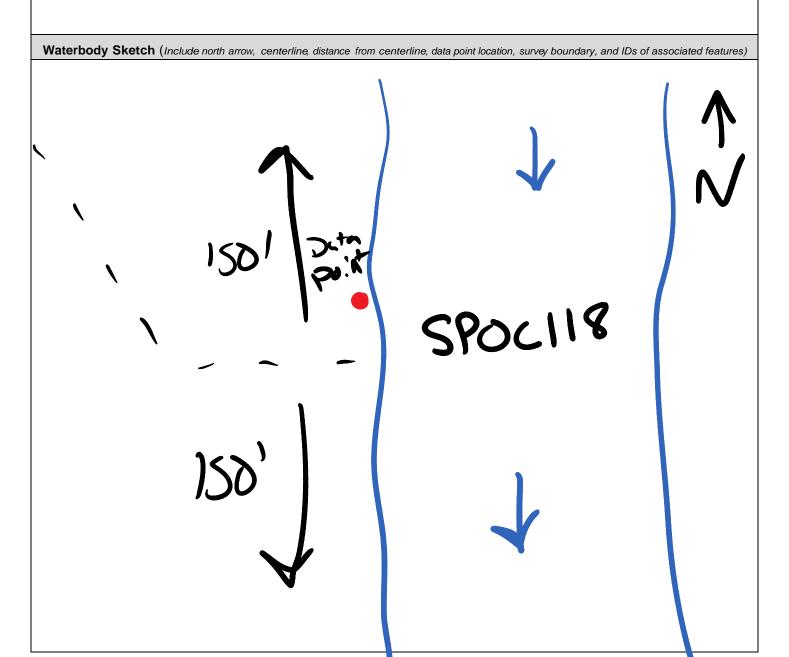
Survey Description	1								
Project Name:		Waterbody Nar	ne:		W	aterbody ID:		Da	ate:
Atlantic Coast Pipeli	ne	Greenbrier R	liver		S	POC118		3/	24/2016
State:	County:	•	Company:		Crew N	lember Initials:	Ph	otos:	
West Virginia	Pocahontas		NRG		SA, C	CR	3		
Tract Number(s):			Nearest Mile	post:		Associated We	etland ID	(s):	
						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	eam 🗆 Dito	:h □ Ca	anal 🗆 Other:	:				
OHWM Width:	OHWM Indication		⊠ Clear lin	e □Shelvin	a	□Wrested		couring	□Water
170 ft.		,	on bank		9	vegetation		Journing	staining
Height: _4_ft. N/A□	⊠Bent, n vegetatio	natted, or missin n	g ⊠Wrack lir	ne ⊠Litter ar debris	nd	☐ Abrupt plant community cha		Soil cha	racteristic change
Width of Waterbody - T			Toe of Slope	Width of Waterbo	ody - W		Depth of	Water:	
Bank to Top of Bank:	to Toe	of Slope:		Water Edge:		(Approx.)		
<u>200</u> ft.	-	ft.		 N/A□	f		√A□		ft.
Sinuosity:	Water	velocity:		Bank height			Bank slo	pe	
(check one) Straight	(Approx.)	•		Right:				Right:	
□ Straight		<u>0.5</u> fps	<u>12</u> ft. Left:			Left:		60 degrees	
⊠Meanderin	g N/A□				<u>10_</u> ft.				60 degrees
Qualitative Attribut	tes								
Water Appearance: (check one)	No water ⊠0	Clear □Turb		een □Sur surface scu		□Algal □ mats	Other:		
Substrate:	Bedrock ⊠ Bo	ulder 🗵 Cobb				lay 🗆 Organic	☐ Oth	er.	
(check all that apply)						, ,	_ 0		
% of Substrate:	% <u>20</u> %	% <u>20</u> %	<u>60</u> %	% _		_%%		%	
Width of Riparian Zone	: Vegetative (check all that		⊠ Trees:	5	Z Sanlin	ngs/Shrubs:	M H	lerbs	
<u>100_ft</u> . N/A□	l'	of Dominants:	_ <u>16_</u> in.		⊴ Sapııı _2_in.	igs/Siliubs.	ΔП	ieibs	
Dominant Bank Vegeta									
Sycamore, red oak,	white pine, hig	hbush bluebe	erry						
Aquatic Habitats (ex: su	bmerged or emerged	d aquatic vegetation	n, overhanging l	banks/roots, leaf pac	ks, large	submerged wood,	riffles, dee	ep pools):	
Riffles, pools, subm	erged vegetati	on							
Aquatic Organisms Obs	served (list):								
Caddisfly larvae, fisl	n, crayfish								
T&E Species Observed	(list):								
None									
Disturbances (ex: livesto	ck access, manure i	n waterbody, waste	discharge pipe	s):					
None									
Tributary is: (check one)	Natural	□ Art	ificial, man-ma	ade 🗆 Manipı	ulated				
Stream Quality ^a : (check one)	☐ High	⊠ Mo	derate	□ Low					

Waterbody ID:
SPOC118

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 SPOC118 facing northeast upstream



Waterbody SPOC118 facing southwest downstream



Waterbody SPOC118 facing southeast across

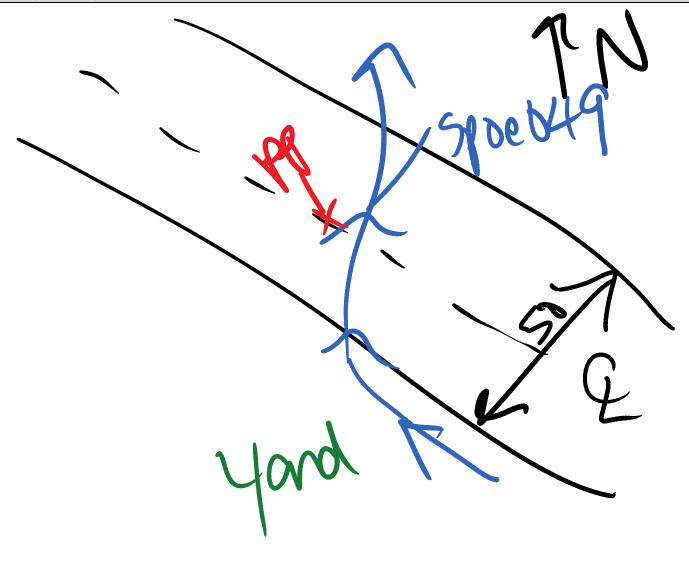
0								
Survey Description Project Name:	1	Waterbody Nar	ne.		lw	/aterbody ID:		Date:
Atlantic Coast Pipeli	ne	UNT to Gree		r		poe049		8/1/2016
State:	County:		Company:		Crew N	Member Initials:	Photo	s:
West Virginia	Pocahontas		NRG		CG, A	AS	1-3	
Tract Number(s):			Nearest Mile	post:	ı	Associated We	etland ID(s):	
05-001-E107			NA			fringe		
Survey Type: (check one)	□Centerline	Re-F	Route	⊠ Access Roa	d	□Other:		
Physical Attributes Stream Classification:	3							
(check one)	⊠Ephemera	al □Inter	mittent	□Perennial				
Waterbody Type: (check one)	River ⊠ Str	eam 🗆 Ditc	h □ Ca	ınal 🗆 Othe	r:			
OHWM Width:	OHWM Indication (check all that apply		☐ Clear lin	e □Shelvir	ng	□Wrested vegetation	□Scou	ring □Water staining
Height: 	⊠Bent, n vegetatio	natted, or missing	g □Wrack lir	ne □Litter a debris	ind	☐Abrupt plant community cha		il characteristic change
Width of Waterbody - To Bank to Top of Bank:		of Waterbody - 7		Width of Waterk Water Edge:	ody - W		Depth of Wa	ter:
		ft.			f	t.	N/A⊠	ft.
Sinuosity: (check one) ⊠Straight	Water (Approx.)	velocity: fp		Bank height Right: Left:	_1_ft.	E	3ank slope Riç L	ght: <u>45_</u> degrees eft:
□Meanderin	9 N/A⊠				_1_ft.			_45_ degrees
Qualitative Attribut	tes							
Water Appearance: (check one) ⊠	No water □0	Clear □Turb			urface cum	□Algal □ mats	☐Other:	
Substrate: (check all that apply) % of Substrate:	Bedrock	ulder ⊠ Cobb % <u>45</u> %	le ⊠ Grave	el □ Sand %	⊠ Silt/ c _45_%	clay □ Organic %	☐ Other:	6
Width of Riparian Zone ft N/A⊠	(check all that		⊠ Trees: _8_in.		□ Saplir	ngs/Shrubs: _in.	⊠ Herb	s
Dominant Bank Vegetar Wingstem, cherry, s								
Aquatic Habitats (ex: su none	bmerged or emerged	aquatic vegetation	n, overhanging t	oanks/roots, leaf pa	cks, large	submerged wood,	riffles, deep p	ools):
Aquatic Organisms Obs	served (list):							
none								
T&E Species Observed	(list):							
none								
Disturbances (ex: livesto	ck access, manure i	n waterbody, waste	discharge pipe	s):				
Adjacent to yard		•	0	,				
Tributary is: (check one)	☐ Natural	□ Art	ificial, man-ma	ade ⊠ Manip	oulated			
Stream Quality ^a : (check one)	☐ High	□ Мо	derate	⊠ Low				

Waterbody	IC
Spoe049	

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 spoe049 facing south upstream



Waterbody spoe049 facing north downstream



Waterbody spoe049 facing east across

0								
Survey Description Project Name:		Waterbody Nar	ne.		lw:	aterbody ID:		Date:
Atlantic Coast Pipeli	ne	UNT to Gree				ooe050		8/1/2016
State:	County:		Company:		Crew M	lember Initials:	Photos	
	Pocahontas		NRG		CG, A	S	1-3	
Tract Number(s):			Nearest Milep	ost:	l	Associated We	etland ID(s):	
05-001-E051			NA			none		
Survey Type: (check one)	□Centerline	Re-R	oute	⊠Access Road		□Other:		
Physical Attributes				El tococo ricad				
Stream Classification: (check one)	⊠Ephemera	al □Inter	mittent	□Perennial				
Waterbody Type: (check one)	River ⊠ Str	eam 🗆 Ditc	h □ Car	nal 🗆 Other:				
OHWM Width:	OHWM Indicat (check all that apply		☐ Clear line	e □Shelving	g	□Wrested vegetation	⊠ Scour	ing □Water staining
Height: 	⊠Bent, n vegetatio	natted, or missing	g □Wrack line	e □Litter ar debris	nd	☐ Abrupt plant community cha		characteristic change
Width of Waterbody - To Bank to Top of Bank:		of Waterbody - 7		Width of Waterbo Water Edge:	ody - Wa		Depth of Wat	er:
_ <u>10_</u> ft.		3_ft.		N/A⊠	ft		N/A⊠	ft.
Sinuosity: (check one) ⊠Straight	(Approx.)	velocity: fp		Bank height Right: Left:	<u>2</u> ft.	E	Bank slope Rig Le	ht:
□Meanderin	14/7.2				_2_ft.			40 degrees
Qualitative Attribut	es							
Water Appearance: (check one) ⊠	No water □C	Clear □Turb		en □Sur surface scu		□Algal □ mats	Other:	
Substrate: (check all that apply) % of Substrate:	Bedrock ⊠ Bo %30%		le ☐ Gravel		⊠ Silt/ cl	ay □ Organic%	□ Other:	
Width of Riparian Zone ft N/A⊠	(check all that		⊠ Trees: _ <u>12</u> _in.		☑ Saplin _1_in.	gs/Shrubs:	⊠ Herbs	3
Dominant Bank Vegetat	tion (list):							
Oak, witch hazel, ne	tue, iem							
Aquatic Habitats (ex: sul none	bmerged or emerged	d aquatic vegetation	n, overhanging ba	anks/roots, leaf pacl	ks, large :	submerged wood,	riffles, deep po	ools):
Aquatic Organisms Obs	served (list):							
none	, ,							
T&E Species Observed	(list):							
none								
Disturbances (ex: livesto	ck access, manure i	n waterbody, waste	discharge pipes):				
Terminates at roadv								
Tributary is: (check one)	☐ Natural	□ Art	ificial, man-ma	de 🗵 Manipu	ulated			
Stream Quality ^a : (check one)	☐ High	□ Мо	derate	⊠ Low				

Waterbody ID: Spoe050

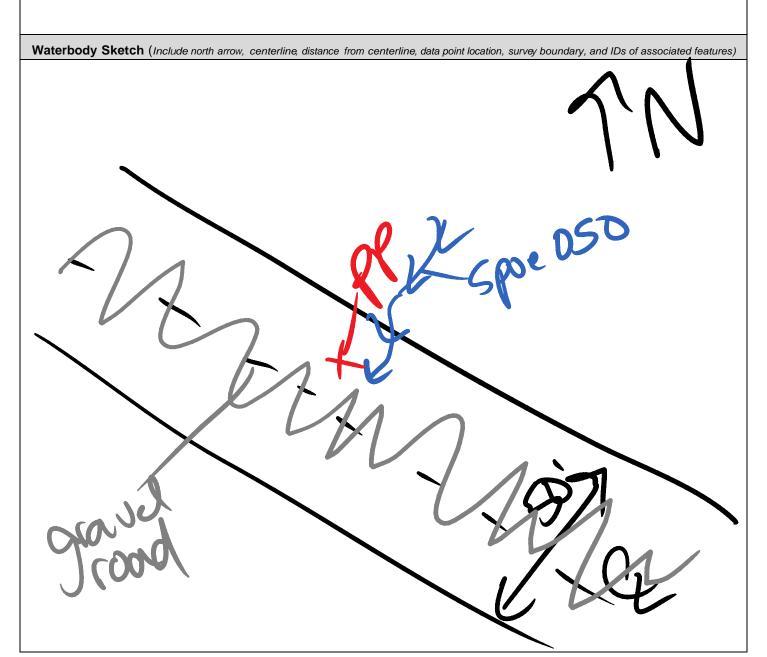
^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

Terminates at gravel road





Waterbody spoe050 facing northeast upstream



Waterbody spoe050 facing southwest downstream



Waterbody spoe050 facing northwest across

Survey Description Project Name:	1	Waterbody Nar	no-		w	aterbody ID:		Date:
Atlantic Coast Pipeli	UNT to Laurel Run				poe012		3/24/2016	
State:	County:		Company:		Crew N	Member Initials:	Photos	<u> </u>
West Virginia	Pocahontas		NRG		CG, A	NS	1-3	
Tract Number(s):			Nearest Mile	post:		Associated We	etland ID(s):	
Unknown tract			76.9			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	h 🗆 Ca	anal 🗆 Other:	1			
OHWM Width:	OHWM Indicat (check all that apply		☐ Clear lin	e □Shelvin	9	□Wrested vegetation	⊠Scourir	ng □Water staining
Height: 0.9 ft. N/A□	⊠Bent, n vegetatio	natted, or missing	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 - 7	Toe of Slope	Width of Waterb	ody - W		Depth of Wate	er:
		<u>4_</u> ft.		N/A	<u>6</u> ft.		N/A□	ft.
Sinuosity: (check one) ☐Straight	(Approx.)	velocity: 0.75fps		Bank height Right: Left:	<u>8</u> ft.		Bank slope Righ Le	80 degrees
⊠Meanderin	147.			-	<u>15_</u> ft.			50 degrees
Qualitative Attribut	tes							
Water Appearance: (check one)	No water ⊠C	Clear □Turb		een □Sui surface scu		□Algal □ mats	□Other:	
Substrate: (check all that apply) % of Substrate:	Bedrock DBo	ulder ⊠ Cobb _% <u>30</u> %	le ⊠ Grave	el ⊠ Sand □ _15_%	⊠ Silt/ cl	lay ☐ Organic	☐ Other:	
Width of Riparian Zone ft N/A⊠	(check all that		⊠ Trees: _ <u>10</u> _in.		⊠ Saplin _1_in.	ngs/Shrubs:	⊠ Herbs	
Dominant Bank Vegeta Rhododendron, woo	• •	ck, tulip popla	r					
Aquatic Habitats (ex: su Leaf packs	bmerged or emerged	d aquatic vegetation	n, overhanging l	banks/roots, leaf pac	ks, large	submerged wood,	riffles, deep poo	ols):
Aquatic Organisms Obs Insects	served (list):							
T&E Species Observed	(list):							
none								
Disturbances (ex: livesto	ck access, manure i	n waterbody, waste	discharge pipe	es):				
Tributary is: (check one)	Natural	□ Art	ificial, man-ma	ade 🗆 Manipi	ulated			
Stream Quality ^a : (check one)	⊠ High	□ Mo	derate	□ Low				

Waterbody ID: Spoe012

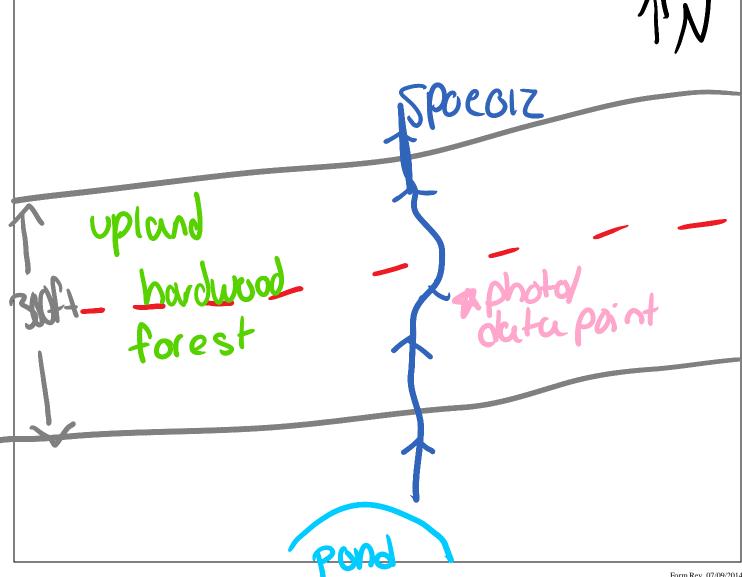
High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

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

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

Notes:

Stream originates from pond 300 feet south of centerline.





