Survey Descriptio	n							
Project Name:		Waterbody Na	me:		w	laterbody ID:	Date:	
Atlantic Coast Pipe	line	UNT to App	omattox Riv	/er	sp	pea400	2/20/2	016
State:	County:		Company:		Crew N	Member Initials	Photos:	
Virginia	Prince Edward	ł	NRG		GB, S	SA	3 Photos	
Tract Number(s):	1		Nearest Mile	epost:		Associated W	etland ID(s):	
11-001			220.8			Originates a outside corr	as outflow from PEI	M wetland
(check one)		Re-	Route	□Access Road		□Other:		
Physical Attribute	s							
Stream Classification: (check one)	Ephemera	al ⊠Inte	rmittent	□Perennial				
Waterbody Type: (check one)	River ⊠ Str	eam 🗆 Dite	ch 🗆 Ca	anal 🗌 Other:	:			
OHWM Width: 3.0 ft.	OHWM Indica (check all that apply	tor: /)	⊠ Clear lir on bank	ne 🗆 Shelvin	g	□Wrested vegetation	⊠ Scouring	⊒Water staining
Height: <u>1.0 ft.</u>	⊠Bent, n vegetatio	natted, or missir n	ng	ne □Litter ar debris	nd	□ Abrupt plan community ch	ange □Soil character	istic change
N/AL Width of Waterbody -	Fon of Width (	of Waterbody -	Too of Slope	Width of Waterb	ody - W	ater Edge to	Depth of Water	
Bank to Top of Bank:	to Toe	of Slope:		Water Edge:	ouy n	ater Euge to	(Approx.)	
<u>5.0</u> ft.	-	<u>2.0_</u> ft.			<u>3.0_</u> ft.		0.25f N/A□	t.
Sinuosity:	Water	velocity:		Bank height			Bank slope	
(check one)	(Approx.)			Right:	20 4		Right:	10 9 10 00
		<u>_0.20</u> fp	S	Left:	<u>3.0_</u> II.		Left:	legrees
Meanderi	ng N/A□			-	<u>3.0_</u> ft.		<u>    80   </u> c	legrees
Qualitative Attribu	ites							
Water Appearance: (check one)	No water ⊠C	Clear 🗆 Turk	oid □Sh on	leen ⊡Sui i surface scu	rface um	□Algal [ mats	∃Other:	
Substrate:	Bedrock 🗆 Bo	ulder 🗆 Cobl	ole 🗆 Grave	el 🛛 Sand 🛛	⊠ Silt/ c	clay 🛛 Organic	□ Other:	
(check all that apply) % of Substrate:	%	%	_%	% <u>40</u> %	<u>50</u> %	<u> 10 </u> %	%	
Width of Riparian Zone	e: Vegetative	e Layers:						
On floodplain	(check all that <u>o of</u> Avg. DBH iver. (approx.)	apply) of Dominants:	⊠ Trees _ <u>9.0_</u> in	: D	⊠ Saplir _ <u>1.0_</u> in	ngs/Shrubs:	⊠ Herbs	
Dominant Bank Vegeta	ation (list):							
White oak, red elm smilax, panic grass	, green ash, rec . winastem	l maple, iron	wood, multi	flora rose, Japa	anese	honeysuckle	, river oats, rough	sedge,
Aquatic Habitats (ex: s Leaf packs	ubmerged or emerged	d aquatic vegetatic	on, overhanging	banks/roots, leaf pac	ks, large	submerged wood	riffles, deep pools):	
Aquatic Organisms Ob	oserved (list):							
none								
T&E Species Observe	d (list):							
none								
Disturbances (ex: livest	ock access, manure i	n waterbody, wast	e discharge pipe	es):				
Historic livestock a	ccess now fend	ed for exclus	ion in part;	active livestoc	k acce	ess upstream		
Tributary is: (check one)	⊠ Natural	□ Ar	tificial, man-m	ade 🗆 Manipi	ulated			
Stream Quality <sup>a</sup> : (check one)	🗆 High		oderate	⊠ Low				

Waterbody ID:

### spea400

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

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

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

### Notes:

Stream begins within PEM wetland in an active livestock pasture outside of corridor; downstream flows into Appomattox River at edge of survey corridor. Loses bed and bank in segments where trampled by cattle, but lacks hydric soils.





Waterbody SPEA400 facing northeast upstream



Waterbody SPEA400 facing northwest downstream



Waterbody SPEA400 facing north across

Survey Descriptio	n								
Project Name:		Waterb	ody Nar	ne:		W	/aterbody ID:		Date:
Southeast Reliabilit	.У	UNNA	MED I	RIBTOA	PPOMATIOX	S	PEK003		8/1/2014
State:	County:			Company:		Crew I	Member Initials	: 1	Photos:
Virginia	Prince E	dward		W&C		JS, W	/M, JD		104-4735 TO 4739
Tract Number(s):	- I			Nearest Mile	epost:		Associated W	etland	ID(s):
11-001				217			NA		
Survey Type: (check one)	⊠Ce	nterline	□Re-F	loute	□ Access Road		□Other:		
Physical Attribute	S								
Stream Classification: (check one)	□Ер	hemeral	□Inter	mittent	Perennial				
Waterbody Type: (check one)	River	Stream	□ Ditc	h 🗆 Ca	anal 🗌 Other:	:			
OHWM Width: 4 ft	OHWM (check all	Indicator: that apply)		⊠ Clear lir on bank	ne ⊠Shelvin	g	⊠Wrested vegetation	$\boxtimes$	Scouring ⊠Water staining
Height:ft.	⊠ ve	Bent, matted, c	or missin	g    □Wrack li	ne ⊠Litter ar debris	nd	☐Abrupt plan community ch	it iange	Soil characteristic change
Width of Waterbody - 1	Top of	Width of Wate	body - T	Foe of Slope	Width of Waterb	odv - W	ater Edge to	Depth	of Water:
Bank to Top of Bank:		to Toe of Slope	ə:		Water Edge:	<b>,</b>	j	(Approx.)	
<u>8 ft.</u>		<u>4</u> ft.			_	<u>3_</u> ft.			<u>_0.5_</u> ft.
Sinuacitur		Wator volocity	-		N/A 🗆			N/A⊔ Bank a	long
(check one)		(Approx.)	-		Right:			Dalik S	Right:
		_	<u>0.4_</u> fps		L offi	<u>7</u> ft.			<u>80</u> degrees
⊠Meanderi	ng	N/A□			Leit.	<u>8</u> ft.			<u>80</u> degrees
Qualitative Attribu	ites				L				
Water Appearance:			<b>Tb</b>			4			
	- INO water	⊠ Clear		ia Lish on	surface scu	um	mats		
Substrate:	Bedrock	□ Boulder		le 🛛 Grave	el 🛛 Sand 🛛	⊠ Silt/ c	clay 🗆 Organic	; □C	Other:
% of Substrate:	<u>NA_</u> %	<u>NA</u> %	<u>NA </u> %	<u> 10 </u> %	<u>20</u> %	<u>70_</u> %	<u>NA</u> %	NA	_%
Width of Riparian Zone	e: Veg	getative Layers	:	Traca		7 Conlin	ana/Chruhau		Llarka
<u>_&gt;100_ft</u> . N/A□	Avg (app	<b>g. DBH of Dom</b> rox.)	inants:	<sup>∞</sup> Trees <u>16</u> in.		⊴ Sapiir _ <u>3_</u> in.	ngs/Shrubs:		Herbs
Dominant Bank Vegeta	ation (list):								
ASH, NETTLE, CA	REX, RIV	'ER OATS, C	HERR	YBARK O	AK, IRONWOO	DD, M	USCADINE		
Aquatic Habitats (ex: s	ubmerged or	emerged aquatic	vegetatio	n, overhanging	banks/roots, leaf pac	ks, large	submerged wood	, riffles, o	deep pools):
America Organization Of		0							
COLEOPTERANS,	WATER	<i>t):</i> STRIDERS							
T&E Species Observed	d (list):								
NA									
Disturbances (ex: livest	ock access, n	nanure in waterbo	ody, waste	discharge pipe	es):				
CLEARCUT/LAND	GRADIN	G/SITE PRE	P NEA	RBY, BUT	STREAM INT	ACT			
Tributary is: (check one)	⊠ Na	atural	□ Art	ificial, man-m	ade 🗆 Manipi	ulated			
Stream Quality <sup>a</sup> : (check one)	🗆 Hi	gh	⊠ Mo	derate	□ Low				

