Linear Waterbody Data Sheet

Survey Description	•								
Project Name:	<u> </u>	Waterbody Nar	ne:		W	Vaterbody ID:		C	Pate:
Atlantic Coast Pipeli	ine	UNT to Ham	ilton Branch	า	s	aua408		4	/25/2016
State:	County:	I.	Company:		Crew I	Member Initials	:	Photos:	
o .	Augusta		NRG - ERI		GB, S			3 photo	S
Tract Number(s):			Nearest Mile	post:		Associated W	etland	ID(s):	
07-001-F002			107.2			none			
Survey Type: (check one)	⊠Centerline	□Re-F	Route	□Access Road		□Other:			
Physical Attributes	S 🗵								
Stream Classification: (check one)	Ephemera	ıl ⊠Inter	mittent	□Perennial					
Waterbody Type: (check one)	River 🗵 Str	eam 🗆 Dito	:h □ Ca	ınal 🗆 Other:	:				
OHWM Width:	OHWM Indication (check all that apply t.		☐ Clear lin	e □Shelvin	g	□Wrested vegetation	×	Scouring	□Water staining
Height: ft. N/A□		natted, or missin n	g □ Wrack li	ne ⊠Litter ar debris	nd	☐ Abrupt plan community ch		□Soil ch	aracteristic change
Width of Waterbody - T Bank to Top of Bank:		of Waterbody - Tof Slope:		Width of Waterbo	ody - W		Depth (Approx.)	of Water:	
ft.		6.0 ft.		N/A□	4.0 <u></u> 1	ft.	N/A□		<u>0.15 </u> ft.
Sinuosity: (check one) ⊠Straight	(Approx.)	velocity:	fps	Left:	10.0 _	_ft.	Bank s	lope Right: Left:	60 degrees
	<u> </u>			_	7.0	_ft			60 degrees
Qualitative Attribut	tes								
Water Appearance: (check one)	No water ⊠0	Clear □Turb		een □Sui surface scu		□Algal [mats	□Other	:	
Substrate: (check all that apply) % of Substrate:	Bedrock				⊠ Silt/ o	clay ⊠ Organic <u>10</u> %		Other: %	
Width of Riparian Zone ft N/A⊠	(check all that		⊠ Trees: 12.0_		⊠ Saplii 1.0	ngs/Shrubs: in.	×	Herbs	
Dominant Bank Vegeta	tion (list):								
Chestnut oak, white creeper, greenbrier. Aquatic Habitats (ex: su	poison ivv. me	eadow rue. tw	<u>risted stalk.</u>	mavapple					
Leaf packs, woody		raquatio vegetation	ii, overnanging i	sants/100ts, icai pac	KS, large	o Submerged wood,	, 111100,	deep pools	•
Aquatic Organisms Ob	served (list):								
invertebrates									
T&E Species Observed	(list):								
none									
Disturbances (ex: livesto	ock access, manure i	n waterbody, waste	discharge pipe	s):					
None apparent	,	,,	0-11-						
Tributary is: (check one)		□ Art	ificial, man-ma	ade 🗆 Manipı	ulated				
Stream Quality ^a : (check one)	☐ High	⊠ Mc	derate	□ Low					

Waterbody saua408	ID
saua408	

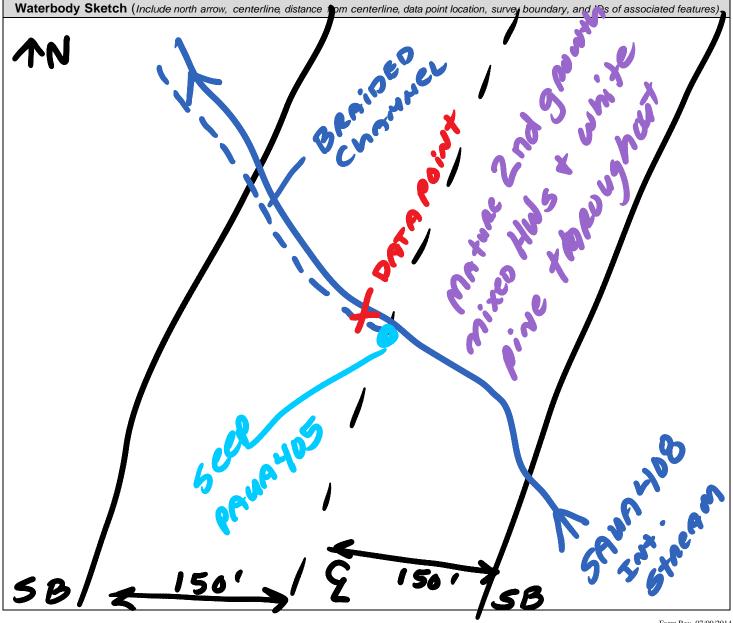
High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance 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; channel is braided downstream of centerline; seep paua405 supplies water to channel braid at centerline; mature second growth mixed hardwoods with white pine element throughout survey corridor.





Waterbody saua408 facing south upstream



Waterbody saua408 facing north downstream



Waterbody saua408 facing west across

Linear Waterbody Data Sheet

Survey Description	<u> </u>								
Project Name:	-	Waterbody Nar	ne:		W	aterbody ID:		Date	9:
Atlantic Coast Pipeli	ne	UNT to Ham	ilton Brancl	h	sa	auz016		8/18	8/2016
State:	County:		Company:		Crew N	lember Initials	: Ph	otos:	
_	Augusta		ERM		SS			-3	
Tract Number(s):			Nearest Mile	epost:		Associated W	etland ID)(s):	
07-001-F002			107			wauz013s			
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	ream 🗆 Dito	:h □ Ca	anal					
OHWM Width:	OHWM Indica (check all that apply		☐ Clear lin	ne ⊠Shelvinç	g	□Wrested vegetation	□S	couring	□Water staining
Height: _4_ft. N/A□	□Bent, r vegetatio	matted, or missin on	g □Wrack lir	ne □Litter an 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:	
_ <u>4_</u> ft.		3_ft.			<u>2</u> ft.		N/A□	0.3	3_ft.
Sinuosity: (check one) ⊠Straight	(Approx.)	velocity: 0.5fps		Left:	<u>0.5</u> ft.		Bank slo	Right: 6	0_degrees
□Meanderin	- [.,,,=			_	<u>0.5_</u> ft.			<u>_6</u>	0_degrees
Qualitative Attribut	tes								
Water Appearance: (check one)	No water ⊠0	Clear □Turb	-	een □Sur surface scu		□Algal mats	□Other:		
Substrate: (check all that apply) % of Substrate:	Bedrock	oulder ⊠ Cobb % <u>10</u> %	le ⊠ Grave _80_%		⊠ Silt/ c 10_%	lay □ Organio		ner: %	
Width of Riparian Zone 250+ ft N/A□	(check all that		⊠ Trees: _ <u>10</u> _in.		☑ Saplin _2_in.	ngs/Shrubs:	⊠ F	Herbs	
Dominant Bank Vegeta Liriodendron tulipife		nes Partheno	cieene anin	auefolia					
Aquatic Habitats (ex: su None			•	<u> </u>	ks, large	submerged wood	, riffles, de	ep pools):	
Aquatic Organisms Obs None	served (list):								
T&E Species Observed	(list):								
None									
Disturbances (ex: livesto	ck access, manure i	n waterbody, waste	e discharge pipe	es):					
Tributary is: (check one)	Natural	□ Art	ificial, man-ma	ade □ Manipu	ulated				
Stream Quality ^a : (check one)	☐ High	□ Mo	oderate	⊠ Low					

Waterbody ID: sauz016

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:

This stream follows the access road and eventually crosses Deerfield Valley Road after passing through a pond.

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

Continues accross Deerfield Valley Rd Sauzollo Sauzollo



Waterbody sauz016 facing east across



Waterbody sauz016 facing north downstream



Waterbody sauz016 facing south upstream

Linear Waterbody Data Sheet

Survey Description	,							
Project Name:	•	Waterbody Nar	ne:		W	aterbody ID:		Date:
Atlantic Coast Pipeli	ne	UNT to Ham	ilton Branch		sa	auz015		7/15/2016
State:	County:	1	Company:		Crew N	lember Initials:	: Phot	tos:
	Augusta		ERM		SS		1-3	
Tract Number(s):			Nearest Milep	ost:		Associated W	etland ID(s	s):
07-001-F004			107.3			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 □ Car	nal 🗆 Other:				
OHWM Width:	OHWM Indica (check all that apply		□ Clear line on bank	e □Shelvinç	g	□Wrested vegetation	□Sco	uring □Water staining
Height: 	□Bent, n vegetatio	natted, or missin n	g □Wrack line	e □Litter an debris	nd	☐ Abrupt plant community ch		oil characteristic change
Width of Waterbody - To Bank to Top of Bank:		of Waterbody - of Slope:		Width of Waterbo Water Edge:	ody - W		Depth of W	/ater:
		<u>1_</u> ft.		valer Lage: 	ft	i.	N/A⊠	ft.
Sinuosity: (check one) ⊠Straight	Water (Approx.)	velocity:		Bank height Right:	_1_ft.			ight:45_ degrees Left:
□Meanderin	9 N/A⊠				_1_ft.			45 degrees
Qualitative Attribut	tes							
Water Appearance: (check one) ⊠	No water □0	Clear □Turb		en □Sur surface scu		□Algal [mats	□Other:	
Substrate: (check all that apply) % of Substrate:	Bedrock DBo		le 🗆 Gravel %%		⊠ Silt/ cl	lay □ Organic		r: %
Width of Riparian Zone 250+ ft	(check all that		⊠ Trees: _8_in.		☑ Saplin _1_in.	gs/Shrubs:	⊠ Her	rbs
N/A □ Dominant Bank Vegeta								
Pinus strobes, Acer		ım						
Aquatic Habitats (ex: su	bmerged or emerged	d aquatic vegetation	n, overhanging b	anks/roots, leaf pack	ks, large	submerged wood,	, riffles, deep	pools):
None								
Aquatic Organisms Obs None	served (list):							
T&E Species Observed	(list):							
None								
Disturbances (ex: livesto	ck access, manure i	n waterbody, waste	discharge pipes	s):				
None								
Tributary is: (check one)	⊠ Natural	□ Art	ificial, man-ma	de 🗆 Manipu	ulated			
Stream Quality ^a : (check one)	☐ High		derate	⊠ Low				

Waterbody	ID:
sauz015	

^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.

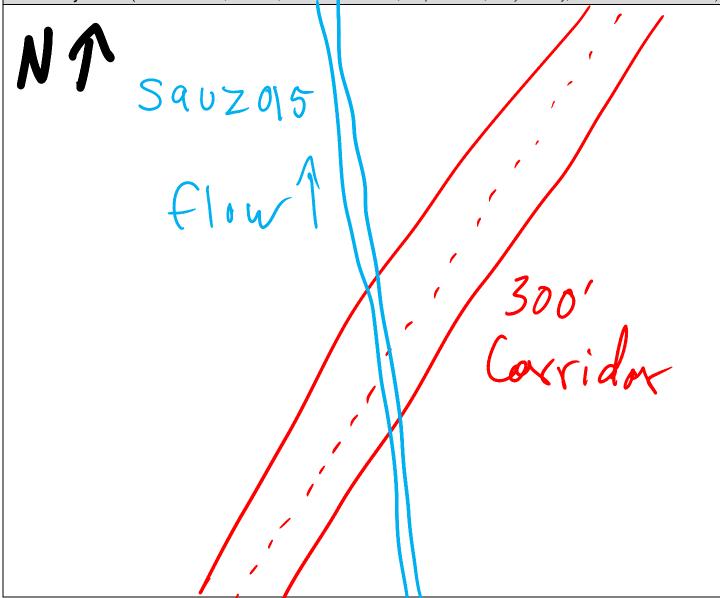
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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

This is a small ephemeral stream that starts at a knickpoint.