Waterbody SPOE012 facing south upstream



Waterbody SPOE012 facing north downstream



Waterbody SPOE012 facing west across

Survey Description Project Name:	1	Motorbody Nor			l\A/	otorbody ID.		Date:
Atlantic Coast Pipeli	Waterbody Name: UNT to Greenbrier River				aterbody ID:	8/1/2016		
•		UNT to Gree	nbrier Rive			poe051		
State:	County:		Company:		Crew N	lember Initials:	Photo	s:
West Virginia	Pocahontas		NRG		CG, A	IS	1-3	
Tract Number(s):			Nearest Mile	post:	1	Associated We	etland ID(s):	
05-001-E051			NA			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:	D							
(check one)	River ⊠ Str	eam Ditc	h □ Ca	nal Other:				
OHWM Width: <u>4</u> ft.	OHWM Indica (check all that appl)		☐ Clear line on bank	e □Shelvin	g	□Wrested vegetation	⊠Scour	ing □Water staining
Height: ft. N/A□	⊠Bent, n vegetatio	natted, or missin	g □Wrack lir	ne □Litter ar debris	nd	□ Abrupt plant community cha		I characteristic change
Width of Waterbody - To				Width of Waterb	ody - W		Depth of Wa	ter:
Bank to Top of Bank:	to Toe	of Slope:		Water Edge:		((Approx.)	
_ <u>20_</u> ft.	_	<u>3_</u> ft.		 N/A⊠	ft		V/A⊠	ft.
Sinuosity:	Water	velocity:		Bank height			Bank slope	
(check one) ⊠Straight	(Approx.)			Right:			Rig	
		fp	os	Left:	_4_ft.		L	30 degrees
□Meanderin	9 N/A⊠				<u>4</u> _ft.			30 degrees
Qualitative Attribut	tes							
Water Appearance: (check one)	No water □0	Clear □Turb		een □Sui surface scu		□Algal □ mats	□Other:	
Substrate:	Bedrock ☐ Bo	ulder 🗵 Cobb	le ⊠ Grave	I □ Sand □	⊠ Silt/ cl	lay 🗆 Organic	☐ Other:	
(check all that apply) % of Substrate:	%	% <u>20</u> %	<u>10</u> %	%	<u>70_</u> %	%	%	
Width of Riparian Zone	Vegetative	Layers:						
ft.	(check all that Avg. DBH	apply) of Dominants:	⊠ Trees: _ <u>14</u> _in.		⊠ Saplin _1_in.	igs/Shrubs:	⊠ Herb	S
N/A 🗵	(approx.)			-	- <u>-</u> -			
Dominant Bank Vegetar Stiltgrass, maple, ne								
Aquatic Habitats (ex: su	bmerged or emerged	d aquatic vegetation	n, overhanging b	panks/roots, leaf pac	ks, large	submerged wood,	riffles, deep po	ools):
none	gg		,	,	, 3-	,		
Aquatic Organisms Obs	served (list):							
none								
T&E Species Observed	(list):							
none								
Disturbances (ex: livesto	ck access, manure i	n waterbody, waste	discharge pipe	s):				
Culverted beneath r	oad							
Tributary is: (check one)	☐ Natural	□ Art	ificial, man-ma	ade 🗵 Manipi	ulated			
Stream Quality ^a : (check one)	☐ High	⊠ Mo	derate	□ Low				

Waterbody	ID
Spoe051	

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 spoe051 facing east upstream



Waterbody spoe051 facing west downstream



Waterbody spoe051 facing north across

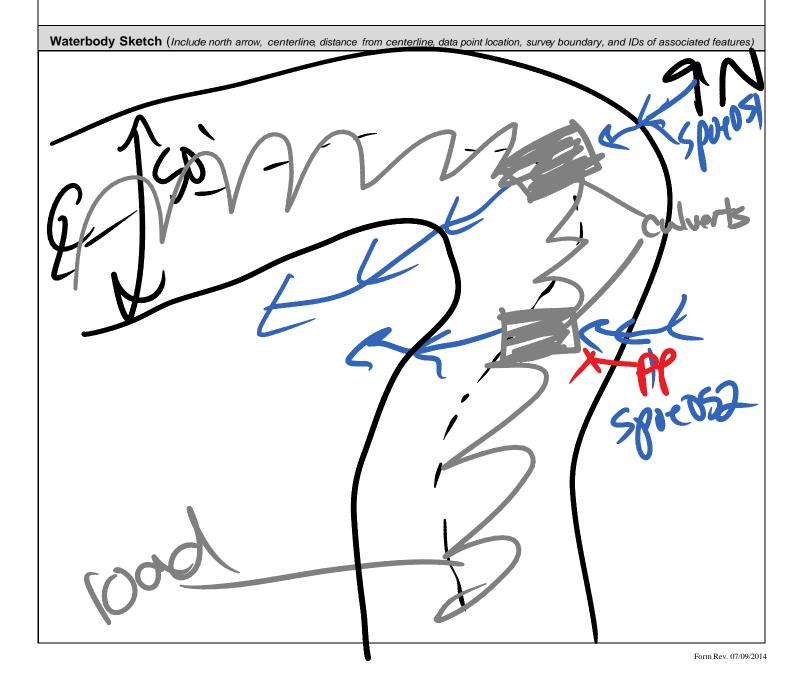
Survey Description Project Name:	1	Waterbody Nar			l\A/	latarha du ID.		Deter
1	_		_		aterbody ID:	Date:		
Atlantic Coast Pipeli	ne	UNT to Gree	nbrier Rive	r	5	poe052		8/1/2016
State:	County:		Company:		Crew N	Member Initials	: Photo	s:
West Virginia	Pocahontas		NRG		CG, A	NS.	1-3	
Tract Number(s):			Nearest Mile	post:	1	Associated W	etland ID(s):	
05-001-E052			NA			none		
Survey Type: (check one)	□Centerline	e □Re-F	Route	⊠Access Road	t	□Other:		
Physical Attributes Stream Classification:	3							
(check one)	⊠Ephemera	al □Inter	mittent	□Perennial				
Waterbody Type:	River ⊠ Str	eam □ Ditc	h □ Ca	ınal 🗆 Othei	r:			
OHWM	OHWM Indica	tor:						
Width: 4_ft.	(check all that apply		☐ Clear lin on bank	e □Shelvir	ng	□Wrested vegetation	⊠Scou	ring □Water staining
Height: 	⊠Bent, r vegetatio	natted, or missing	g □Wrack lir	ne □Litter a debris	nd	☐Abrupt plan community ch		I characteristic change
Width of Waterbody - To Bank to Top of Bank:		of Waterbody - 7		Width of Waterb Water Edge:	ody - W		Depth of Wa	ter:
·		•		water Luge.			(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	4
<u>8</u> ft.	-	<u>3</u> ft.		 N/A⊠	f		N/A⊠	ft.
Sinuosity:		velocity:		Bank height			Bank slope	
(check one) ⊠Straight	(Approx.)			Right:	0 4		Rig	Jht:
		fp	os .	Left:	<u>2</u> ft.		L	30 degrees
□Meanderin	9 N/A⊠				<u>2</u> ft.			30 degrees
Qualitative Attribut	es							
Water Appearance: (check one)	No water □0	Clear □Turb			ırface	□Algal [mats	□Other:	
Substrate:	Bedrock ☐ Bo	ulder 🗵 Cobb	le 🛭 Grave	el □ Sand	⊠ Silt/ c	lay 🗆 Organic	☐ Other:	
(check all that apply) % of Substrate:	%	% <u>20</u> %	<u>10</u> %	%	<u>70</u> %	%	9	6
Width of Riparian Zone	: Vegetative	Layers:						
ft		apply) of Dominants:			⊠ Saplir 1_in.	ngs/Shrubs:	⊠ Herb	S
N/A⊠ Dominant Bank Vegetat	(approx.)				_			
Stiltgrass, maple, ne								
Aquatic Habitats (ex: su	bmerged or emerged	d aquatic vegetation	n, overhanging I	oanks/roots, leaf pad	cks, large	submerged wood,	, riffles, deep p	ools):
none								
Aquatic Organisms Obs	served (list):							
none								
T&E Species Observed	(list):							
none								
Disturbances (ex: livesto	ck access, manure i	n waterbody, waste	discharge pipe	s):				
Culverted beneath r	oad							
Tributary is: (check one)	☐ Natural	□ Art	ificial, man-ma	ade ⊠ Manip	oulated			
Stream Quality ^a : (check one)	☐ High	⊠ Mo	derate	□ Low				

Waterbody	ID:
Spoe052	

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 spoe052 facing south upstream



Waterbody spoe052 facing north downstream



Waterbody spoe052 facing west across

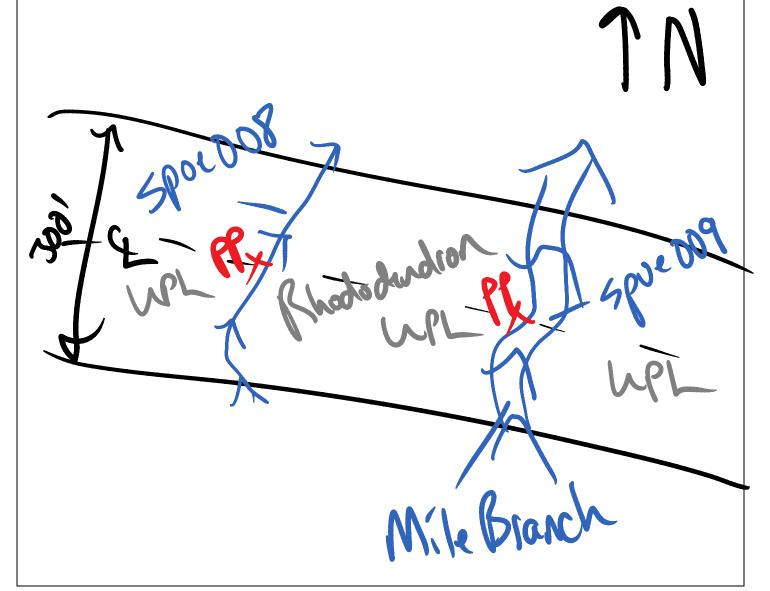
Survey Description	,							
Project Name:	•	Waterbody Na	me:		W	aterbody ID:		Date:
Atlantic Coast Pipeli	ne	UNT to Mile	Branch		SI	poe008		3/21/2016
State:	County:		Company:		Crew N	Member Initials:	: Pho	otos:
<u> </u>	Pocahontas		NRG		CG, A		1-3	
Tract Number(s):			Nearest Mile	post:		Associated W	etland ID(s):
05-001-E051 Survey Type:			77.4			none		
(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	ch □ Ca	anal 🗆 Other:	:			
OHWM Width:	OHWM Indica (check all that appl)		☐ Clear lin	e □Shelvin	g	□Wrested vegetation	□Sco	ouring □Water staining
Height: 1_ft. N/A□	□Bent, r vegetatio	matted, or missin n	g □Wrack lii	ne □Litter ar debris	nd	☐Abrupt plant		Soil 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 V	Vater:
	to roe	_4_ft.		N/A	_4_ft.		N/A□	<u>0.25</u> ft.
Sinuosity: (check one) ☐ Straight	(Арргох.)	velocity: 0.2fps	i	Left:	ft.		Bank slop F	Right:30_ degrees Left:
	1 1,712				_3_ft.			_65_ degrees
Qualitative Attribut Water Appearance:	ies							
(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 % <u>30</u> %	le ⊠ Grave		⊠ Silt/ c 10_%	elay □ Organic %	□ Othe	er: _%
Width of Riparian Zone ft N/A⊠	(check all that		⊠ Trees: _ <u>10</u> _in.		⊠ Saplir _2_in.	ngs/Shrubs:	⊠ Не	erbs
Dominant Bank Vegeta Rhododendron,hick								
Aquatic Habitats (ex: su Overhanging veg		d aquatic vegetatio	n, overhanging	banks/roots, leaf pac	ks, large	submerged wood,	riffles, deep	o pools):
Aquatic Organisms Obs	, ,							
T&E Species Observed	(list):							
none								
none Disturbances (ex: livesto	ck access, manure i	n waterbody, waste	e discharge pipe	es):				
Tributary is:	Natural	□ Art	ificial, man-m	ade □ Manipı	ulated			
Stream Quality ^a : (check one)	⊠ High	□ Мо	oderate	□ Low				

Waterbody Spoe008	ID:
Spoe008	

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 SPOE008 facing southwest upstream



Waterbody SPOE008 facing northeast downstream



Waterbody SPOE008 facing northwest across

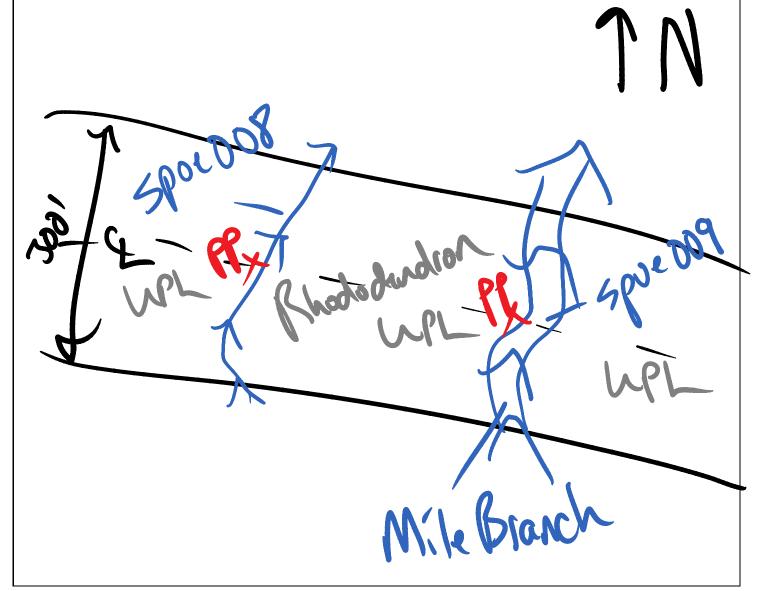
Survey Description)							1-	
Project Name:	Waterbody Name:				aterbody ID:	Date: 3/21/2016			
Atlantic Coast Pipeline		Mile Branch			Sı	Spoe009			5
State:	County:		Company:		Crew N	lember Initials:	Pho	otos:	
ŭ	Pocahontas		NRG		CG, A		1-3		
Tract Number(s):			Nearest Mile	post:		Associated We	etland ID(s):	
05-001-E051			77.5			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 Width: 15_ft.	OHWM Indicat (check all that apply		☐ Clear lin	e ⊠Shelvin	g	⊠Wrested vegetation	⊠Sco	ouring □W stain	
Height: _1_ft. N/A□	⊠Bent, n vegetatio	natted, or missin n	g □Wrack lir	ne □Litter ar debris	nd	⊠Abrupt plant community cha		Soil characteristic	change
Width of Waterbody - To Bank to Top of Bank:		of Waterbody - ⁻ of Slope:	Toe of Slope	Width of Waterbo Water Edge:	ody - W		Depth of V (Approx.)	Vater:	
_ <u>25_</u> ft.	_	<u>8</u> ft.		_ N/A□	<u>10</u> ft.	1	N/A□	<u>0.5_</u> ft.	
Sinuosity: (check one) ☐Straight	(Approx.)	velocity:		Bank height Right: Left:	_ <u>5_</u> ft.	I	Bank slop F	e Right: <u>90</u> degre Left:	ees
⊠Meanderin	1477.2				<u>3</u> ft.			_60_ degre	ees
Qualitative Attribut	es								
Water Appearance: (check one) □	No water ⊠C	Clear □Turb		een □Sui surface scu		□Algal □ mats	□Other:		
Substrate: (check all that apply) % of Substrate:	Bedrock ⊠ Bo%10%		le ⊠ Grave		⊠ Silt/ c	lay □ Organic%	□ Othe	er: _%	
Width of Riparian Zone	(check all that	apply)	⊠ Trees:	۵	⊠ Saplin	ngs/Shrubs:	⊠ He	erbs	
<u>25 ft</u> ⋅ N/A□	Avg. DBH (approx.)	of Dominants:	<u>12</u> in.	-	<u>2</u> in.				
Dominant Bank Vegetar Rhododendron, birch									
Aquatic Habitats (ex: su	bmerged or emeraed	d aquatic vegetation	n, overhanging l	banks/roots, leaf pac	ks, large	submerged wood.	riffles, deer	o pools):	
Riffles, runs, pools,					-, - J-	,	, ,	, , , , , ,	
Aquatic Organisms Obs	served (list):								
none									
T&E Species Observed	(list):								
none									
Disturbances (ex: livesto	ck access, manure i	n waterbody, waste	discharge pipe	es):					
none		•	5 117						
Tributary is: (check one)	⊠ Natural	□ Art	ificial, man-ma	ade 🗆 Manipı	ulated				
Stream Quality ^a : (check one)	⊠ High	□ Мо	derate	□ Low					

Waterbody Spoe009	ID:
Spoe009	

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 SPOE009 facing southwest upstream



Waterbody SPOE009 facing north downstream



Waterbody SPOE009 facing northwest across

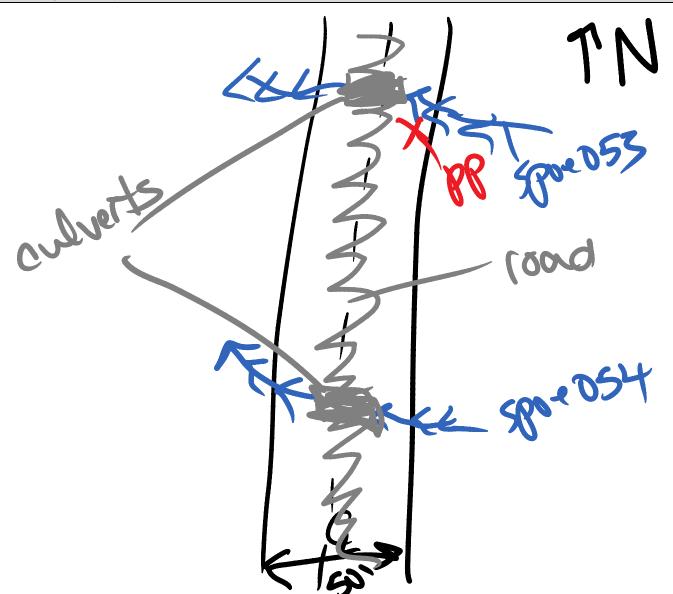
Survey Description Project Name:	1	Waterbady Nar	mo:		l\A/	atarbady ID:		Date:
1	Waterbody Name:				aterbody ID:	8/1/2016		
P -		UNT to Greenbrier River			Spoe053			
State:	County:		Company:		Crew N	Member Initials:	: Photo	s:
West Virginia	Pocahontas		NRG		CG, A	NS .	1-3	
Tract Number(s):			Nearest Mile	post:	I	Associated W	etland ID(s):	
05-001-E051			NA			none		
Survey Type: (check one)	□Centerline	e □Re-F	Route	⊠Access Road	d	□Other:		
Physical Attributes Stream Classification:								
(check one)	⊠Ephemera	al □Inter	mittent	□Perennial				
Waterbody Type: (check one)	River ⊠ Str	eam □ Ditc	h 🗆 Ca	ınal 🗆 Othei	r:			
ОНWМ	OHWM Indica							
Width: 2_ft.	(check all that apply	/)	☐ Clear lin on bank	e □Shelvir	ng	□Wrested vegetation	⊠Scou	ring □Water staining
Height: <u>0.4</u> ft. N/A□	⊠Bent, n vegetatio	natted, or missin n	g □Wrack lir	ne □Litter a debris	nd	☐Abrupt plant community ch		I characteristic change
Width of Waterbody - To Bank to Top of Bank:		of Waterbody - 7		Width of Waterb Water Edge:	ody - W		Depth of Wa	ter:
·		•		water Luge.			(* .pp. cx.)	4
_ <u>4</u> ft.	_	<u>3_</u> ft.		 N/A⊠	f		N/A⊠	ft.
Sinuosity:		velocity:		Bank height		I	Bank slope	
(check one) ⊠Straight	(Approx.)	<i>t</i>		Right:	_1ft.		Rig	jht: 30_ degrees
	_	fp)S	Left:			L	eft:
□Meanderin	9 N/A⊠				_1_ft.			30 degrees
Qualitative Attribut	es							
Water Appearance: (check one) ⊠	No water □0	Clear □Turb			ırface :um	□Algal [mats	□Other:	
Substrate:	Bedrock ☐ Bo	ulder 🗵 Cobb	le 🛭 Grave	el □ Sand	⊠ Silt/ c	lay 🗆 Organic	☐ Other:	
(check all that apply) % of Substrate:	%	<u>20</u> %	<u>10</u> %	%	<u>70</u> %	%	9	, b
Width of Riparian Zone								
ft-		apply) of Dominants:	⊠ Trees: _ <u>14</u> _in.		⊠ Saplir 1_in.	ngs/Shrubs:	⊠ Herb	S
N/A⊠ Dominant Bank Vegetat	(approx.)							
Stiltgrass, maple, as								
Aquatic Habitats (ex: su	omerged or emerged	d aquatic vegetation	n, overhanging l	panks/roots, leaf pag	cks, large	submerged wood,	, riffles, deep p	ools):
none			, , , , , , ,		, g .	,	,,, ,	,
Aquatic Organisms Obs	served (list):							
none								
T&E Species Observed	(list):							
none								
Disturbances (ex: livesto	ck access, manure i	n waterbody, waste	discharge pipe	s):				
Culverted beneath r	oad							
Tributary is: (check one)	☐ Natural	□ Art	ificial, man-ma	ade 🛭 Manip	oulated			
Stream Quality ^a : (check one)	☐ High	⊠ Mo	derate	□ Low				

Waterbody	ID:
Spoe053	

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 spoe053 facing southeast upstream



Waterbody spoe053 facing northwest downstream



Waterbody spoe053 facing southwest across

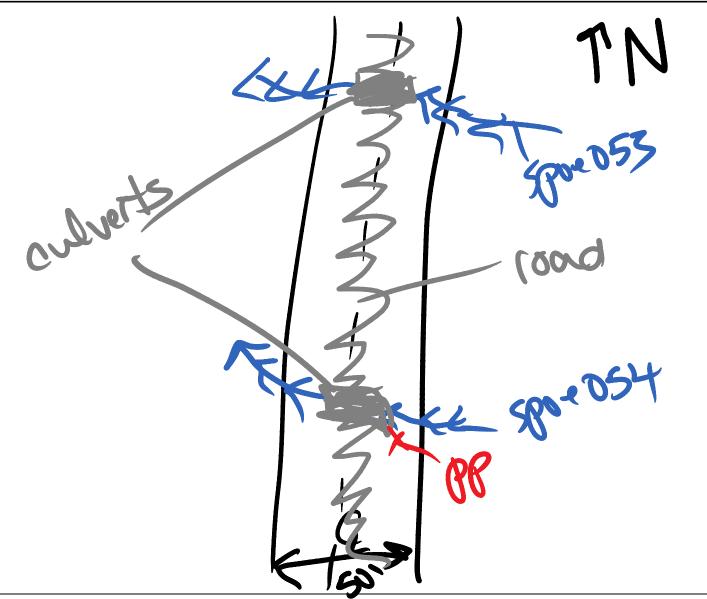
Survey Description Project Name:	1	Motorbody Nor			l\A/	atorbody ID.		Date:
Atlantic Coast Pipeli	no	Waterbody Name: UNT to Greenbrier River				aterbody ID:	8/1/2016	
•		ONT to Gree	ilbilei Kive	ı		poe054		
State:	County:		Company:		Crew N	lember Initials	: Photo	s:
West Virginia	Pocahontas		NRG		CG, A	NS	1-3	
Tract Number(s):			Nearest Mile	post:	- II	Associated W	etland ID(s):	
05-001-E051			NA			none		
Survey Type: (check one)	□Centerline	e □Re-F	Route	⊠Access Road	l	□Other:		
Physical Attributes Stream Classification:								
(check one)	⊠Ephemera	al □Inter	mittent	□Perennial				
Waterbody Type: (check one)	River 🗵 Str	eam □ Ditc	h 🗆 Ca	ınal 🗆 Other	:			
OHWM	OHWM Indica							
Width: 2_ft.	(check all that apply	/)	☐ Clear lin on bank	e □Shelvir	ıg	□Wrested vegetation	⊠Scou	ring □Water staining
Height: 	⊠Bent, r vegetatio	natted, or missin	g □Wrack lir	ne □Litter a debris	nd	☐ Abrupt plant community ch		Il characteristic change
Width of Waterbody - To Bank to Top of Bank:		of Waterbody - 7		Width of Waterb	ody - W		Depth of Wa	ter:
·		•		Water Edge:		1	(дриох.)	
_ <u>4</u> ft.	_	<u>3_</u> ft.		 N/A⊠	ft		N/A⊠	ft.
Sinuosity:		velocity:		Bank height		I	Bank slope	
(check one) ⊠Straight	(Approx.)	<i>t</i>	_	Right:	_1_ ft.		Rig	jht: <u>30</u> degrees
		fp)S	Left:			L	eft:
□Meanderin	9 N/A⊠				_1_ft.			30 degrees
Qualitative Attribut	es							
Water Appearance: (check one) ⊠	No water □0	Clear □Turb	-		rface um	□Algal [mats	□Other:	
Substrate:	Bedrock ☐ Bo	ulder 🗵 Cobb	le 🛭 Grave	el □ Sand	⊠ Silt/ c	lay Organic	☐ Other:	
(check all that apply) % of Substrate:	%	% <u>40</u> %	<u>10</u> %	%	<u>50</u> %	%	9	6
Width of Riparian Zone								
ft.	(check all that Avg. DBH	apply) of Dominants:	⊠ Trees: _ <u>14</u> _in.		⊠ Saplin 1_in.	ngs/Shrubs:	⊠ Herb	S
N/A 🗵	(approx.)			•				
Dominant Bank Vegetar Stiltgrass, maple, as								
Aquatic Habitats (ex: su	bmerged or emerged	d aquatic vegetation	n, overhanging b	oanks/roots, leaf pag	ks, large	submerged wood,	riffles, deep p	ools):
none			,		, , , ,	,		,
Aquatic Organisms Obs	served (list):							
none								
T&E Species Observed	(list):							
none								
Disturbances (ex: livesto	ck access, manure i	n waterbody, waste	discharge pipe	s):				
Culverted beneath r	oad							
Tributary is: (check one)	☐ Natural	□ Art	ificial, man-ma	ade 🛭 Manip	ulated			
Stream Quality ^a : (check one)	☐ High	⊠ Mo	derate	□ Low				