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

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

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

#### Notes:

PERENNIAL STREAM IN BOTTOMLAND HW FOREST; INCISED CHANNEL AT DATA POINT

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





Waterbody point spek003 facing northeast and downstream



Waterbody point spek003 facing southwest and upstream



Waterbody point spek003 facing north and across

Line	ar Wa	terboc	ly Data	Sheet
------	-------	--------	---------	-------

Survey Description	n							
Project Name:		Waterbody Na	me:		w	aterbody ID:		Date:
Southeast Reliability	/	UNNAMED <sup>®</sup> RIVER	TRIB TO A	PPOMATTOX	S	PEK004	<b>I</b>	8/2/2014
State:	County:		Company:		Crew I	Member Initials	: Phot	(OS:
Virginia	Prince Edward	k	W&C		WM, 、	JD	100	)-0406 TO 0408
Tract Number(s):	•		Nearest Mile	epost:		Associated W	etland ID(s	.):
11-021/022			218			NA		
Survey Type: (check one)	Centerline	e □Re-l	Route	□ Access Road		□Other:		
Physical Attributes	5							
Stream Classification: (check one)	Ephemera	al 🗌 Inte	rmittent	Perennial				
Waterbody Type:								
(check one)	River 🛛 Str	eam 🗆 Dite	ch 🗆 C	anal 🗌 Other				
OHWM Width:	OHWM Indica (check all that apply	<b>tor:</b> /)	⊠ Clear lir on bank	ne ⊠Shelvin	g	⊠Wrested vegetation	□Sco	uring □Water staining
Height:								
<u>1.5</u> ft. N/A□	⊠Bent, r vegetatic	natted, or missir n	ig ⊠Wrack li	ne ⊠Litter ar debris	nd	Community ch	it 🗆 S nange	oil characteristic change
Width of Waterbody - T Bank to Top of Bank:	op of Width	of Waterbody -	Toe of Slope	Width of Waterb	ody - W	ater Edge to	Depth of W	/ater:
Bank to rop of Bank.	10 100	or slope.		water Luge.			(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	o. F. (l
<u>_6 ft</u> .	-	<u>4</u> ft.			<u>3</u> ft.		N/A 🗆	<u>_0.5_</u> ft.
Sinuosity:	Water	velocity:		Bank height			Bank slope	
(check one)	(Approx.)	2		Right:			R	ight:
		<u>_0.1_</u> fps	5	L oft:	<u>2</u> ft.			60 degrees
⊠Meanderir	ng N/A□			Lent.	<u>4</u> ft.			<u>60</u> degrees
Qualitative Attribu	tes							
Water Appearance: (check one)	No water	Clear □Turb	oid □Sh or	neen ⊡Su n surface sci	rface um	⊠Algal mats	□Other:	
Substrate:	Bedrock 🗆 Bo	ulder 🗆 Cobl	ole 🛛 Grav	el 🛛 Sand 🛛	⊠ Silt/ c	lav 🛛 Organic	: 🗆 Other	 f:
(check all that apply)			00.0/	50.0/	<b>F</b> 0/	5 0		0/
	<u>0</u> % <u>NA</u>	% <u>NA</u> %	<u>   30  </u> %	<u>   50  </u> %	<u>5</u> %	<u>  5 </u> %		_%
Width of Riparian Zone	: Vegetative (check all that	e Layers: apply)	⊠ Trees	. 5	⊲ Saplir	nas/Shrubs:	🛛 He	rbs
<u>&gt;100 ft</u> ·	Avg. DBH	of Dominants:	<u>16</u> in.		<u>3</u> in.	.g.,		
N/AL	tion (list):							
BEECH, TULIP POI	PLAR, DOGW	OOD, GLYCI	ERIA, SUG	AR MAPLE, IR	ONW	OOD, CARE	Х	
Aquatic Habitats (ex: su	bmerged or emerged	d aquatic vegetatic	n, overhanging	banks/roots, leaf pac	ks, large	submerged wood	, riffles, deep	pools):
POOLS/RIFFLES, S	SOFT SAND, L	WD, OVERH	ANGING	/EG, UNDERC	UT BA	ANKS		
Aquatic Organisms Ob	served (list):							
FROGS, FISH								
T&E Species Observed NA	(list):							
Disturbances (ex: livesto	ock access, manure i	n waterbody, wast	e discharge pipe	es):				
CLEARCUT/LAND	GRADING/SIT	E PREP NE	ARBY, BUT	STREAM INT	ACT			
Tributary is: (check one)	⊠ Natural	□ Ar	tificial, man-m	ade 🗌 Manip	ulated			
Stream Quality <sup>a</sup> : (check one)	□ High	⊠ Mo	oderate	□ Low				

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

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

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

#### Notes:

PERENNIAL STREAM IN HARDWOOD FOREST; WELL CONNECTED TO SMALL FLOODPLAIN AREA; GOOD AQUATIC HABITAT; SOME SEEPY STREAMBANK AREAS





Waterbody point spek004 facing South and upstream



Waterbody point spek004 facing North and downstream



Waterbody point spek004 facing East and across

Survey Description	n	-			<u> </u>			
Project Name:		Waterbody Na	me:		N	aterbody ID:		Date:
Southeast Reliability	y	UNNAMED RIVER	TRIB TO A	PPOMATTOX	S	PEK006		8/2/2014
State:	County:		Company:		Crew	Member Initials:	Photos:	
Virginia	Prince Edward	ł	W&C		WM,	JD	100-04	126 TO 0428
Tract Number(s):			Nearest Mile	epost:		Associated Wetla	nd ID(s):	
11-022			218			WPEK001		
Survey Type: (check one)	⊠Centerline	e □Re-I	Route	□Access Road		□ Other:		
Physical Attribute	s							
Stream Classification: (check one)	Ephemera	al 🗆 Inte	rmittent	⊠Perennial				
Waterbody Type								
(check one)	River Str	eam 🗆 Dite	ch 🗆 C	anal 🗌 Other	:			
ОНШМ	OHWM Indica	tor:			-			
Width: <u>9</u> ft.	(check all that apply	()	on bank	ne 🛛 Sheivin	g	vegetation	⊔Scourine	g ⊡water staining
Height:	⊠Bent. r	natted, or missir	na ⊠Wrack li	ne 🛛 Litter ar	nd	□Abrupt plant	⊠Soil c	haracteristic change
<u>2</u> ft.	vegetatio	n	.9	debris		community chang	e	j.
Width of Waterbody - T	op of Width of	of Waterbody -	Toe of Slope	Width of Waterb	ody - W	ater Edge to Dep	oth of Wate	:
Bank to Top of Bank:	to Toe	of Slope:		Water Edge:		(App	rox.)	
<u>_15 ft</u> .	_	<u>9 ft.</u>			<u>3</u> ft.			<u>0.5</u> ft.
		_		N/A 🗆		N/A		
Sinuosity: (check one)	Water (Approx.)	velocity:		Bank height		Bar	k slope	
□Straight		0.1 fp	s	Right:	6 ft.		Right	60 degrees
⊠Meanderir		<u></u> ,p.	-	Left:	5 #		Left	: 60 degrees
					<u> </u>			<u> </u>
Water Appearance:	103							
(check one)	No water ⊠0	Clear 🗆 Turk	oid ⊡Sh or	neen ⊡Sui n surface sci	rface um	⊠Algal □Ot mats	ther:	
Substrate:	Bedrock Bou	Ilder 🛛 Cobb	le 🛛 Grave	I 🛛 Sand 🖂	Silt/ cl	ay 🛛 Organic 🗌	Other:	
(check all that apply) % of Substrate: 5	% NA	% 10 %	30 %	45 %	5 %	5 %	%	
<u> </u>		<u> </u>	<u> </u>	<u>-10</u> //0	<u> </u>	<u></u> ,,,	/0	
Width of Riparian Zone	check all that	apply)	⊠ Trees	:	⊠ Sapli	nas/Shrubs:	⊠ Herbs	
<u>&gt;100 ft</u> .	Avg. DBH	of Dominants:	<u>16</u> in.	-	<u>3</u> in.	0		
N/AL Dominant Bank Vegeta	(approx.)							
BEECH, TULIP PO	PLAR, DOGW	OOD, CHRIS	STMAS FER	RN, SUGAR M	APLE,	HELIANTHUS,	CAREX,	ELDERBERRY
Aquatic Habitats (ex: su	ubmerged or emerged	d aquatic vegetatic	on, overhanging	banks/roots, leaf pac	ks, large	e submerged wood, riffl	es, deep pool	s):
POOLS/RIFFLES, \$	SOFT SAND, L	WD, OVERH	HANGING	/EG, UNDERC	UT B	ANKS		
Aquatic Organisms Ob	served (list):							
FROGS, FISH, CRI	JSTACEAN, M	IAYFLIES, W	ATER STF	RIDER				
T&E Species Observed	(list):							
NA								
Disturbances (ex: livesto	ock access, manure i	n waterbody, wast	e discharge pip	es):				
CLEARCUT/LAND	GRADING/SIT	E PREP NE	ARBY, BUT	STREAM INT	ACT			
Tributary is: (check one)	⊠ Natural	□ Ar	tificial, man-m	ade 🗆 Manip	ulated			
Stream Quality <sup>a</sup> : (check one)	□ High		oderate					

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

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

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

#### Notes:

PERENNIAL STREAM IN HARDWOOD FOREST; WELL CONNECTED TO SMALL FLOODPLAIN AREA; GOOD AQUATIC HABITAT; SOME SEEPY STREAMBANK AREAS







Waterbody point spek006 facing North and downstream



Waterbody point spek006 facing South and upstream



Waterbody point spek006 facing East and across

Survey Description	n								
Project Name:		Waterbody Na	ime:		N	aterbody ID:		Date:	
Southeast Reliability	y	UNNAMED RIVER	TRIB TO A	PPOMATTOX	S	PEK005		8/2/2014	
State:	County:		Company:		Crew I	Member Initials	:	Photos:	
Virginia	Prince Edwar	d	W&C		WM,	JD		100-0423 To 0425	
Tract Number(s):			Nearest Mile	epost:		Associated W	etland	ID(s)	
11-022			218			WPEK001			
Survey Type: (check one)	⊠Centerlin	e □Re-	Route	□ Access Road		□Other:			
<b>Physical Attributes</b>	S								
Stream Classification: (check one)	⊠Ephemer	al 🛛 Inte	ermittent	Perennial					
Waterbody Type:									
(check one)	River St	ream 🗆 Dit	ch 🗆 Ca	anal 🗌 Other	:				
OHWM	OHWM Indica	tor:			~	⊠\\/reated			
<b>wiatn:</b> <u>1</u> ft.	(check an that app	y)	on bank		g			staining	
Height:	⊠Bent,	matted, or missi	ng	ne ⊠Litter ar	nd	□Abrupt plan	ıt	Soil characteristic cha	nge
<u>0.5</u> ft. N/A□	vegetatio	on		debris		community ch	ange		
Width of Waterbody - T	op of Width	of Waterbody -	Toe of Slope	Width of Waterb	ody - W	ater Edge to	Depth	of Water:	
Bank to Top of Bank:	to Toe	of Slope:		Water Edge:			(Approx.)		
<u>_2</u> ft.	<u>-</u>	<u>1_</u> ft.			<u>ft</u> .			ft.	
Sinuosity	Water	velocity		N/A⊠ Bank beight			N/A⊠ Bank s		
(check one)	(Approx.)			Right:			Dalik S	Right:	
		fps			<u>0.75</u> ft	t.		70_degrees	
⊠Meanderir	ng N/A 🖂			Left:	0.75 ft	t.		Left: 70 dearees	
Qualitative Attribu	tes								
Water Appearance:	n								
(check one)	No water	Clear □Tur	bid □Sh on	neen 🗆 Sui In surface sci	rface um	□Algal mats	□Other	r:	
Substrate:	Bedrock 🗆 Be	oulder 🛛 Cob	ble 🛛 Grav	el 🛛 Sand 🛛	⊠ Silt/ o	clay 🛛 Organic	; □0	Other:	
(check all that apply) % of Substrate:	<u>NA_% NA</u>	<u>% NA %</u>	<u> </u>	<u>30 %</u>	<u>55_</u> %	<u> 10 </u> %		%	
Width of Riparian Zone	: Vegetativ	e Lavers:							
	(check all tha	t apply)	☑ Trees	: D	🛛 Saplii	ngs/Shrubs:	$\boxtimes$	] Herbs	
<u>&gt;100 ft</u> · N/A□	Avg. DBH (approx.)	of Dominants:	<u> 16 </u> in.	-	<u>3</u> in.				
Dominant Bank Vegeta	tion (list):								
BEECH, TULIP POI	PLAR, DOGW	OOD, REDB	UD, XMAS	FERN, VIRGIN	NIA CF	REEPER, CA	REX		
Aquatic Habitats (ex: su	Ibmerged or emerge	d aquatic vegetati	on, overhanging	banks/roots, leaf pac	ks, large	submerged wood	, riffles,	deep pools):	
NA									
Aquatic Organisms Ob	served (list):								
NA									
T&E Species Observed	(list):								
NA									
Disturbances (ex: livesto	ock access, manure	in waterbody, was	te discharge pipe	es):					
CLEARCUT/LAND	GRADING/SIT	TE PREP NE	ARBY						
Tributary is: (check one)	⊠ Natural	□ A	rtificial, man-m	ade 🗆 Manip	ulated				
Stream Quality <sup>a</sup> : (check one)	□ High		oderate	⊠ Low					