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





Waterbody SAUZ015 facing southeast upstream



Waterbody SAUZ015 facing northwest downstream



Waterbody SAUZ015 facing northeast across

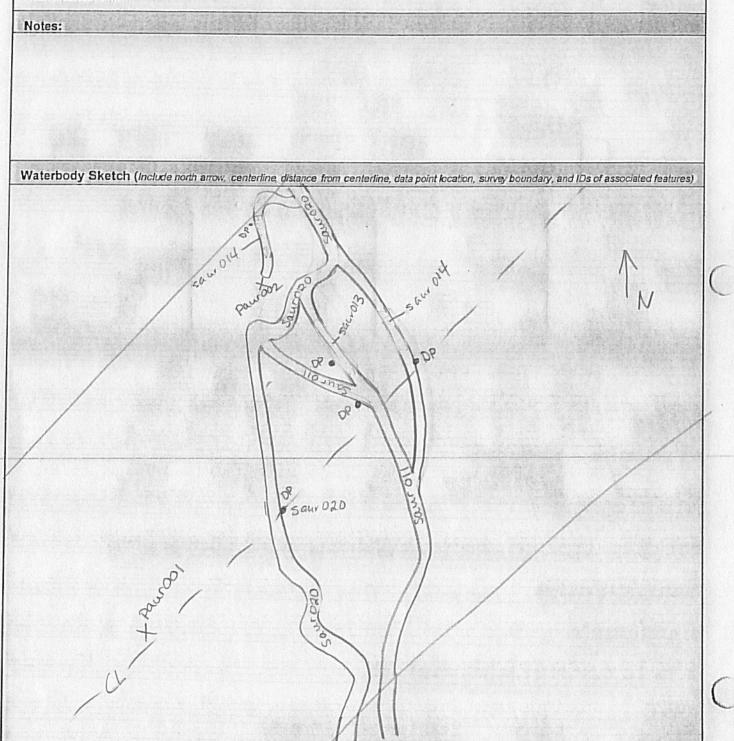
Linear Waterboo	dy Data Sheet			N. 52 (5.15) B. 52 (5.1	AND DESCRIPTION OF THE		
Survey Description	00	her a de de No		20 American	Waterbody ID:		Date:
Project Name:		Waterbody Na		, ,	Sauroa	0	3-29-16
ACP		MUT to	Hamilton F	branch	HE SEND OF THE PERSON OF THE P	CONTROL TO A REAL PROPERTY OF THE PARTY OF T	3 2110
State:	County/Parish:		Company:		Crew Member Initials		N,E
AV	Augusta		EST		KM, WY		115
Tract Number(s):			Nearest Milepost:		Associated W		
07-001-1	F007, F00	8	107.5		Non	-	
Survey Type:	☐ Centerline		Poute FIA	ccess Road	☐Other:		
(check one)	AND DESCRIPTION OF THE PROPERTY OF	LINE TO THE PERSON OF THE PERS	THE PROPERTY OF THE PARTY OF TH	THE PROPERTY			
Physical Attribute Stream Classification							
(check one)	□Ephemera	I □Inter	mittent EP	erennial			
Waterbody Type: (check one)	□River □ Str	eam 🗆 Dito	ch 🗆 Canal	☐ Other			
OHWM G ft.	OHWM Indica (check all that appl)	tor:	☐ Clear line on bank	□Shelvin	g	四 Scouring	g
Height: 0./ ft.	MBent, n vegetatio	natted, or missin	g @Wrack line	□Litter ar debris	nd	nange	haracteristic change
Width of Waterbody -	Top of Width	of Waterbody -	Toe of Slope Widtl	n of Waterb	ody - Water Edge to	Depth of Wate (Approx.)	r.
Bank to Top of Bank:	to Toe	of Slope:	Wate	r Euge.	6 .		0.1 ft.
ft.	-	<u> </u>	N/AE	, –	<u>Ø</u> ft.	N/A□	
Sinuosity:	Water	velocity:	minimum programme and device strand - office added	height		Bank slope	
check one)	(Approx.)			Right:	1 .	Right	30 degrees
			ps	Left:	<u> </u>	Lef	t: We
□Meander	ring N/A				n.	EDMANDE ACT	degrees
Qualitative Attrib	utes						
Water Appearance:			и пере	□Su	rface □Algal	□Other:	
check one)	□No water 🖭	lear □Turb	oid □Sheen on surfa	STEEL CONTROL OF LOAD OF BRIDGE			
Substrate:	□ Bedrock ☑ Bo	ulder L Cobb	ole M Gravel I	Sand I	Silt/ clay Organi	c Other:	
check all that apply)		% 20		10 %	30%	%%	
% of Substrate:	% _5_	_%	70				
Width of Riparian Zor	re: Vegetativ		☑ Trees:		1 Saplings/Shrubs:	☐ Herbs	
100 ft.	(check all that	of Dominants:	/3 in.		I in.	NA in	ì.
VAL AV	(approx.)				A SECURITION OF THE PARTY OF TH	Tilly have a light of the state	
Dominant Bank Vege							
Carpinus	carolinian	Plata	nus occide	ntalis,	Rosa mult.	florer	
Carpinus Aquatic Habitats (ex	submerged or emerge	d aquatic vegetation	on, overhanging banks	roots, leaf pag	ks, large submerged woo	a, rimes, deep poo	, , , , , , , , , , , , , , , , , , ,
01-1	brok.	lest m	che cassi	deed	pools		
Over hanger Aquatic Organisms O	bserved (list):	1 Eddit Postski		/			
Salamender T&E Species Observe	ed (list):	ly					
Disturbances (ex. lives	stock access, manure	in waterbody, was	e discharge pipes):				
7000	2			100000000000000000000000000000000000000			
Tributary is: (check one)	☑ Natural	ПА	rtificial, man-made	☐ Manip	oulated		
Stream Quality ::	1			D.			
(check one)	High		oderate	□ Low		Target Street of the Street of	Control of the same of the latest and the same of the

N	Nat	erb	ody	11	5:		
1	<	a	a	7	0	2	C

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.





Waterbody data point saur020 facing south upstream.



Waterbody data point saur020 facing north downstream.



Waterbody data point saur020 facing east across bank.

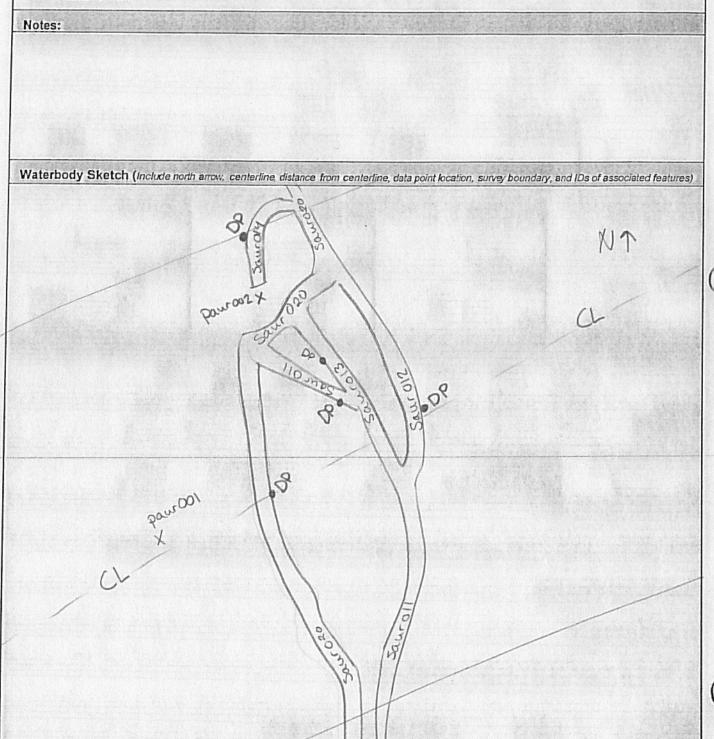
inear Waterbo	dy Data Sheet		Augustus Walker Store		CALCASSING HAVE AS	\$50 S\$ S\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	TO STREET STREET
Survey Description	on	STATE OF THE OWNER.	grand to a	the design of	Waterbody ID:		Date:
Project Name:		Waterbody Na		ton Brand			3-29-16
ACP		MN1 +		TON BAND	Crew Member Initia	OF HER LAND BOOK STREET	0 2 1 10
State:	County/Parish:		Company:			HOREST TO STATE OF THE PARTY OF	IW,NE
AV	Augusta		EST		KM-WU	Wetland ID(s):	
ract Number(s):			Nearest Mile		Non		
07-001-F00	77		107	5	7,4011	16	
urvey Type:	Centerline	. □Re-	Route	□Access Road	□Other:		The state of the s
hysical Attribut	SHEAT OF THE PARTY					建设的信息的 包	
tream Classification	1:			Perennial			
heck one)	□Ephemera	al □Inte	mittent	Merenniai			
Vaterbody Type: theck one)	□River ☑ Str	eam 🗆 Dit	ch 🗆 Ca	anal 🗆 Other			
HWM Width: 3 ft.	Check all that apply		Clear lin	e □Shelvin	g	□Scouring	staining
Height: O. ft.	vegetatio			debris	community	change	naracteristic change
Vidth of Waterbody -		of Waterbody -	Toe of Slope	Width of Waterb Water Edge:	ody - Water Edge to	Depth of Water	•
lank to Top of Bank:	to Toe	of Slope:		Water Euge.	? .		0.1 ft.
	-	ft.		N/A□ —	<u> </u>	N/A□	
inuosity:		velocity:		Bank height		Bank slope	
heck one) Straight	(Арргох.)			Right:	l n.	Right	20 degrees
,			fps	Left:	2	Left	35 degrees
™Meande	ring N/A□			-	<u>f.</u>	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	
Qualitative Attrib	utes			ESTRACTION			
Vater Appearance: theck one)	□No water □	Clear □Tur		STREET, STREET	rface □Algal um mats	□Other:	
Substrate:	☐ Bedrock ☐ Bo	oulder 🖬 Cob	ble 🗹 Grave	el 🗹 Sand	Silt/ clay Orga	inic Other:	
check all that apply) % of Substrate:	%	% 10	% 30	% 30 %	30 %	_%%	
Width of Riparian Zo	ne: Vegetativ		Trees		Saplings/Shrubs:	☐ Herbs	
100 ft.	Avg. DBH	of Dominants:	CHARLEST CONTRACTOR AND ADDRESS		3 In.	NA in	
VA□ Dominant Bank Vege	(approx.)						
Carya to	mentosa (arpinus	caroliniar	banks/roots, leaf par	cks, large submerged w	ood, riffles, deep poo	ls):
leaf packs	Submerged	wood, riff	les, deep	Pools			
Salamedo /	ma, fl, cap ed (list):	Uisfly					
none	abserted						
Disturbances (ex: live	estock access, manure	in waterbody, was	ste discharge pip	es):			
Mone Tributary is:							
(check one)	☐ Natural		Artificial, man-n	nade	pulated		
Stream Quality *:	El Wah	1	Anderate	□Low			

Waterbody	ID:	
Sni	10	0

* 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 mals, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.