Waterbody Spoe054	ID:
Spoe054	

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 spoe054 facing east upstream



Waterbody spoe054 facing west downstream



Waterbody spoe054 facing south across

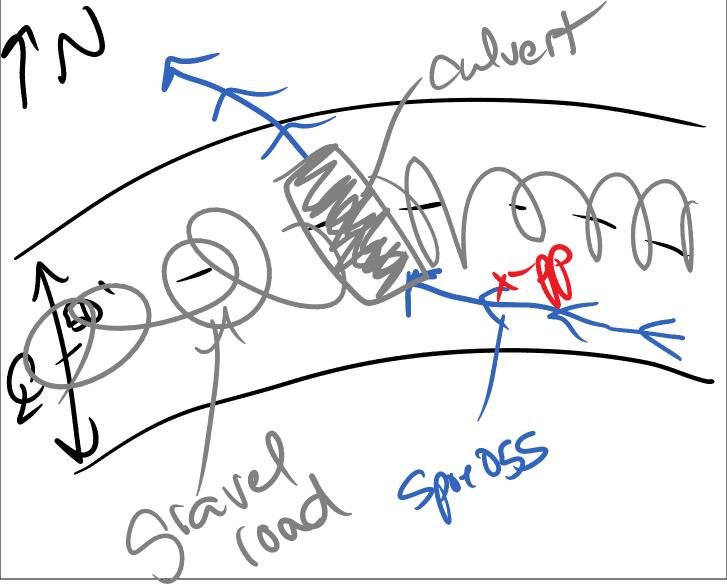
Survey Description		NA/ataulaada Nau			l\A/	latanha di ID-		Dete
Project Name:	Waterbody Name: UNT to Greenbrier River				aterbody ID:	Date:		
Atlantic Coast Pipeli	ne	UNT to Gree	nbrier Rive	r	9	poe055		8/2/2016
State:	County:		Company:		Crew N	Member Initials:	Photos	:
West Virginia	Pocahontas		NRG		CG, A	AS	1-3	
Tract Number(s):			Nearest Mile	post:	ı	Associated We	etland ID(s):	
05-001-E051			NA			none		
Survey Type: (check one)	□Centerline	e □Re-F	Route	⊠Access Road	I	□Other:		
Physical Attributes								
Stream Classification: (check one)	⊠Ephemera	al □Inter	mittent	□Perennial				
Waterbody Type:	River ⊠ Str	eam □ Ditc	h 🗆 Ca	ınal 🗆 Other	:			
ОНWМ	OHWM Indica							
Width: 2_ft.	(check all that apply	<i>(</i>)	☐ Clear lin on bank	e □Shelvin	g	□Wrested vegetation	⊠Scourii	ng □Water staining
Height: <u>0.4</u> ft. N/A□	⊠Bent, n vegetatio	natted, or missin n	g □Wrack lir	ne □Litter ar debris	nd	☐ Abrupt plant community cha		characteristic change
Width of Waterbody - To				Width of Waterb	ody - W		Depth of Water	er:
Bank to Top of Bank:	to Toe	of Slope:		Water Edge:		(-	Approx.)	
_ <u>4_</u> ft.	_	<u>1_</u> ft.		 N/A⊠	f		√A⊠	ft.
Sinuosity:		velocity:		Bank height		E	Bank slope	
(check one) ⊠Straight	(Approx.)	<i>t</i>	_	Right:	_1_ ft.		Righ	nt: _45_ degrees
		fp	OS .	Left:			Le	ft:
□Meanderin	9 N/A⊠				_1_ft.			45 degrees
Qualitative Attribut	es							
Water Appearance: (check one) ⊠	No water □0	Clear □Turb	-	een □Sui surface scu		□Algal □ mats	Other:	
Substrate:	Bedrock ☐ Bo	ulder Cobb	le 🛭 Grave	el 🗵 Sand	□ Silt/ c	lay Organic	☐ Other:	
(check all that apply) % of Substrate:	%	%	% <u>30</u> %	<u>70</u> %		_%%	%	
Width of Riparian Zone:	Vegetative	Layers:						
ft	(check all that Avg. DBH	apply) of Dominants:	☐ Trees	: [_in	□ Saplin	ngs/Shrubs: _in.	⊠ Herbs	
N/A⊠ Dominant Bank Vegetat	(approx.)			-''''-				
Stiltgrass, coltsfoot	.ion (#st).							
Aquatic Habitats (ex: sub	omerged or emerged	d aquatic vegetation	n, overhanging b	oanks/roots, leaf pac	ks, large	submerged wood,	riffles, deep poo	ols):
none				·		-		
Aquatic Organisms Obs	served (list):							
none								
T&E Species Observed	(list):							
none								
Disturbances (ex: livesto	ck access, manure i	n waterbody, waste	discharge pipe	s):				
Culverted beneath re	oad, roadside	ditch for part	of reach					
Tributary is: (check one)	☐ Natural	□ Art	ificial, man-ma	ade 🗵 Manip	ulated			
Stream Quality ^a : (check one)	☐ High	□ Мо	derate	⊠ Low				

Waterbody	ID
Spoe055	

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 spoe055 facing east upstream



Waterbody spoe055 facing west downstream



Waterbody spoe055 facing south across

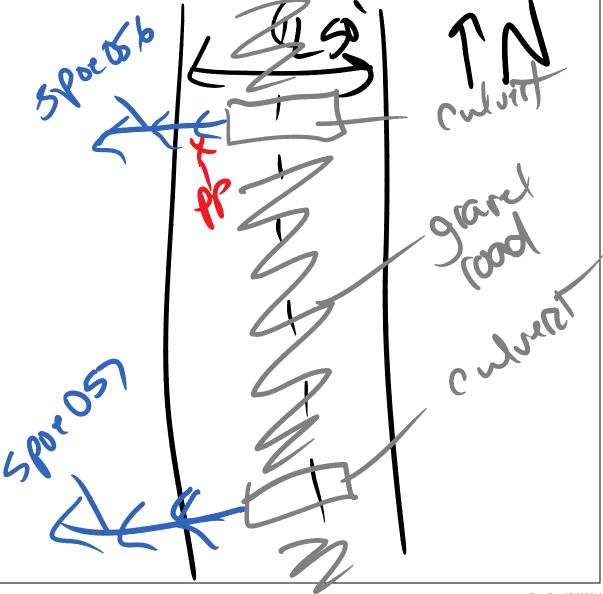
Survey Description Project Name:	1	Waterbody Nar	no.		l\A/	aterbody ID:		Date:
Atlantic Coast Pipeli	no	UNT to Little Thorny Creek				oe056	8/2/2016	
·		ONT to Little	; ITIOITIY CI	eek				
	County:		Company:		Crew M	lember Initials:	Photos	:
West Virginia	Pocahontas		NRG		CG, A	S	1-3	
Tract Number(s):			Nearest Mile	post:		Associated We	etland ID(s):	
05-001-E051			NA			none		
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 ⊠ Stre	eam 🗆 Dito	h □ Ca	ınal 🗆 Other:	:			
ОНWМ	OHWM Indicat							
Width: <u>3</u> ft.	(check all that apply	<i>'</i>)	☐ Clear lin on bank	e □Shelvin	g	□Wrested vegetation	⊠Scouri	ng □Water staining
Height: ft. N/A□	⊠Bent, n vegetatio	natted, or missin n	g □Wrack lir	ne ⊠Litter ar debris	nd	☐ Abrupt plant community cha		characteristic change
Width of Waterbody - To Bank to Top of Bank:		of Waterbody - of Slope:		Width of Waterbo Water Edge:	ody - Wa		Depth of Wate	er:
_ <u>6_</u> ft.		<u>2_</u> ft.			ft		.1/4 🖂	ft.
Sinuosity:	Water	velocity:		N/A⊠ Bank height			N/A⊠ Bank slope	
(check one) ⊠Straight	(Approx.)	cioony.		Right:			Righ	nt:
⊠ Straight		fr	os	Left:	<u>0.5_</u> ft.		Le	30 degrees
□Meanderin	9 N/A⊠				<u>0.5_</u> ft.		LG	30 degrees
Qualitative Attribut	es							
Water Appearance:								
(check one)	No water □C	Clear □Turb		een □Sur surface scu		□Algal □ mats	∃Other:	
Substrate:	Bedrock ☐ Bo	ulder Cobb	le 🛭 Grave	el ⊠ Sand □	⊠ Silt/ cl	ay Organic	☐ Other:	
% of Substrate:	%	%	<u>% 20</u> %	<u>10</u> %	<u>70</u> %	%	%	
Width of Riparian Zone	Vegetative	Layers:						
ft-		apply) of Dominants:			☑ Saplin _2_in.	gs/Shrubs:	⊠ Herbs	
N/A⊠ Dominant Bank Vegeta	(approx.)		_ _ _					
Oak, maple, clearwe	• •							
Aquatic Habitats (ex: su	bmerged or emerged	l aquatic vegetation	n, overhanging b	oanks/roots, leaf pac	ks, large	submerged wood,	riffles, deep po	ols):
none								
Aquatic Organisms Obs	served (list):							
none								
T&E Species Observed	(list):							
none								
Disturbances (ex: livesto	ck access, manure in	n waterbody, waste	discharge pipe	s):				
Starts at culvert								
Tributary is: (check one)	□ Natural	□ Art	ificial, man-ma	ade 🗵 Manipı	ulated			
Stream Quality ^a : (check one)	☐ High	□ Мо	derate	⊠ Low				

Waterbody Spoe056	ID:
Spoe056	

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 spoe056 facing east upstream



Waterbody spoe056 facing west downstream



Waterbody spoe056 facing north across

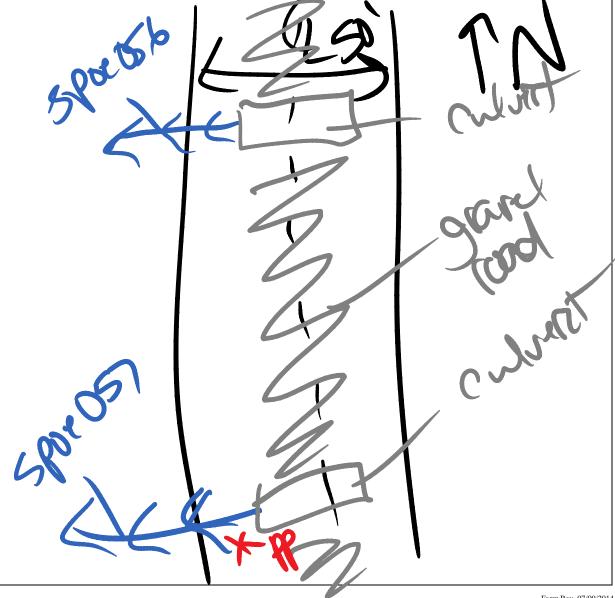
Survey Description	1	NA/ataula adu Alai			lsa.	ataula adv. ID.		Data
Project Name: Atlantic Coast Pipeli	no	Waterbody Na		a a k		aterbody ID:		Date: 8/2/2016
•		UNT to Little		eek .		ooe057		
State:	County:		Company:		Crew N	lember Initials:	Photos	:
West Virginia	Pocahontas		NRG		CG, A	NS .	1-3	
Tract Number(s):			Nearest Mile	post:		Associated Wo	etland ID(s):	
05-001-E051			NA			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 Width:	OHWM Indica (check all that apply		☐ Clear lin	e □Shelvin	g	□Wrested vegetation	⊠Scouri	ng □Water staining
Height: 0.2 ft.	⊠Bent, n vegetatio	natted, or missin n	g □Wrack lir	ne ⊠Litter ar debris	nd	☐Abrupt plant		characteristic change
Width of Waterbody - To			Toe of Slope	Width of Waterb	ody - W		Depth of Wate	er:
Bank to Top of Bank:	to Toe	of Slope:		Water Edge:		((Approx.)	
<u>6</u> ft.	_	<u>2</u> ft.		 N/A⊠	ft		\/A⊠	ft.
Sinuosity:		velocity:		Bank height			Bank slope	
(check one) ⊠Straight	(Approx.)			Right:	0.5.4		Righ	
		fr	os	Left:	<u>0.5_</u> ft.		Le	30 degrees
□Meanderin	9 N/A⊠			_	<u>0.5_</u> ft.			30 degrees
Qualitative Attribut	es							
Water Appearance: (check one) ⊠	No water □0	Clear □Turb		een □Su surface scu		□Algal [mats	□Other:	
	Bedrock ☐ Bo	ulder Cobb	le 🗵 Grave	el 🗵 Sand	⊠ Silt/ cl	lay 🗆 Organic	☐ Other:	
(check all that apply) % of Substrate:	%	%	% <u>20</u> %	<u>10</u> %	<u>70</u> %	%	%	
Width of Riparian Zone								
<u>ft</u> . N/A⊠	(check all that Avg. DBH (approx.)	apply) of Dominants:	⊠ Trees: _ <u>12</u> _in.		⊠ Saplin _2_in.	gs/Shrubs:	⊠ Herbs	
Dominant Bank Vegetat	tion (list):							
Oak, maple, coltsfoo	ot, sorrell							
Aquatic Habitats (ex: su	bmerged or emerged	d aquatic vegetatio	n, overhanging l	banks/roots, leaf pac	ks, large	submerged wood,	riffles, deep po	ols):
none								
Aquatic Organisms Obs	served (list):							
none								
T&E Species Observed	(list):							
none								
Disturbances (ex: livesto	ck access, manure i	n waterbody, waste	discharge pipe	s):				
Starts at culvert								
Tributary is: (check one)	☐ Natural	□ Art	ificial, man-ma	ade ⊠ Manip	ulated			
Stream Quality ^a : (check one)	☐ High		oderate	⊠ Low				

Waterbody	ID:
Spoe057	

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 spoe057 facing east upstream



Waterbody spoe057 facing west downstream



Waterbody spoe057 facing south across

Survey Description	1								
Project Name:		Waterbody Name:				Waterbody ID:			e:
Atlantic Coast Pipeli	ne	Little Thorny	Creek		S	poe059		8/2	/2016
State:	County:		Company:		Crew I	Member Initials:	Р	hotos:	
ū	Pocahontas		NRG		CG, A			1-3	
Tract Number(s):			Nearest Mile	post:		Associated We	etland II	D(s):	
05-001-E051			NA			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 Width: _35_ft.	OHWM Indicat (check all that apply		⊠ Clear lin on bank	e □Shelvin	g	□Wrested vegetation		Scouring	⊠Water staining
Height: 1_ft. N/A□	□Bent, n vegetatio	natted, or missin n	g □Wrack lir	ne □Litter ar debris	nd	☐Abrupt plant community cha		□Soil chara	cteristic change
Width of Waterbody - To Bank to Top of Bank:		of Waterbody - of Slope:		Width of Waterbo	ody - W		Depth o	f Water:	
_ <u>35_</u> ft.	_	<u>35</u> ft.		 N/A⊠	f	t.	N/A⊠		ft.
Sinuosity: (check one) ⊠ Straight □ Meanderin	(Арргох.)	velocity: f	os	Bank height Right: Left:	<u>3</u> ft.	E	Bank slo	Right:	0_degrees
	14/12				<u>3_</u> ft.				0_degrees
Qualitative Attribut Water Appearance:	es								
(check one)	No water □C	Clear □Turb		een □Sui surface scu		□Algal □ mats	Other:		
Substrate: (check all that apply) % of Substrate:	Bedrock DBo	ulder □ Cobb		el 🗆 Sand [%% _	□ Silt/ c	clay □ Organic %		ther: CONCI _%	rete
Width of Riparian Zone ft N/A⊠	(check all that	-	□ Trees	: [_in	□ Saplir	ngs/Shrubs: _in.		Herbs	
Dominant Bank Vegetat									
none									
Aquatic Habitats (ex: su	bmerged or emerged	d aquatic vegetatio	n, overhanging l	banks/roots, leaf pac	ks, large	submerged wood,	riffles, de	eep pools):	
none									
Aquatic Organisms Obs	served (list):								
none									
T&E Species Observed	(list):								
none									
Disturbances (ex: livesto	ck access, manure i	n waterbody, waste	e discharge pipe	es):					
Artificial, bank revet									
Tributary is: (check one)	□ Natural	⊠ Ari	ificial, man-ma	ade 🗆 Manipı	ulated				
Stream Quality ^a : (check one)	☐ High		oderate	⊠ Low					

Waterbody ID: Spoe059

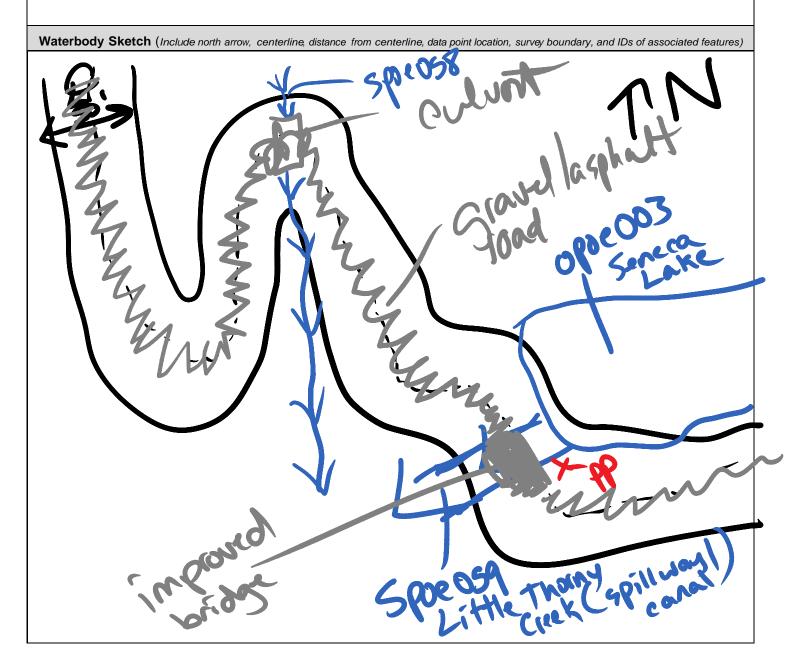
^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