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

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

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

#### Notes:

EPHEMERAL STREAM IN HARDWOOD FOREST; NOT CONNECTED TO FLOODPLAIN AREA; DRAINS UPSTREAM HILLSIDE WETLAND AREA





Waterbody point spek005 facing West and upstream



Waterbody point spek005 facing East and downstream



Waterbody point spek005 facing South and across

Survey Description	n								
Project Name:		Waterbody N	lame:		v	aterbody ID:			Date:
Southeast Reliability	/	UNNAMED RIVER	) TRIB TO A	PPOMATTOX	S	PEK007			8/2/2014
State:	County:		Company:		Crew I	Member Initials	: F	hotos:	
Virginia	Prince Edward	d	W&C		WM,	JD		100-04	29 TO 0431
Tract Number(s):	•		Nearest Mil	epost:		Associated W	etland	ID(s):	
11-024			218			NA			
Survey Type: (check one)	⊠Centerline	e □Re	e-Route	□Access Road	l	□Other:			
Physical Attributes	5								
Stream Classification: (check one)	□ Ephemera	al ⊠Int	ermittent	Perennial					
Waterbody Type:									
(check one)	River 🛛 Str	ream 🗆 D	itch 🗆 C	anal 🛛 🗆 Other	:				
онwм	OHWM Indica	tor:							
Width:ft.	(check all that appl	<i>y)</i>	Clear line On bank	ne 🗆 Shelvin	g	□Wrested vegetation		Scouring	g ⊠Water staining
Height:	⊠Bent, r	matted, or miss	sing 🗆 Wrack I	ine 🛛 Litter ar	nd	⊠Abrupt plan	t	⊠Soil cł	naracteristic change
ft. N/A□	vegetatio	on	-	debris		community ch	ange		-
Width of Waterbody - T	op of Width	of Waterbody	- Toe of Slope	Width of Waterb	ody - W	ater Edge to	Depth o	of Water	:
ванк то тор ог ванк:	to loe	of Slope:		water Edge:			(Approx.)		
<u>_12</u> ft.	-	<u>2</u> ft.			<u>1</u> ft.		N/A 🗆	-	<u>    0.1    </u> ft.
Sinuosity:	Water	velocity:		Bank height			Bank s	lope	
(check one)	(Approx.)			Right:				Right	:
		0.01	fps	l oft:	<u>9</u> ft.			l oft	80 degrees
⊠Meanderir	ng N/A□			Len.	<u>8</u> ft.			Len	. <u>80</u> degrees
Qualitative Attribu	tes								
Water Appearance: (check one) □ BACTERIA	No water	Clear □Tu	ırbid ⊡Sł on	neen ⊡Su surface scu	rface um	⊠Algal mats	⊠Other:	FE-O	XIDIZING
Substrate:	Bedrock 🗆 Bo	oulder 🗆 Co	bble 🗆 Grav	el 🛛 Sand 🛛	⊠ Silt/ c	clay 🛛 Organic	□ 0	ther:	
(check all that apply) % of Substrate:	NA % NA	% NA 9	% NA %	70 %	15 %	15 %		%	
Width of Pinarian Zona	Vogototiv								
width of Riparian Zone	(check all that	t apply)	⊠ Trees	:	🛛 Saplir	ngs/Shrubs:	$\boxtimes$	Herbs	
<u>&gt;100 ft</u> .	Avg. DBH	of Dominants	<b>in</b> .	-	<u>3</u> in.				
Dominant Bank Vegeta	tion (list):								
BEECH, SWEETGL	JM, BLACK W	ALNUT, SO	URWOOD,	RUBUS, POKE	WEEI	D, JAPANES	E HOI	NEYSU	JCKLE
Aquatic Habitats (ex: su	bmerged or emerge	d aquatic vegeta	tion, overhanging	banks/roots, leaf pac	ks, large	submerged wood,	, riffles, d	leep pools	s):
SOFT SAND, LWD,	OVERHANG	ING VEG							
Aquatic Organisms Ob	served (list):								
FROGS									
T&E Species Observed	(list):								
NA									
Disturbances (ex: livesto	ock access, manure i	in waterbody, wa	ste discharge pip	es):					
CLEARCUT/LAND	GRADING/SIT	E PREP NE	EARBY; LOO	GGING DEBRIS	S PILE	D IN STREA	M		
Tributary is: (check one)	⊠ Natural		Artificial, man-m	nade 🗌 🗆 Manip	ulated				
Stream Quality <sup>a</sup> : (check one)	□ High		Moderate	⊠ Low					

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

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

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

#### Notes:

HEADWATER INTERMITTENT STREAM IN CLEARCUT; POOR AQUATIC HABITAT; SOME SEEPY STREAMBANK AREAS

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





Waterbody point spek007 facing South and upstream



Waterbody point spek007 facing North and downstream



Waterbody point spek007 facing East and across

Survey Description	n								
Project Name:		Waterbody Na	me:		v	laterbody ID:			Date:
Southeast Reliability	y	UNNAMED RIVER	TRIB TO A	PPOMATTOX	S	PEK008			8/2/2014
State:	County:		Company:		Crew I	Member Initials	-	Photos:	
Virginia	Prince Edward	d	W&C		WM,	JD		100-04	34 TO 0437
Tract Number(s):			Nearest Mile	epost:		Associated W	etland	ID(s):	
11-024			217			NA			
Survey Type: (check one)	⊠Centerline	e □Re-	Route	□Access Road	l	□Other:			
Physical Attributes	S								
Stream Classification: (check one)	Ephemeral	⊠Inte	rmittent	Perennial					
Waterbody Type:									
(check one)	River Str	ream 🗆 Dite	ch 🗆 C	anal 🗌 Other	:				
онwм	OHWM Indica	ator:							
Width: <u>2</u> ft.	(спеск ал татарр	y)	on bank	ne ⊠Shelvin	g	⊠Wrested vegetation	×	Scouring	g ⊡Water staining
Height:	⊟Bent, r	matted, or missir	ng ⊡Wrack li	ine ⊠Litter ar	nd	⊠Abrupt plan	t	⊠Soil cl	haracteristic change
ft. N/A□	vegetatio	on	-	debris		community ch	ange		-
Width of Waterbody - T	op of Width	of Waterbody -	Toe of Slope	Width of Waterb	ody - W	ater Edge to	Depth	of Water	:
Bank to Top of Bank:	to Toe	of Slope:		Water Edge:			(Approx.)	)	
<u>_10 ft</u> .	-	<u>2</u> ft.			<u>0.5</u> ft.				<u>0.1</u> ft.
Sinuccity	Wator	volocityr		N/A			N/AL		
(check one)	(Approx.)			Bank neight			Dalik	Right	
		<u>0.01</u> fp	S		<u>4</u> ft.				
⊠Meanderir	ng N/A 🗆			Left:	<u>4</u> ft.			Left	: <u>60</u> degrees
Qualitative Attribu	tes								-
Water Appearance:		<b>a</b> . <b>bz</b> .							
	No water ⊠0	Clear 🗆 l'urt	oid ⊡Sr or	neen ⊔Su n surface scu	rface um	∐Algal I mats		r:	
Substrate:	Bedrock 🗆 Bo	oulder 🛛 Cobl	ble 🛛 Grav	el 🛛 Sand 🛛	⊠ Silt/ c	clay 🗆 Organic	: 🗆 (	Other:	
% of Substrate:	<u>NA_% NA</u>	<u>% 5</u> %	<u>   25  </u> %	<u>20 </u> %	<u>50 %</u>	<u>NA</u> %		%	
Width of Riparian Zone	: Vegetativ	e Lavers:							
	(check all that	t apply)	□ Trees	: D	🛛 Saplir	ngs/Shrubs:	$\boxtimes$	Herbs	
<u>&gt;100 π</u> . N/A□	AVG. DBH (approx.)	of Dominants:	<u></u> in.	-	<u>3</u> in.				
Dominant Bank Vegeta	tion (list):								
BEECH, RED MAPI	LE, TULIP PO	PLAR, RUBL	JS, POKEW	/EED, CHRIST	MAS	FERN, JAPA	NESE	E HONE	EYSUCKLE
Aquatic Habitats (ex: su	Ibmerged or emerge	d aquatic vegetatio	on, overhanging	banks/roots, leaf pac	ks, large	submerged wood	, riffles,	deep pool	s):
COBBLE-GRAVEL,	, OVERHANGI	ING VEG							
Aquatic Organisms Ob	served (list):								
NA									
T&E Species Observed	l (list):								
NA									
Disturbances (ex: livesto	ock access, manure i	in waterbody, wast	e discharge pip	es):					
CLEARCUT/LAND	GRADING/SIT	TE PREP NE	ARBY; LOO		S PILE	D IN STREA	M		
Tributary is: (check one)	⊠ Natural	□ Ar	tificial, man-m	nade 🗆 Manip	ulated				
Stream Quality <sup>a</sup> : (check one)	□ High		oderate	⊠ Low					