Waterbody data point saur011 facing southeast upstream.





Waterbody data point saur011 facing northeast across bank.

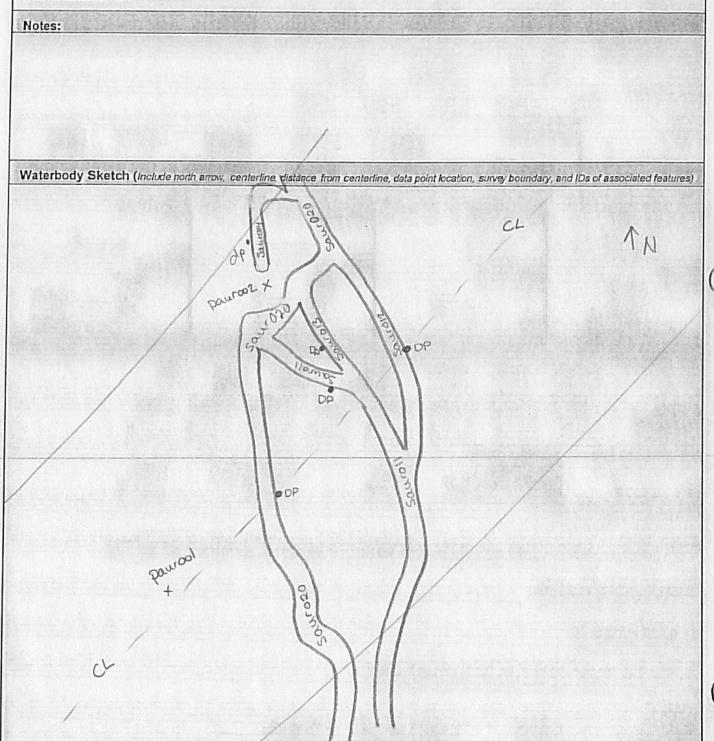
Linear Waterbody Data	a Sheet		on to VIV to the transfer of the	200000000000000000000000000000000000000	U SAL SECTION OF STREET
Survey Description		and the second second		Waterbody ID:	Date:
roject Name:	Waterbody	to Hamilto	in Branc	h Sour O	3 3-29-16
ACP	Militaria Halland At			CONTROL OF THE PROPERTY OF THE	The control and the control of the c
itate: County	/Parish:	Company:	C	rew Member Initials:	
VA A	egusta	EST		KM, WV	S, N, E
ract Number(s):		Nearest Milepos		Associated We	
07-001-F	207	107.5		n	one
urvey Type:	6	Re-Route	Access Road	□Other:	
La contra de la contra del la contra del la contra del la contra del la contra de la contra de la contra del la contra d	Centerline □ I	Re-Route L	Access Noau	ENDOUGH STREET	354341837441848
Physical Attributes tream Classification:			/		
	Ephemeral 🗆	ntermittent 🗵	Perennial		
Vaterbody Type: check one) □River	☑ Stream □	Ditch Canal	☐ Other:		
OHWM OHV	VM Indicator: k all that apply)	Clear line on bank	□Shelving	□Wrested vegetation	□Scouring □Water staining
Height: O.\ ft.	Bent, matted, or mi vegetation	ssing	Citter and debris	☐ ☐ Abrupt plant community cha	
VA□ Vidth of Waterbody - Top of lank to Top of Bank:	Width of Waterbook to Toe of Slope:	y - Toe of Slope Wid	th of Waterbo	dy - Water Edge to	Depth of Water: (Approx.)
<u>6</u> n.	n.	N/A	7		<u>0 • l</u> ft.
inuosity:	Water velocity:	Bar	k height		Bank slope
heck one)	(Approx.)		Right:	ft.	Right: 30 degrees
1		fps	Left:	2	Left: 45 degrees
Meandering	N/A□			<u>∠_ft.</u>	ATTOMS IN THE CASE OF THE COLUMN TO SEE
Qualitative Attributes				A Real Latin	
Vater Appearance: theck one) One wat	er 🗆 Clear 🗆	Turbid □Sheen on surf	ace scur	acc =	□Other:
Substrate: Bedro	ck □ Boulder ☑ C	Cobble Gravel	☑ Sand ☑	Silt/ clay Organic	☐ Other:
check all that apply) % of Substrate:%	% _/(7-	5 % _	15%%	<u></u> %
	Vegetative Layers:		F	Saplings/Shrubs:	☐ Herbs
100 tt.	(check all that apply) Avg. DBH of Dominal (approx.)	Trees: 18 in.	=	3_in.	<u>NA</u> in.
Dominant Bank Vegetation (lis					
Platanus occ Aquatic Habitats (ex submerge	identalis Co	rnus florido	. Carpir	nus carolinias	na de madele
Aquatic Habitats (ex. submerger	d or emerged aquatic vege	etation, overhanging bank	s/roots, leaf pack	s, large submerged wood	, nmes, deep pools):
0. h h	. F. COL.	deen and	5		
Over hang no bo	(list):	, rech pas			
(&E Species Observed (list):					
None					
Disturbances (ex: livestock acce	ss manure in waterbody.	waste discharge pipes):			
None	oo, manaro at waterbody,	• • • • • • • • • • • • • • • • • • • •			
Tributary Is:	/				
(check one)	☑ Natural [Artificial, man-made	☐ Manipu	ulated	
Stream Quality *:	□ High	Moderate	□ Low		

Waterbody	ID:
	1013

* 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.





Waterbody data point saur013 facing south upstream.





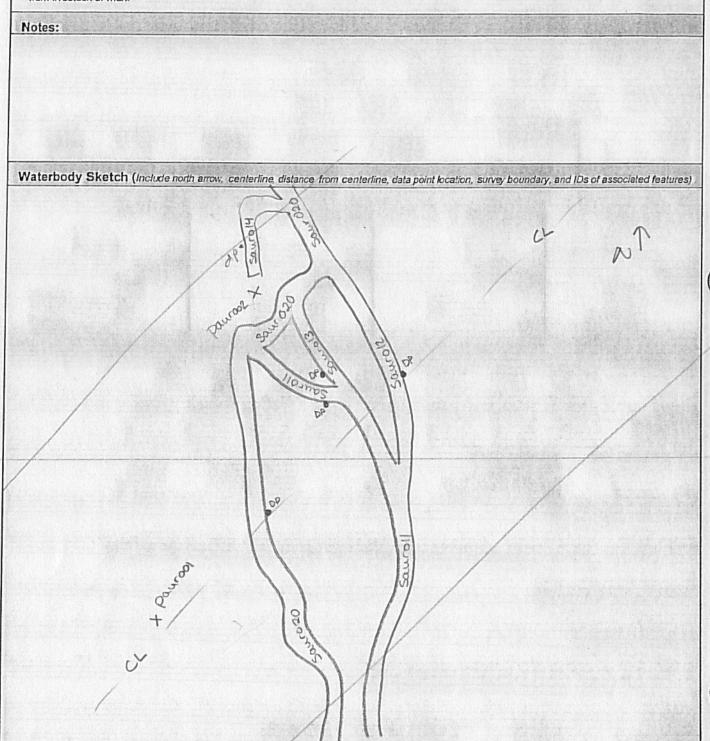
Linear Waterbod	STATE OF STREET STATE OF STREET			10 T 10 T 2 VIII	9-11-1-12-12-12-12-12-12-12-12-12-12-12-1	PERSONAL PROPERTY OF THE PARTY
Survey Description	í ·	Waterbody Nar	me:	E ANADARI	Waterbody ID:	Date:
Project Name:		I I I I	Hamilton	Branch		2 3-29-16
ACP		UN 1 70			Crew Member Initials:	Photos:
	County/Parish:		Company:			SNE
VA	Acquist	2	ESI		KM, WV Associated Wet	Control of the Contro
Tract Number(s):			Nearest Milepost:		Associated Wet	
- 1 00 1	F007		107.5			
Survey Type: (check one)	Centerline	□Re-F	Route □A	ccess Road	□Other:	and the same and the same of t
Physical Attributes						
Stream Classification: (check one)	□Ephemera	I □Inter	mittent 🖽	erennial		
Waterbody Type: (check one)	River 🖸 Str	eam 🗆 Dito	ch 🗆 Canal	□ Other:		
OHWM . Width: 2 ft.	OHWM Indicat (check all that apply		Clear line on bank	□Shelving	□Wrested vegetation	□Scouring □Water staining
Height: O. I ft.	vegetatio	n	g □Wrack line	Litter and debris	community char	
Width of Waterbody - To	op of Width	of Waterbody -	Toe of Slope Width	of Waterbo	dy - Water Edge to De	epth of Water:
Bank to Top of Bank:	to 10e	of Slope:	N/A□	_ 2	ft. N/	<u>0.1</u> ft.
Sinuosity:	Water	relocity:	CONTRACTOR OF THE STATE OF THE	height	B	ank slope
(check one)	(Approx.)	1		Right:	1 .	Right: 20 degrees
Liouaigne		f;	os	Left:	1	Left: 30 degrees
☐Meanderin	g N/A□			-	ft.	
Qualitative Attribut	tes					
Water Appearance: (check one)	No water 🖂	lear □Turb	oid □Sheen on surfac	e Scu	acc Dinger -	Other:
Substrate: (check all that apply) % of Substrate:	Bedrock Bo	ulder © Cobb			Silt/ clay Organic	☐ Other:%
Width of Riparian Zone	: Vegetative				<i>/</i>	Herbs
	(check all that Avg. DBH (approx.)	of Dominants:	Trees: _/in.	- -	Saplings/Shrubs:	NA_in.
Dominant Bank Vegeta	tion (list):					
Car pinus Aquatic Habitats (ex su	Carolinian	a Linion	dendron tuli	pifera	s Jame submerged wood, r	iffles, deep pools):
Aquatic Habitats (ex. su	omerged or emerger	aquate vegetatio	in, overhanging banks/	, icar pacr	1 60 1 - 61	The deep mile
Submerger Aquatic Organisms Ob	d aquatic served (list):	Vegetatia	n, overhanging	g roots,	leat packs, Fift	les Clear Hours
Stonefly, Ma,						The state of the s
none						
Disturbances (ex: livesto	ock access, manure i	n waterbody, wast	e discharge pipes):			
no	re					
Tributary is:	Natural	□ Aı	tificial, man-made	☐ Manipu	ulated	
Stream Quality *:	High	□ M	oderate	□ Low		

Waterbody	ID:
5000	1012

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 mals, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.





Waterbody data point saur012 facing south upstream.



Waterbody data point saur012 facing north downstream.



Waterbody data point saur012 facing east across bank.

