterbody Type: (check ane) □River □Str	eam 🗆 Dito	ch 🗆 Canal	□ Other		
OHWM OHWM Indica (check all that appl)		Clear line on bank	⊠Shelvin	g □Wrested vegetation	回Scouring □Water staining
Height: 2 ft. ⊠Bent, r	matted, or missin	ng EWrack line	□Litter ar debris	nd	hange
Width of Waterbody - Top of Width	of Waterbody -	Toe of Slope Wid	th of Waterb er Edge:	ody - Water Edge to	Depth of Water: (Approx.)
<u>15</u> ft.	10 ft.	N/A!		9ft.	<u> </u> ft.
Sinuosity: Water (Approx.)	velocity:	Ban	k height Right:	4 .	Bank slope Right: O degrees
⊠Meandering N/A□		ps	Left:	6 n.	Left: 80 degrees
Ovelitative Attributes		Varietis (1941)			
Qualitative Attributes Water Appearance:					Carried Street, and a second second
(check one)	Clear □Turb	oid □Sheen on surfa		um mats	□Other:
Substitute.	oulder Cobb			□ Silt/ clay □ Organ %	ic
Width of Riparian Zone: Vegetativ		□ Trees:	[Saplings/Shrubs:	Herbs
N/A (approx.)		in.		AND AND DESCRIPTION OF THE PARTY OF THE PART	
Dominant Bank Vegetation (list): Fagus grandifolia, Rub	us argut	s, Carex	5p.		
Aquatic Habitats (ex: submerged or emerge	d aquatic vegetation	on, overhanging banks	s/roots, leaf pag	cks, large submerged woo	od, riffles, deep pools):
Riffles, deep pools, over					
Aquatic Organisms Observed (list):					
hone observed					
T&E Species Observed (list):		1 141 1 1 1 1 1 1 1 1 1 1			
none observed					
Disturbances (ex: livestock access, manure	in waterbody, was	te discharge pipes):			
Access road crossing					
Tributary is: (check one)	ΠA	rtificial, man-made	☑Manip	oulated	
Stream Quality *:		loderate	□ Low		

Waterbody ID: Srap 802

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.

from livestock or man. Notes: Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features) Wrap003e 5rep 001 Access Road

Environmental Field Surveys Waterbody Photo Page



Waterbody srap002 facing east upstream.



Waterbody srap002 facing west downstream.

Environmental Field Surveys Waterbody Photo Page



Waterbody srap002 facing south across bank.



Waterbody srap002 at road crossing

Survey Description	1							
Project Name:		Waterbody Na	ne:		w	aterbody ID:		Date:
Atlantic Coast Pipeli	ne	UNT to Long	Run		SI	RAC130		4/25/2016
State:	County:		Company:		Crew N	Member Initials:	Photos	s:
ŭ .	Randolph		NRG		CR, A		3	
Tract Number(s):			Nearest Mile	epost:		Associated We	etland ID(s):	
04-002-B001.AR7						None		
Survey Type: (check one)	□Centerline	e □Re-F	Route	⊠Access Road		□Other:		
Physical Attributes Stream Classification:	S							
(check one)	Ephemera	al ⊠Inter	mittent	□Perennial				
Waterbody Type: (check one)	River ⊠ Str	eam 🗆 Dito	:h □ Ca	anal 🗆 Other:				
OHWM Width:	OHWM Indica (check all that appl)		☐ Clear lin	e □Shelvin	g	□Wrested vegetation	□Scouri	ng □Water staining
Height: ft. N/A□	□Bent, r vegetatio	matted, or missin on	g □Wrack lii	ne ⊠Litter ar debris	nd	□Abrupt plant community cha		characteristic change
Width of Waterbody - T Bank to Top of Bank:		of Waterbody - of Slope:	Toe of Slope	Width of Waterbo	ody - W		Depth of Wat	er:
_ <u>18_</u> ft.		_1_ft.		N/A□	_4_ft.	, 	√A□	<u>0.2</u> ft.
Sinuosity: (check one) ⊠Straight	(Арргох.)	velocity: 0.5fps		Bank height Right: Left:	<u>3_</u> ft.	E	Bank slope Rigi Le	50 degrees
	- [.,,,=				_4_ft.			_70_ degrees
Qualitative Attribut Water Appearance:	es							
(check one)	No water ⊠0	Clear □Turb	-	een □Sur surface scu		□Algal □ mats	Other:	
(check all that apply)	Bedrock ⊠ Bo	oulder ⊠ Cobb % <u>30</u> %	le ⊠ Grave	el ⊠ Sand □ 20_%	□ Silt/ c %	lay □ Organic%	□ Other:	
Width of Riparian Zonet. N/A⊠	(check all that		⊠ Trees: _ <u>12</u> _in.		☑ Saplin _2_in.	ngs/Shrubs:	⊠ Herbs	3
Dominant Bank Vegeta Yellow birch, easter		d maple, beed	h, violet, bl	ackberry				
Aquatic Habitats (ex: su None		d aquatic vegetatio	n, overhanging	banks/roots, leaf pac	ks, large	submerged wood,	riffles, deep po	ols):
Aquatic Organisms Obs None								
T&E Species Observed None	(list):							
	ok access manus:	n waterhadira-t-	discharge nice	ne).				
Disturbances (ex: liveston Flows through a 3' of the state of the st				:5):				
Tributary is: (check one)	Natural		ificial, man-m	ade □ Manipu	ulated			
Stream Quality ^a : (check one)	☐ High	⊠ Mo	oderate	□ Low				