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

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

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

#### Notes:

HEADWATER INTERMITTENT STREAM IN CLEARCUT; POOR AQUATIC HABITAT; SOME SEEPY STREAMBANK AREAS





Form Rev. 07/09/2014



Waterbody point spek008 facing South and upstream



Waterbody point spek008 facing North and downstream



Waterbody point spek008 facing West and across

Survey Description	n							
Project Name:		Waterbody Na	me:		N	Vaterbody ID:		Date:
Southeast Reliability	y	UNNAMED RIVER	TRIB TO A	PPOMATTOX	S	PEK009		8/2/2014
State:	County:		Company:		Crew I	Member Initials:	Photos:	
Virginia	Prince Edward	d	W&C		WM,	JD	100-04	438 TO 0440
Tract Number(s):			Nearest Mile	epost:		Associated Wetla	and ID(s):	
11-024			218			NA		
Survey Type: (check one)	⊠Centerline	e □Re-I	Route	□Access Road		□Other:		
Physical Attributes	S							
Stream Classification: (check one)		al 🗌 Inte	rmittent	Perennial				
Waterbody Type:								
(check one)	River Str	ream 🗆 Dite	ch 🗆 Ca	anal 🛛 🗆 Other				
OHWM Width:	OHWM Indica (check all that appl	tor: y)	⊠ Clear lir	ne ⊠Shelvin	g	⊠Wrested	Scourin	g ⊟Water
<u>4</u> π.			ULIDALIK			vegetation		stanning
Height: 2_ft.	□Bent, r vegetatio	matted, or missir	ng ⊡Wrack li	ne ⊠Litter ar debris	nd	Abrupt plant community change	⊠Soil c ae	haracteristic change
N/A								
Width of Waterbody - T Bank to Top of Bank:	op of Width to Toe	of Waterbody - of Slope:	Toe of Slope	Width of Waterb Water Edge:	ody - W	Ater Edge to De	pth of Wate	r:
<u>_14 ft</u> .		<u>4 ft.</u>		_	<u>3</u> ft.			<u>_0.5_</u> ft.
<u>Oinne aitea</u>	<b>N</b> /-1			N/A 🗆		N/A	<b>↓</b>	
Sinuosity: (check one)	(Approx.)	velocity:		Bank neight		Ва	nk slope Right	
□Straight		0.1fps	6		<u>10</u> ft.		rtight	<u>80</u> degrees
⊠Meanderir	ng N/A 🗆			Left:	10 ft		Lef	t: 80 degrees
Qualitative Attribu	tes							-
Water Appearance:	<b>.</b>							
	No water ⊠0	Clear 🗆 l'urb	old ∐Sh on	ieen ⊔Su i surface sci	rface um	⊔Algal ⊔C mats	)ther:	
Substrate:	Bedrock 🛛 🖾 Bo	oulder 🛛 Cobl	ole 🛛 Grave	el 🛛 Sand 🛛	⊠ Silt/ o	clay 🛛 Organic	□ Other:	
% of Substrate:	<u>15 % 10 </u>	% <u>15</u> %	<u>25</u> %	<u>25</u> %	<u>10_</u> %	<u>NA</u> %	%	
Width of Riparian Zone	e: Vegetativ	e Layers:						
>100 ft	(check all that	t apply)	⊠ Trees	: 0	Saplii	ngs/Shrubs:	⊠ Herbs	
<u>&gt;100 II</u> . N/A□	(approx.)	or Dominants.	<u>14</u> in.	-	<u>3</u> in.			
Dominant Bank Vegeta	tion (list):							
BEECH, QUERCUS	S SPP., TULIP	POPLAR, S	NEETGUM	I, DEER TONG	SUE, F	IOLLY, XMAS F	FERN, MU	JSCADINE
Aquatic Habitats (ex: su	ubmerged or emerge	d aquatic vegetatic	on, overhanging	banks/roots, leaf pac	ks, large	e submerged wood, riff	fles, deep poo	ls):
COBBLE-GRAVEL,	, UNDERCUT	BANKS, LWI	D, OVERHA	ANGING VEG				
Aquatic Organisms Ob	served (list):							
EPT, FISH, CRAYF	ISH							
T&E Species Observed	(list):							
NA								
Disturbances (ex: livesto	ock access, manure	in waterbody, wast	e discharge pipe	es):				
PERENNIAL STRE	AM IN HARDV	VOOD FORE	ST; STABL	E				
Tributary is: (check one)	⊠ Natural	□ Ar	tificial, man-m	ade 🗆 Manip	ulated			
Stream Quality <sup>a</sup> : (check one)	⊠ High		oderate	□ Low				

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

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

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

#### Notes:

PERENNIAL STREAM IN VALLEY WITH STABLE, CONFINED CHANNEL; GOOD AQUATIC HABITAT

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



Form Rev. 07/09/2014



Waterbody point spek009 facing South and upstream



Waterbody point spek009 facing North and downstream



Waterbody point spek009 facing East and across

Linear	Waterbod	y Data	Sheet
--------	----------	--------	-------

Survey Description	n								
Project Name:		Waterbody Na	me:		W	/aterbody ID:		Date:	
Southeast Reliability	y	UNNAMED RIVER	TRIB TO A	PPOMATTOX	S	PEK010		8/2/2014	
State:	County:		Company:		Crew I	Member Initials	: Ph	otos:	
Virginia	Prince Edward	ł	W&C		WM, 、	JD	10	)0-0443 TO 0445	
Tract Number(s):	•		Nearest Mile	epost:		Associated W	etland ID	(s):	
11-026/032			218			NA			
Survey Type: (check one)	⊠Centerline	e □Re-l	Route	□ Access Road		□Other:			
Physical Attributes	S								
Stream Classification: (check one)	Ephemera	al 🗌 Inter	rmittent	Perennial					
Waterbody Type:									
(check one)	River Str	eam 🗆 Dito	ch 🗆 Ca	anal 🗌 Other					
OHWM Width:	OHWM Indica (check all that apply	tor: /)	⊠ Clear lir	ne ⊠Shelvin	g	⊠Wrested vegetation	□Sc	couring DWater	
<u> </u>									
ft. N/A□	⊔Bent, r vegetatic	natted, or missir n	ig ⊔Wrack li	ne ⊠Litter ar debris	nd	☐Abrupt plan community ch	it ⊠ nange	Soil characteristic change	е
Width of Waterbody - T Bank to Top of Bank:	op of Width to Toe	of Waterbody - of Slope:	Toe of Slope	Width of Waterb Water Edge:	ody - W	ater Edge to	Depth of (Approx.)	Water:	
_ <u>_10</u> ft.	-	<u>6 f</u> t.			<u>3</u> ft.		N/A 🗆	<u>0.5</u> ft.	
Sinuosity:	Water	velocity:		Bank height			Bank slo	pe	
(check one)	(Approx.)	relevely.		Right:			Barneoro	Right:	
		<u>_0.2_</u> fps	3	L offer	<u>3</u> ft.			<u>50</u> degrees	
⊠Meanderir	ng N/A□			Left:	<u>5</u> ft.			<u>60</u> degrees	
Qualitative Attribu	tes								
Water Appearance: (check one)	No water ⊠0	Clear 🗆 Turk	oid □Sh on	leen ⊡Su surface scu	rface um	□Algal mats	□Other:		
Substrate:	Bedrock 🗆 Bo	ulder 🛛 Cobl	ole 🛛 Grave	el 🛛 Sand 🛛	⊠ Silt/ c	lay 🛛 Organic	c □ Oth	ier:	
(check all that apply) % of Substrate:	<u>NA_% NA_</u>	% <u>25 </u> %	<u>45</u> %	<u>20</u> %	<u>5</u> %	_5_%		%	
Width of Riparian Zone	e: Vegetative	e Layers:							
<u>&gt;100 ft</u> ·	(check all that Avg. DBH	apply) of Dominants:	⊠ Trees <u>8_</u> in.	2	⊠ Saplir <u>_3_</u> in.	ngs/Shrubs:	⊠H	lerbs	
N/AL	tion (list):								
CEDAR, VIRGINIA I	PINE, BEECH,	BOEHMERI	A, DEER T	ONGUE, LADY	/ FER	N, ELEPHAN	NTS FO	OT, MICROSTEGIU	M
Aquatic Habitats (ex: su	bmerged or emerged	d aquatic vegetatio	n, overhanging	banks/roots, leaf pac	ks, large	submerged wood	, riffles, dee	ep pools):	
COBBLE-GRAVEL	UNDERCUT	BANKS, RIFI	FLE/POOL	S, LWD, OVER	HANG	GING VEG			
Aquatic Organisms Ob	served (list):								
EPT, FISH, FROGS	6								
T&E Species Observed	( <i>list)</i> :								
Disturbances (ex: livesto	ock access. manure i	n waterbody, wast	e discharge pipe	es):					
FORD CROSSING	AT PIPELINE	CENTERLIN	E; FARMIN	IG NEAR STR	EAM				
Tributary is: (check one)	⊠ Natural	□ Ar	tificial, man-m	ade 🛛 Manip	ulated				
Stream Quality <sup>a</sup> : (check one)	□ High	⊠ Mo	oderate						

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

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

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

#### Notes:

PERENNIAL STREAM IN YOUNG MIXED PINE-HW FOREST; GOOD AQUATIC HABITAT

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



Form Rev. 07/09/2014



Waterbody point spek010 facing South and upstream



Waterbody point spek010 facing North and downstream



Waterbody point spek010 facing West and across
Survey Description	n	-							
Project Name:		Waterbody Na	me:		N	laterbody ID:		D	ate:
Southeast Reliability	y	UNNAMED RIVER	TRIB TO A	PPOMATTOX	S	PEK011		8	/2/2014
State:	County:		Company:		Crew I	Member Initials	5:	Photos:	
Virginia	Prince Edward	ł	W&C		WM,	JD		100-044	16 TO 0448
Tract Number(s):			Nearest Mile	epost:		Associated W	etland	ID(s):	
11-035			218			NA			
Survey Type: (check one)	⊠Centerline	e □Re-I	Route	□Access Road	1	□Other:			
Physical Attributes	S								
Stream Classification: (check one)	Ephemera	al 🛛 Inter	rmittent	Perennial					
Waterbody Type: (check one)	]River ⊠ Str	eam 🗆 Dito	ch 🗆 Ca	anal 🛛 Other	:				
OHWM Width: _4 ft.	OHWM Indica (check all that apply	<b>tor:</b> //	⊠ Clear lir on bank	ne ⊠Shelvin	g	⊠Wrested vegetation	×	Scouring	⊠Water staining
<b>Height:</b> ft.	□Bent, r vegetatio	natted, or missir	ng	ne ⊠Litter a debris	nd	□Abrupt plar community ch	nt nange	⊠Soil ch	aracteristic change
Width of Waterbody - T	op of Width of	of Waterbody -	Toe of Slope	Width of Waterb	ody - W	ater Edge to	Depth	of Water:	
Bank to Top of Bank:	to Toe	of Slope:		Water Edge:			(Approx.)		
<u>_12</u> ft.	-	<u>4 ft.</u>		N/A□	<u>1_</u> ft.		N/A□	_	<u>0.1_</u> ft.
Sinuosity:	Water	velocity:		Bank height			Bank s	lope	
(check one)	(Approx.)			Right:				Right:	
Ū Ū		<u>    0.01   </u> fp	S	Left:	<u>6</u> ft.			Left:	<u>70</u> degrees
⊠Meanderir	ng N/A□			-	<u>5</u> ft				60 degrees
Qualitative Attribu	tes								
Water Appearance: (check one)	<sup>]</sup> No water ⊠0	Clear 🗆 Turk	oid □Sh on	neen □Su n surface sci	rface um	□Algal mats	□Othe	r:	
Substrate:	Bedrock 🗆 Bo	ulder 🗆 Cobl	ole 🗆 Grave	el 🛛 Sand 🛛	Silt/ o	clay 🛛 Organio	: □ (	Other:	
(check all that apply) % of Substrate:	<u>NA % NA </u>	% <u>NA</u> %	<u>NA</u> %	<u>20 %</u>	<u>75_</u> %	<u>   5  </u> %		%	
Width of Riparian Zone	e: Vegetative	E Layers:							
_ <u>&gt;100_ft</u> . N/A□	(check all that <b>Avg. DBH</b> (approx.)	apply) of Dominants:	⊠ Trees <u>8_</u> in.	:	⊠ Sapliı _ <u>1_</u> in.	ngs/Shrubs:	×	Herbs	
Dominant Bank Vegeta	tion (list):								
CEDAR, WINGED I	ELM, TULIP PO	OPLAR, MUL	TIFLORA I	ROSE, FRAGA	RIA, A	ASPLENIUM			
Aquatic Habitats (ex: su LWD. OVERHANG	ubmerged or emerged	d aquatic vegetatio	on, overhanging	banks/roots, leaf pac	ks, large	submerged wood	, riffles,	deep pools)	:
Aquatia Organiama Oh	conved (list)								
NA	serveu ( <i>iist)</i> .								
T&E Species Observed	(list):								
Disturbances (ex: livesto	ock access, manure i	n waterbody, wast	e discharge pipe	es):					
LIVESTOCK INTRU	JSION; FARMI	NG NEAR S	TREAM						
Tributary is: (check one)	⊠ Natural	□ Ar	tificial, man-m	iade 🗆 Manip	ulated				
Stream Quality <sup>a</sup> : (check one)	□ High		oderate	⊠ Low					