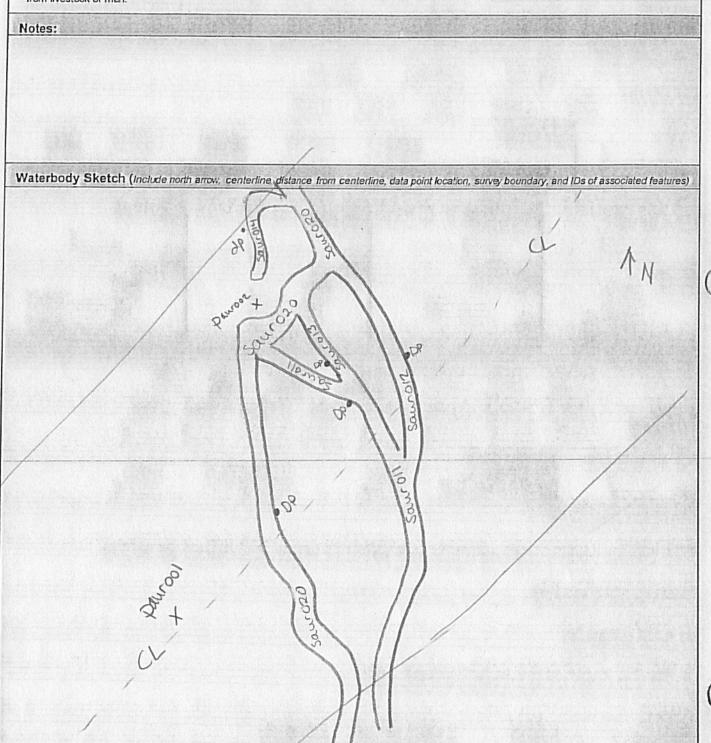
	t	Control of the Contro	CONTRACTOR SOURCE	· 在一个学习的是一个一个
Survey Description	Waterbody Name:	A STREET	Waterbody ID:	Date:
Project Name:	UN T to Ham	ilton Branch		3-29
ACP				Photos:
State: County/Parish:	Company:		JV KM	SWN SE
VA August	a ESI		Associated Wetland	The state of the s
ract Number(s):	Nearest Mil			
07-001-007	107.3)	non	
durvey Type: theck one) Genterline	e □Re-Route	□Access Road	□Other:	NAMES OF THE PERSONS
Physical Attributes		1. 10.1 在原源性型间隔离器及		entropy of Average
tream Classification:	al [Intermittent	☑Perennial		
Vaterbody Type:		anal Other.		
check one) River Sta	ream Li Ditch Li C	dia Guier.		
Width:ft. OHWM Indica		ne □Shelving	□Wrested [vegetation	Scouring Water staining
Height: 0.1 ft. GBent, I	matted, or missing □Wrack I on	ine Litter and debris	☐Abrupt plant community change	Soil characteristic change
Vidth of Waterbody - Top of Width	of Waterbody - Toe of Slope	Width of Waterbod	y - Water Edge to Depth	of Water:
Bank to Top of Bank: to Toe	of Slope:	Water Edge.		(). I t.
ft.	<u> </u>	N/A□	ft. N/A□	
inuosity: Water	velocity:	Bank height	Bank	slope
check one) (Approx.)	/1	Right) .	ft.	Right: 30 degrees
	fps	Left:		Left: 15 degrees
☑Meandering N/A□		<u>v.</u>	<u>/ n.</u>	THE REPORT OF THE PARTY OF THE
Qualitative Attributes		le sur la filla la		
Nater Appearance: check one)	Olcui Elicicia	heen □Surfa n surface scum		er.
Substrate: ☐ Bedrock ☐ Be	oulder □ Cobble □ Grav	vel □ Sand □ :	Silt/ clay Organic	Other:
check all that apply) % of Substrate: %	% % 50	% 40 % 1) %%	%
a Di Dubbullator	arregalities and there were real celebration in the life that the first	CONTRACTOR		
Width of Riparian Zone: Vegetativ	re Layers:		Saplings/Shrubs:	Herbs
Vidth of Riparian Zone: Vegetativ	at apply) Tree	es: 🗗 :	Saplings/Shrubs:	Herbs in.
Vidth of Riparian Zone: Vegetativ (check all that Avg. DBH (approx.)	at apply) Tree		Sapinigaremase	
Width of Riparian Zone: Vegetativ (check all that Avg. DBH (approx.)	at apply) Tree		Sapinigaremase	
Width of Riparian Zone: Vegetativ (check all that Avg. DBH (approx.) VACI (approx.) VACI (list):	at apply) If Tree If of Dominants:	_in	<u>3</u> in	in.
Vidth of Riparian Zone: Vegetativ (check all that Avg. DBH (approx.) VACI Rosa Multiple (ist): Rosa Multiple (approx.) Aquatic Habitats (ex. submerged or emerged	at apply) If Tree If of Dominants: Comparison of the comparison	in	<u>3</u> in	in.
Vidth of Riparian Zone: Vegetativ (check all that Avg. DBH (approx.) VACI Rosa Multiple (ist): Rosa Multiple (approx.) Aquatic Habitats (ex. submerged or emerged	at apply) If Tree If of Dominants: Comparison of the comparison	in	<u>3</u> in	in.
Vidth of Riparian Zone: Vegetativ (check all that Avg. DBH (approx.) Dominant Bank Vegetation (list): Rosa Multiflora Aquatic Habitats (ex. submerged or emergence aquatic Vegetation (list):	at apply) If Tree If of Dominants: Comparison of the comparison	in	<u>3</u> in	in.
Vidth of Riparian Zone: Vegetativ (check all that Avg. DBH (approx.) Dominant Bank Vegetation (list): Rosa Multiflora Aquatic Habitats (ex. submerged or emergence acquatic Vegetation (list):	at apply) If Tree If of Dominants: Comparison of the comparison	in	<u>3</u> in	in.
Width of Riparian Zone: Vegetative (check all that Avg. DBH (approx.) Cominant Bank Vegetation (list): Rosa Multiplication (list): Aquatic Habitats (ex. submerged or emergence according to the companion of t	at apply) If Tree If of Dominants: Comparison of the comparison	in	<u>3</u> in	in.
Width of Riparian Zone: Vegetative (check all that Avg. DBH (approx.) Dominant Bank Vegetation (list): Rosa Multiplication (list): Aquatic Habitats (ex. submerged or emerged approx.) Aquatic Organisms Observed (list): Caddos fly T&E Species Observed (list):	ed aquatic vegetation, overhanging	in. g banks/roots, leaf packs,	<u>3</u> in	in.
Width of Riparian Zone: Vegetative (check all that Avg. DBH (approx.) Dominant Bank Vegetation (list): Rosa Multiplication (list): Aquatic Habitats (ex. submerged or emerged and according to the condition of	ed aquatic vegetation, overhanging	in. g banks/roots, leaf packs,	<u>3</u> in	in.
Width of Riparian Zone: Vegetative (check all that Avg. DBH (approx.) Dominant Bank Vegetation (list): Rosa Multi-flora Aquatic Habitats (ex. submerged or emergence acuatic Vegetation (list): Cadd. of Ly T&E Species Observed (list): Disturbances (ex. livesbock access, manure	ed aquatic vegetation, overhanging the formula of packs, find the formula of the	in. g banks/roots, leaf packs, FFICS pes):	in.	in.

Waterbody	ID:			
50	11	1	0	14

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 mals, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.





Waterbody data point saur014 facing southwest upstream.



Waterbody data point saur014 facing northeast downstream.



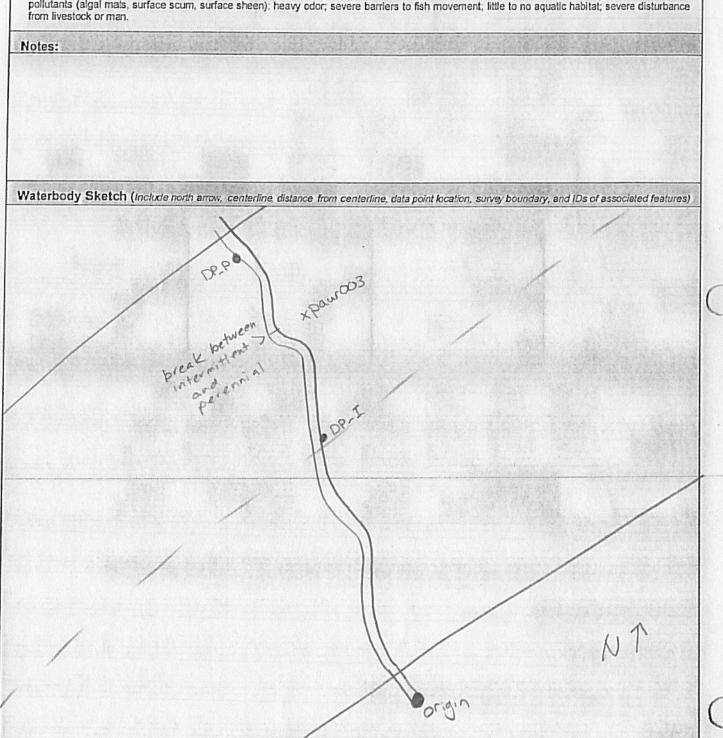
Linear Waterboo	dy Data Sheet						
Survey Description	on			10000	Waterbody ID)	Date:
Project Name:		Waterbody Na	me: - Hamiltor	Rvano			3-29-16
ACP		UN 1 +	- Mamilion		Jaar		Marie Contract Contra
State:	County/Parish:		Company:		Crew Member Init	2	
AV	Augus	sta	ESI		KM, WV	01	Z, NW, NE
ract Number(s):			Nearest Milepost:		Associated Wetland ID(s):		
07-001	-007		107.5		h	one	
Survey Type: (check one)	☐ Centerline	□Re-	Route 🗆	Access Road	□Other:	A SECTION E SECRETARIO	CEL 10 JULY 9 7475 8786
Physical Attribute	es						STATE OF THE PARTY
Stream Classification (check one)	Ephemera	ı 🗹 nte	rmittent 🗆	Perennial			
Waterbody Type: (check one)	□River ⊡ Str	eam 🗆 Dit	ch 🗆 Canal	☐ Other:			
OHWM Width: 2 ft.	OHWM Indica (check all that apply		Clear line on bank	□Shelving	☐Wrested vegetation		ring
Height: O. \ ft.	vegetatio			Litter and debris	communit	y change	il characteristic change
Nidth of Waterbody -	Top of Width	of Waterbody -	Toe of Slope Wid	th of Waterbo	ody - Water Edge t	(Approx.)	ater:
Bank to Top of Bank:	to Toe	of Slope:	Wat		JIA tt.		ft.
ft.	-	of ft.	N/A!		tt.	N/AX	
Sinuosity:	Water	velocity:	THE STREET AND STREET WAS TO STREET TO STREET	k height		Bank slope	
check one)	(Арргох.)			Right:	2 n.	Ri	ght: 68 degrees
		<u>- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1</u>	fps	Left:	7	1	Left: 80 degrees
□Meande	ring N/A				<u>6</u> .	CHARLES OF SHEET SH	are vote it various
Qualitative Attrib	utes						
Nater Appearance:	No water □	Clear □Tur		□Sur	Andrew Art City (City City City City City City City City	□Other:	
		,_	on surfa			anic 🗆 Other	
JUDOHILLOT	☐ Bedrock ☐ Bo		ble Gravel		☐ Silt/ clay ☐ Org		
check all that apply) % of Substrate:	%%	_% 60	% 15 %	15 %	%	_%	%
Width of Riparian Zor	ne: Vegetativ	Lavers:			/		
100	(check all that	apply)	☑ Trees:	E	Saplings/Shrubs:	☐ Hert	
VAD tt.	Avg. DBH	of Dominants:		-	in.	PARA ZELES Les retentes	_jn.
Dominant Bank Vege					en un arrest en entre en referencia.		
		. 12.01	. All	const	lense P	runus S	erotina
Quercus Velu Aquatic Habitats (ex	submerged or emerge	d aquatic vegetati	on, overhanging bank	s/roots, leaf pag	ks, large submerged	wood, riffles, deep	pools):
In I	term. Hent	Waters					
T&E Species Observ	hone			7.1			
T&E Species Observe	ed (list):						
n	one						
Disturbances (exc live	stock access, manure	in waterbody, was	ste discharge pipes):				
Y	none						
Tributary is:	[5] Natural		Artificial, man-made	☐ Manip	ulated		
Stream Quality ::				1			
(check one)	☐ High		Moderate	☑ Low			

Waterbody	ID:	
sau	n015-	i

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





Waterbody data point saur015i facing southeast upstream.