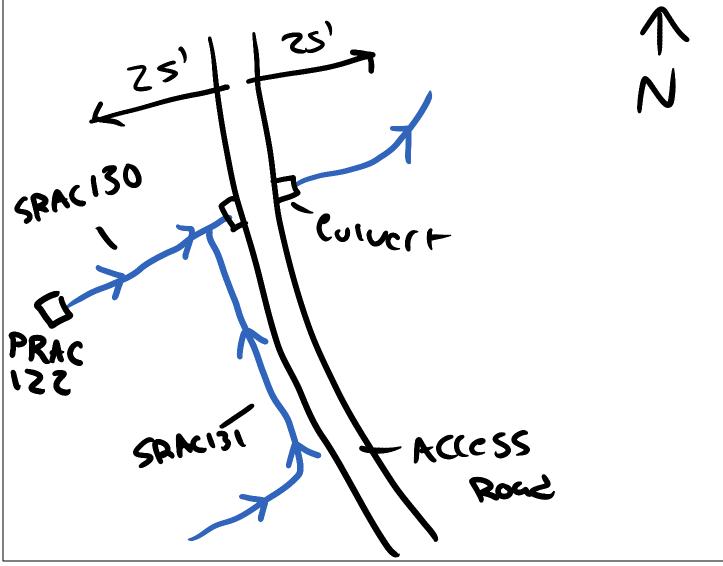
^a High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

Spring fed stream





Waterbody SRAC130 facing southwest upstream



Waterbody SRAC130 facing northeast downstream



Waterbody SRAC130 facing southeast across

Survey Description) 1							
Project Name:	-	Waterbody Nai	ne:		W	aterbody ID:		Date:
Atlantic Coast Pipeli	ne	UNT to Long	Run		S	RAC131		4/25/2016
State:	County:	1	Company:		Crew N	Member Initials:	Phot	tos:
ŭ .	Randolph		NRG		CR, A	NS	3	
Tract Number(s):			Nearest Mile	epost:		Associated W	etland ID(s):
04-002-B001.AR7						None		
Survey Type: (check one)	□Centerline	e □Re-F	Route	⊠Access Road		□Other:		
Physical Attributes Stream Classification:	5							
(check one)	Ephemera	al ⊠Inter	mittent	□Perennial				
Waterbody Type: (check one)	River ⊠ Str	eam 🗆 Dito	:h □ Ca	anal 🗆 Other:	:			
OHWM Width:	OHWM Indica (check all that appl)		⊠ Clear lin on bank	e □Shelvin	g	□Wrested vegetation	□Sco	uring □Water staining
Height: 	□Bent, r vegetatio	matted, or missin on	g □Wrack lii	ne ⊠Litter ar debris	nd	□ Abrupt plant community ch		oil characteristic change
Width of Waterbody - T Bank to Top of Bank:		of Waterbody -	Toe of Slope	Width of Waterbo	ody - W		Depth of W	ater:
_ <u>5_</u> ft.		_1_ft.			_2_ft.	I	N/A□	ft.
Sinuosity: (check one) ⊠Straight □Meanderin	(Approx.)	velocity: 0.5fps		Bank height Right: Left:	<u>3_</u> ft.			ight: <u>50_</u> degrees Left:
	- [.,,,=				_4_ft.			_70_ degrees
Qualitative Attribut Water Appearance:	ies							
(check one)	No water ⊠0	Clear □Turb	-	een □Sur surface scu		□Algal [mats	□Other:	
(check all that apply)	Bedrock ⊠ Bo	oulder ⊠ Cobb % <u>30</u> %	le ⊠ Grave	el ⊠ Sand □ %	□ Silt/ c %	lay □ Organic		". %
Width of Riparian Zonett. N/A⊠	(check all that		□ Trees: in.		⊠ Saplir _1_in.	ngs/Shrubs:	⊠ Hei	rbs
Dominant Bank Vegeta cherry, beech, violet								
Aquatic Habitats (ex: su None	bmerged or emerge	d aquatic vegetatio	n, overhanging	banks/roots, leaf pac	ks, large	submerged wood,	riffles, deep	pools):
Aquatic Organisms Obs None								
T&E Species Observed None	(list):							
Disturbances (ex: livesto	ck access manure i	n waterhody waste	discharge nine	es):				
Stream is primarily I		-						
Tributary is: (check one)	Natural	□ Art	ificial, man-m	ade □ Manipu	ulated			
Stream Quality ^a : (check one)	☐ High	□ Мо	oderate	⊠ Low				