Bridge unlikely to need improvements





Waterbody spoe059 facing northeast upstream



Waterbody spoe059 facing southwest downstream



Waterbody spoe059 facing southeast across

Open Waterbody Data Sheet

Open waterboo	iy Dala Sileel								
Survey Descripti	on								
Project Name:		Waterbody N	Waterbody Name:					Date:	
Atlantic Coast Pip	eline	Seneca La	Seneca Lake			Opoe003		8/2/2016	
State:	County:		Company: Crew			Member Initials:	Photos:		
West Virginia	Pocahontas		ERM		CG,	AS	1-3		
Tract Number(s):			Nearest Milepos	t:		Associated Wetland	ID(s):		
05-001-E051			NA			fringe			
Survey Type: (check one)	□Centerlin	ie □F	Re-Route	⊠Access Roa	ad	□Other:			
Physical Attribut	es								
Waterbody Type: (check one) □Stoo	ck Pond Natura	l Pond □ La	ke Reservoir	⊠ Impoundme	ent 🗆	Oxbow Dother:			
Hydrologic Regime:	□ Permanently	Flooded \square	Semipermanentl	y Flooded □	Seas	sonally Flooded	Temporar	ily Flooded	
ОНWМ	OHWM Indi							. 53144	
Height:	(crieck all triat a	рріу)	⊠ Clear li on bank	ne □She	elving	□Wrested vegetation	□Sco	ouring ⊠Water staining	
_ <u>1_</u> ft.	⊠Ben vegeta	t, matted, or mation	nissing □Wrack line	□Litte debris		□ Abrupt plant community cha		haracteristic change	
Depth of Water:		Bank heig	ht (average):			Bank slope (aver	rage):		
	_ft.		<u>5</u> f	t.		-	45 degre	es	
Qualitative Attrib	utes								
Water Appearance: (check one)		Clear ⊠T	urbid □She on sur		Surface	e □Algal □0 mats	Other:		
Substrate: (check all that apply)	□ Bedrock □ B	oulder \square C	obble Gravel	☐ Sand	⊠S	ilt/ clay ☐ Organic	☐ Other:		
% of Substrate:	%	%	%	%%	100	<u> </u>		_%	
Width of Riparian Zo									
ft.	(check all that	apply)			□ Sa	plings/Shrubs:	⊠ He	rbs	
N/A⊠	Avg. DBH (approx.)	of Dominants	s: <u>12</u> in.			in.			
Dominant Bank Vege	tation (list):								
Bulrush, pine, sed	ges								
Aquatic Habitats (ex:	submerged or emerged a	quatic vegetation, o	overhanging banks/roots	, leaf packs, large si	ubmerge	ed wood, riffles, deep pools, e	etc.):		
Emergent veg, do	cks, overhangir	ng veg							
Aquatic Organisms C	Observed (list):								
Salamanders, min	nows, fish, inve	ertebrates							
T&E Species Observe	ed (list):								
none									
Disturbances (ex: live	stock access, manure	in waterbody, w	aste discharge pipes):					
Artificial impoundr	nent, bank reve	tment, culv	ert outlets, adj	acent to road	d				
Waterbody is: (check one)	☐ Natural		Artificial, man-ma	de 🗆 Man	ipulate	ed			
Waterbody Quality a: (check one)	☐ High		Moderate	□ Low					

Waterbody	ID:
Opoe003	

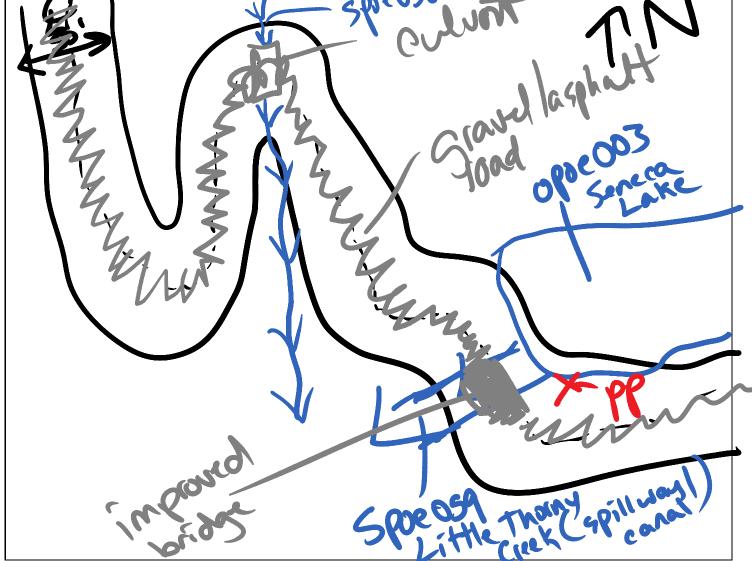
^a **High Quality:** Natural, natural bank vegetation around entire waterbody; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

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

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

Notes:

G. 1 Species





Open waterbody opoe003 facing east



Open waterbody opoe003 facing north



Open waterbody opoe003 facing northwest

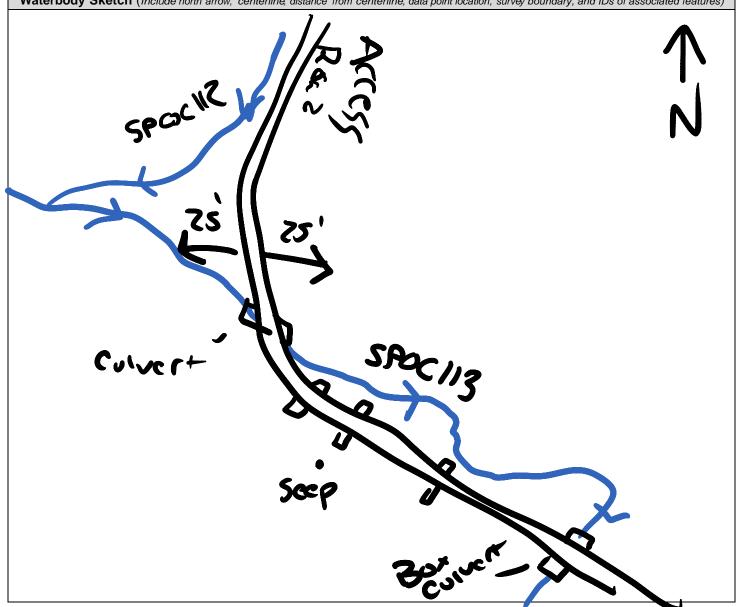
Survey Description	1								
Project Name:		Waterbody Name:			W	Waterbody ID:			Date:
Atlantic Coast Pipeline		UNT to Thor	n Creek		SI	poc113			3/22/2016
State:	County:		Company:		Crew N	lember Initials	: P	hotos:	
and the games	Pocahontas		NRG		CR, S		3		
Tract Number(s):			Nearest Mile	epost:		Associated W	etland II	D(s):	
05-001-E051-AR1			78			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	ch □ Ca	anal 🗆 Other:					
OHWM Width:	OHWM Indicat (check all that apply			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		⊒Soil c	haracteristic change
Width of Waterbody - To Bank to Top of Bank:		of Waterbody - of Slope:	Toe of Slope	Width of Waterbo	ody - W		Depth o	f Water	r:
_ <u>15_</u> ft.		_1ft.		N/A□	<u>6</u> _ft.		N/A□		<u>0.8</u> ft.
Sinuosity: (check one)	Water (Approx.)	velocity:		Bank height Right: Left:	_3_ft.		Bank slo	ope Right Left	60 degrees
⊠Meanderin	9 N/A□				<u>4</u> _ft.				70 degrees
Qualitative Attribut	tes								
Water Appearance: (check one)	No water ⊠C	Clear □Turb		een □Sur surface scu		□Algal [mats	□Other:		
(check all that apply)	Bedrock □ Bo % <u></u> %	ulder □ Cobb %	le ⊠ Grave _50_%		⊠ Silt/ c 25_%	lay □ Organic %		ther: %	
Width of Riparian Zone	: Vegetative (check all that		⊠ Trees:		☑ Saplir	ngs/Shrubs:		Herbs	
<u>20 ft</u> ⋅ N/A□	Avg. DBH (approx.)	of Dominants:	<u>12</u> in.	-	<u>2</u> _in.				
Dominant Bank Vegeta	• •								
White pine, eastern	hemlock, red o	oak, red mapl	e, mountai	n laurel, greenl	orier, (Christmas Fe	ern		
Aquatic Habitats (ex: su	bmerged or emerged	l aquatic vegetatio	n, overhanging	banks/roots, leaf pac	ks, large	submerged wood,	, riffles, de	eep pool	s):
Leaf packs, overhar	nging roots, po	ols							
Aquatic Organisms Obs	served (list):								
Fish, caddisfly larva	е								
T&E Species Observed None	(list):								
Disturbances (ex: livesto	ck access, manuro ir	waterbody wast	discharge nine	ne):					
Stream flows under									
Tributary is:	⊠ Natural	□ Art	ificial, man-m	ade □ Manipu	ulated				
Stream Quality ^a : (check one)	☐ High	⊠ Mo	oderate	□ Low					

Waterbody	ID
Spoc113	

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 SPOC113 facing north-northwest upstream



Waterbody SPOC113 facing south-southeast downstream



Waterbody SPOC113 facing west-southwest across

Open Waterbody Data Sheet

Open waterboo	iy Data Sileet							
Survey Description	on							
Project Name:		Waterbody Name:				Vaterbody ID:		Date:
Atlantic Coast Pipe	eline	Unnamed pond			C	Opoe001		3/23/2016
State:	State: County:		Company:		Crew I	Member Initials:	Photos:	
Virginia	Pocahontas		NRG		CG, A	AS	1-2	
Tract Number(s):			Nearest Milepos	t:	A	Associated Wetland	I ID(s):	
05-001-E053			79.2		\	Wpoe008e		
Survey Type: (check one)	⊠Centerlin	e □R	Re-Route	□Access Ro	ad	□Other:		
Physical Attribute	es							
Waterbody Type:	ck Pond □ Natura	I Pond □ La	ke □ Reservoir	☐ Impoundme	ent 🗆	Oxbow Other:		
Hydrologic Regime:	☐ Permanently	Flooded	Semipermanentl	y Flooded	Seaso	onally Flooded	Temporaril	y Flooded
OHWM	OHWM Indi		·				•	<u>, </u>
Height:	(check all that a	oply)	⊠ Clear li on bank	ne □She	elving	□Wrested vegetation	□Scou	ıring ⊠Water staining
_ <u>1_</u> ft.	⊠ Beni vegeta	t, matted, or m tion	issing □Wrack □Litter and line debris			d □Abrupt plant □Soil characteristic chang community change		
Depth of Water:	I	Bank heig	ht (average):			Bank slope (ave	rage):	
N/A□	_ft.		<u>2</u> f	t.		-	70 degree	S
Qualitative Attrib	utes	<u>'</u>				- 1		
Water Appearance:		Clear □T	urbid □She on sur		Surface ım	□Algal ⊠ mats	Other: Aqu	a Blue
Substrate: (check all that apply)	□ Bedrock □ B	oulder \square C	obble ⊠ Gravel	⊠ Sand	⊠ Silt	t/ clay □ Organic	☐ Other:	
% of Substrate:	%	<u></u> %	<u></u> % <u>10_</u> %	<u>10</u> %	80 9	%%	0	%
Width of Riparian Zor	ne: Vegetative							
ft.	(check all that	apply)			⊠ Sap	lings/Shrubs:	⊠ Herb	os
 N/A⊠	Avg. DBH (approx.)	of Dominants	s: <u>8</u> in.		<u>_1</u> _in.			
Dominant Bank Vege	tation (list):							
Pine, moss, fern								
Aquatic Habitats (ex: s	submerged or emerged ac	quatic vegetation, o	overhanging banks/roots	, leaf packs, large s	ubmerged	wood, riffles, deep pools,	etc.):	
none								
Aquatic Organisms O	bserved (list):							
none								
T&E Species Observe	ed (list):							
none								
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes):								
Impounded, pipes	on edges, appe	ears to have	e chemical inp	ut				
Waterbody is: (check one)	☐ Natural		Artificial, man-ma	de 🗆 Man	ipulated	d		
Waterbody Quality ^a :	☐ High		Moderate	⊠ Low				

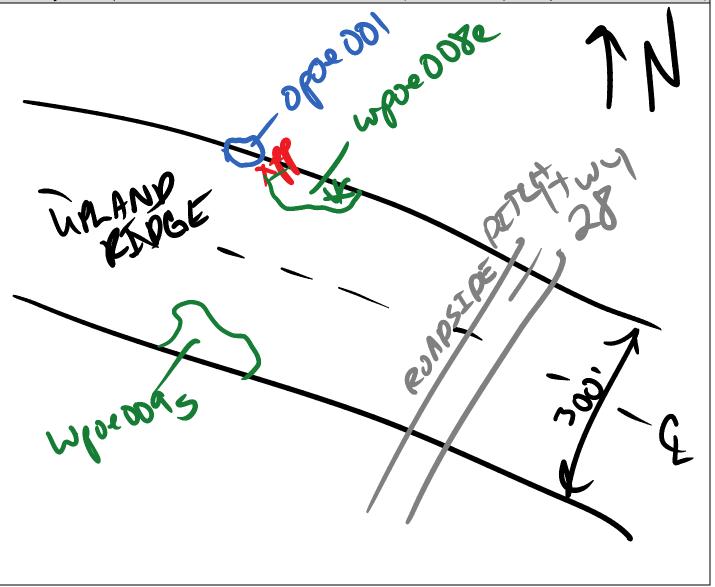
Waterbody	ID
Waterbody Opoe001	

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

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

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

Notes:





Open waterbody OPOE001 facing southwest



Open waterbody OPOE001 facing northeast



Open waterbody OPOE001 facing northwest

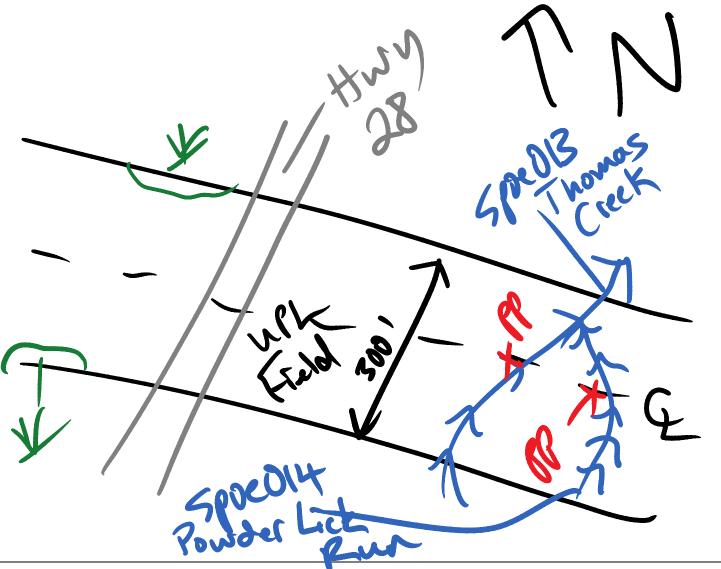
Survey Description	1								
Project Name:	Waterbody Name:			W	Waterbody ID:			Date:	
Atlantic Coast Pipeli	Thomas Creek			S	·			3/28/2016	
State:	County:		Company:		Crew N	Member Initials:	: PI	hotos:	
Ü	Pocahontas		NRG		CG, S			-3	
Tract Number(s):			Nearest Mile	post:		Associated W	etland II)(s):	
Unnamed tract south	of 05-001-E055		79.3			none			
Survey Type: (check one)	⊠Centerline	□Re-F	Route	□Access Road		□Other:			
Physical Attributes Stream Classification:	5								
(check one)	□Ephemera	ıl □Inter	mittent	⊠Perennial					
Waterbody Type: (check one)	River ⊠ Str	eam 🗆 Dito	ch □ Ca	ınal 🗆 Other:					
OHWM Width: 12 ft.	OHWM Indicat (check all that apply		☐ Clear lin	e ⊠Shelvin	g	⊠Wrested vegetation	⊠S	Scouring	□Water staining
Height: 2_ft. N/A□	⊠Bent, n vegetatio	natted, or missin n	g □Wrack lir	ne ⊠Litter ar debris	nd	□ Abrupt plant community ch		⊠Soil ch	aracteristic change
Width of Waterbody - T Bank to Top of Bank:		of Waterbody - of Slope:		Width of Waterbo	ody - W		Depth of	f Water:	:
_ <u>30_</u> ft.		8_ft.			<u>10</u> ft.		N/A□	-	<u>1.5</u> ft.
Sinuosity: (check one) ☐Straight	Water (Approx.)	/elocity : 		Bank height Right: Left:	_2_ft.		Bank slo	ope Right: Left:	10 degrees
⊠Meanderin	g N/A□				<u>2.5</u> ft.				70 degrees
Qualitative Attribut	tes								
Water Appearance: (check one)	No water ⊠C	Clear □Turb		een □Sui surface scu		□Algal [mats	□Other:		
Substrate: (check all that apply) % of Substrate:	Bedrock DBo	ulder ⊠ Cobb % <u>30</u> %	le ⊠ Grave _45_%	el ⊠ Sand □ _20_%	⊠ Silt/ c <u>5_</u> %	elay □ Organic %		her: %	
Width of Riparian Zone	: Vegetative (check all that		⊠ Trees:	Б	⊠ Sanlir	ngs/Shrubs:	⊠ !	Herbs	
<u>40_ft</u> - N/A□	•	of Dominants:	_ <u>6</u> _in.		_ <u>0.5</u> _in	_		10100	
Dominant Bank Vegeta Rose, sedge, pine	tion (list):								
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools):									
Riffles, runs, pools, overhanging banks									
Aquatic Organisms Obs	served (list):								
minnows									
T&E Species Observed	(list):								
none									
Disturbances (ex: livesto	ck access, manure i	n waterbody, waste	e discharge pipe	s):					
Cattle runoff									
Tributary is: (check one)	⊠ Natural	□ Art	ificial, man-ma	ade 🗆 Manipı	ulated				
Stream Quality ^a : (check one)	☐ High	⊠ Mc	oderate	□ Low					

Waterbody	ID:
Spoe013	

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 spoe013 facing southwest upstream



Waterbody spoe013 facing northeast downstream



Waterbody spoe013 southeast across

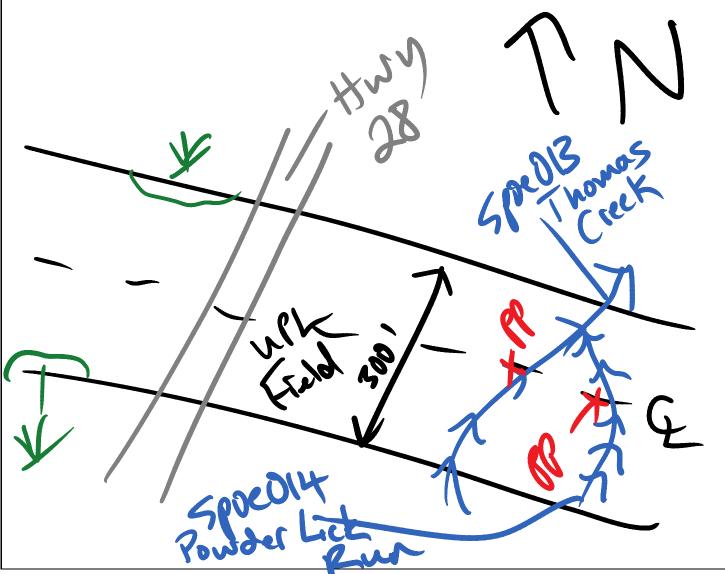
Survey Description	1							
Project Name:		Waterbody Nai	me:			aterbody ID:		Date:
Atlantic Coast Pipeli	ne	Powder Lick	Run		Sı	poe014		3/28/2016
State:	County:		Company:		Crew N	lember Initials	: Photo	s:
ŭ .	Pocahontas		NRG		CG, S		1-3	
Tract Number(s):			Nearest Mile	post:		Associated W	etland ID(s):	
Unnamed tract south	of 05-001-E055		79.4			none		
Survey Type: (check one)	⊠Centerline	□Re-F	Route	□Access Road		□Other:		
Physical Attributes Stream Classification:	5							
(check one)	Ephemera	ıl ⊠Inter	mittent	□Perennial				
Waterbody Type: (check one)	River ⊠ Str	eam 🗆 Dito	:h □ Ca	anal 🗆 Other:	:			
OHWM Width: 8 ft.	OHWM Indicate (check all that apply		☐ Clear lin	e ⊠Shelvin	g	□Wrested vegetation	⊠Scour	ing □Water staining
Height:	⊠Bent, n vegetatio	natted, or missin n		ne □Litter ar debris	nd	□ Abrupt plan community ch		I characteristic change
N/A 🗆	· ·						_	
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 (Approx.)	ter:
_ <u>15_</u> ft.	_	<u>6</u> ft.		_ N/A□	<u>6</u> ft.		N/A□	0.25ft.
Sinuosity:		elocity:		Bank height			Bank slope	
(check one) ☐Straight	(Approx.)			Right:	0 "		Rig	
		_0.8_fps	;	Left:	_2_ft.		L	<u>80</u> degrees eft:
⊠Meanderin	lg N/A□				<u>2</u> ft.			20 degrees
Qualitative Attribut	tes							
Water Appearance: (check one)	No water ⊠0	Clear □Turb	-	een □Sui surface scu		□Algal [mats	□Other:	
Substrate:	Bedrock ☐ Bo	ulder ⊠ Cobb				lay 🗆 Organic	☐ Other:	
(check all that apply) % of Substrate:	%	% <u>10</u> %	<u>65</u> %		<u>5</u> %	%)
Width of Riparian Zone	: Vegetative	Layers:						
<u>ft</u> .	(check all that Avg. DBH (approx.)	apply) of Dominants:	⊠ Trees: _ <u>10</u> _in.		⊠ Saplir _ <u>1</u> _in.	ngs/Shrubs:	⊠ Herb	S
N/A⊠ Dominant Bank Vegeta								
Hemlock, barberry,								
Aquatic Habitats (ex: su	bmerged or emerged	l aquatic vegetatio	n, overhanging	banks/roots, leaf pac	ks, large	submerged wood	, riffles, deep po	ools):
riffles								
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):				
none								
Tributary is: (check one)			ificial, man-m	ade 🗆 Manipı	ulated			
Stream Quality ^a : (check one)	☐ High	⊠ Mo	oderate	□ Low				