Waterbody data point saur015i facing northwest downstream.



Waterbody data point saur015i facing northeast across bank.

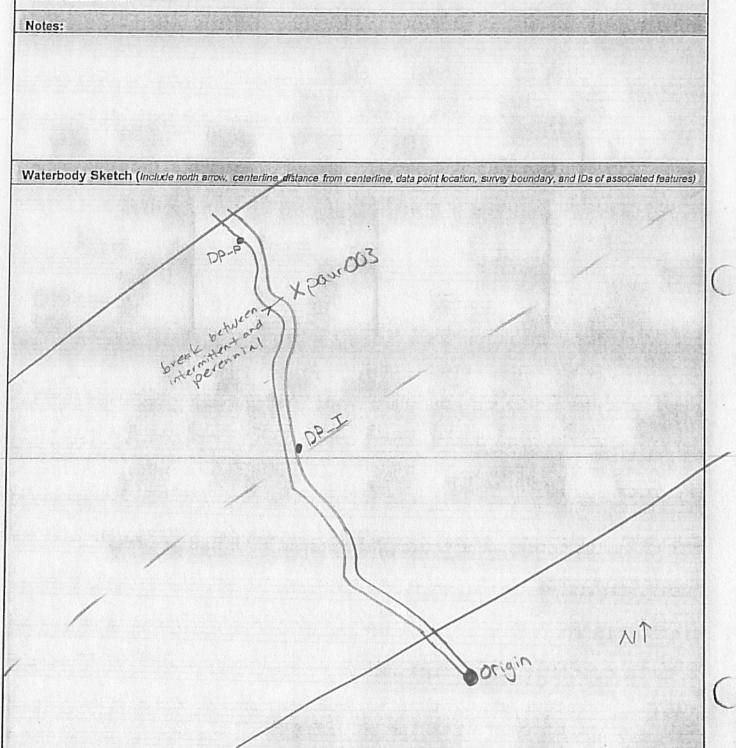
Linear Waterbody Da	ta Sheet		Audiona gazaran sen		5/2/3009	ALCRES AND A STATE OF THE		
Survey Description		Waterbody Na			lw	aterbody ID:		Date:
Project Name:		waterbody Nai	the milt	in Branch	RESTROYCHE # 1456	Saurois	D	3-29-16
ACP		UNITO		0.4.0.	SENSOR SPURIOR A CONTROL	Member Initials:	Photos	The state of the s
State: Coun	ty/Parish:		Company:		100000000000000000000000000000000000000	VKM		NE
VA A	egusta		FSI		W	Associated Wel	/	14,5
Tract Number(s):			Nearest Mile	post:		PROBLEM TO STATE OF S		
07-001-1	007		107	2		l h	one	
Survey Type:	Centerline	□Re-F	Route	□Access Road		□Other:		
Physical Attributes	机过滤器	transfer and	THE PERSON	STATE OF THE PARTY				that the little and the
Stream Classification:	□Ephemera	I □Inter	mittent	Perennial				
Waterbody Type: (check one) □River	CI/Str	eam 🗆 Dito	ch □ Ca	nal Other				
	IWM Indicat eck all that apply		Clear lin	e □Shelvin	g	☑Wrested vegetation	□Scouri	ng □Water staining
Height: O.l ft.	Bent, n	natted, or missin	g @Wrack lin	ne ☐Litter a	nd	□Abrupt plant community cha		characteristic change
WA□ Width of Waterbody - Top of	Width	of Waterbody -	Toe of Slope	Width of Waterb	ody - W	ater Edge to D	epth of Wat	er:
Bank to Top of Bank:	to Toe	of Slope:		Water Edge:		(4	(pprox.)	01 .
	-	<u> </u>		N/A□ —	1		I/A□	<u>O, </u>
Sinuosity:	(Approx.)	velocity:		Bank height		В	lank slope Rig	ht: , 15
check one)	(Αμβίολ.)	< f	os	Right:		ft.		degrees
□Meandering				Left:	1	ft.	L	eft: 45 degrees
Hillieanderling	N/A□	PARTICIPATION AND A TOTAL OF THE		HURSE FREE TO TOKE SHE	STORES TO	BETTER COLUMN		WIND FALLEN AND A
Qualitative Attributes				的。但可是到在自		Equipment of the second	10 15 160 NE 2 16	
Water Appearance: (check one)	ater 🖼 🤇	Clear □Turb		MARKET BERNELLER STEEL	irface ium	□Algal □ mats	Other:	
Substrate: Bedr	ock 🗆 Bo	ulder 🗆 Cobb	ole 🗹 Grave	Sand	Silt o	clay Organic	☐ Other:	
check all that apply)	% <u> </u>	% 20	% 10	% 10 %	60	%%	%	
Width of Riparian Zone:	Vegetative		- 5/			10h - the	☐ Herbs	
50 ft.	(check all that Avg. DBH (approx.)	of Dominants:	Trees		4 Sapli	ngs/Shrubs: _in.	THE COLUMN STREET	jn.
Dominant Bank Vegetation (list):				大学的権利			
Par D	4.0.	Acer	n.hn.m	Prunus Ser	ntina	Lirioden	dron tu	lipifera
Rosa m Aquatic Habitats (ex. submerg	ed or emerge	d aquatic vegetation	on, overhanging	banks/roots, leaf pa	cks, large	submerged wood,	riffles, deep p	ools):
Out-planess.	· bas	V. 10-0	nack.	CPles				
OVER Mangin	d (list):	1 1004	paces, 1	1110				
T&E Species Observed (list):	17		* * *					
hone								
Disturbances (ex. livestock acc	cess, manure	in waterbody, was	te discharge pipe	es):	No.			
Tributary Is:	7		Salaria, al Calaria Magazina (1941) a				A	
(check one)	☐ Natural	□A	rtificial, man-m	ade 🗆 Mani	pulated			
Stream Quality *:	Пикан	1	oderate	Пlow				

Waterbody ID:	
sauro15_	P

* 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 mals, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.





Waterbody data point saur015p facing south upstream.



Waterbody data point saur015p facing north downstream.



Waterbody data point saur015p facing east across bank.

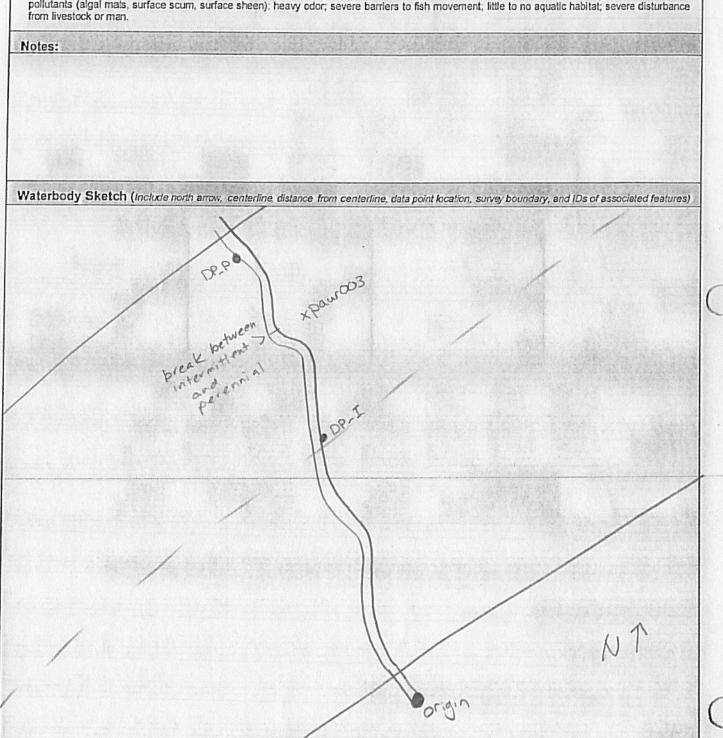
Linear Waterbo	dy Data Sheel					THE STREET	
Survey Description	on .			100000	Waterbody ID		Date:
Project Name:		Waterbody Na	me: - Hamiltor	Rvano			3-29-16
ACP		WN 1 +	- Mamilion		Jaare		Marie Contract Contra
State:	County/Parish:		Company:		Crew Member Init	7	
AV	Augus	sta	ESI		KM, WV	01	Z, NW, NE
Tract Number(s):			Nearest Milepost			Wetland ID(s):	
07-001	-007		107.5		h	one	
Survey Type: check one)	Centerline	□Re-	Route 🗆	Access Road	□Other:	A SECTION ESTABLISMENT	
Physical Attribute	es					wethousest also marting	STATE OF THE PARTY
Stream Classification (check one)	□Ephemera	ıl 🗹 İnte	rmittent 🗆	Perennial			
Waterbody Type: (check one)	□River ⊡ Str	eam 🗆 Dit	ch 🗆 Canal	☐ Other:			
OHWM Width: 2 ft.	OHWM Indica (check all that apply		Clear line on bank	□Shelving	☐Wrested vegetation		ring
Height: O. \ ft.	EBent, r vegetation	natted, or missin n	ng 🗹 Wrack line	☐Litter and debris	d EJAbrupt j communit	y change	il characteristic change
V/A□ Width of Waterbody -	Top of Width	of Waterbody -	Toe of Slope Wid	th of Waterbo	ody - Water Edge t	Depth of Wa	ater:
Bank to Top of Bank:	to Toe	of Slope:	Wat	er Edge:	JIA tt		ft.
	-	<u></u>	N/Á!		tt.	N/AX	
Sinuosity:	Water	velocity:	THE STREET AND STREET WAS TO STREET TO STREET	k height		Bank slope	
check one)	(Approx.)			Right:	2 n.	Ri	ght: 68 degrees
		-	fps	Left:	7		Left: 80 degrees
□Meande	ring N/A				<u>6</u> ft.	数据证明的	attention of the contract of
Qualitative Attrib	utes						
Water Appearance:	No water	Clear □Tur		□Sur	Andrew Art City (City City State Control of City City City City City City City City	□Other:	
		,	on surfa			anic Other	
Substrate:	☐ Bedrock ☐ Bo	oulder 🗹 Cob	ble Gravel		☐ Silt/ clay ☐ Org		
check all that apply) % of Substrate:	%	_% 69	<u>%</u> <u>15</u> %	15 %	%	%	%
Width of Riparian Zor	ne: Vegetativ	e Layers:	/		/		
100	(check all tha	apply)	Trees:	E	Saplings/Shrubs:	☐ Hert	os . in.
VA□	Avg. DBH	of Dominants:	<u>12</u> in.		<u>5</u> in.		
Dominant Bank Vege							
A	1. Pos-	mult Cla	ma Alliena	canal	lense. P	runus S	serotina
Quercus Velu Aquatic Habitats (ex	submerged or emerge	d aquatic vegetati	on, óverhanging bank	s/roots, leaf pag	ks, large submerged	wood, riffles, deep	pools):
In A	Observed (list):	Waters	en en article de la companya de la c				
T&E Species Observ	none						
n	one	la waterbody was	te discharge nines).				
Disturbances (exc live		in waterbody, was	ne discharge pipes).				
	none.						
Tributary is: (check one)	☐ Natural		rtificial, man-made	☐ Manip	ulated		
Stream Quality ::		91 x 7.	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	/			
(check one)	☐ High		Moderate	☑ Low			CONTRACTOR OF THE PROPERTY OF THE PARTY.