Waterbody ID: SPEK011

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

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

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

#### Notes:

INTERMITTENT STREAM WITH SIGNIFICANT DISTURBANCE; POOR AQUATIC HABITAT







Waterbody point spek011 facing South and upstream



Waterbody point spek011 facing North and downstream



Waterbody point spek011 facing East and across

Survey Description	n						
Project Name:		Waterbody Nar	ne:		Waterbo	dy ID:	Date:
Southeast Reliability	у	UNNAMED 1 RIVER	RIB TO A	PPOMATTOX	SPEK0	12	8/4/2014
State:	County:		Company:		Crew Member	r Initials:	Photos:
Virginia	Prince Edward		W&C		WM, JD		100-0466 TO 0468
Tract Number(s):			Nearest Mile	epost:	Assoc	iated Wetland	ID(s):
11-035/11-036			218		Wpel	k002	
Survey Type: (check one)	⊠Centerline	□Re-R	loute	□Access Road	□Othe	er:	
Physical Attribute	s	-				-	
Stream Classification:	3						
(check one)	Ephemera	⊠Inter	mittent	Perennial			
Waterbody Type: (check one)	River ⊠ Stre	eam 🗆 Ditc	h 🗆 Ca	anal 🛛 Other:			
онwм	OHWM Indicat	or:					
Width: _ <u>2</u> ft.	(check all that apply,	)	☑ Clear lin on bank	ne ⊠Shelving	g ⊠Wre veget	ested ⊠ ation	Scouring ⊠Water staining
Height:	⊠Bent, m	atted, or missing	g	ne ⊠Litter an	ıd ⊡Abr	upt plant	Soil characteristic change
ft. N/A□	vegetatior	١		debris	comm	nunity change	
Width of Waterbody - T	op of Width o	f Waterbody - T	oe of Slope	Width of Waterbo	ody - Water Ec	Ige to Depth	of Water:
Bank to Top of Bank:	to loe d	of Slope:		water Edge:		(Approx.)	)
<u>_8 ft</u> .	_2	_ft.		-	<u>1_</u> ft.	N/A 🗆	<u>0.1</u> ft.
Sinuosity:	Water v	elocity:		Bank height		Bank	slope
(check one)	(Approx.)			Right:			Right:
		<u>_0.01_</u> fps	3	l eft <sup>.</sup>	<u>3</u> ft.		<u>30</u> degrees
⊠Meanderir	ng N/A□				<u>4</u> ft.		
Qualitative Attribu	tes						
Water Appearance:	No water 🛛 🖾	lear ⊡Turb	id ⊟Sh	een 🗆 Sur	face ⊠Alc	nal ⊡Othe	r.
			on	surface scu	im ma	ats	
Substrate:	Bedrock 🗆 Bou	ulder 🛛 Cobb	le 🛛 Grave	el 🛛 Sand 🛛	🛛 Silt/ clay 🛛	Organic 🗆 0	Other:
% of Substrate:	<u>2_% NA_</u> %	% <u>NA</u> %	<u>18</u> %	<u>   20  </u> %	<u>55_% 5</u>	%	%
Width of Riparian Zone	: Vegetative	Lavers:					
	(check all that a	apply)	⊠ Trees:		Saplings/Shr	ubs: 🗵	I Herbs
<u>&gt;100 ft</u> · N/A□	Avg. DBH ( (approx.)	of Dominants:	<u>6</u> in.	-	<u>1</u> in.		
Dominant Bank Vegeta	tion (list):						
CEDAR,WINGED E	LM, HACKBER	RRY, MULTIF	LORA RO	SE, DOGFENN	IEL, ASPLE	NIUM	
Aquatic Habitats (ex: su	ubmerged or emerged	aquatic vegetation	n, overhanging	banks/roots, leaf pack	ks, large submer	ged wood, riffles,	deep pools):
LWD, OVERHANG	ING VEG						
Aquatic Organisms Ob	served (list):						
NA							
T&E Species Observed	(list):						
NA							
Disturbances (ex: livesto	ock access, manure in	waterbody, waste	discharge pipe	es):			
LIVESTOCK INTRU	JSION; FARMI	NG NEAR ST	REAM				
Tributary is: (check one)	⊠ Natural	□ Art	ificial, man-m	ade 🗆 Manipu	ulated		
Stream Quality <sup>a</sup> : (check one)	🗌 Hiah	□ Mo	derate	⊠ Low			
	J	=					

	Waterbody ID:
:	SPEK012

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

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

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

### Notes:

INTERMITTENT STREAM WITH SIGNIFICANT DISTURBANCE; POOR AQUATIC HABITAT







# Waterbody point spek012 facing North and upstream



Waterbody point spek012 facing South and downstream



# Waterbody point spek012 facing West and across

Survey Description	1							1-
Project Name:		Waterbody Na	ne:		N	/aterbody ID:		Date:
Atlantic Coast Pipeli	ne	Little Saylers	Creek		S	pea401		6/28/2016
State:	County:		Company:		Crew I	Member Initials:	Photos:	•
Virginia	Prince Edward	l	NRG - ER	М	GB, ł	KO	3 phot	OS
Tract Number(s):			Nearest Mile	epost:		Associated Wetlar	nd ID(s):	
11-049			223.2			wpea005		
Survey Type: (check one)	⊠Centerline	□Re-F	Route	□ Access Road		□Other:		
<b>Physical Attributes</b>								
Stream Classification: (check one)	Ephemera	I □Inter	mittent	Perennial				
Waterbody Type:								
(check one)	River 🛛 Stre	eam 🗆 Dito	:h □Ca	anal 🗌 Other	:			
OHWM	OHWM Indicat	or:	🛛 Clear lir		~			a 🗆 🖓 Victor
<u>25.0</u> ft		/	on bank		y	vegetation		staining
Height:	⊟Bent, m	natted, or missin	g 🛛 Wrack I	line □Litter ar	nd	□Abrupt plant	□Soil c	haracteristic change
<u>3.0</u> ft. N/A□	vegetatio	n	0	debris		community change	Э	C C
Width of Waterbody - To	op of Width o	of Waterbody -	Toe of Slope	Width of Waterb	ody - W	ater Edge to Dep	th of Wate	r:
Bank to Top of Bank:	to Toe	of Slope:		Water Edge:		(Appri	ох.)	
<u>35.0</u> ft.	_	<u>20.0</u> ft.		N/A 🗆	20.0 _	ft.		<u>1.5 _</u> ft.
Sinuosity:	Water	velocity:		Bank height		Ban	k slope	
(check one)	(Approx.)			Right:			Righ	t:
		0.75	fps	Left:	8.0 _	_ft.	Lef	<u>85</u> degrees t:
⊠Meanderin	9 N/A□				7.0 _	_ft.		60 degrees
Qualitative Attribut	es							
Water Appearance: (check one)	No water 🛛 🖂 🔿	lear ⊡Turb	id ⊟Sh	neen □Su	rface		her:	
			on	surface sci	um	mats		
Substrate:	Bedrock 🗆 Bo	ulder 🗆 Cobb	le 🛛 Grave	el 🛛 Sand 🛛	⊠ Silt/ o	clay 🛛 Organic 🗌	Other:	
% of Substrate:	%%	<u> </u> %	<u>    5   </u> %	<u>   75   </u> %	<u>15_</u> %	<u> 5 </u> %	%	
Width of Riparian Zone:	Vegetative	Lavers:						
<i>(</i>	(check all that	apply)	⊠ Trees	: 2	🛛 Saplii	ngs/Shrubs:	$\boxtimes$ Herbs	
<u>250 ft</u> · N/A□	Avg. DBH (approx.)	of Dominants:	12.0	in	2.0	in.		
Dominant Bank Vegetat	ion (list):							
Red maple, sycamor Wingate, deer-tongu	re, river birch, le arass. wild r	box elder, re ve. Japanese	d elm, mult stilt arass	berry, pawpaw,	spice	bush, ironwood,	walnut,	grape, greenbrier,
Pools, coarse wood	y debris, wrack	x piles, leaf p	n, overnanging acks, overl	nanging roots a	ind ba	nks	es, deep poo	IS):
Aquatic Organisms Obs	served (list):							
Water striders, riffle	beetles, fish, f	rogs						
T&E Species Observed	(list):							
none								
Disturbances (ex: livesto	ck access, manure ir	waterbody, waste	e discharge pipe	es):				
None apparent								
Tributary is: (check one)	⊠ Natural	□ Art	ificial, man-m	ade 🗆 Manip	ulated			
Stream Quality <sup>a</sup> : (check one)	⊠ High	□ Mo	oderate	□ Low				

#### spea401

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

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

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

#### Notes:

Stream continues out of corridor in both directions; flows through wetland wpea005. Area is mature second growth mixed bottomland hardwood forest.