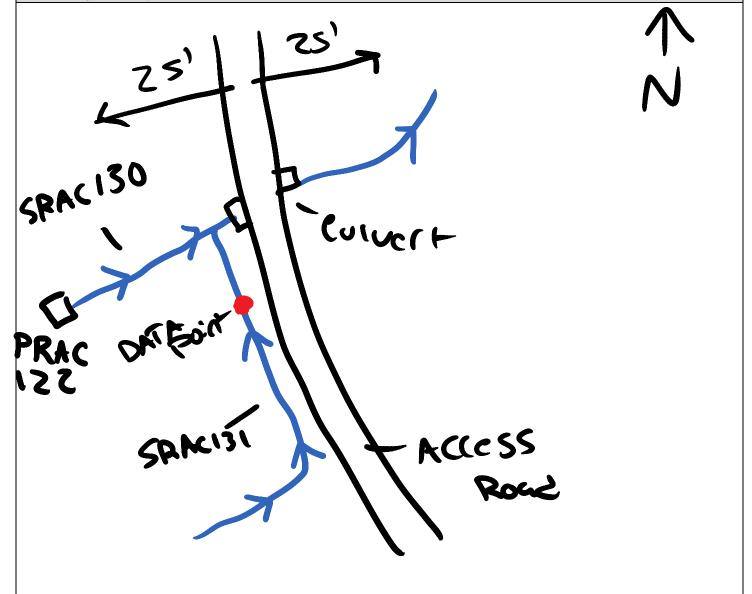
^a High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