Waterbody	ID:	
sau	015-	i

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





Waterbody data point saur015i facing southeast upstream.



Waterbody data point saur015i facing northwest downstream.



Waterbody data point saur015i facing northeast across bank.

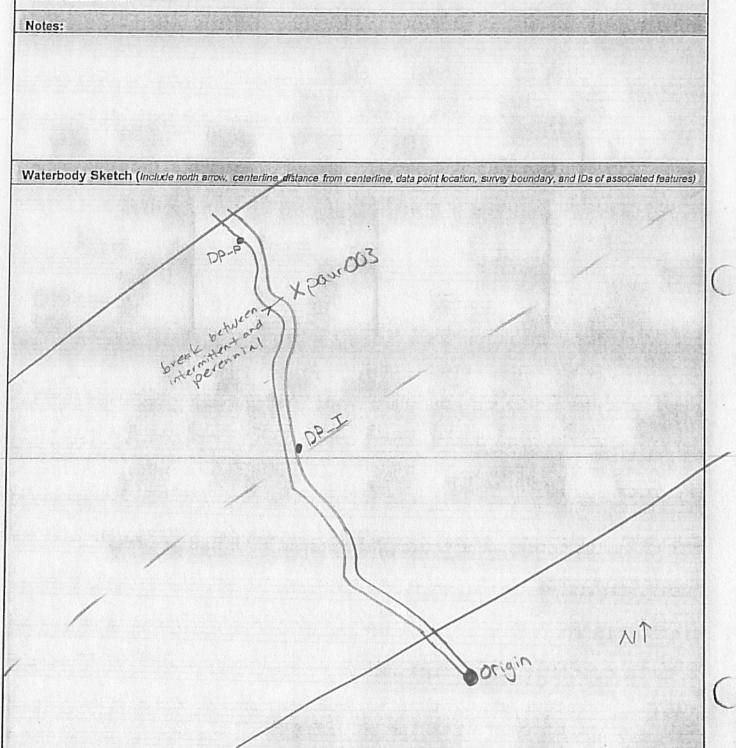
Linear Waterbody Da	ta Sheet		Audiona gazaran sen		5/2/3009	ALCRES AND A STATE OF THE		
Survey Description		Waterbody Na			lw	aterbody ID:		Date:
Project Name:		waterbody Nai	the milt	in Branch	RESTROYCHE # 1456	Saurois	D	3-29-16
ACP		UNITO		0.4.0.	SENSOR SPURIOR A CONTROL	Member Initials:	Photos	The state of the s
State: Coun	ty/Parish:		Company:		100000000000000000000000000000000000000	VKM		NE
VA A	egusta		FSI		W	Associated Wel	/	14,5
Tract Number(s):			Nearest Mile	post:		PROBLEM TO STATE OF S		
07-001-1	007		107	2		l h	one	
Survey Type:	Centerline	□Re-F	Route	□Access Road		□Other:		
Physical Attributes	机过滤器	transfer and	THE PERSON	STATE OF THE PARTY				that the little and the
Stream Classification:	□Ephemera	I □Inter	mittent	Perennial				
Waterbody Type: (check one) □River	CI/Str	eam 🗆 Dito	ch □ Ca	nal Other				
	IWM Indicat eck all that apply		Clear lin	e □Shelvin	g	☑Wrested vegetation	□Scouri	ng □Water staining
Height: O.l ft.	Bent, n	natted, or missin	g @Wrack lin	ne ☐Litter a	nd	□Abrupt plant community cha		characteristic change
WA□ Width of Waterbody - Top of	Width	of Waterbody -	Toe of Slope	Width of Waterb	ody - W	ater Edge to D	epth of Wat	er:
Bank to Top of Bank:	to Toe	of Slope:		Water Edge:		(4	(pprox.)	01 .
	-	<u> </u>		N/A□ —	1		I/A□	<u>O, </u>
Sinuosity:	(Approx.)	velocity:		Bank height		В	lank slope Rig	ht: , 15
check one)	(Αμβίολ.)	< f	os	Right:		ft.		degrees
□Meandering				Left:	1	ft.	L	eft: 45 degrees
Hillieanderling	N/A□	PARTICIPATION AND A TOTAL OF THE		HURSE FREE TO TOKE SHE	STORES TO	BETTER COLUMN		WIND FALLEN AND A
Qualitative Attributes				的。但可是到在自		Equipment of the second	10 15 160 NE 2 16	
Water Appearance: (check one)	ater 🖼 🤇	Clear □Turb		MARKET BERNELLER STEEL	irface ium	□Algal □ mats	Other:	
Substrate: Bedr	ock 🗆 Bo	ulder 🗆 Cobb	ole 🗹 Grave	Sand	Silt o	clay Organic	☐ Other:	
check all that apply)	% <u> </u>	% 20	% 10	% 10 %	60	%%	%	
Width of Riparian Zone:	Vegetative		- 5/			10h - the	☐ Herbs	
50 ft.	(check all that Avg. DBH (approx.)	of Dominants:	Trees		4 Sapli	ngs/Shrubs: _in.	THE COLUMN STREET	jn.
Dominant Bank Vegetation (list):				大学的権利			
Par D	4.0.	Acer	n.hn.m	Prunus Ser	ntina	Lirioden	dron tu	lipifera
Rosa m Aquatic Habitats (ex. submerg	ed or emerge	d aquatic vegetation	on, overhanging	banks/roots, leaf pa	cks, large	submerged wood,	riffles, deep p	ools):
Out-planess.	· bas	V. 10-0	nack.	CPles				
OVER Mangin	d (list):	1 1004	paces, 1	1110				
T&E Species Observed (list):	17		* * *					
hone								
Disturbances (ex. livestock acc	cess, manure	in waterbody, was	te discharge pipe	es):	No.			
Tributary Is:	7		Salaria, al Calaria Magazina (1941) a				A	
(check one)	☐ Natural	□A	rtificial, man-m	ade 🗆 Mani	pulated			
Stream Quality *:	Пикан	1	oderate	Пlow				

Waterbody ID:	
sauro15_	P

* 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 mals, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.





Waterbody data point saur015p facing south upstream.



Waterbody data point saur015p facing north downstream.



Waterbody data point saur015p facing east across bank.

inear Waterbody	Data Sheet			w 10.700 (E) 50 (E) 40		2 15 16 16 16 16 16 16 16 16 16 16 16 16 16	
Survey Description	N CONTRACTOR		Bartolden Sall Si		Waterbody II	#96223	Date:
roject Name:		Waterbody Na			Salu		3-29-16
ACP		UNTto	Hamilton	Branch		A STATE OF THE PARTY.	property and the second second
tate:	ounty/Parish:		Company:		Crew Member Init	jais:	SENE
VA	Augusta		ESI		KM, WV		Control of the Contro
ract Number(s):	· J		Nearest Milepos	t .	3555 (2540) (3540) - EFECORE (3544)	d Wetland	ID(s):
7-001 - FOO9	07-001	- F009.401	107.7		No	ne	
urvey Type:	Centerline	□Re-	Pouta [7	Access Road	□Other:		
heck one)	Centerine	this is a	Code -	10 mg 1 mg 10 mg 2 mg			arces are compar
Physical Attributes tream Classification:				,			
theck one)	□Ephemera	I □Inte	rmittent 🗵	Perennial			
Vaterbody Type: theck one)	River 🗹 Stre	eam 🗆 Dit	ch 🗆 Canal	☐ Other			
OHWM	OHWM Indicat (check all that apply		Clear line on bank	□Shelvin	g □Wreste vegetation		Scouring
Height: 0.3 ft.	□Bent, n vegetatio	natted, or missin	ng Wrack line	Litter a debris	nd ElAbrupt communi	y change	☐Soil characteristic change
Vidth of Waterbody - To	p of Width o	of Waterbody -	Toe of Slope Wic	ith of Waterb	ody - Water Edge	to Depth (Approx.)	of Water:
ank to Top of Bank:	to Toe	of Slope:	VVa	ter Euge:	7		0.3 ft.
_5_t	-	ft.	N/A	п —	<u>∠ft.</u>	N/A□	
inuosity:	Water	velocity:	SEPTEMBERS OF STREET STREET, SALES	nk height		Banks	slope
heck one)	(Approx.)	1		Right:	1 -		Right: 30 degrees
⊠ Straight			fps	Left:	ft.		Left: U.C
□Meandering	N/A□				<u>ft.</u>		45 degrees
Qualitative Attribute	es						
Vater Appearance:		(===	bid □Sheen	Пе	rface □Algal	□Othe	r.
theck one)	No water 🖽	Slear □Tur	on sud	FEED AT SECULO STATE OF THE SECULO SECULO	um mats		
Substrate:	Bedrock ☑ Bo	ulder 🗹 Cob	ble D'Gravel	☑ Sand	Silt clay Org	ganic 🗆 (Other:
check all that apply)	and analogical and the Street Particle	% 5	% 20 %	60%	10 %	%	%
of Substrate:	%3	_%	_7676	00-70			
Width of Riparian Zone:	Vegetative		Trees:		☐ Saplings/Shrubs		Herbs
36 ft.	(check all that	of Dominants:	Charles to the Control of the Contro		in.		NA in.
VAC	(approx.)				TO A CONTROL OF THE PARTY OF TH		
ominant Bank Vegetat							
Acer ru Aquatic Habitats (ex. sub	brum. F	astuca r	ubra, Ras	ia mult	flore	1 (m	Hann pools\t
quatic Habitats (ex sub	merged or emerge	d aquatic vegetati	on, overhanging bank	s/roots, leaf pa	cks, large submerged	wood, nmes,	deep poorsy.
and of	Cl . 1 .	order of	erles				
Pook, rif	served (list):	1					
0.2	- 10 01						
may fires	Caddis M	ccs					
	(maty)						
Disturbances (ex. livesto	-k nonner	in waterbody, was	te discharge nines)				
		iii waleibody, was	discitarge pipes).				
pasture							
Tributary is: (check one)	☑ Natural		rtificial, man-made	□ Mani	pulated		A STATE OF THE STA
Stream Quality ::			, 1000				
(check one)	☐ High	□ N	Moderate	□ Low			and the second s

Waterbody	ID:
Waterbody	ur016

• 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 mals, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

from livestock or man. Notes: Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features) Access Road \$ Seep paulouy



Waterbody data point saur016 facing southeast upstream.