Waterbody Spoe014	ID:
Spoe014	

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 spoe014 facing southwest upstream



Waterbody spoe014 facing northeast downstream



Waterbody spoe014 facing southeast across

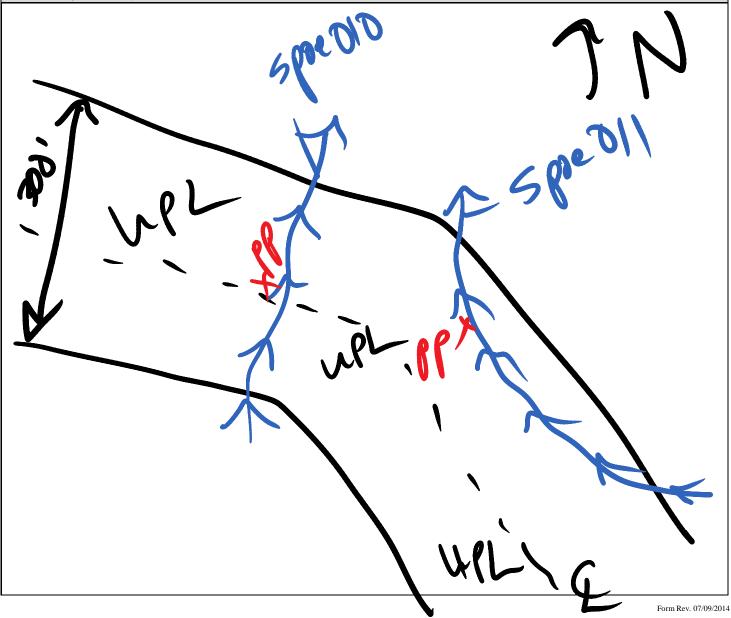
Survey Description	1							
Project Name:		Waterbody Nai	ne:		W	aterbody ID:		Date:
Atlantic Coast Pipeli	ne	UNT to Thon	nas Creek			poe010		3/23/2016
State:	County:		Company:		Crew N	lember Initials:	Photo	s:
<u> </u>	Pocahontas		NRG		CG, A		1-3	
Tract Number(s):			Nearest Mile	epost:		Associated W	etland ID(s):	
05001-E051			79.8			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	ch □ Ca	anal 🗆 Other:				
OHWM Width: 6 ft.	OHWM Indica (check all that apply		☐ Clear lin	e ⊠Shelvin	g	□Wrested vegetation	⊠Scou	ring □Water staining
Height:	⊠Bent, r vegetatio	matted, or missin on	g □Wrack lii	ne □Litter ar debris	nd	☐Abrupt plant		il characteristic change
N/A□ Width of Waterbody - T	op of Width	of Waterbody -	Toe of Slope	Width of Waterbo	odv - W	ater Edge to	Depth of Wa	iter:
Bank to Top of Bank:		of Slope:	roc or olope	Water Edge:	ou,		(Approx.)	
_ <u>_10_</u> ft.	_	<u>5</u> ft.		_ N/A□	<u>5</u> ft.	I	N/A□	0.25ft.
Sinuosity:		velocity:		Bank height		I	Bank slope	
(check one) ☐Straight	(Approx.)			Right:			Rig	ght:
		_ <u>0.8</u> _fps	;	Left:	<u>1</u> ft.		L	<u>80</u> degrees .eft:
⊠Meanderin	g N/A□				_2_ft.			45 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				lay 🗆 Organic	☐ Other:	
(check all that apply) % of Substrate:						, ,		,
	% <u>5</u> %		<u>60</u> %	<u>10</u> % _		%	9	6
Width of Riparian Zone	: Vegetative (check all that		⊠ Trees:		☑ Saplin	ngs/Shrubs:	⊠ Herb	s
<u>15 ft</u> ⋅ N/A□	Avg. DBH (approx.)	of Dominants:	<u>_12</u> _in.	-	<u>1</u> in.			
Dominant Bank Vegeta								
Pine, cinquefoil, ferr)							
Aquatic Habitats (ex: su	bmerged or emerged	d aquatic vegetatio	n, overhanging	banks/roots, leaf pac	ks, large	submerged wood,	riffles, deep p	ools):
Leaf packs, woody								
Aquatic Organisms Ob	served (list):							
none								
T&E Species Observed	(list):							
none								
Disturbances (ex: livesto	ck access, manure i	n waterbody, waste	e discharge pipe	es):				
none								
Tributary is: (check one)	⊠ Natural	□ Art	ificial, man-m	ade 🗆 Manipı	ulated			
Stream Quality ^a : (check one)	⊠ High		oderate	□ Low				

Waterbody	ID
Spoe010	

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 SPOE010 facing southwest upstream



Waterbody SPOE010 facing northeast downstream



Waterbody SPOE010 facing southeast across

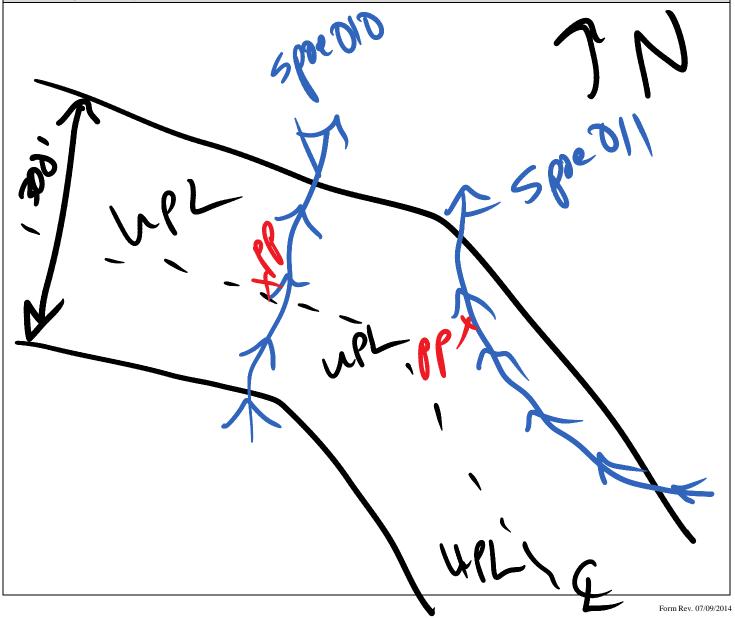
Currey Deceription								
Survey Description Project Name:	1	Waterbody Nai	ne:		W	aterbody ID:		Date:
Atlantic Coast Pipeli	ne	UNT to Thon				poe011		3/23/2016
State:	County:	1	Company:		Crew N	Member Initials:	Photo	s:
g .	Pocahontas		NRG		CG, A	NS.	1-3	
Tract Number(s):			Nearest Mile	post:		Associated Wo	etland ID(s):	
05-001-E051			79.9			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: 5 ft.	OHWM Indica (check all that apply		☐ Clear lin	e □Shelvino	g	□Wrested vegetation	⊠Scoul	ring ⊠Water staining
Height:ft. N/A□	⊠Bent, r vegetatio	matted, or missin on	g □Wrack lir	ne □Litter an debris	nd	□Abrupt plant community cha		l characteristic change
Width of Waterbody - To			Toe of Slope	Width of Waterbo	ody - W		Depth of Wa	ter:
Bank to Top of Bank: 10_ft.		of Slope: _5_ft.		_	<u>5</u> ft.		(Approx.)	_ <u>0.1_</u> ft.
Sinuosity: (check one)	Water (Approx.)	velocity:		N/A□ Bank height Right:	ft.		N/A□ Bank slope Riç	yht: _45_degrees
⊠Meanderin	g N/A□	ipc		Left:	ft.		L	eft: 80 degrees
Qualitative Attribut	tes							
Water Appearance:		Clear □Turb	-			J	□Other:	
Substrate:	Bedrock □ Bo	oulder 🗵 Cobb		surface scu		mats	☐ Other:	
(check all that apply) % of Substrate:	%	% <u>40</u> %	<u>20</u> %		<u>30</u> %	%	%	,
Width of Riparian Zone	(check all that	apply)	⊠ Trees:		☑ Saplin	ngs/Shrubs:	⊠ Herb	s
<u>ft</u> . N/A⊠	Avg. DBH (approx.)	of Dominants:	<u>8</u> _in.	_	_ <u>1_</u> in.			
Dominant Bank Vegetar Fern, eastern hemlo								
Aquatic Habitats (ex: su		d aquatic vegetatio	n, overhanging l	banks/roots, leaf pack	ks, large	submerged wood,	riffles, deep p	ools):
Leaf packs								
Aquatic Organisms Obs	served (list):							
T&E Species Observed	(list):							
none								
Disturbances (ex: livesto	ck access, manure i	n waterbody, waste	e discharge pipe	s):				
Tributary is:		□ ^ ri	ificial, man-ma	ade □ Manipu	ulated			
Stream Quality ^a : (check one)	⊠ High		oderate	□ Low	aiat e u			

Waterbody Spoe011	ID:
Spoe011	

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 SPOE011 facing southeast upstream



Waterbody SPOE011 facing southwest downstream



Waterbody SPOE011 facing northeast across

Survey Description	1				L			<u> </u>	
Project Name:	Waterbody Name:				Waterbody ID:			ate:	
Atlantic Coast Pipeli	ne	UNT to Suga	r Camp Ru	ın	Sı	poe019		5,	/12/2016
State:	County:	•	Company:		Crew N	Member Initials:	PI	notos:	
3	Pocahontas		NRG		CG, k			-3	
Tract Number(s):			Nearest Mile	epost:		Associated We	etland II	O(s):	
05-001-E060			81.0			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 ⊠ Stre	eam 🗆 Ditc	h □ Ca	anal 🗆 Other:	:				
OHWM Width: <u>3</u> ft.	OHWM Indicat (check all that apply		☐ Clear lin	e □Shelvin	g	□Wrested vegetation	□S	Scouring	⊠Water staining
Height: <u>0.25</u> ft. N/A□	⊠Bent, n vegetatio	natted, or missin n	g □Wrack liı	ne ⊠Litter ar debris	nd	☐Abrupt plant community cha		Soil cha	aracteristic change
Width of Waterbody - To Bank to Top of Bank:		of Waterbody - 7 of Slope:	Toe of Slope	Width of Waterbo Water Edge:	ody - W		Depth of Approx.)	f Water:	
<u>12</u> ft.	_	<u>2_</u> ft.		_ N/A□	_1_ft.	1	N/A□		<u>0.1_</u> ft.
Sinuosity: (check one) ⊠Straight	(Approx.)	velocity: 0.2fps		Bank height Right: Left:	_2_ft.	E	Bank slo	Right:	20 degrees
□Meanderin	1,77.				<u>3_</u> ft.			-	30 degrees
Qualitative Attribut	tes								
Water Appearance: (check one) □	No water ⊠C	Clear □Turb		een □Sui surface scu		□Algal □ mats	Other:		
Substrate: (check all that apply) % of Substrate:	Bedrock DBo		le ⊠ Grave <u>% 5</u> %	el ⊠ Sand □ _15_%	⊠ Silt/ c 80_%	elay □ Organic %	□ Oti	her: %	
Width of Riparian Zone	(check all that Avg. DBH	,	⊠ Trees: _8_in.		⊠ Saplir _1_in.	ngs/Shrubs:	⊠ ŀ	Herbs	
N/A⊠ Dominant Bank Vegetat	(approx.)								
White pine, Blueberi									
Aquatic Habitats (ex: su	bmerged or emerged	d aquatic vegetation	n, overhanging	banks/roots, leaf pac	ks, large	submerged wood,	riffles, de	ep pools)	
none									
Aquatic Organisms Obs	served (list):								
none									
T&E Species Observed	(list):								
none									
Disturbances (ex: livesto	ck access, manure in	n waterbody, waste	discharge pipe	es):					
none									
Tributary is: (check one)	⊠ Natural	□ Art	ificial, man-m	ade 🗆 Manipı	ulated				
Stream Quality ^a : (check one)	☐ High	⊠ Mo	derate	□ Low					

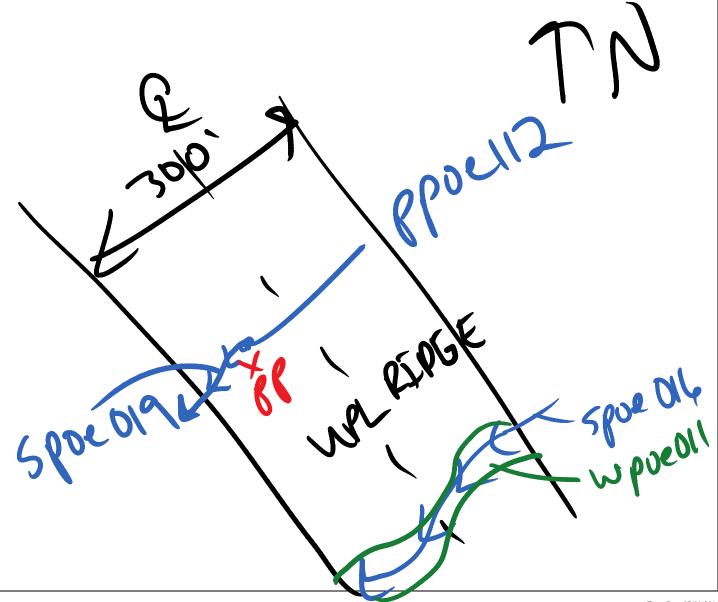
Waterbody	ID:
Spoe019	

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:

Weakly intermittent originating at spring ppoe112





Waterbody spoe019 facing north upstream



Waterbody spoe019 facing south downstream



Waterbody spoe019 facing west across

Survey Description	1				L			T	
Project Name:		Waterbody Nar				aterbody ID:		Date:	
Atlantic Coast Pipeli	ne	UNT to Suga	ır Camp Ru	ın	Sı	poe016		3/29/20)16
State:	County:	•	Company:		Crew N	Member Initials:	Pho	otos:	
3	Pocahontas		NRG		CG, S		1-3		
Tract Number(s):			Nearest Mile	post:		Associated W	etland ID(s):	
05-001-E060			81.0			none			
Survey Type: (check one)	⊠Centerline	e □Re-R	Route	□Access Road		□Other:			
Physical Attributes Stream Classification:	i								
(check one)	□Ephemera	al ⊠Inter	mittent	□Perennial					
Waterbody Type: (check one)	River ⊠ Str	eam 🗆 Ditc	h □ Ca	anal 🗆 Other:	:				
OHWM Width: <u>3</u> ft.	OHWM Indicat (check all that apply		☐ Clear lin	e □Shelvin	g	⊠Wrested vegetation	⊠Sco		⊒Water staining
Height: _1_ft. N/A□	□Bent, n vegetatio	natted, or missing n	g □Wrack lir	ne □Litter ar debris	nd	☐ Abrupt plant community ch		Soil characteri	istic change
Width of Waterbody - To Bank to Top of Bank:		of Waterbody - 7 of Slope:		Width of Waterbo Water Edge:	ody - W		Depth of V (Approx.)	Water:	
_ <u>_7_</u> ft.	_	_1ft.		_ N/A□	_1_ft.		N/A□	<u>0.1_</u> ft	
Sinuosity: (check one) ☐Straight	(Approx.)	velocity: 0.2fps		Bank height Right: Left:	_1_ft.		Bank slop F	Right : 30_ d Left :	legrees
⊠Meanderin	1477.2				_1_ft.			_ <u>35_</u> d	legrees
Qualitative Attribut	es								
Water Appearance: (check one) □	No water ⊠0	Clear □Turb		een □Sui surface scu		□Algal [mats	□Other:		
Substrate: (check all that apply) % of Substrate:	Bedrock DBo	ulder □ Cobb %%	le □ Grave %	el ⊠ Sand □ _25_%	⊠ Silt/ c 	elay □ Organic %		er: _%	
Width of Riparian Zone	(check all that Avg. DBH	•	□ Trees: in.		⊠ Saplir _ <u>0.5</u> _in.	ngs/Shrubs:	⊠ He	erbs	
N/A⊠ Dominant Bank Vegetat	(approx.)								
Pine, sedge, grasse									
Aquatic Habitats (ex: su	bmerged or emerged	d aquatic vegetation	n, overhanging l	banks/roots, leaf pac	ks, large	submerged wood,	riffles, deep	p pools):	
none									
Aquatic Organisms Obs	served (list):								
none									
T&E Species Observed	(list):								
none									
Disturbances (ex: livesto	ck access, manure i	n waterbody, waste	discharge pipe	s):					
none									
Tributary is: (check one)	⊠ Natural	☐ Art	ificial, man-ma	ade 🗆 Manipı	ulated				
Stream Quality ^a : (check one)	☐ High	□ Mo	derate	⊠ Low					

Waterbody	ID:
Spoe016	

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

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

Notes:

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

Steplo wettans or rest



Waterbody spoe016 facing north upstream



Waterbody spoe016 facing south downstream



Waterbody spoe016 facing east across

Open Waterbody Data Sheet

Open waterboo	iy Dala Sileet	•						
Survey Description	on							
Project Name:		Waterbody I	Name:		,	Waterbody ID:	Į.	Date:
Atlantic Coast Pip	eline	Unnamed pond				Opoe002	6	6/16/2016
State:	County:		Company: Crew			Member Initials:	Photos:	
West Virginia	Pocahontas		NRG		CG,	SA, KO	1-2	
Tract Number(s):			Nearest Milepos	t:	1	Associated Wetland	ID(s):	
05-001-E060			NA			fringe		
Survey Type: (check one)	□Centerlin	ie □F	Re-Route	⊠Access Roa	ad	□Other:		
Physical Attribut	es							
Waterbody Type: (check one) ⊠ Stoo	ck Pond □ Natura	l Pond □ La	ake 🗆 Reservoir	☐ Impoundme	ent 🗆	Oxbow Other:		
Hydrologic Regime:	☐ Permanently	Flooded 2	Semipermanentl	y Flooded	Seas	sonally Flooded □	Temporarily	/ Flooded
ОНWМ	OHWM Indi		☐ Clear li	ne □She	elvina	□Wrested	□Scou	ring □Water
Height:			on bank		9	vegetation		staining
<u>0.5</u> ft.	□Ben vegeta	t, matted, or nation	nissing □Wrack line	□Litte debris		⊠Abrupt plant community cha		aracteristic change
Depth of Water:	<u> </u>	Bank heig	ht (average):			Bank slope (aver	age):	
N/A□ <u>2</u>	_ft.		<u>1</u> f	t.		_	30 degrees	S
Qualitative Attrib	utes							
Water Appearance: (check one)	□No water □	Clear ⊠⊺	Γurbid □She on sui		Surface	e □Algal □0 mats	Other:	
Substrate: (check all that apply)	□ Bedrock □ B	oulder \square C	cobble Grave	☐ Sand	⊠ Si	lt/ clay □ Organic	☐ Other:	
% of Substrate:	%	%	%	%%	100	<u> </u>	9	6
Width of Riparian Zor		•						
ft.	(check all that	apply)	☐ Trees:		☐ Sap	olings/Shrubs:	⊠ Herb	os .
N/A⊠	Avg. DBH	of Dominant	s: ir	٦.	_	in.		
Dominant Bank Vege	1 1 1 1							
Rushes, alder, gra	asses, goldenro	d						
Aquatic Habitats (ex: s	submerged or emerged ac	quatic vegetation,	overhanging banks/roots	, leaf packs, large su	ubmerged	d wood, riffles, deep pools, e	etc.):	
Submerged aquat								
Aquatic Organisms C	Observed (list):							
Tadpoles, dragonf	flies							
T&E Species Observe	ed (list):							
none								
Disturbances (ex: live	stock access, manure	in waterbody, v	vaste discharge pipes	s):				
Artificial, adjacent	to driveway							
Waterbody is: (check one)	☐ Natural	×	Artificial, man-ma	de 🗆 Man	ipulate	ed		
Waterbody Quality a: (check one)	☐ High		Moderate	⊠ Low				

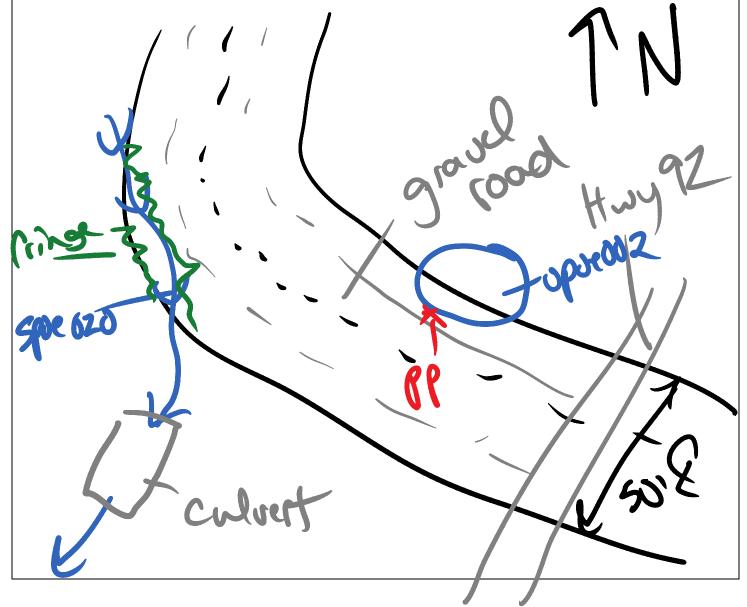
Waterbody	ID
Opoe002	

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

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

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

Notes:





Open waterbody OPOE002 facing northwest



Open waterbody OPOE002 facing southeast

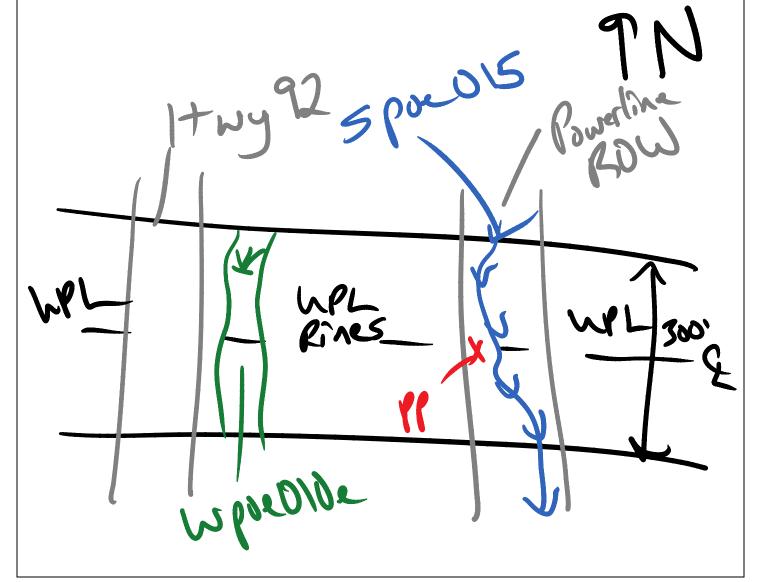
Survey Description	•								
Project Name:	I	Waterbody Nai	ne:		W	aterbody ID:		Date	:
Atlantic Coast Pipeli	UNT to Sugar Camp Run				Spoe015			9/2016	
State:	County:	I	Company:		Crew N	Member Initials	: Ph	otos:	
	Pocahontas		NRG		CG, S			-3	
Tract Number(s):			Nearest Mile	epost:		Associated W	etland ID)(s):	
05-001-E060 Survey Type:			81.2			none			
(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 Sti	ream 🗆 Dito	:h □ Ca	anal 🗆 Other:					
OHWM Width: _5_ft.	OHWM Indica (check all that appl		☐ Clear lin	ne □Shelvin	g	□Wrested vegetation	⊠S	couring	□Water staining
Height: 2_ft. N/A□	⊠Bent, r vegetatio	matted, or missin on	g □Wrack lii	ne □Litter ar debris	nd	□ Abrupt plan community ch		Soil chara	cteristic 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	Water:	
	-	ft.		N/A	_4ft.		N/A□	_0.2	5_ft.
Sinuosity: (check one) □ Straight ⊠ Meanderin	(Approx.)	velocity:		Bank height Right: Left:	2_ft.		Bank slo	Right: 35	5_ degrees
	- 14712				<u>2</u> ft.			_80)_degrees
Qualitative Attribut 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 % <u>5</u> %	le ⊠ Grave		⊠ Silt/ c 30_%	elay □ Organio		ner: %	
Width of Riparian Zone	(check all that Avg. DBH	-	☐ Trees		☑ Saplin _0.5_in.	ngs/Shrubs:	⊠ F	Herbs	
N/A⊠ Dominant Bank Vegeta	(approx.)								
Goldenrod, sedge, g									
Aquatic Habitats (ex: su	bmerged or emerge	d aquatic vegetatio	n, overhanging	banks/roots, leaf pac	ks, large	submerged wood	, riffles, de	ep pools):	
Aquatic Organisms Obs	served (list):								
none	,								
T&E Species Observed	(list):								
none									
Disturbances (ex: livesto	ock access, manure	in waterbody, waste	e discharge pipe	es):					
Powerline ROW									
Tributary is:	☐ Natural	□ Art	ificial, man-m	ade ⊠ Manipı	ulated				
Stream Quality ^a : (check one)	☐ High	□ Мо	oderate	⊠ Low					

Waterbody Spoe015	ID:
Spoe015	

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 spoe015 facing north upstream



Waterbody spoe015 facing south downstream

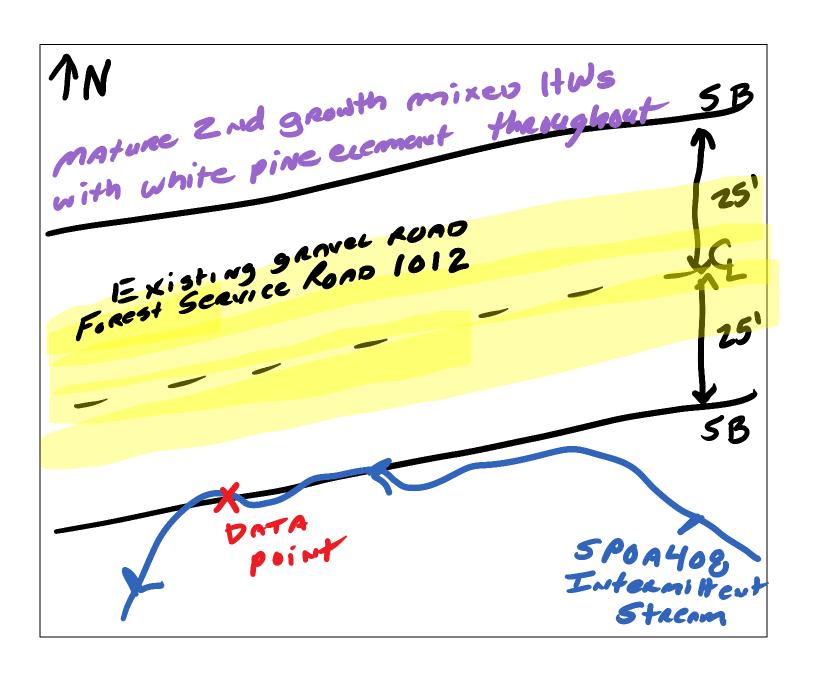


Waterbody spoe015 facing northeast across

Survey Description	on								
Project Name: Waterbody N			me:			Waterbody ID:			Date:
Atlantic Coast Pipeline UNT to Suga			ır Camp Run			spoa408			5/25/2016
State:	County:		Company:		Crew N	Member Initials	s: F	Photos:	
West Virginia	Pocahontas		NRG - ER	M	GB, K	O		5 photo	os
Tract Number(s):			Nearest Mile	epost:	ı	Associated W	etland	ID(s):	
Access road 05-001-E	064.AR1 within 0	5-001-E064	81.1			none			
Survey Type: (check one)	□ Centerlin	e □Re-	Route	⊠Access Road	1	□Other:			
Physical Attribute		<u> </u>	rtouto	<u></u>					
Stream Classification:	:								
(check one)	□Ephemer	al ⊠Inte	ermittent	□Perennial					
Waterbody Type: (check one)	□River ⊠ St	ream 🗆 Di	ch 🗆 Ca	anal 🗆 Other	:				
OHWM Width: _5.0_ft.	OHWM Indica (check all that app		⊠ Clear lir on bank	ne □Shelvin	g	□Wrested vegetation		Scouring	□Water staining
Height: <u>1.0</u> ft. N/A□	□Bent, vegetatio	matted, or missi on	ng □Wrack li	ne ⊠Litter ar debris	nd	□ Abrupt plan community ch		□Soil ch	naracteristic change
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 (Approx.)	of Water	:
<u>9.0</u> ft.	-	_ <u>4.0_</u> ft.		 N/A□	<u>3.0</u> ft.		N/A□	-	<u>0.25</u> ft.
Sinuosity: (check one)	Water (Approx.	velocity:		Bank height			Bank s	lope	
□ Straight	(Αρρίολ.			Right:	3.0_ft.			Right	90 degrees
⊠Meander	ing	<u>_1.0_</u> fp	3	Left:				Left	:
	14712				3.0_ft.				70 degrees
Analysis of Bank Stat Banks exhibit underc		_		-	:				
Qualitative Attribu	utes								
Water Appearance: (check one)	□No water ⊠	Class DT	h:4 □ Ch				□ O4b a #		
(Check one)	⊣no water ⊠	Clear □Tur		leen □Sul surface scu		□Algal mats	□Other	:	
	☐ Bedrock ☐ Be	oulder 🗵 Cob	ble ⊠ Grave	el 🗵 Sand 🏻	□ Silt/ c	lay 🛭 Organio	: DC	Other:	
(check all that apply) % of Substrate:	%	<u>_</u> % <u>_30</u> _%	<u>35</u> _%	<u>25</u> %	%	_ <u>10_</u> %		%	
Width of Riparian Zon	e: Vegetativ	e Layers:							
50 ft	(check all tha	t apply) I of Dominants:	⊠ Trees			ngs/Shrubs:	\boxtimes	Herbs	
 N/A□	(approx.)	i oi Dominants.	<u>11.0</u> ir	n. <u>-</u>	_ <u>1.0</u> _in.	•	-		
Dominant Bank Veget	` '						_		
White oak, red man creeper, wood fern Aquatic Habitats (ex: s		•			·	•	•		
Leaf packs, overha	-	-				ū			,
Aquatic Organisms O	bserved (list):								
Invertebrates – sto	nefly, caddisfly	, black fly							
T&E Species Observe	d (list):								
none									
Disturbances (ex: lives	tock access, manure	in waterbody, was	te discharge pipe	es):					
Paralleled by existi	ing gravel road								
Tributary is: (check one)	Natural	□ A	rtificial, man-m	ade 🗆 Manip	ulated				

		spoa408						
а	ligh Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by bots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no isturbance 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 veg channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (e turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish move severe disturbance from livestock or man.	roding); water color is muddy and						
Notes:								
	Stream continues out of access road corridor in both directions; parallels existing gravel road; does not cross road; nature second growth mixed hardwoods with white pine element.							
1	Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey bound	dary, and IDs of associated features)						
	Stream Quality ^a :							
((check one) ☐ High ☐ Moderate ☐ Low							

Waterbody ID:





Waterbody SPOA408 facing northeast upstream



Waterbody SPOA408 facing southwest downstream



Waterbody SPOA408 facing northwest across

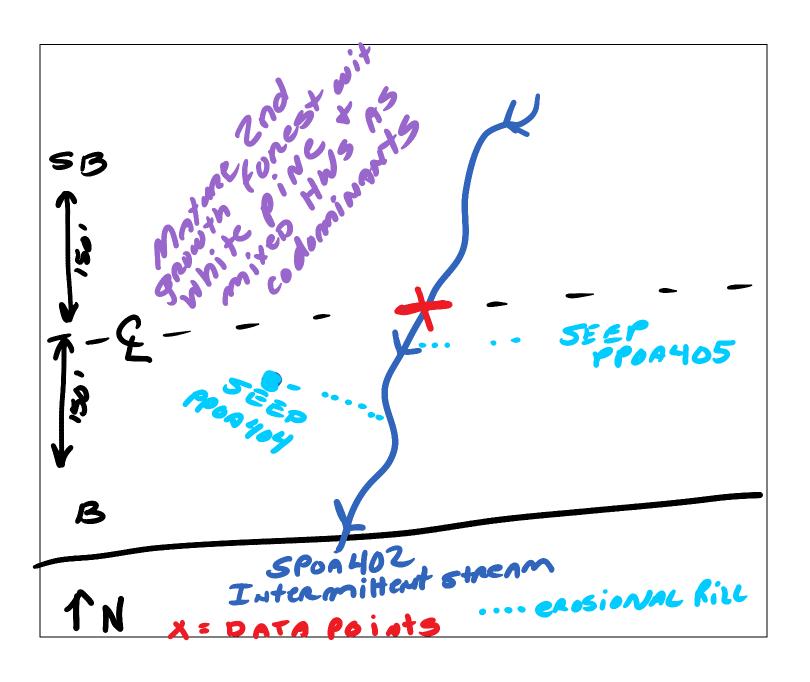


Waterbody SPOA408 scouring facing northwest across

Survey Descriptio	n								
Project Name:	Waterbody Name:			W	Waterbody ID:			Date:	
Atlantic Coast Pipeline	UNT to Suga	ar Camp Ru	ın	sp	spoa402			5/12/2016	
State:	County:		Company:		Crew N	Member Initials	s: F	hotos:	
West Virginia	Pocahontas		NRG/ERM		GB, S	SA	;	3 photo	S
Tract Number(s):	.		Nearest Mile	epost:	1	Associated W	etland l	D(s):	
05-001-E064 – Monong	gahela National Fo	orest	81.5			none			
Survey Type: (check one)	⊠Centerline	e □Re-F	Route	□Access Road]	□Other:			
Physical Attribute	S								
Stream Classification: (check one)	□Ephemera	al ⊠Inter	mittent	□Perennial					
Waterbody Type:	· · · · · · · · · · · · · · · · · · ·								
	□River ⊠ Str	ream 🗆 Dito	ch 🗆 Ca	anal 🗆 Other:	•				
OHWM Width: ft.	OHWM Indica (check all that appl)		⊠ Clear lin	e □Shelvin	g	□Wrested vegetation	\boxtimes :	Scouring	□Water staining
Height: ft. N/A□	□Bent, r vegetatio	matted, or missin	g □Wrack li	ne ⊠Litter ar debris	nd	□ Abrupt plan		□Soil ch	aracteristic change
Width of Waterbody - 1 Bank to Top of Bank:		of Waterbody - of Slope:	Toe of Slope	Width of Waterbo	ody - W	ater Edge to	Depth o	of Water:	
<u>_10.0ft</u> .	_	3.0_ft.			3.0_ft.		N/A□	_	<u>0.25</u> ft.
Sinuosity:		velocity:		Bank height			Bank sl	lope	
(check one) ⊠Straight	(Approx.)			Right:				Right:	
		<u>0.75</u> fp	S	Left:	3.0_ft.			Left:	_75_ degrees
□Meanderi	ng N/A□			_	6.0_ft.				75 degrees
Analysis of Bank Stab No evidence of bank in	• (icture, vegetation	on, substrate	characteristics):	:				
Qualitative Attribu	ites								
Water Appearance: (check one)	[□] No water ⊠0	Clear □Turb	-	een □Sui surface scu		□Algal mats	□Other:		
	☐ Bedrock ☐ Bo	oulder 🗵 Cobb	ole ⊠ Grave	el 🛭 Sand	⊠ Silt/ c	lay 🛭 Organio	c □ 0	ther:	
(check all that apply) % of Substrate:	%%	_40_	% <u>30</u> %	% <u>10</u> %	<u>10</u> %	6 _10_% __	%		
Width of Riparian Zone	Vegetative		⊠ Trees:		✓ Sanlir	ngs/Shrubs:	<u></u>	Herbs	
<u>ft</u> . N/A⊠	, i	of Dominants:	ir		_ <u>1.5</u> _in.	-		110103	
Dominant Bank Vegeta	1 1 1								
White pine, red ma Christmas fern, par Aquatic Habitats (ex: s	tridae berry, wa	ood fern				•	•		•
coarse woody debr				banks/roots, lear pac	iks, iarge	submerged wood	ı, mnes, d	leep pools).
Aquatic Organisms Ob	served (list):								
Invertebrates	, ,								
T&E Species Observed	d (list):								
none									
Disturbances (ex: livest	ock access, manure i	n waterbody, waste	e discharge pipe	es):					
None apparent									
Tributary is: (check one)	Natural	□ Ar	tificial, man-m	ade 🗆 Manipi	ulated				

		spoa402						
а	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 veg channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (controlled) turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish more severe disturbance from livestock or man.	roding); water color is muddy and						
Notes:								
re	Steep gradient intermittent stream with no evidence of bank instability; continues out of corridor in both directions; eceives outflow from seeps ppoa404 & ppoa405 via erosional rill on steep slopes above stream. Area is mature second growth forest with white pine and mixed hardwoods.							
	Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey bound	dary, and IDs of associated features)						
	Stream Quality ^a : check one) ⊠ High □ Moderate □ Low							

Waterbody ID:





Waterbody SPOA402 facing north upstream



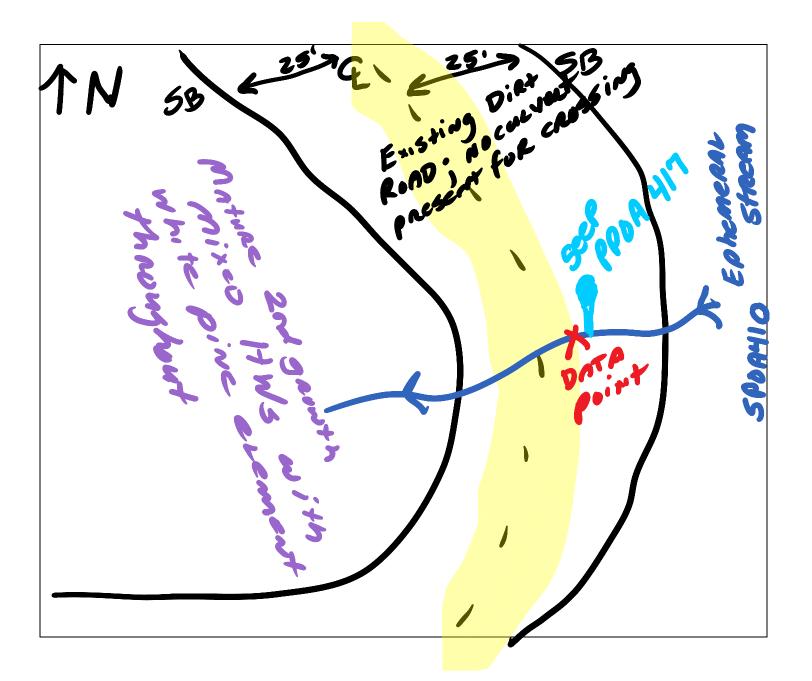
Waterbody SPOA402 facing south downstream



Waterbody SPOA402 facing west across

Survey Description	on								
Project Name:		Waterbody Na			W	aterbody ID:		I	Date:
Atlantic Coast Pipeline		UNT to Sug	ar Camp Ru	un	sp	ooa410			5/25/2016
State:	County:		Company:		Crew N	Member Initials	s: F	hotos:	
West Virginia	Pocahontas		NRG - ER	M	GB, K	O	;	3 photo	os
Tract Number(s):			Nearest Mile	epost:	1	Associated W	etland l	D(s):	
Access road 05-001-E	064.AR1 within 0	5-001-E064	81.9			none			
Survey Type: (check one)	□Centerlin	e □Re-	Route	⊠Access Road	I	□Other:			
Physical Attribute			rtouto	<u></u>					
Stream Classification									
(check one)	⊠Ephemei	ral □Inte	ermittent	□Perennial					
Waterbody Type: (check one)	□River ⊠ St	tream Dit	ch 🗆 Ca	anal 🗆 Other	:				
OHWM Width:	OHWM Indica (check all that app		⊠ Clear lir on bank	ne □Shelvin	ıg	□Wrested vegetation		Scouring	□Water staining
Height: <u>0.33</u> ft. N/A□	□Bent, vegetati	matted, or missi on	ng □Wrack li	ne ⊠Litter ar debris	nd	☐ Abrupt plan community ch		□Soil ch	aracteristic change
Width of Waterbody - Bank to Top of Bank:		of Waterbody - e of Slope:	Toe of Slope	Width of Waterb Water Edge:	ody - W	ater Edge to	Depth (Approx.)	of Water	:
_ <u>3.0_</u> ft.		_ <u>1.0_</u> ft.		N/A⊠	ft.		N/A⊠	-	ft.
Sinuosity:		velocity:		Bank height			Bank s	lope	
(check one) ⊠Straight	(Approx			Right:	00 4			Right:	
		fp	S	Left:	<u>2.0_</u> ft.			Left:	75 degrees
□Meande	ring N/A⊠			_	3.0_ft.				85 degrees
Analysis of Bank Stal No evidence of bank	• (, •	ion, substrate	characteristics)	:				
Qualitative Attrib	utes								
Water Appearance: (check one)	oxtime No water $\qquad \Box$	Clear □Tur			rface um	□Algal mats	□Other:		
Substrate:	□ Bedrock □ B	oulder ⊠ Cob	ble ⊠ Grave	el 🗵 Sand	⊠ Silt/ c	lay 🛭 Organio	: 🗆 0	ther:	
(check all that apply) % of Substrate:	%	<u></u> % <u>_25</u> _%	<u>35</u> _%	<u>20</u> %	<u>10</u> %	_10_%	%	ı	
Width of Riparian Zor		ve Layers:							
<u>30 ft</u> -		at apply) I of Dominants:	⊠ Trees 10.0 ir		⊠ Saplir 1.0_in.	ngs/Shrubs:		Herbs	
N/A□ Dominant Bank Veget	(approx.)								
White oak, Chestn violet, speedwell, b	ut oak, striped outtercup, golde	enród		•					-
Aquatic Habitats (ex: s Leaf packs	submerged or emerge	ed aquatic vegetati	on, overhanging	banks/roots, leaf pac	ks, large	submerged wood	l, riffles, c	leep pools	;):
Aquatic Organisms O	bserved (list):								
None									
T&E Species Observe	ed (list):								
none									
Disturbances (ex: lives	stock access, manure	in waterbody, was	te discharge pipe	es):					
Existing dirt road of	rosses stream	with no bridg	e or culvert	present					
Tributary is: (check one)	Natural	□ A	rtificial, man-m	ade 🗆 Manip	ulated				

		spoa410							
а	High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.								
	Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.								
	Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.								
	Notes:								
	Stream continues out of access road corridor in both directions; no culvert present for road crossing; receives outflow rom seep ppoa417 located approximately 15 feet upslope; seep outflow becomes subterranean immediately upon eaching stream channel.								
rc	om seep ppoa417 located approximately 15 feet upslope; seep outflow becomes subt								
e	om seep ppoa417 located approximately 15 feet upslope; seep outflow becomes subt	erranean immediately upon							