Spring fed stream





Waterbody SRAC131 facing southeast upstream



Waterbody SRAC131 facing northwest downstream



Waterbody SRAC131 facing northeast across

Survey Description	1								
Project Name:	•				Waterbody ID:			Oate:	
Atlantic Coast Pipeli	ne	UNT to Fallir	ng Spring R	lun	Sı	rac139		4	/28/2016
State:	County:		Company:		Crew N	Member Initials	: l	Photos:	
ū	Randolph		NRG		CR, A			3	
Tract Number(s):			Nearest Mile	post:		Associated W	etland	ID(s):	
04-002-B025.AR						None			
Survey Type: (check one)	□Centerline	e □Re-F	Route	⊠Access Road		□Other:			
Physical Attributes Stream Classification:	3								
(check one)	Ephemera	al ⊠Inter	mittent	□Perennial					
Waterbody Type: (check one)	River ⊠ Str	eam 🗆 Dito	:h □ Ca	anal 🗆 Other	:				
OHWM Width: 10_ft.	OHWM Indica (check all that apply			e □Shelvin	g	□Wrested vegetation		Scouring	□Water staining
Height: ft. N/A□	□Bent, n vegetatio	natted, or missin n	g □Wrack lii	ne ⊠Litter ar debris	nd	☐ Abrupt plan community ch		□Soil ch	aracteristic change
Width of Waterbody - To Bank to Top of Bank:		of Waterbody - ⁻ of Slope:	Toe of Slope	Width of Waterbown	ody - W		Depth (Approx.)	of Water:	
_ <u>15_</u> ft.	_	_2_ft.		 N/A□	<u>10</u> ft.		N/A□	-	<u>0.6</u> ft.
Sinuosity: (check one) □ Straight	(Approx.)	velocity:		Bank height Right: Left:	_4_ft.		Bank s	lope Right: Left:	60 degrees
	14/1				_2_ft.				
Qualitative Attribut Water Appearance:	ies								
(check one)	No water □0	Clear ⊠Turb		een □Sui surface scu		□Algal [mats	□Other	:	
(check all that apply)	Bedrock ⊠ Bo % <u>5</u> %		le ⊠ Grave _65_%	el ⊠ Sand [□ Silt/ c	lay □ Organic _%%		Other: %	
Width of Riparian Zone 50 ft N/A□	(check all that		⊠ Trees: _ <u>12</u> _in.		⊠ Saplir _2_in.	ngs/Shrubs:		Herbs	
° Dominant Bank Veget American elm, red n	, ,	vellow birch, b	eech, May	-apple, golden	rod, bl	ackberry, da	ndelic	on, yarro	ow
Aquatic Habitats (ex: sul Rock piles, riffles, le		d aquatic vegetation	n, overhanging	banks/roots, leaf pac	ks, large	submerged wood	, riffles, o	deep pools):
Aquatic Organisms Obs									
None									
T&E Species Observed	(list):								
None									
Disturbances (ex: livesto Flows through 4' cul			e discharge pipe	es):					
Tributary is: (check one)	⊠ Natural		ificial, man-m	ade □ Manip	ulated				
Stream Quality ^a : (check one)	□ High		oderate	☐ Low					

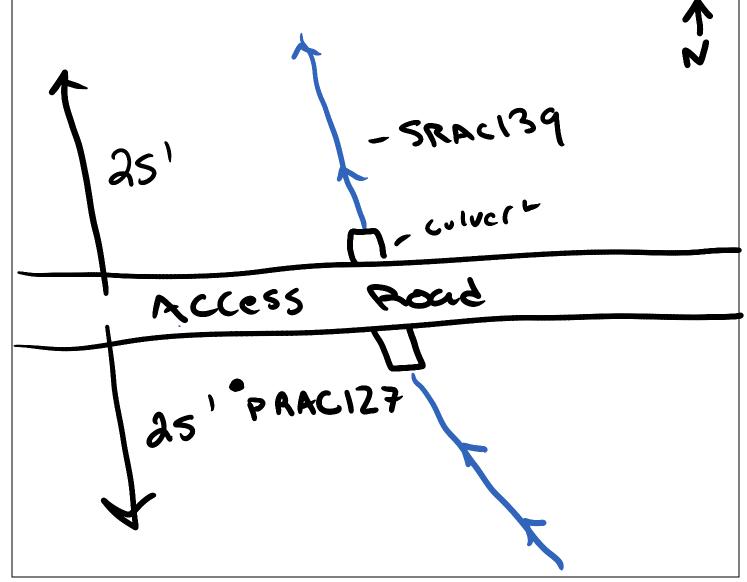
^a High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