Waterbody data point saur016 facing north downstream.



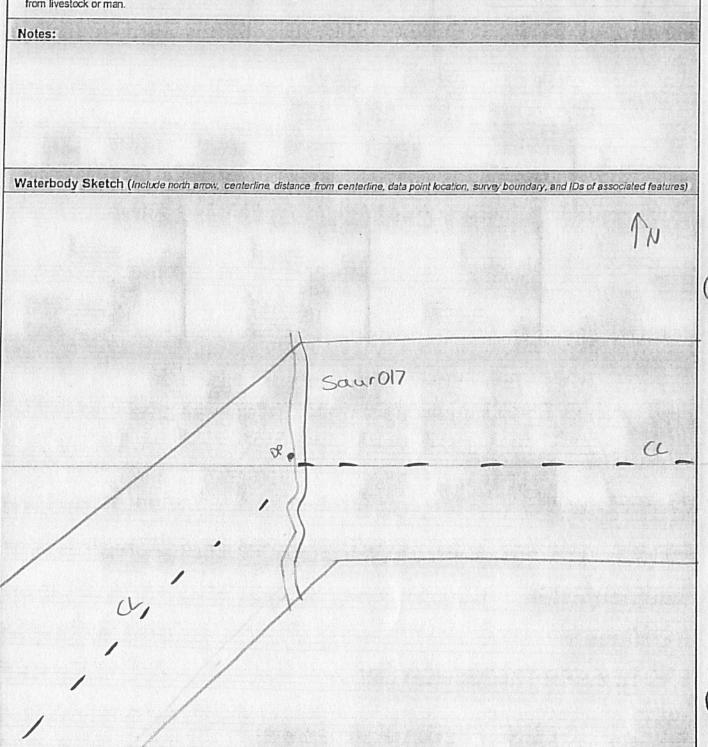
Linear Waterbody Da	ta Sheet				# 20 C N S	nounce of the	ans 24:54:124	
Survey Description		har seed a		A CARDON	- Iw	/aterbody ID:	经股外的 经验经	Date: ,
Project Name:		Waterbody N		, 6			7	3/29/16
ACP		UNT to	100	ton Brand	010200000000000000000000000000000000000	Saurol Member Initials:	Contract of the Contract of th	-/-/16
State: Cour	ity/Parish:		Company:					N,E
VA A	igusta		FOT		WV	Associated W	AND RECORD AND PARTY OF THE PAR	/',L
Fract Number(s):	Ü		Nearest Mile					
07-001-6010	07-0	01-F011	10%	9		N	one	
Survey Type:	Centerline	□Re	-Route	□Access Road	1	□Other:		Service Review design
Physical Attributes		E 31 10 11 11 1 2 10 1	的独立工作				STARKE.	是自己的基本的对象的数据。 第一
Stream Classification:	□Ephemera	ı ⊡/nt	ermittent	□Perennial				
Naterbody Type: check one)	☑ Stre	eam 🗆 D	itch 🗆 C	anal Other	T.			
	-WM Indicat eck all that apply		Clear lin	ne 🗆 Shelvir	ng	□Wrested vegetation	□Scour	ing
Height: 0.2 ft.	⊠Bent, n vegetatio		ing ⊠Wrack li	ne □Litter a debris	nd	☐Abrupt plant community ch	ange	characteristic change
VA□ Vidth of Waterbody - Top of	Width o	of Waterbody	- Toe of Slope	Width of Waterb	ody - W	Vater Edge to	Depth of Wa (Approx.)	ter:
Bank to Top of Bank:	to Toe	of Slope:		Water Edge:	41			ft.
<u></u>	<u> </u>	<u>ft.</u>		N/ACI —	1014	ft.	N/AM	
Sinuosity:	Water	velocity:		Bank height			Bank slope	
theck one)	(Approx.)			Right:	1	ft.	Rig	tht: 80 degrees
			_fps	Left:	1		L	eft: 60 degrees
□Meandering	NIAD			=	NOTE OF STREET	ft.	MACON PLANS	Davis vil Michigan
Qualitative Attributes				国际中共等的联络		(4		
Water Appearance: UNo w	ater 🗆 C	Clear □Tu		Andread Control of the Control of th	urface	□Algal I mats	Other:	
	1		,		um		: Other:	
Substrate: Bedicheck all that apply)	rock 🗹 Bo		0.			clay Organic		
	% 10	_% _20	% 60	% 10 %		%%	<u>"</u> "	0
Width of Riparian Zone:	Vegetative	Layers:	- /					
30 tt.	(check all that		Tree:			ings/Shrubs: in.	☐ Herbs	
VAC	(approx.)	of Dominants	: 12	_in.	3		ent us attocked to	
Dominant Bank Vegetation ((list):					1 0		
Liriodendro- Aquatic Habitats (ex submer	talipif	era, Qu	vercus f	rinus, Lo	254	multifloo	a	and alt
Aquatic Habitats (éx submer	ged or emerge	d aquátic vegeta	tion, overhanging	banks/roots, leaf pa	icks, large	e submerged wood	i, riffles, deep r	xoois):
Overhans	backs	leafo	reke Ci	Cfles dee	o Por	ols		
Overhanging Aquatic Organisms Observe	ed (list):						1	
none								,
T&E Species Observed (list)				tody a cream over 2000	100000000000000000000000000000000000000			
none								\
Disturbances (ex. livestock ac	cess, manure	in waterbody, wa	ste discharge pip	es):				
none								
Tributary is:	/							
(check ane)	☐ Natural		Artificial, man-r	nade	pulated			
Stream Quality *:	Пин	ro/	Moderate	□ Low				THE RESERVE TO SERVE THE PROPERTY OF THE PERSON OF THE PER

V	Vater	bod	dy I	D:		
	5	50	ec	4	0	17

* 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 mais, surface scum, surface sheen); heavy odor; severe barriers to fish movement, little to no aquatic habitat; severe disturbance from livestock or man.





Waterbody data point saur017 facing south upstream.



Waterbody data point saur017 facing north downstream.



Waterbody data point saur017 facing east across bank.

Linear Waterbody Data Sheet

Survey Description Project Name:	1	Waterbody Nar			l\A/	/aterbody ID:		Data
1	no	UNT to Ham				aua412		Date: 6/30/2016
Atlantic Coast Pipeli		UNT IO HAIII	IIIOH DIAHU	ı				
State:	County:		Company:		Crew N	Member Initials:	Photos:	
Virginia	Augusta		NRG - ERN	Л	GB, K	O	3 phot	os
Tract Number(s):			Nearest Mile	post:	l.	Associated Wet	and ID(s):	
07-001-F012			108.05			none		
Survey Type: (check one)	⊠Centerline	□Re-F	Route	□ Access Road		□Other:		
Physical Attributes Stream Classification:	S 🗵							
(check one)	□Ephemera	ıl ⊠Inter	mittent	□Perennial				
Waterbody Type: (check one)	River ⊠ Str	eam 🗆 Ditc	h □ Ca	nal Other:	:			
OHWM Width: 4.0 ft.	OHWM Indicat (check all that apply		⊠ Clear line	e □Shelvin	g	□Wrested vegetation	⊠Scourin	g □Water staining
Height:ft.	□Bent, n	natted, or missing	g 🗆 Wrack lii	ne ⊠Litter ar debris	nd	☐ Abrupt plant community chan		haracteristic change
Width of Waterbody - To Bank to Top of Bank:				Width of Waterbo	ody - W		epth of Wate	r:
ft.	to roe	of Slope:		Water Edge: <u>3</u> N/A□	.0	_ft.	A□	<u>0.25</u> ft.
Sinuosity: (check one) ⊠Straight	(Арргох.)	/elocity: 0.50		Bank height Right: Left:	1.5 _	ft.	ink slope Righ	<u>40</u> degrees t:
□Meanderin	147.			_	2.0	ft.		45degrees
Qualitative Attribut	tes							
Water Appearance: (check one)	No water ⊠0	Clear □Turb		een □Sur surface scu		□Algal □0 mats	Other:	
Substrate: (check all that apply) % of Substrate:	Bedrock ⊠ Bo				⊠ Silt/ c <u>5</u> %	elay ⊠ Organic	☐ Other:%	
Width of Riparian Zoneft N/A⊠	(check all that		⊠ Trees: 11.0_		☑ Saplin 1.5	ngs/Shrubs: in.	⊠ Herbs	
Dominant Bank Vegeta	tion (list):							
Yellow poplar, black northern Rd oak. Ch	<u>rístmas fern. v</u>	<u>vina stem. be</u>	<u>aaars lice. v</u>	<u>wood rush. wo</u>	odland	<u>d sedae, wild r</u>	ve. panic (arass. violet
Aquatic Habitats (ex: su coarse woody debris		l aquatic vegetation	n, overhanging b	oanks/roots, leaf pacl	ks, large	submerged wood, rif	fles, deep poo	ls):
Aquatic Organisms Obs	served (list):							
caddisfly								
T&E Species Observed	(list):							
none								
Disturbances (ex: livesto	ck access, manure i	n waterbody, waste	discharge pipes	s):				
None apparent		2,	3 1 1 1					
Tributary is:	⊠ Natural	□ Art	ificial, man-ma	ade 🗆 Manipu	ulated			
Stream Quality ^a : (check one)	☐ High	⊠ Mo	derate	□ Low				

Waterbody	ID
saua/12	

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

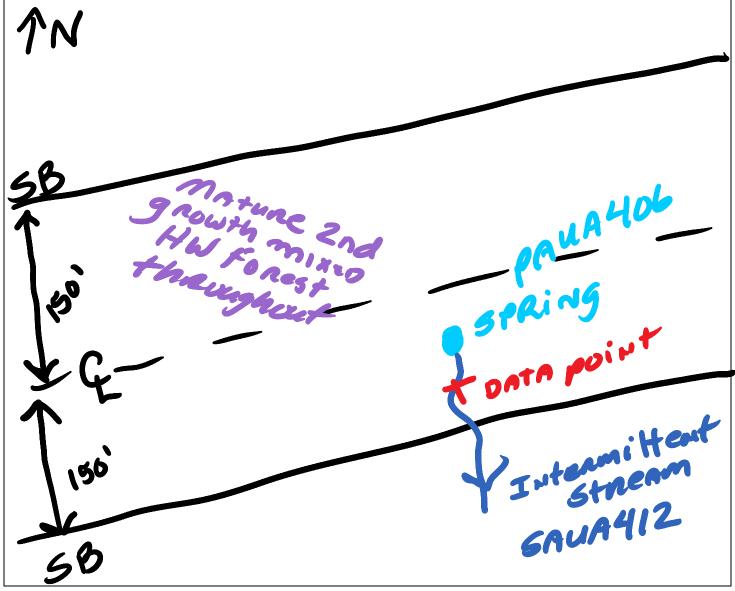
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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

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

Notes:

Stream begins at spring paua406 at head cut in draw within corridor; downstream continues out of corridor; mature second growth mixed hardwood forest.