Waterbody SPOA410 facing southeast upstream



Waterbody SPOA410 facing northwest downstream



Waterbody SPOA410 facing northeast across



Waterbody SPOA410 scouring facing east

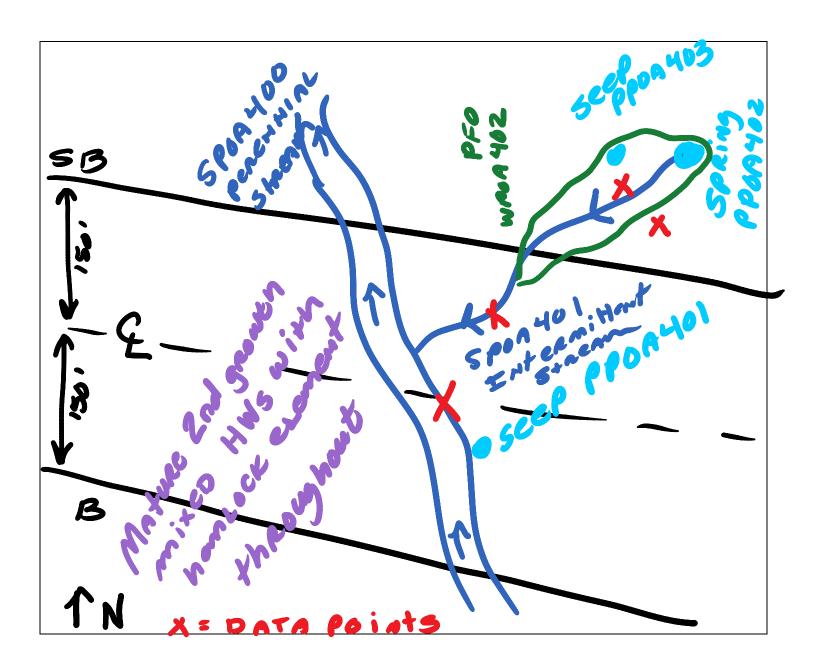
Survey Descriptio	n								
Project Name:		Waterbody Na			W	aterbody ID:		[Date:
Atlantic Coast Pipeline		UNT to Sho	ck Run		sı	ooa400		5	5/12/2016
State:	County:		Company:		Crew I	Member Initials	s:	Photos:	
West Virginia	Pocahontas		NRG/ERM	1	GB, S	SA		5 photo	s
Tract Number(s):			Nearest Mile	epost:		Associated W	Vetland	ID(s):	
05-001-E064 – Monong	jahela National F	orest	82.05			none			
Survey Type: (check one)	⊠Centerlin	e □Re	-Route	□Access Road		□Other:			
Physical Attribute	s								
Stream Classification: (check one)	□Ephemer	al □Inte	ermittent	⊠Perennial					
Waterbody Type:									
(check one)	□River ⊠ St	ream Di	tch C	anal Other					
OHWM Width: 12.0 ft.	OHWM Indica (check all that app		⊠ Clear liı on bank	ne ⊠Shelvin	g	□Wrested vegetation	×	Scouring	□Water staining
Height:ft.	□Bent, vegetatio	matted, or missi on	ng ⊠Wrack li	ne □Litter ar debris	nd	□ Abrupt plar community cl		□Soil ch	aracteristic change
N/A□ Width of Waterbody - □ Bank to Top of Bank:		of Waterbody	Toe of Slope	Width of Waterb	ody - W	ater Edge to	Depth (Approx.)	of Water:	
		_ <u>9.0_</u> ft.			10.0ft				<u>0.50_</u> ft.
Sinuscitur	Water	volocity;		N/A D			N/A 🗆	lono	
Sinuosity: (check one)	(Approx.	velocity:		Bank height Right:			Bank s	Right:	
⊠Straight		_1.75_f	ps	_	4.0_ft.			•	90 degrees
□Meanderi	ng N/A□			Left:	3.0_ft.			Left:	50 degrees
Analysis of Bank Stab Loose rocks/soil and o Qualitative Attribu	exposed roots in	, ,	•	•		gradient with	flashy,	high flow	7 S
Water Appearance:	ites								
	□No water ⊠	Clear □Tui		neen □Su n surface scu		□Algal mats	□Other	r:	
Substrate: (check all that apply)	☐ Bedrock ⊠ B	oulder 🗵 Cob	ble ⊠ Grav	el ⊠ Sand [□ Silt/ c	lay 🛭 Organi	с 🗆 С	Other:	
% of Substrate:	% <u>5</u> %	_ <u>50</u>	_% <u>_30</u> _%	<u>10</u> %		_% _5_%	_%		
Width of Riparian Zone	Vegetativ	e Layers:	⊠ Trees		Z Conlir	ngs/Shrubs:		Horbo	
_ <u>50 ft</u> -	, and the second	l of Dominants			⊴ Зарііі <u>_ 1.0_</u> in	J		Herbs	
N/A □ Dominant Bank Vegeta									
Sugar maple, hemlenettle, foamflower, s Aquatic Habitats (ex: s	ock, sweet bird	ch, beech, blan, woodland	ack cherry, s	striped maple, v	witch h	nazel, green	ash, C	Christma	as fern, wood
Small step poles, ri)-
Aquatic Organisms Ob	served (list):								
Invertebrates, crayf	ish								
T&E Species Observed	d (list):								
none									
Disturbances (ex: livest	ock access, manure	in waterbody, was	te discharge pip	es):					
None apparent									
Tributary is: (check one)	Natural	□ A	rtificial, man-m	nade 🗆 Manip	ulated				

		spoa400								
а	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:									
o o	Moderately steep gradient perennial stream exhibiting areas of bank instability in the form of loose rock/soil and exposed bots; normal for a stream of this gradient. Stream continues out of corridor in both directions; receives output from seep poa401 located on cut bank above stream; intermittent stream spoa401 flows into this stream within the survey corridor ownstream of center line. Surrounding area is a mature second growth mixed hardwood forest with scattered hemlock.									
,	Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey bound	dary, and IDs of associated features)								
	Stream Quality ^a : check one) ⊠ High □ Moderate □ Low									

 $\; \square \; \mathsf{Low}$

 oxtimes High

☐ Moderate





Waterbody SPOA400 facing south upstream



Waterbody SPOA400 facing north downstream



Waterbody SPOA400 facing east across

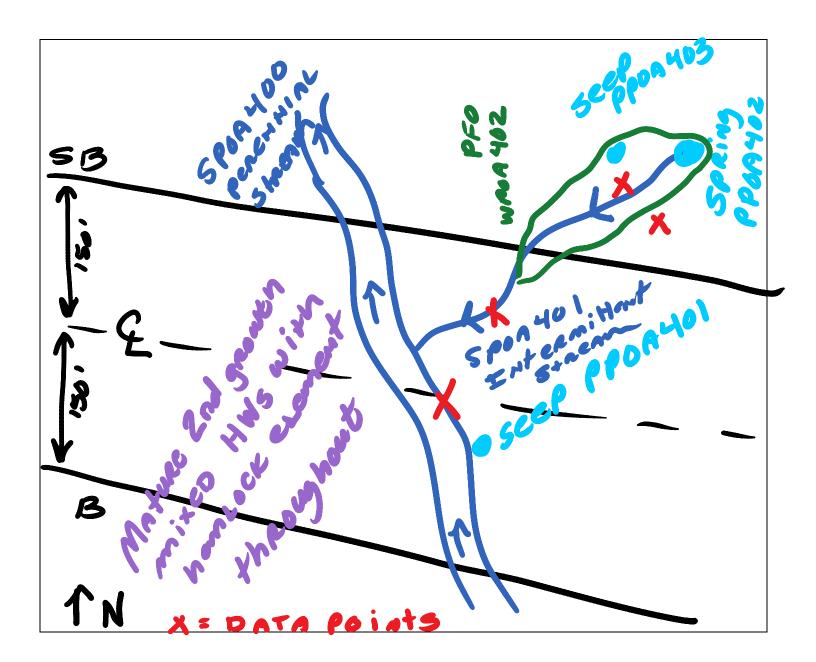
Survey Descriptio	n								
Project Name:		Waterbody Na			W	aterbody ID:		Da	nte:
Atlantic Coast Pipeline		UNT to Shoo	ck Run		sp	oa401		5/	12/2016
State:	County:		Company:		Crew N	lember Initials	: Pl	notos:	
West Virginia	Pocahontas		NRG/ERM		GB, S	SA .	3	photos	;
Tract Number(s):	.		Nearest Mile	epost:	1	Associated W	etland II)(s):	
05-001-E064 – Monong	jahela National Fo	orest	82.05			wpoa402			
Survey Type: (check one)	⊠Centerline	e □Re-l	Route	□Access Road	l	□Other:			
Physical Attribute	S								
Stream Classification: (check one)	□Ephemera	al ⊠Inter	rmittent	□Perennial					
Waterbody Type:									
	☐River ⊠ Str	ream 🗆 Dito	ch □ Ca	anal 🗆 Other:	:				
OHWM Width: ft.	OHWM Indica (check all that appl		⊠ Clear lin	e □Shelvin	g	□Wrested vegetation	⊠S	couring	□Water staining
Height:	□Bent, r vegetatio	matted, or missir on	ng □Wrack lin	ne ⊠Litter ar debris	nd	□Abrupt plan		∃Soil cha	racteristic change
Width of Waterbody - 1 Bank to Top of Bank:		of Waterbody -	Toe of Slope	Width of Waterbo	ody - W	ater Edge to	Depth of (Approx.)	Water:	
ft.		<u>3.0</u> ft.			<u>3.5</u> ft.		N/A□	_0	<u>.25_</u> ft.
Sinuosity:	Water	velocity:		Bank height			Bank slo	ре	
(check one) Straight	(Approx.)	·		Right:				Right:	
		<u>1.5_</u> fps	8	Left:	6.0_ft.			Left:	70 degrees
□Meanderi	ng N/A□				7.0_ft.				75 degrees
Analysis of Bank Stab	exposed roots in	, ,	•	•		gradient with f	lashy, hi	gh flows	
Qualitative Attributed Water Appearance:	ites								
	[□] No water ⊠0	Clear □Turb		een □Sui surface scu		□Algal mats	□Other:		
	☐ Bedrock ☐ Bo	oulder 🗵 Cobb	ole 🗵 Grave	el 🗵 Sand 🏻	□ Silt/ cl	lay 🛭 Organio	: □ Otl	her:	
(check all that apply) % of Substrate:	<u>%</u> %	<u>40</u>	% <u>5</u> %	<u>5</u> %		% _10_%	% <u></u> %		
Width of Riparian Zone	Vegetative				✓ Caplin	age/Shrubs:	✓ ⊔	lerbs	
<u>ft</u> . N/A⊠	,	of Dominants:	<u>12.0</u> ir		⊴ Зарііп <u>_ 1.0_</u> in.	igs/Shrubs:	_·	leibs	
Dominant Bank Vegeta	,								
Sugar maple, hemlenettle, foamflower,	ock, sweet birc	<u>ı, woodland s</u>	edge						s fern, wood
Aquatic Habitats (ex: s coarse woody debr	-	_		banks/roots, lear pac	ks, large	submerged wood	i, miles, de	ep pools):	
Aquatic Organisms Ob	served (list):								
Invertebrates	, ,								
T&E Species Observed	d (list):								
none									
Disturbances (ex: livest	ock access, manure i	in waterbody, waste	e discharge pipe	es):					
None apparent									
Tributary is: (check one)	Natural	□ Ar	tificial, man-m	ade 🗆 Manipi	ulated				

		spoa401								
а	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:									
Steep gradient intermittent stream exhibiting areas of bank instability in the form of loose rock/soil and exposed roots; normal for a stream of this gradient. Stream flows into perennial stream spoa400 within the survey corridor; upstream continues out of corridor where it originates at spring ppoa402 within PFO wetland wpoa402; also receives outflow from seep ppoa403 via wetland. Surrounding area is a mature second growth mixed hardwood forest with scattered hemlock.										
,	Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey bound	lary, and IDs of associated features)								
	Stream Quality ^a : check one) ⊠ High □ Moderate □ Low									

 $\;\square\;\mathsf{Low}$

 oxtimes High

☐ Moderate





Waterbody SPOA401 facing east upstream



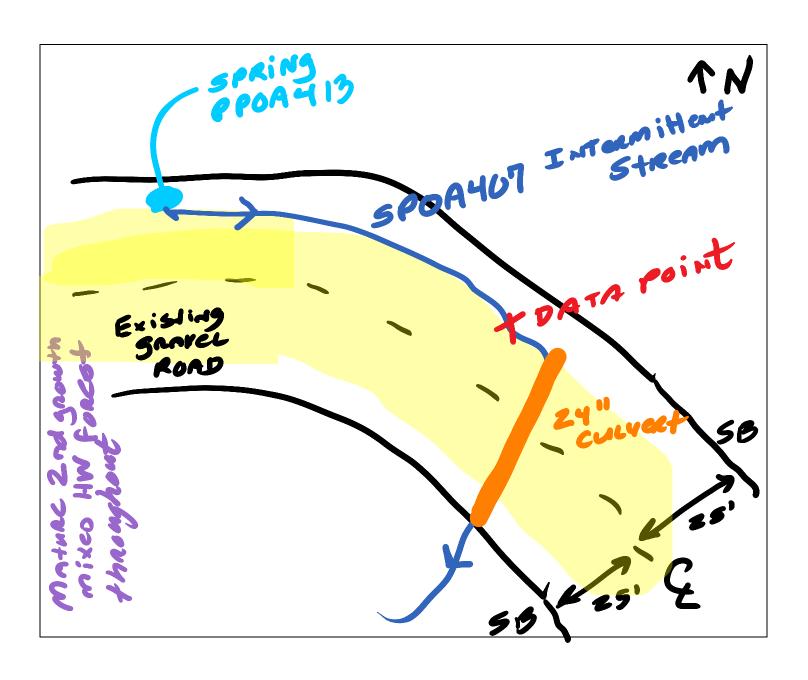
Waterbody SPOA401 facing west downstream



Waterbody SPOA401 facing north across

Survey Description	n								
Project Name:		Waterbody Na			W	aterbody ID:			ate:
Atlantic Coast Pipeline		UNT to Kna	pp Creek		sı	poa407		5	/13/2016
State:	County:		Company:		Crew I	Member Initials	s: F	Photos:	
West Virginia	Pocahontas		NRG/ERM	1	GB, S	SA		3 photo	S
Tract Number(s):	1		Nearest Mile	epost:	<u> </u>	Associated W	etland	ID(s):	
Access road 05-001-E	064.AR2; Monong	gahela NF	83.6			none			
Survey Type: (check one)	□Centerline	e □Re-	Route	⊠Access Road		□Other:			
Physical Attribute	es								
Stream Classification: (check one)		al ⊠Inte	ermittent	□Perennial					
Waterbody Type:									
(check one)	□River ⊠ St	ream Dit	ch 🗆 C	anal Other:					
OHWM Width:	OHWM Indica (check all that app		⊠ Clear lir on bank	ne □Shelvin	g	□Wrested vegetation		Scouring	□Water staining
Height: 0.33 ft.	□Bent, i vegetatio	matted, or mission	ng □Wrack li	ne ⊠Litter ar debris	nd	□ Abrupt plan		□Soil ch	aracteristic change
N/A□ Width of Waterbody - Bank to Top of Bank:			Toe of Slope	Width of Waterbo	ody - W	ater Edge to	Depth (Approx.)	of Water:	
•		of Slope:		Water Edge:			(Αρρίολ.)		0.25_ ft.
_ <u>5.0_f</u> t.	-	<u>1.0</u> ft.		N/A□	<u>1.5_</u> ft.		N/A□	_	<u>0.25_</u> it.
Sinuosity: (check one)	Water (Approx.	velocity:		Bank height			Bank s	-	
⊠Straight	(прргох.,	′ 1.25fr	ne	Right:	<u>2.5_</u> ft.			Right:	60 degrees
□Meanderi	ing N/A 🗆		55	Left:				Left:	<u> </u>
	14712				<u>10.0_</u> ft	•			70 degrees
Analysis of Bank Stab Confined to ditch alor	• `	, ,	•	•					
		barnes are road	out und road	- DCu					
Qualitative Attribution Water Appearance:	ites								
(check one)	□No water ⊠	Clear □Tur		ieen □Sui surface scu		□Algal mats	□Other	:	
	☐ Bedrock ☐ Be	oulder 🗵 Cob	ble ⊠ Grav	el 🗵 Sand 🛭	⊠ Silt/ c	clay 🛭 Organio	: □ C	Other:	
(check all that apply) % of Substrate:	%	% _ <u>40</u> _%	_35%	<u>10 </u> % <u>5</u>	%	_ <u>10 %</u>			
Width of Riparian Zon	e: Vegetativ	e Lavers							
	(check all tha	t apply)		: 🛚 🗈	☑ Saplir	ngs/Shrubs:	\boxtimes	Herbs	
<u>ft</u> ⋅ N/A⊠	Avg. DBH (approx.)	I of Dominants:	<u>12.0</u> jı	n. _	_ <u>1.0_</u> in		_		
Dominant Bank Veget	ation (list):								
Chestnut oak, swe vellow cress, golde Aquatic Habitats (ex: s	et birch, pignut n ragwort, colts ubmerged or emerge	t hickory, whi s foot, New Y	te oak, red ork fern, whon, overhanging	maple, sugar m nite snakeroot banks/roots, leaf pac	naple,	green ash, s	service	berry, g	garlic mustard,
Leaf packs				•		ū			
Aquatic Organisms Ol	oserved (list):								
none									
T&E Species Observed	d (list):								
none									
Disturbances (ex: livest	ock access, manure	in waterbody, was	te discharge pipe	es):					
Culvert crossing fo	r existing grave	el road; 24" co	orrugated m	netal culvert; co	nfined	d to ditch for	125 fe	et alono	g existing road
Tributary is: (check one)	□ Natural	□ A	rtificial, man-m	ade 🗵 Manipi	ulated				

		spoa407							
а	High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.								
	Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.								
	Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.								
	Notes:								
	Stream begins at spring ppoa413 located on road cut and is confined to ditch for 125 feet; downstream continues out; rulvert crossing for existing gravel road (forest service road 55); mature second growth mixed hardwood forest.								
	Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey bound	dary, and IDs of associated features)							
	Stream Quality ^a : (check one) □ High □ Moderate □ Low								
('check one) ☐ High ☐ Moderate ☐ Low								





Waterbody SPOA407 facing northwest upstream



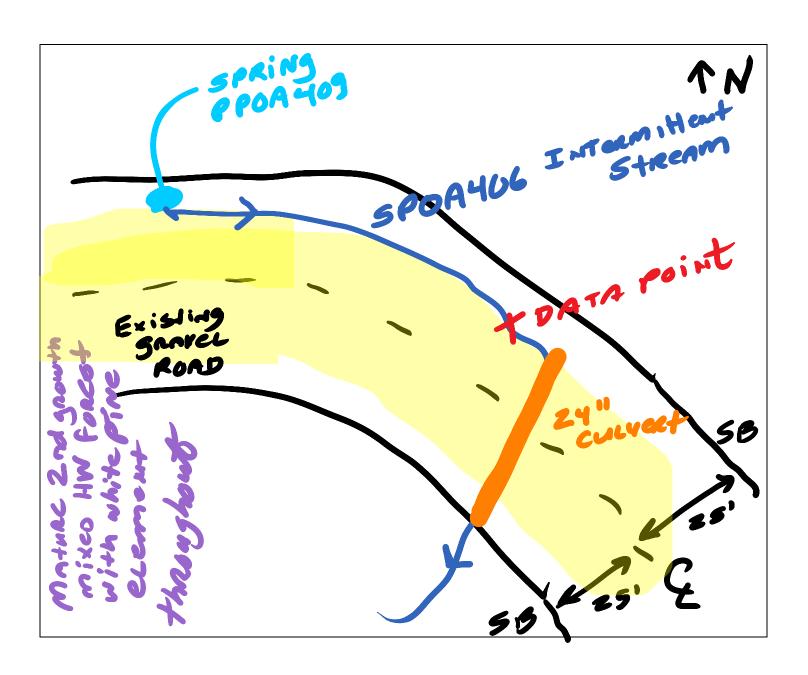
Waterbody SPOA407 facing southeast downstream