Stream is at the OHWM. Recent heavy rain ending a few hours ago





Waterbody SRAC139 facing southeast upstream



Waterbody SRAC139 facing northwest downstream



Waterbody SRAC139 facing northeast across

Survey Description	1								
Project Name:		Waterbody Name:			W	aterbody ID:		Date:	
Atlantic Coast Pipeli	ne	UNT to Fallir	ng Spring R	lun	S	RAC155		4/29/2	016
State:	County:	•	Company:		Crew N	Member Initials:	Pho	otos:	
	Randolph		NRG		CR, A		3		
Tract Number(s):			Nearest Mile	epost:		Associated We	etland ID(s	s):	
04-002-B025.AR						None			
Survey Type: (check one)	□Centerline	e □Re-F	Route	⊠Access Road		□Other:			
Physical Attributes Stream Classification:	3								
(check one)	⊠Ephemera	al □Inter	mittent	□Perennial					
Waterbody Type: (check one)	River □ Str	eam ⊠ Dito	:h □ Ca	anal 🗆 Other:					
OHWM Width:	OHWM Indica (check all that apply		☐ Clear lin	e □Shelvin	g	□Wrested vegetation	□Sco		⊒Water staining
Height: 0.3 ft.	□Bent, r vegetatio	matted, or missin on	g □Wrack lii	ne ⊠Litter ar debris	nd	□Abrupt plant community cha		Soil character	istic change
Width of Waterbody - To			Toe of Slope	Width of Waterbo	ody - W		Depth of V	Vater:	
Bank to Top of Bank:	to roe	of Slope:		Water Edge:			Арргох.)		
<u>6</u> ft.	_	_1ft.		N/A□	<u>3</u> ft.	1	N/A□	<u>0.2_</u> ft	
Sinuosity: (check one)		velocity:		Bank height		Ī	Bank slop	е	
⊠Straight	(Approx.)			Right:	_2_ft.		F	Right:	legrees
	_	_1_fps		Left:				Left:	
□Meanderin	9 N/A□				_2_ft.			_ <u>60</u> _c	legrees
Qualitative Attribut	tes								
Water Appearance: (check one)	No water ⊠0	Clear □Turb	-	een □Sur surface scu		□Algal □ mats	☐Other:		
	Bedrock ☐ Bo	oulder 🗵 Cobb	le ⊠ Grave	el 🗵 Sand 🛭	⊠ Silt/ c	clay 🗆 Organic	☐ Othe	er:	
(check all that apply) % of Substrate:	%%	<u>10</u> %	<u>45</u> %	<u>35</u> %	<u>10_</u> %	%		_%	
Width of Riparian Zone									
<u>ft</u> .	_	of Dominants:	⊠ Trees: _8_in.		⊠ Saplir _ <u>2</u> _in.	ngs/Shrubs:	⊠ He	erbs	
N/A⊠ ° Dominant Bank Veget	ation (list):								
Tulip poplar, Americ sumac	• •	aple, locust, y	ellow birch	, beech, May-a	apple,	goldenrod, b	lackberr	y, dandelic	on, yarrow,
Aquatic Habitats (ex: su	bmerged or emerge	d aquatic vegetatio	n, overhanging	banks/roots, leaf pac	ks, large	submerged wood,	riffles, deep	pools):	
None									
Aquatic Organisms Obs	served (list):								
T&E Species Observed	(list)·								
None	(moty:								
Disturbances (ex: livesto	ck access, manure i	n waterbody, waste	discharge pipe	es):					
Located within roads	side ditch flow	s through an	18" culvert						
Tributary is: (check one)	☐ Natural	□ Ari	ificial, man-m	ade ⊠ Manipı	ulated				
Stream Quality ^a : (check one)	☐ High	⊠ Mo	oderate	□ Low					

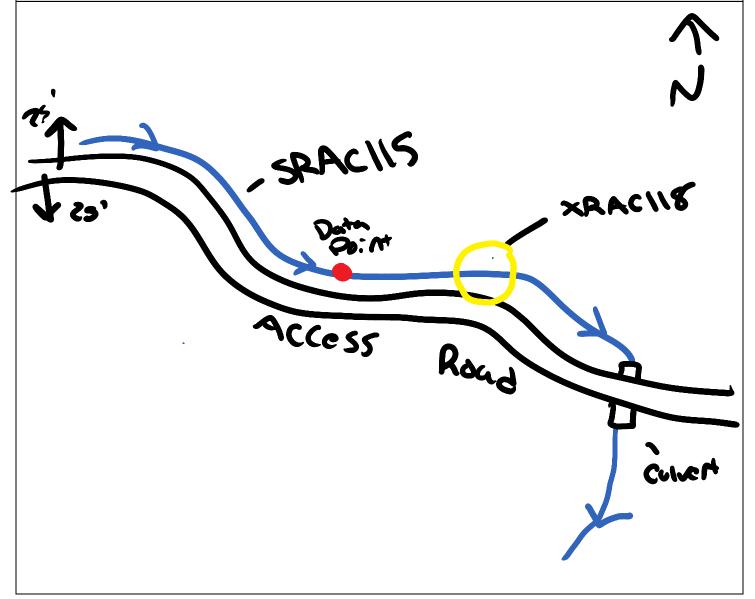
^a High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

Recent heavy rain ending a few hours ago. Stream located with a roadside ditch and it receives water input from seeps





Waterbody SRAC155 facing west upstream



Waterbody SRAC155 facing east downstream



Waterbody SRAC155 facing north across