Waterbody SPEA401 facing northeast upstream



Waterbody SPEA401 facing southwest downstream



Waterbody SPEA401 facing northwest across

Survey Descriptio	n							
Project Name:		Waterbody	Name:	_	w	aterbody ID:		Date:
Atlantic Coast Pipe	line	UNT to Li	ttle Saylers (	Creek	s	pea006		10/20/2014
State:	County:		Company:		Crew I	Member Initials:	Photos	:
Virginia	Prince Edwar	ď	NRG		GB, T	ΓP	3 pho	tos
Tract Number(s):			Nearest Mil	epost:		Associated We	tland ID(s):	
11-051			220.55			none		
Survey Type: (check one)	⊠Centerlin	e 🗆 R	Re-Route	□Access Road		□Other:		
Physical Attribute	S							
Stream Classification: (check one)		ral ⊠Ir	ntermittent	Perennial				
Waterbody Type:								
(check one)	∃River ⊠ St	ream 🗆	Ditch 🗆 C	anal 🛛 Other				
OHWM Width	OHWM Indica	ator:	🛛 Clear li	na MShalvin	a		⊠ Scourie	og ⊡Wator
<u>4.0</u> ft.	(onoon an inar app	.,,,	on bank		y	vegetation		staining
Height:	□Bent,	matted, or mis	sing DWrack	line ⊠Litter ar	nd	□Abrupt plant	□Soil	characteristic change
ft. N/A□	vegetati	on		debris		community cha	nge	
Width of Waterbody - 1 Bank to Top of Bank:	Fop of Width	of Waterbody	y - Toe of Slope	Width of Waterb	ody - W	ater Edge to	epth of Wate	er:
Ballk to Top of Ballk.	το τοε	e of Slope:		water Euge.		(*	ηρριοχ.)	0.05 (
<u>10.0_</u> ft.		<u>_3.0_</u> ft.		N/A	<u>3.0_</u> ft.	Ν	I/A□	<u>_0.25</u> π.
Sinuosity:	Water	velocity:		Bank height		E	ank slope	
(check one)	(Approx	.)		Right:	F 0 4		Righ	nt:
		0.5	_fps	Left:	<u>5.0_</u> π.		Le	ft:
Meanderi	ng N/A□				<u>4.5_</u> ft.			<u>70</u> degrees
Qualitative Attribu	ites							
Water Appearance: (check one)	<sup>□</sup> No water ⊠	Clear □T	urbid □S	heen □Su n surface sci	rface um	□Algal □ mats	Other:	
Substrate:	Bedrock 🛛 🛛 🖾	oulder 🛛 🗠 C	obble 🛛 Grav	vel 🛛 Sand 🛛	⊠ Silt/ c	clay 🗆 Organic	□ Other:	
(check all that apply) % of Substrate:	<u>15_% 10</u>	<u>% 20</u>	% <u>10</u> %	<u>30</u> %	<u>15_</u> %	%	%	
Width of Riparian Zone	e Vegetativ	e Lavers:						
	(check all the	at apply)	⊠ Trees	s: D	⊠ Saplir	ngs/Shrubs:	⊠ Herbs	
<u>ft</u> · N/A⊠	Avg. DBH (approx.)	I of Dominant	t <b>s:</b> <u>8.0</u> ir	n. <u>-</u>	<u>2.0</u> in			
Dominant Bank Vegeta	ation (list):							
Yellow poplar, beec wood rush, violet, fo	ch, hickory, sw pamflower, are	eetgum, flo enbrier	wering dogw	ood, pawpaw, a	azalea	, Japanese ho		e, Christmas fern,
Small pools, overha	anging roots a	nd banks, le	eaf packs	j banks/100ts, lear pac	ks, large	submerged wood,	nines, deep poo	JIS).
Aquatic Organisms Ob	oserved (list):							
Water striders, cade	disfly larvae							
T&E Species Observed	<b>d</b> (list):							
none								
Disturbances (ex: livest	ock access, manure	in waterbody, w	aste discharge pip	es):				
Surrounding clear of	cut with minima	al buffer						
Tributary is: (check one)	⊠ Natural		Artificial, man-n	nade 🗌 Manip	ulated			
Stream Quality <sup>a</sup> : (check one)	🗆 High	$\boxtimes$	Moderate	□ Low				

spea006

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

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

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

### Notes:

Stream continues out of corridor in both directions, flows through mixed hardwoods that were clear cut about three years ago, minimal buffer was left along stream course,







SPEA006 facing south upstream



SPEA006 facing north downstream



# SPEA006 facing west across

Linear Waterbod	y Data S	Sheet								
Survey Description	า									
Project Name:		Waterbo	ody Nar	ne:	_	v	Vaterbody ID:		D	ate:
Atlantic Coast Pipeli	ine	UNT to	o Little	Saylers Cr	eek	s	pea001		1	0/17/2014
State:	County:	•		Company:		Crew	Member Initials	s: P	hotos:	
Virginia	Prince E	dward		NRG		GB,	LE	3	3 photo	S
Tract Number(s):				Nearest Mile	post:		Associated W	etland I	D(s):	
11-051; 11-052				220.9			wpea001			
Survey Type: (check one)	⊠Ce	nterline	□Re-F	loute	□Access Roa	ad	□Other:			
Physical Attributes	5									
Stream Classification:										
(check one)	□Epl	hemeral	⊠Inter	mittent						
Waterbody Type: (check one)	River	⊠ Stream	□ Ditc	h 🗆 Ca	anal 🗌 Othe	ər:				
OHWM Width: _ <u>2.0_</u> ft.	OHWM (check all	Indicator: that apply)		⊠ Clear lin on bank	e ⊡Shelv	ing	□Wrested vegetation	$\boxtimes$ S	Scouring	□Water staining
<b>Height:</b> ft. N/A□	□ ve	Bent, matted, or getation	r missin	g	ne ⊠Litter debris	and	□Abrupt plar community ch	nt [ nange	∃Soil cha	aracteristic change
Width of Waterbody - T Bank to Top of Bank:	op of t	Width of Water	body - 1 :	Foe of Slope	Width of Water Water Edge:	body - V	Vater Edge to	Depth o (Approx.)	f Water:	
<u>7.0</u> ft.		<u>_1.0</u> ft.			N/A□	_1.25_f	t.	N/A□	(	<u>0.20_</u> ft.
Sinuosity: (check one)		Water velocity: (Approx.)	) <u>.25_</u> fps	8	Bank height Right:	<u>4.0_</u> ft	t.	Bank slo	ope Right:	<u>75</u> degrees
⊠Meanderin	ig I	N/A□			Leit.	<u>5.0_</u> ft	t.		Len.	70 degrees
Qualitative Attribut	tes									
Water Appearance: (check one)	No water	⊠Clear	□Turb	id ⊡Sh on	een □S surface s	urface cum	□Algal mats	□Other:		
Substrate:	Bedrock	□ Boulder [	⊠ Cobb	le 🗆 Grave	el 🛛 Sand	Silt/	clay 🛛 Organio	; □ Ot	her:	
% of Substrate:	%	%	<u>5</u> %		% <u>50</u> %	<u>40</u> %	<u>   5  </u> %		%	
Width of Riparian Zone	: Veg	<b>etative Layers:</b> ck all that apply)		⊠ Trees:		⊠ Sapl	ings/Shrubs:	$\boxtimes$	Herbs	
N/A⊠ <u>ft</u> ·	Avg (appr	J. DBH of Domi rox.)	nants:	<u>9.0</u> in.		<u>_1.0</u> _i	า.			
Dominant Bank Vegeta Beech, hickory, loble	tion (list): olly pine,	red oak, bla	ck gun	n, spicebus	h, pawpaw, i	ronwoc	od, blueberry,	Christ	mas fer	'n
Aquatic Habitats (ex: su	bmerged or	emerged aquatic v	regetation	n, overhanging	banks/roots, leaf pa	acks, larg	e submerged wood	l, riffles, de	eep pools)	:
Small pools, leaf pa	cks									
Aquatic Organisms Ob	served (list	t):								
none										
T&E Species Observed	(list):									
none										
Disturbances (ex: livesto	ock access, n	nanure in waterbo	dy, waste	discharge pipe	s):					
Recent clear cut on	northeas	st side								
Tributary is: (check one)	⊠ Na	atural	□ Art	ificial, man-m	ade 🗆 Mani	pulated				
Stream Quality <sup>a</sup> : (check one)	🗆 Hig	gh	⊠ Mo	derate	□ Low					

spea001

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

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

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

### Notes:

Begins at head cut within the corridor, downstream continues out; spea002 is a tributary; recent clear cut to NE, mixed hardwoods with pines to the SW. PFO wetland located at confluence of spea001 & spea002.

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





## Waterbody SPEA001 facing west upstream



Waterbody SPEA001 facing east downstream



Waterbody SPEA001 facing north across

Survey Descriptio	n								
Project Name:		Waterbody Na	me:		w	aterbody ID:			Date:
Atlantic Coast Pipel	line	UNT to Little	Saylers C	reek	s	pea002			10/17/2014
State:	County:		Company:		Crew I	Member Initials	:	Photos:	
Virginia	Prince Edward	ł	NRG		GB, L	.E		3 phot	OS
Tract Number(s):			Nearest Mile	epost:		Associated W	etland	ID(s):	
11-052			220.9			wpea001			
Survey Type: (check one)	⊠Centerline	e □Re-	Route	□ Access Road		□Other:			
Physical Attribute	S								
Stream Classification: (check one)	Ephemera	al 🛛 🖾 Inte	rmittent	Perennial					
Waterbody Type:									
(check one)	River ⊠ Str	eam 🗆 Dite	ch 🗆 Ca	anal 🗌 Other:	:				
онwм	OHWM Indica	tor:						0	
<u>2.0 f</u> t.	(check all that appl)	()	on bank		g	vegetation	X	Scouring	staining
Height:	□Bent, r	natted, or missir	ng ⊡Wrack li	ne ⊠Litter ar	nd	□Abrupt plan	t	□Soil cl	haracteristic change
ft. N/A□	vegetatio	n	-	debris		community ch	ange		-
Width of Waterbody - 1 Bank to Ton of Bank	op of Width	of Waterbody -	Toe of Slope	Width of Waterb	ody - W	ater Edge to	Depth	of Wate	:
Bank to Top of Bank:	to loe	of Slope:		water Edge:			(Approx.)		
<u>_10.0</u> ft.	-	<u>1.0</u> ft.			<u>1.0</u> ft.		N/A□	-	<u>_0.25_</u> ft.
Sinuosity:	Water	velocity:		Bank height			Bank s	lope	
(check one)	(Approx.)			Right:				Right	:
		<u>_0.25</u> fp	S	Left:	<u>4.0_</u> ft.			Left	<u>60</u> degrees
Meanderi	ng N/A□			-	<u>4.0_</u> ft.				70 degrees
Qualitative Attribu	ites								
Water Appearance: (check one)	No water ⊠0	Clear 🗆 Turb	oid □Sh on	leen ⊡Sui surface sci	rface um	□Algal [ mats	□Othe	r:	
Substrate:	Bedrock 🗆 Bo	ulder 🗆 Cobl	ole 🗆 Grave	el 🛛 Sand 🛛	⊠ Silt/ c	clay 🛛 Organic	: 🗆 C	Other:	
(check all that apply) % of Substrate:	%	_% _%		% <u>45</u> %	<u>45_</u> %	<u>  10 </u> %		%	
Width of Riparian Zone	e: Vegetative	E Layers:							
4	(check all that	apply)	⊠ Trees	: D	Saplir	ngs/Shrubs:	$\boxtimes$	Herbs	
<u></u> . N/A⊠	арргох.)	or Dominants.	<u>_9.0_</u> in		<u>1.0</u> in				
Dominant Bank Vegeta	ation (list):								
Beech, hickory, lob	lolly pine, red o	ak, black gur	n, spicebus	sh, pawpaw, irc	nwoo	d, blueberry,	Chris	tmas fe	ern
Aquatic Habitats (ex: se	ubmerged or emerged	d aquatic vegetatic	on, overhanging	banks/roots, leaf pac	ks, large	submerged wood	, riffles,	deep pool	s):
Small pools, leaf pa	acks								
Aquatic Organisms Ob	served (list):								
none									
T&E Species Observed	l (list):								
none									
Disturbances (ex: liveste	ock access, manure i	n waterbody, wast	e discharge pipe	es):					
Recent clear cut									
Tributary is: (check one)	⊠ Natural	□ Ar	tificial, man-m	ade 🗌 Manip	ulated				
Stream Quality <sup>a</sup> : (check one)	□ High	⊠ Me	oderate	□ Low					

spea002

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

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

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

### Notes:

Begins at head cut within the corridor near centerline, downstream flows into spea001; recent clear at confluence, mixed hardwoods with pines upstream. PFO wetland located at confluence of spea001 & spea002.