Waterbody SPOA407 facing northeast across

Survey Descriptio	n								
Project Name:		Waterbody Na			W	aterbody ID:			ate:
Atlantic Coast Pipeline		UNT to Kna	pp Creek		sı	poa406		5	/13/2016
State:	County:		Company:		Crew I	Member Initials	s: F	Photos:	
West Virginia	Pocahontas		NRG/ERM	1	GB, S	SA		3 photo	S
Tract Number(s):			Nearest Mile	epost:		Associated W	etland	ID(s):	
Access road 05-001-E	064.AR2; Monon	gahela NF	83.8			none			
Survey Type: (check one)	□Centerlin	ie □Re-	Route	⊠Access Road		□Other:			
Physical Attribute	s								
Stream Classification: (check one)	□Ephemei	ral ⊠Inte	ermittent	□Perennial					
Waterbody Type:									
(check one)	□River ⊠ St	tream 🗆 Dit	ch 🗆 Ca	anal Other:	:				
OHWM Width: _2.0_ft.	OHWM Indica (check all that app		□ Clear lir on bank	ne □Shelvin	g	□Wrested vegetation		Scouring	□Water staining
Height: ft. N/A□	□Bent, vegetati	matted, or missi on	ng □Wrack li	ne ⊠Litter ar debris	nd	☐ Abrupt plar community ch		□Soil ch	aracteristic change
Width of Waterbody - Bank to Top of Bank:		of Waterbody -	Toe of Slope	Width of Waterbo	ody - W	ater Edge to	Depth (of Water:	
ft.		_ <u>1.0_</u> ft.			<u>1.5_</u> ft.		N/A□		<u>0.25</u> ft.
Sinuosity: (check one) ⊠Straight □Meanderi	(Арргох.	velocity: .) 1.25fp	os	Left:	<u>2.5</u> ft. 10.0_ft		Bank s	lope Right: Left:	60 degrees 70 degrees
Analysis of Bank Stab Confined to ditch along	•	. •	•	characteristics):	:				
Qualitative Attribu	ites								
Water Appearance: (check one)	[□] No water ⊠	Clear □Tur		neen □Sui n surface scu		□Algal mats	□Other	:	
	☐ Bedrock ☐ B	oulder 🛛 Cob	ble ⊠ Grav	el 🗵 Sand 🛭	⊠ Silt/ c	clay 🛭 Organio	; □ O	ther:	
(check all that apply) % of Substrate:	%	<u>40</u> %	_35%	<u>10</u> % <u>5</u>	%	<u>_10 %</u>			
Width of Riparian Zone	e: Vegetativ	ve Layers:	⊠ Trees	. 5	✓ Conlir	ngs/Shrubs:		Uorbo	
<u>ft</u> .	Avg. DBI	ત of Dominants:			⊴ Зарііі _ <u>1.0</u> in			Herbs	
N/A⊠ Dominant Bank Vegeta	(approx.)								
Chestnut oak, swe	et birch, pignu	wort, colts fo	ot. New Yor	rk fern	•	• •			
Aquatic Habitats (ex: s Leaf packs	ubmerged or emerge	ed aquatic vegetati	on, overhanging	banks/roots, leaf pac	ks, large	submerged wood	l, riffles, c	deep pools)	:
Aquatic Organisms Ol	served (list)								
none	oortou (noi).								
T&E Species Observed	d (list):								
none									
Disturbances (ex: livest		•	9	,					
Culvert crossing for	r existing grave	el road; 24" c	orrugated m	netal culvert; co	onfined	to ditch for	150 Ft	along e	existing road
Tributary is: (check one)	□ Natural		rtificial, man-m	ıade ⊠ Manipı	ulated				

		spoa406							
а	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.								
ı	Notes:								
cul	Stream begins at spring ppoa409 located on road cut and is confined to ditch for 150 feet; downstream continues out; ulvert crossing for existing gravel road (forest service road 55); mature second growth mixed hardwood forest with cattered white pine.								
\	Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey bound	dary, and IDs of associated features)							





Waterbody SPOA406 facing northwest upstream



Waterbody SPOA406 facing southeast downstream



Waterbody SPOA406 facing northeast across

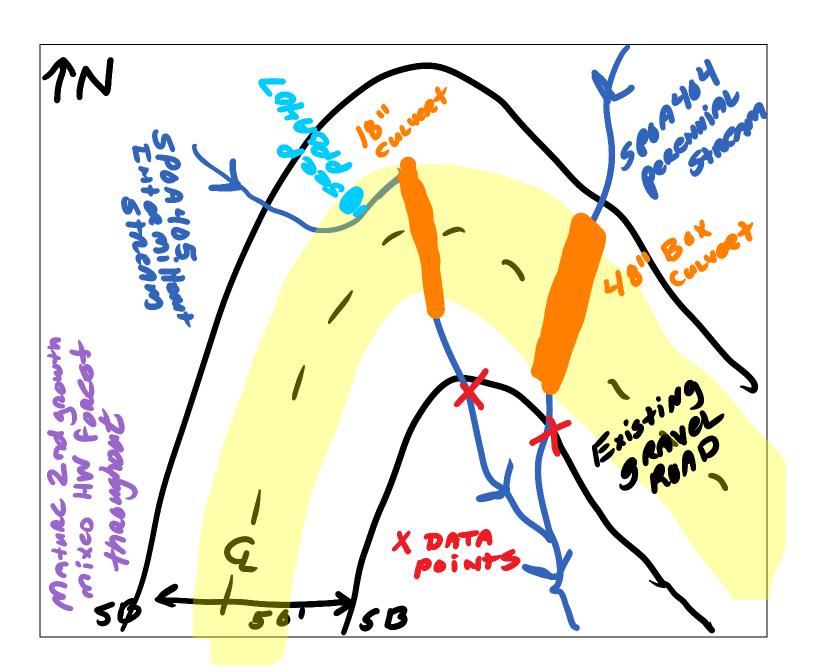
Survey Description	on								
Project Name:		Waterbody Na			W	aterbody ID:			ate:
Atlantic Coast Pipeline		UNT to Kna	pp Creek		sį	poa405		5/	13/2016
State:	County:		Company:		Crew I	Member Initials	s: F	hotos:	
West Virginia	Pocahontas		NRG/ERM	1	GB, S	SA		4 photos	3
Tract Number(s):			Nearest Mile	epost:		Associated W	etland l	D(s):	
Access road 05-001-E	064.AR2; Monong	jahela NF	83.9			none			
Survey Type: (check one)	□Centerline	e □Re-	Route	⊠Access Road		□Other:			
Physical Attribute	es								
Stream Classification (check one)		al ⊠Inte	rmittent	□Perennial					
Waterbody Type: (check one)	□River ⊠ Stı	ream Dit	ch 🗆 C	anal Other	:				
OHWM Width: 5.0_ft.	OHWM Indica (check all that appl		⊠ Clear lir on bank	ne □Shelvin	g	□Wrested vegetation	⊠;	Scouring	□Water staining
Height: 1.0 ft.	□Bent, r vegetatio	matted, or mission	ng □Wrack li	ne ⊠Litter ar debris	nd	□Abrupt plar community ch		□Soil cha	racteristic change
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 (of Water:	
<u>9.0</u> ft.	-	<u>5.0</u> ft.		 N/A□	<u>5.0</u> ft.		N/A□	0) <u>.33_</u> ft.
Sinuosity: (check one) ⊠Straight	(Approx.)	velocity:) 1.5fp	s	Left:	5.0_ft.		Bank sl	Right:	80 degrees
Analysis of Bank Stal	stream is down	, ,	•	•					
Qualitative Attrib	utes								
Water Appearance: (check one)	□No water ⊠0	Clear □Tur		neen □Sui n surface sci		□Algal mats	□Other:		
Substrate:	☐ Bedrock ☐ Bo	oulder 🗵 Cob	ble ⊠ Grav	el 🗵 Sand [□ Silt/ c	ay 🛭 Organio	; DO	ther:	
(check all that apply) % of Substrate:	%	% _ <u>50</u> _%	_30%	<u>10</u> %	%	<u>_10 %</u>			
Width of Riparian Zon	e: Vegetative (check all that		⊠ Trees		☑ Sanlir	ngs/Shrubs:	—————————————————————————————————————	Herbs	
<u>ft</u> . N/A⊠	ľ.	of Dominants:			_ <u>1.5_</u> in		_	110103	
Dominant Bank Veget	ation (list):								
Basswood, green a pipe, geranium, Ch Aquatic Habitats (ex: s	ash, sweet birch ristmas fern, w	n, striped map	ole, red ma	ple, sugar map	le, bee	ech, multiflor	a rose,	, witch h	azel, Dutchman's
Leaf packs, coarse			on, overnanging	banks/100ts, lear pac	ns, large	Submerged wood	i, iiiies, u	еер рооіз).	
Aquatic Organisms O	bserved (list):								
Invertebrates									
T&E Species Observe	d (list):								
none									
Disturbances (ex: lives	tock access, manure	in waterbody, was	te discharge pipe	es):					
Culvert crossing fo	r existing grave	el road; 18" co	orrugated m	netal culvert					
Tributary is: (check one)	Natural	□ A	rtificial, man-m	ade 🗆 Manip	ulated				

		spoa405							
а	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.								
ı	Notes:								
ou s	tream continues out of access road corridor in both directions; moderate gradient stream with eroded banks at culvert utlet; culvert crossing for existing gravel road (forest service road 55); mature second growth mixed hardwood; stream a tributary to perennial stream spoa404 outside access road corridor; receives outflow from seep ppoa407 located on early vertical road cut.								
,	Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey bound	dary, and IDs of associated features)							
	Stream Quality ^a : check one)								

 $\;\square\;\mathsf{Low}$

□ High

oxtimes Moderate





Waterbody SPOA405 facing northwest upstream



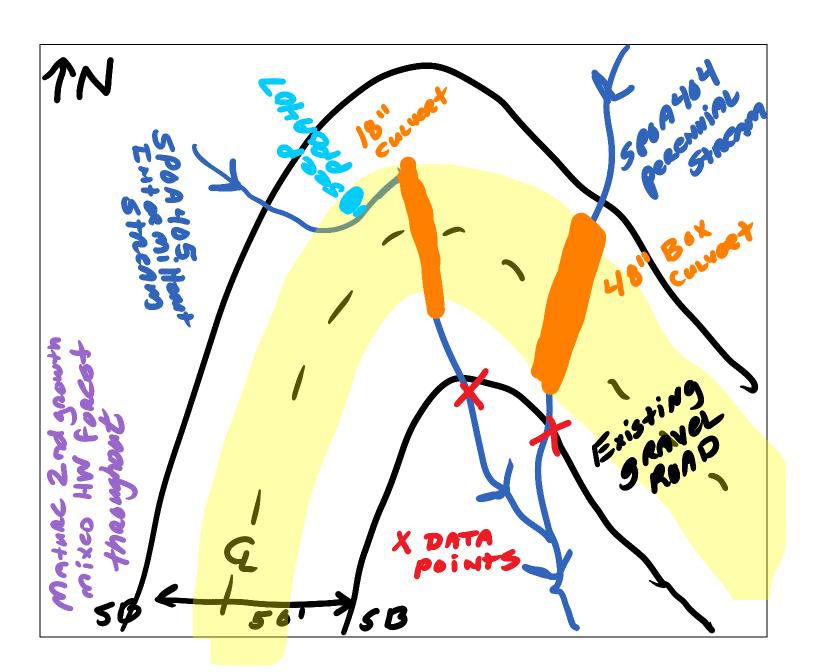
Waterbody SPOA405 facing southeast downstream



Waterbody SPOA405 facing northeast across

Survey Descripti	on								
Project Name:		Waterbody Na			W	aterbody ID:			Date:
Atlantic Coast Pipeline		UNT to Knap	op Creek		sp	ooa404		5	5/13/2016
State:	County:		Company:		Crew N	Member Initials	s: F	Photos:	
West Virginia	Pocahontas		NRG/ERM		GB, S	SA		4 photo	os
Tract Number(s):			Nearest Mile	epost:		Associated W	etland	ID(s):	
Access road 05-001-	E064.AR2; Monong	jahela NF	83.9			none			
Survey Type: (check one)	□Centerline	e □Re-F	Route	⊠Access Road		□Other:			
Physical Attribut	es								
Stream Classification (check one)		al □Inter	mittent	⊠Perennial					
Waterbody Type: (check one)	□River ⊠ Str	ream 🗆 Dito	ch 🗆 Ca	anal 🗆 Other:					
OHWM Width: 8.0 ft.	OHWM Indica (check all that appl		⊠ Clear lin	ne □Shelvin	9	□Wrested vegetation	\boxtimes	Scouring	□Water staining
Height: 1.25 ft.	□Bent, r vegetatio	matted, or missin	ıg □Wrack liı	ne ⊠Litter ar debris	nd	□ Abrupt plar community ch		□Soil ch	aracteristic change
Width of Waterbody - Bank to Top of Bank		of Waterbody - of Slope:	Toe of Slope	Width of Waterbo Water Edge:	ody - W	ater Edge to	Depth (of Water:	:
<u>_15.0</u> ft.	-	<u>6.0</u> ft.			7.0_ft.		N/A□	_	<u>0.50</u> ft.
Sinuosity: (check one) ⊠ Straight	(Approx.)	velocity: 	S	Bank height Right: Left:	4.5_ft.		Bank s	lope Right: Left:	60 degrees
□Meande	ering N/A 🗆				8.0_ft.			Leit.	75 degrees
Analysis of Bank Sta	nstability	icture, vegetation	on, substrate	characteristics):	:				
Qualitative Attrib Water Appearance:	utes								
(check one)	□No water ⊠0	Clear □Turb	-	een □Sui surface scu		□Algal mats	□Other	:	
Substrate:	☐ Bedrock ☐ Bo	oulder 🗵 Cobb	ole 🛭 Grave	el 🛭 Sand 🔝	□ Silt/ c	lay 🛭 Organio	: O	ther:	
(check all that apply) % of Substrate:	%	% _ <u>40</u> _%	_35%	<u>15</u> %	%	_10 %			
Width of Riparian Zo	ne: Vegetative		⊠ Troops		7 Conlin	aga/Chrushas		Llorbo	
_ <u>30_ft</u> - N/A□	,	of Dominants:	⊠ Trees: 13.0_ir		⊴ Sapılı _ <u>1.5_</u> in.	ngs/Shrubs:	_	Herbs	
Dominant Bank Vege									
Basswood, green pipe, geranium, C Aquatic Habitats (ex:	ash, sweet birch hristmas fern, w	n, striped map ood aster, go	ole, red mar Iden ragwo	ole, sugar map	le, bee	ech, multiflor	a rose	, witch	hazel, Dutchman's
Leaf packs, coars					, g-		,		,-
Aquatic Organisms C	Observed (list):								
Invertebrates, cray	yfish								
T&E Species Observe	ed (list):								
none									
Disturbances (ex: live	stock access, manure i	in waterbody, waste	e discharge pipe	es):					
Culvert crossing for	or existing grave	el road; 48" co	ncrete squ	are box culvert	:				
Tributary is: (check one)	Natural	□ Ar	tificial, man-m	ade 🗆 Manipi	ulated				

		spoa404
а	High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each s roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; dividisturbance by livestock or man.	
	Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active of function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloud greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by lives	y, submerged objects covered with
	Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural verthannel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eturbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish more severe disturbance from livestock or man.	roding); water color is muddy and
	Notes:	
cr	tream continues out of access road corridor in both directions; moderate gradient strear ossing for existing gravel road (forest service road 55); mature second growth mixed hard tributary outside access road corridor.	
	Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey bound	dary, and IDs of associated features)
	Stream Quality ^a : check one) □ High □ Moderate □ Low	





Waterbody SPOA404 facing north upstream



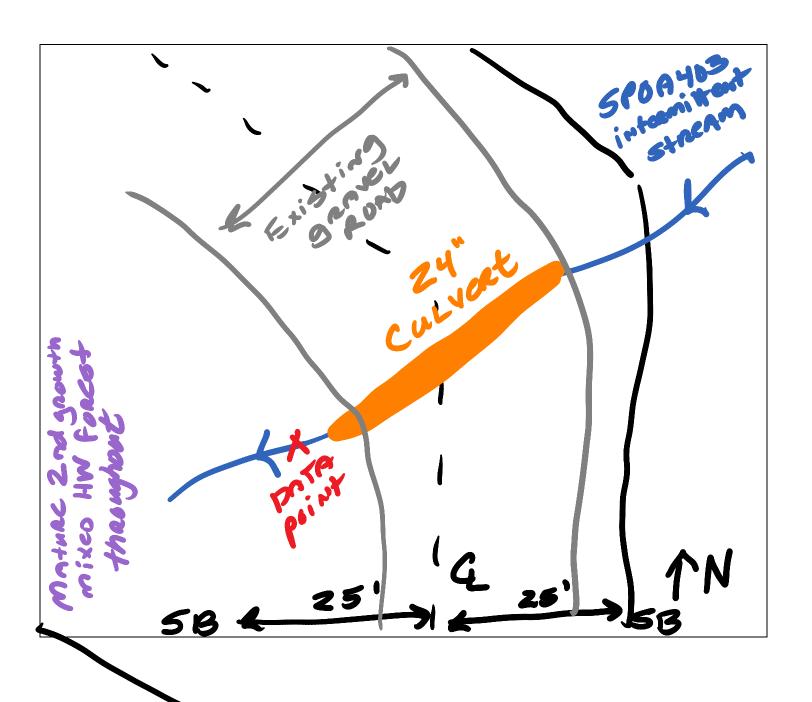
Waterbody SPOA404 facing south downstream



Waterbody SPOA404 facing east across

Survey Description	1								
Project Name:		Waterbody Na				/aterbody ID:		Da 5/	
Atlantic Coast Pipeline	T-	UNT to Knap	<u> </u>			poa403			13/2016
State:	County:		Company:			Member Initials		hotos:	
3	Pocahontas		NRG/ERM		GB, S			3 photos	
Tract Number(s):			Nearest Mile	epost:		Associated W	etland I	D(s):	
Access road 05-001-E0	64.AR2; Monong	ahela NF	84.1			none			
Survey Type: (check one)	□Centerline	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:	OHWM Indica (check all that apply		⊠ Clear lir	ne □Shelvin	g	□Wrested vegetation	\boxtimes	Scouring	□Water staining
Height: 0.50 ft.		natted, or missin			nd	☐Abrupt plan		□Soil char	acteristic change
N/A□	vegetatio	n		debris		community ch	nange		
Width of Waterbody - T Bank to Top of Bank:		of Waterbody - of Slope:	Toe of Slope	Width of Waterbo Water Edge:	ody - W	ater Edge to	Depth o	of Water:	
<u>6.0</u> ft.	_	<u>2.5</u> ft.			3.0_ft.		N/A□	0.	<u>25_</u> ft.
Sinuosity:	Water	velocity:		N/A□ Bank height			Bank si	ope	
(check one) ⊠ Straight	(Approx.)			Right:				Right:	
		1.0fps	3	Left:	3.0_ft.			Left:	70 degrees
□Meanderir	ng N/A□			_	3.0_ft.				60 degrees
Analysis of Bank Stabi No evidence of bank in	• `	cture, vegetation	on, substrate	characteristics):					
Qualitative Attribu	tes								
Water Appearance:	No water ⊠0	Clear □Turb	-			□Algal mats	□Other:		
Substrate:	Bedrock □ Bo	ulder ⊠ Cobb				clay 🗵 Organic	; D 0	thor:	
(check all that apply)							, 🗆 0	uiei.	
% of Substrate:	%	_% <u>35</u> _%	_35%	<u>15</u> % <u>5</u>	%	<u>_10 %</u>			
Width of Riparian Zone	: Vegetative (check all that		⊠ Trees:	. 5	7 Sanlir	ngs/Shrubs:		Herbs	
f <u>t</u> .	Avg. DBH	of Dominants:	ir		₃ 3apııı _1.0 in	-	_	ieins	
N/A⊠ Dominant Bank Vegeta	(approx.)								
White oak, northern		h. red maple.	black gum	. white pine. m	ountai	in laurel, pinl	k azale	a. cinque	efoil, wood aster
, teaberry Aquatic Habitats (ex: su		•	•	•		•		•	
Leaf packs, coarse			.,		, 90		,		
Aquatic Organisms Ob	served (list):								
none									
T&E Species Observed	(list):								
none									
Disturbances (ex: livesto	ock access, manure i	n waterbody, waste	e discharge pipe	es):					
Culvert crossing for	existing grave	l road; 24" co	rrugated m	etal culvert					
Tributary is: (check one)	Natural	□ Ari	tificial, man-m	ade □ Manipu	ulated				

		spoa403
а	High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; dividisturbance by livestock or man.	
	Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active of function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloud greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by lives	dy, submerged objects covered with
	Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural ve channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish mo severe disturbance from livestock or man.	eroding); water color is muddy and
	Notes:	
St	Notes: tream continues out of access road corridor in both directions; moderate gradient stream ossing for existing gravel road (forest service road 55); mature second growth mixed hardw	
St	tream continues out of access road corridor in both directions; moderate gradient strear	vood forest.





Waterbody SPOA403 facing east upstream



Waterbody SPOA403 facing west downstream



Waterbody SPOA403 facing south across