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





Waterbody SPEA002 facing south upstream



Waterbody SPEA002 facing north downstream



Waterbody SPEA002 facing east across

Survey Descriptio	n						<u> </u>				
Project Name:		Waterboo	dy Nam	ne:			w	aterbody ID:			Date:
Atlantic Coast Pipel	line	UNT to	Little	Saylers C	reek		s	pea004			10/17/2014
State:	County:			Company:			Crew I	Member Initials	::	Photos:	
Virginia	Prince Edwa	ard	I	NRG			GB, L	.E		3 phote	OS
Tract Number(s):				Nearest Mile	epost:			Associated W	etland	ID(s):	
11-053				221.0				wpea002			
Survey Type: (check one)	⊠Centerl	ine [	□Re-R	oute	□Ac	cess Road		□Other:			
Physical Attribute	S										
Stream Classification: (check one)	Ephem	eral	⊠Intern	nittent	□Pe	rennial					
Waterbody Type:	1 -				-						
(check one)	∃River ⊠ \$	Stream	Ditch	n 🗆 Ca	anal	Other:					
ОНШМ	OHWM Indi	cator:							_		
Width: ft.	(cneck all that a	оріу)		☑ Clear lin on bank	ie	Shelving	g	☐Wrested vegetation	×	Scouring	g ⊟Water staining
Height:	□Ben	t, matted, or i	missing	I □Wrack li	ne	□Litter ar	nd	□Abrupt plan	ıt	□Soil cl	naracteristic change
<u> </u>	vegeta	tion				debris		community ch	nange		
Width of Waterbody - 1 Bank to Top of Bank:	Top of Widt	h of Waterbo	ody - T	oe of Slope	Width	of Waterbo	ody - W	ater Edge to	Depth (Approx	of Water	:
Ballk to Top of Ballk.		be of Slope:			water	Eage.			(Approx.)	)	0.00 (
<u>_7.0</u> ft.		<u>_3.0</u> ft.			N/A□	_	<u>2.5_</u> ft.		N/A□	-	<u>_0.30_</u> π.
Sinuosity:	Wate	er velocity:			Bank h	neight			Bank s	slope	
(check one)	(Appro	ox.)				Right:	F 0 4			Right	: CO demas
		0.7	<u>75_</u> fps			Left:	<u>5.0_</u> 11.			Left	<u> </u>
	ng N/A						<u>5.5_</u> ft.				<u>90</u> degrees
Qualitative Attribu	ites										
(check one)	No water	⊠Clear	□Turbi	d ⊡Sh on	een surface	⊡Sur e scu	face Im	□Algal mats	□Othe	r:	
Substrate:	Bedrock	Boulder 🛛	Cobbl	e 🛛 Grave	el 🛛	Sand D	⊠ Silt/ c	lay 🛛 Organic	; 🗆 (	Other:	
(check all that apply) % of Substrate:	_%	%_5	<u>%</u>	<u>20</u> %	4	<u>5_%</u>	<u>25_</u> %	<u> 5 </u> %		%	
Width of Riparian Zone	e: Vegetat	ive Lavers:									
	(check all t	hat apply)		⊠ Trees:	:	$\triangleright$	Saplir	ngs/Shrubs:	$\geq$	I Herbs	
<u>π</u> . N/A⊠	AV <b>g. D</b> E (approx.)		ants:	_ <u>10.0_</u> iı	า.	-	_ <u>1.5_</u> in				
Dominant Bank Vegeta	ation (list):										
Yellow poplar, black sedge, Christmas fe	k gum, beech ern. ladv fern	i, Red ced	ar, lob	ololly pine,	Red n	naple, irc	onwoo	d, grape, pa	wpaw	, wood	rush, woodland
Small pools, overha	anging roots	and banks	, leaf ∣	packs	Dariks/10	ots, lear pac	ks, large	submerged wood	, nnes,	deep poor	5):
Aquatic Organisms Ob	served (list):										
Crayfish, frogs											
T&E Species Observed	l (list):										
none											
Disturbances (ex: livest	ock access, manu	e in waterbody	, waste	discharge pipe	es):						
None apparent											
Tributary is: (check one)	⊠ Natura		□ Artii	ficial, man-m	ade	□ Manipu	ulated				
Stream Quality <sup>a</sup> : (check one)	□ High		⊠ Moo	derate		□ Low					

spea004

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

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

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

### Notes:

Upstream continues out of corridor, downstream flows into spea003; flows through mature mixed hardwood and pine forest; saturated PFO wpea002 is a small seep that is hydrologically connected to spea003 & spea004 at the confluence of the streams.

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





Waterbody SPEA004 facing southwest upstream



Waterbody SPEA004 facing northeast downstream



# Waterbody SPEA004 facing southeast across

Survey Descriptio	n								
Project Name:		Waterbody Na	me:		v	/aterbody ID:			Date:
Atlantic Coast Pipe	line	UNT to Little	e Saylers C	Creek	s	pea003			10/17/2014
State:	County:		Company:		Crew I	Member Initials	:	Photos:	
Virginia	Prince Edward	ł	NRG		GB, L	.E		3 phot	os
Tract Number(s):			Nearest Mile	epost:		Associated W	etland	ID(s):	
11-053			221.0			wpea002			
Survey Type: (check one)	⊠Centerline	e □Re-	Route	□Access Road		□Other:			
Physical Attribute	S								
Stream Classification: (check one)	□Ephemera	al 🗆 Inte	rmittent	Perennial					
Waterbody Type:									
(check one)	□River ⊠ Str	eam 🗆 Dite	ch 🗆 C	anal 🛛 Other	:				
ОНШМ	OHWM Indicat	tor:							
Width: _ <u>6.0_f</u> t.	(check all that apply	/)	☑ Clear lir on bank	ne ⊠Shelvin	g	☐Wrested vegetation	Þ	Scouring	g □Water staining
Height:	□Bent, n	natted, or missir	ng ⊠Wrack li	ine 🗆 Litter ar	nd	□Abrupt plan	t	□Soil cl	haracteristic change
<u> </u>	vegetatio	n		debris		community ch	ange		
Width of Waterbody -	Top of Width o	of Waterbody -	Toe of Slope	Width of Waterb	ody - W	ater Edge to	Depth	of Water	r:
Bank to Top of Bank:	to Toe	of Slope:		Water Edge:			(Approx.	)	
<u>_12.0</u> ft.	-	<u>4.0</u> ft.			<u>5.0_</u> ft.				<u>1.0</u> ft.
Sinuosity:	Water	velocity:		N/AL			Bank	slone	
(check one)	(Approx.)			Right:			Bailie	Right	:
		<u>_1.0</u> _fp:	S	L offi	<u>6.0_</u> ft.			Loff	<u>80</u> degrees
⊠Meanderi	ng N/A□			Leit.	<u>3.5_</u> ft.			Len	75_ degrees
Qualitative Attribu	ites								
Water Appearance: (check one)	<sup>□</sup> No water ⊠0	Clear □Turl	bid □St	neen 🗆 Su	rface	□Algal	Othe	r:	
			or	surface sci		mats		0.1	
Substrate: (check all that apply)	Bedrock Bo	ulder 🛛 Cobl	ble 🛛 Grav	el 🛛 Sand 🛛	imes Silt/ c	clay 🗆 Organic	; [](	Other:	
% of Substrate:	%	<u>% 15</u> %	<u> 10 </u> %	<u>45</u> %	<u>30 </u> %	%		%	
Width of Riparian Zon	e: Vegetative	E Layers:							
100 ft.	(check all that	apply)	⊠ Trees	: 0	Sapliı ∑	ngs/Shrubs:	$\geq$	Herbs	
N/A 🗆	(approx.)	or Dominanto.	<u>_10.0</u> _I	n	<u>_1.5</u> IN	l.			
Dominant Bank Veget	ation (list):								
Yellow poplar, blac sedge. Christmas f	k gum, beech, l ern. ladv fern	Red cedar, lo	blolly pine,	, Red maple, iro		od, grape, pav	wpaw	, wood	rush, woodland
Pools, riffles, overh	anging roots ar	nd banks, lea	af packs, co	arse woody de	bris	submerged wood	, nnes,	deep poor	5):
Aquatic Organisms Ol	oserved (list):								
Crayfish, minnows,	water striders,	frogs							
T&E Species Observe	d (list):								
none									
Disturbances (ex: livest	ock access, manure i	n waterbody, wast	e discharge pip	es):					
None apparent									
Tributary is: (check one)	⊠ Natural	□ Ar	tificial, man-m	nade 🗆 Manip	ulated				
Stream Quality <sup>a</sup> : (check one)	⊠ High		oderate	□ Low	_		_		

spea003

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

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

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

### Notes:

Continues out of corridor, flows through mature mixed hardwood and pine forest, spea004 is a tributary; saturated PFO wpea002 is a small seep that is hydrologically connected to spea003 & spea004 at the confluence of the streams.

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





Waterbody SPEA003 facing southeast upstream



Waterbody SPEA003 facing northwest downstream



# Waterbody SPEA003 facing southwest across

Linear Waterbod	y Data Shee	t							
Survey Description	n	Waterbody Na	me-			aterbody ID:		Dat	·•·
Atlantic Coast Pinel	ino		Savlore Ci	ook	•••			10	.e. /17/2014
				eek	P			10/	17/2014
State:	County:		Company:		Crew N	lember Initials	: Ph	otos:	
Virginia	Prince Edward	d	NRG		GB, L	E	3	photos	
Tract Number(s):			Nearest Mile	epost:		Associated W	etland ID	)(s):	
11-054; 11-054.01			221.25			wpea003			
Survey Type: (check one)	⊠Centerline	e □Re-I	Route	□Access Road		□Other:			
Physical Attribute	s								
Stream Classification:	_								
(check one)	Ephemera	al 🛛 Inte	rmittent	Perennial					
Waterbody Type: (check one)	River 🛛 Str	ream 🗆 Dite	ch 🗆 Ca	anal 🗌 Other:	:				
онwм	OHWM Indica	tor:							
Width: _ <u>2.0_</u> ft.	(check all that appl	<i>y)</i>	Clear lin on bank	ie 🗆 Shelving	g	☐Wrested vegetation	⊠S	couring	□Water staining
Height: ft.	□Bent, r vegetatio	matted, or missir	ig	ne ⊠Litter ar debris	nd	□Abrupt plan community ch	t ⊑ ange	Soil chara	acteristic change
Width of Waterbody - T Bank to Top of Bank:	op of Width to Toe	of Waterbody -	Toe of Slope	Width of Waterbo	ody - Wa	ater Edge to	Depth of (Approx.)	Water:	
_ <u>3.5</u> ft.		_1.0_ ft.			1.5_ ft.			0.2	<u>20_</u> ft.
				N/A□			N/A□		
Sinuosity: (check one)	Water (Approx.)	velocity:		Bank height			Bank slo	pe Districts	
□Straight		0.50 fp	s	Right:	<u>4.0_</u> ft.				<u>30</u> degrees
⊠Meanderir		<u> </u>		Left:	4.0 ft			Left:	0 degrees
				-	<u>4.0_</u> 1t.				
Qualitative Attribu	tes								
(check one)	No water ⊠0	Clear DTurk	oid ⊡Sh on	een ⊡Sur surface scu	rface um	□Algal I mats	□Other:		
Substrate:	Bedrock 🗆 Bo	oulder 🗆 Cobb	ole 🗆 Grave	el 🛛 Sand 🛛	⊠ Silt/ cl	ay 🛛 Organic	□ Oth	ner:	
(check all that apply) % of Substrate:	%	%	_%	% <u>35 </u> % _	<u>60 </u> %	<u> 5 </u> %		_%	
Width of Riparian Zone	C Vegetative	e Layers:			Sanlin	as/Shrubs:	MH	lerhs	
<u>ft</u> . N/A⊠	Avg. DBH (approx.)	of Dominants:	<u>_9.0_</u> in.	· · · · ·	<u>1.75</u> ir	).			
Dominant Bank Vegeta	tion (list):								
Sweetgum, red map	ole, black gum,	, yellow popla	r, sourwoo	d, dogwood, ju	niper, (	greenbrier, C	Christma	as fern,	wood oats
Aquatic Habitats (ex: su	Ibmerged or emerge	d aquatic vegetatic	n, overhanging	banks/roots, leaf pac	ks, large	submerged wood	, riffles, de	ep pools):	
Small pools, leaf pa	icks								
Aquatic Organisms Ob	served (list):								
none									
T&E Species Observed	l (list):								
none									
Disturbances (ex: livesto	ock access, manure i	in waterbody, wast	e discharge pipe	es):					
Recent clear cut, hi	gh sediment lo	ad and down	cutting						
Tributary is: (check one)	⊠ Natural	□ Ar	tificial, man-m	ade 🗆 Manipu	ulated				
Stream Quality <sup>a</sup> : (check one)	□ High		oderate	⊠ Low					

spea005

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:

Clear cut in last year to southeast, mixed hardwoods and pines to the northwest; downstream continues out of corridor where it flows into spea003; upstream is outflow from wpea003.



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



Waterbody SPEA005 facing northeast upstream



Waterbody SPEA005 facing southwest downstream



# Waterbody SPEA005 facing southeast across
## Linear Waterbody Data Sheet

Survey Description	on									
Project Name:		Waterbody Na	Waterbody Name:						Date:	
Atlantic Coast Pipe	eline	UNT to Little	UNT to Little Saylers Cree		S				1/7/2015	
State:	County:		Company: Ci		Crew I	rew Member Initials:		Photos:		
Virginia	Prince Edwar	d	NRG	NRG CI		R, AS		SPEC001_001-003		
Tract Number(s):			Nearest Milepost:			Associated Wetland ID(s):				
11-064			222.3			WPEC001				
Survey Type: (check one)	⊠Centerline	e □Re-	Route	□Access Road		□Other:				
Physical Attribute	es									
Stream Classification: (check one)	: □Ephemer	al ⊠Inte	rmittent	Perennial						
Waterbody Type:										
(check one)	□River ⊠ St	ream 🗆 Dit	ch 🗆 C	anal 🛛 Other	:					
ОНШМ	OHWM Indica	tor:								
Width: _ <u>2 f</u> t.	(спеск ан тпат арр	<i>y)</i>	☑ Clear lir on bank	Ine Shelving		☐Wrested vegetation	L	Scouring Water staining		
Height:	⊠Bent, i	matted, or missir	ng ⊡Wrack li	ne 🗆 Litter ar	nd	□Abrupt plan	t	□Soil cl	haracteristic change	
ft. N/A□	vegetatio	on	-	debris		community ch	ange		-	
Width of Waterbody -	Top of Width	of Waterbody -	Toe of Slope	Width of Waterb	ody - W	ater Edge to	Depth	of Water	r:	
Bank to Top of Bank:	to Toe	of Slope:		Water Edge:			(Approx.)			
<u>_3 f</u> t.	-	<u>1_</u> ft.			<u>1.5_</u> ft.				<u>_0.3_</u> ft.	
Sinuccity	Wator	volocity		N/A 🗆			N/AL	lono		
(check one)	(Approx.)			Right:				Right		
		<u>_2_</u> fps			<u>1_</u> ft.				80 degrees	
⊠Meander	ing N/A			Left:	<u>1_</u> ft.			Lett	:: <u>80</u> degrees	
Qualitative Attrib	utes									
Water Appearance:					rfaaa					
			or	n surface sci	um	mats		-		
Substrate:	Bedrock Bo	oulder 🛛 Cobl	ole 🗆 Grav	el 🛛 Sand 🛛	⊠ Silt/ c	clay 🛛 Organic		Other:		
% of Substrate:	%	%	_%	% <u>80</u> %	<u>20_</u> %	%		%		
Width of Riparian Zon	e: Vegetativ	e Layers:								
	(check all tha	t apply)	☑ Trees	:	⊠ Saplir	ngs/Shrubs:	$\boxtimes$	Herbs		
<u>ft</u> . N/A⊠	Avg. DBH (approx.)	of Dominants:	<u>_10_</u> in.	-	<u>1</u> in.					
Dominant Bank Veget	ation (list):									
White oak, scarlet cabbage	oak, southern r	ed cedar, Am	erican horr	nbeam, blackbe	erry, C	hristmas ferr	n, junc	us effu	isus, skunk	
Aquatic Habitats (ex: s	submerged or emerge	d aquatic vegetatio	on, overhanging	banks/roots, leaf pac	ks, large	submerged wood	, riffles,	deep pool	s):	
Leaf packs, riffles	and pools									
Aquatic Organisms O	bserved (list):									
None										
T&E Species Observe	d (list):									
None										
Disturbances (ex: lives	tock access, manure	in waterbody, wast	e discharge pip	es):						
None										
Tributary is: (check one)	⊠ Natural	□ Aı	tificial, man-m	nade 🗆 Manip	ulated					
Stream Quality <sup>a</sup> : (check one)	□ High	⊠M	oderate	□ Low						

Waterbody ID: SPEC001

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

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

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

## Notes:

Stream flows underground in a few places within the corridor. Stream is underground where it crosses centerline.

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





Waterbody SPEC001 facing upstream



Waterbody SPEC001 facing downstream



Waterbody SPEC001 facing across

## Linear Waterbody Data Sheet

Survey Descriptio	on	-								
Project Name: Wate		Waterbody Na	aterbody Name:			Vaterbody ID:			Date:	
Atlantic Coast Pipe	line	UNT to Litt	JNT to Little Saylers Creek		spea007				10/20/2014	
State:	County:		Company:	Company: C		rew Member Initials:		Photos:		
Virginia	Prince Edward			NRG G		B, TP		3 phot	os	
Tract Number(s):			Nearest Mile	Nearest Milepost:			etland	ID(s):		
11-069	222.65	222.65			wpea006					
Survey Type: (check one)	⊠Centerlin	e □Re	□Re-Route □Access R			□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: 2.0 ft.	OHWM Indica (check all that app	ator: ly)	⊠ Clear lir on bank	ne 🗆 Shelvin	g	□Wrested vegetation		Scouring	g ⊟Water staining	
Height: 	□Bent, vegetatio	Bent, matted, or missing □Wrack line ⊠Litter and □Abrupt plant □Soil charact getation debris community change				naracteristic change				
N/A 🗆	Top of her hit	- ( ) M - ( - al-	Taxadolaria	Middle of Mictory	l- / \A	/oton Educ to	Damith	of Woto:	-	
Bank to Top of Bank:	to Toe	of Waterbody	· Toe of Slope	Water Edge:	bay - w	ater Edge to	(Approx.		:	
<u>_3.0</u> ft.	-	<u>2.5</u> ft.			<u>1.5_</u> ft.			-	<u>0.20_</u> ft.	
Sinuosity:	Water	velocity:		Bank height			Bank	slope		
(check one)	(Approx.	)		Right:				Right	:	
		<u>_0.1_</u> fp	S	Left:	<u>2.0_</u> ft.			Left	<u>80</u> degrees	
⊠Meanderi	ing N/A□				<u>2.5_</u> ft.				80 degrees	
Qualitative Attribu	utes									
Water Appearance: (check one)	□No water 🛛	Clear 🗆 Tu	bid □St	neen 🗆 Sur a surface sci	face	□Algal mats	□Othe	r:		
Substrate:	Bedrock B	oulder 🗆 Cot	ble 🗆 Grav	el 🛛 Sand 🛛	⊠ Silt/ o	clav 🖂 Organic	: □(	Other:		
(check all that apply)							,			
	%%	»%	%	<u>   65  </u> %	<u>25_</u> %	<u>   10  </u> %		%		
Width of Riparian Zon	e: Vegetativ	e Layers:			7 Sanlii	nge/Shruhe:				
<u> </u>	Avg. DBH	l of Dominants	= nees 14.0 i	. ⊵ n.	0.5 in	nys/Sniubs. ).				
N/A⊠ Dominant Bank Vagat	(approx.)			-						
Yellow poplar, red	maple, opossu	m haw, white	e oak, Japar	nese honeysucl	kle, ne	etted chain fe	ern, Cl	hristma	s fern, greenbrier	
Aquatic Habitats (ex: s	ubmerged or emerge	ed aquatic vegetati	on, overhanging	banks/roots, leaf pac	ks, large	e submerged wood	, riffles,	deep pool	s):	
Small pools, leaf pa	acks									
Aquatic Organisms Ol	<b>oserved</b> (list):									
none										
T&E Species Observe	d (list):									
none										
Disturbances (ex: livest	tock access, manure	in waterbody, was	te discharge pip	es):						
none										
Tributary is: (check one)	⊠ Natural		rtificial, man-m	nade 🗌 Manipi	ulated					
Stream Quality <sup>a</sup> : (check one)	□ High	×N	loderate							

Waterbody ID:

spea007

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 head cut near the northern edge of corridor, downstream continues out of corridor, flows through PFO wetland wpea006; forested draw between hayfields.





SPEA007 facing east upstream



SPEA007 facing southwest downstream



SPEA007 facing south across