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





Waterbody SAUA412 facing southeast upstream



Waterbody SAUA412 facing northwest downstream



Waterbody SAUA412 facing southwest across

Linear Waterbody Data Sheet

Survey Description	1							
Project Name:	Waterbody Name:			W	laterbody ID:	Date:		
Atlantic Coast Pipeli	ne	UNT to Hamilton Branch			sa	aua411		6/30/2016
State:	Company:			Crew I	Member Initials:	Ph	otos:	
	Augusta		NRG - ERI		GB, k			photos
Tract Number(s):			Nearest Mile	post:		Associated We	tland ID	(s):
07-001-F013			108.1			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	nal 🗆 Other:	:			
OHWM Width: 6.0ft.	OHWM Indicat (check all that apply		⊠ Clear lin on bank	e □Shelvin	g	□Wrested vegetation	⊠So	couring
Height: 0.75ft. N/A□	vegetatio			debris		☐Abrupt plant community cha		Soil characteristic change
Width of Waterbody - To Bank to Top of Bank:		of Waterbody - ⁻ of Slope:		Width of Waterbo Water Edge:	ody - W		epth of Approx.)	Water:
10.0ft.	_	3.0ft.		 N/A⊠	ft		I/A⊠	ft.
Sinuosity: (check one) ⊠Straight	(Арргох.)	/elocity : fp	os	Bank height Right: Left:	3.0 _		ank slo	pe Right:degrees Left:
□Meanderin	14/7(2			_	3.0	_ft.		65 degrees
Qualitative Attribut	tes							
Water Appearance: (check one) ⊠	No water □C	Clear □Turb	-	een □Sur surface scu		□Algal □ mats	Other:	
Substrate: (check all that apply) % of Substrate:	Bedrock ⊠ Bo	ulder ⊠ Cobb _% <u>45</u> %			⊠ Silt/ c	clay ⊠ Organic _5_%	□ Oth	er: %
Width of Riparian Zone ft N/A⊠	(check all that				☑ Saplir <u>1.5</u>	ngs/Shrubs: in.	⊠H	lerbs
Dominant Bank Vegeta	tion (list):							
Yellow poplar, black multiflora rose. Japa	<u>inese Barberry</u>	<u>. Christmas f</u>	ern. wina si	em. begåars li	ice. wo	<u>ood rush. woo</u>	dland s	sedae. areenbrier
Aquatic Habitats (ex: su coarse woody debris			n, overhanging b	oanks/roots, leaf pac	ks, large	submerged wood,	riffles, dee	ep pools):
Aquatic Organisms Obs	served (list):							
none								
T&E Species Observed	(list):							
none								
Disturbances (ex: livesto	ck access, manure i	n waterbody, waste	e discharge pipe	s):				
Active logging on ac	djacent tract 10	00 feet to the	east					
Tributary is: (check one)	⊠ Natural	□ Art	ificial, man-ma	ade 🗆 Manipu	ulated			
Stream Quality ^a : (check one)	☐ High	⊠ Mc	oderate	☐ Low				

Waterbody ID: saua411

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

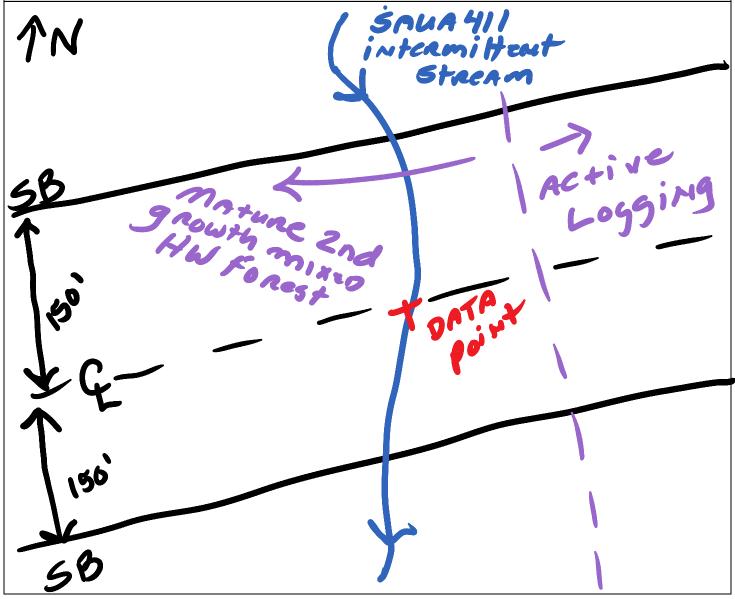
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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

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

Notes:

Stream continues out of corridor in both directions, stream is weakly intermittent; mature second growth mixed hardwood forest.

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





Waterbody SAUA411 facing southeast upstream



Waterbody SAUA411 facing northwest downstream



Waterbody SAUA411 facing southwest across

Linear Waterbod		TO SEE ALL SEE ALL SEE	William Co.		Company o		3007 HE 25 FEB.			
Survey Description	n	Waterbody Na	me:		ar seed to be a	N	Waterbody ID:	AND THE PARTY	Date:	
Project Name:		UNT		Ham. It	_ R_		saur 01	9	4-1-1	6
ACP	In	0117	Compa	CONTRACTOR OF STREET			Member Initials		Photos:	4
State:	County/Parish:		Compa	CT		residence (minimum of the contract of the cont	V, KM		SW NE NI	1
VA	August	a	E	OT.		W	Associated W	etland		, _
Tract Number(s):				t Milepost:						
07-001-F0	115		10	8.3			Waur	00 1		
Survey Type: (check one)	□Centerline	ERe-I	Route	□Ac	cess Road	PASSAR	□Other:		## 15 ES S. (20 AS) 20	
Physical Attribute				35.5 法可谓		53.03				
Stream Classification: check one)	□Ephemera	l □Inter	mittent	ØР	erennial					
Waterbody Type: check one)	River Str	eam 🗆 Dito	ch	☐ Canal	☐ Other:					
OHWM Width: 2 ft.	OHWM Indicat (check all that apply		on ba	ear line ank	□Shelving	g	□Wrested vegetation		Scouring Water staining	
Height: 0,7 ft.	vegetatio			rack line	ZiLitter ar debris		☐Abrupt plan community cl	nange	☐Soil characteristic cha	inge
Width of Waterbody - 1 Bank to Top of Bank:	Top of Width of to Toe	of Waterbody - of Slope:	Toe of S	Slope Width Water	of Waterb Edge:	ody-N	Water Edge to _ft.	Depth (Approx.)	of Water: O.Z_ft.	
Sinuosity: check one) □Straight	(Арргах.)	velocity:	ps	NUMBER OF STREET	helght Right: C	.5	_ft.	Bank s	Right: degr Left: Sodegr	
Qualitative Attribu	ites			rangel.	77.78					
Water Appearance:		Ćlear □Turl	oid	□Sheen on surfac	⊟Su e sc		□Algal mats	□Othe	г .	
Substrate: [Coheck all that apply] % of Substrate:	□ Bedrock □ Bo	oulder 🗆 Cobl	ble □ _%	Gravel 🗆	I Sand I	/00		c □(Other: %	
Width of Riparian Zon 15 ft. N/A	(check all that			Trees: in.		₫ Sap	olings/Shrubs: in.		Herbs NA in.	
Dominant Bank Veget								ý.		
Aquatic Habitats (ex. s					oots, leaf pag	cks, lar	ge submerged woo	d, riffles,	deep pools):	
Submerge Aquatic Organisms O	d Vegetat. bserved (list): uing beetle		paci							
T&E Species Observe	ed (list):									
Tar apecies observe	none									
Disturbances (ex. lives		in waterbody was	te dischar	rge pipes):						
DISTUIDANCES (ex. lives				8- p.p).						
Tributary is:	road	crassing			17000000					
(check one)	☐ Natural	□A	rtificial, r	man-made	☐ Manip	oulated	d			
Stream Quality *:	□ utab	1	Ioderate		Flow					

- n -- nene

Waterbody ID:

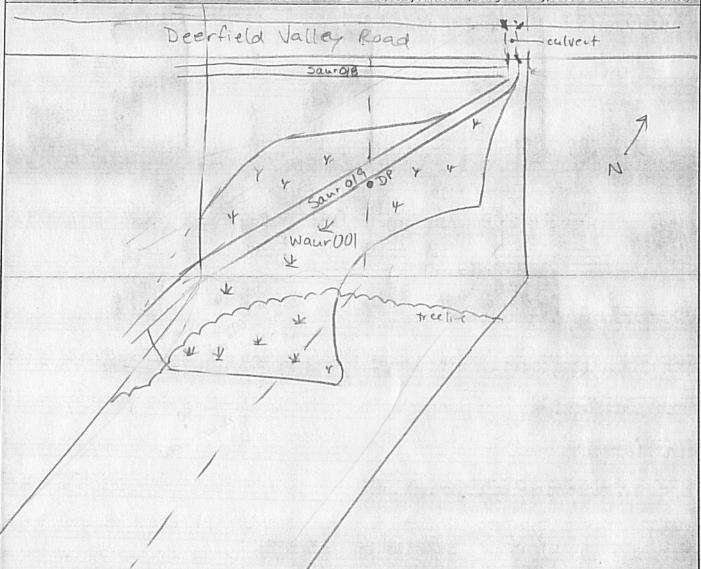
High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

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

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

Notes:

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





Waterbody data point saur019 facing southwest upstream.



Waterbody data point saur019 facing northeast downstream.



Waterbody data point saur019 facing northwest across bank.

Linear Waterbo	dy Data Sheet		MINDONO CONTRACTOR	- 41 B 10 C 10 B 2 C	52 C 53 C 54 C 40 C 4 1 C 4 1	THE RESERVE	
Survey Descripti	on	Mark Control	AND STREET		Waterbody ID:		Date:
Project Name:		Waterbody Nar	Hamilto	2 Branch	FORTOR TOTAL CONTRACTOR AND ADDRESS OF A STATE OF THE STA		4-1-16
ACP		MN 1 40	Hamilio		THE RESERVE OF THE PROPERTY OF	AND AND DESCRIPTION OF STREET	SATE THE PROPERTY OF
State:	County/Parish:		Company:		Crew Member Initia		
AV	August	a	ESI		KM, WV		E, N
Tract Number(s):			Nearest Milepo	st:		Wetland ID(s):	
07-00	1-F015		108.3		N	one	
Survey Type:	□Centerline	☑Ŕe-F	Route	□Access Road	□Other:		
(check one)	794500 FE 10250 产种505023	Elike-I	Todie		EN PROPERTY OF		计可以针错的影響
Physical Attribut Stream Classification	n:						
(check one)	□Ephemera	i ⊡inter	mittent	□Perennial			
Waterbody Type: (check one)	□River □ Str	eam 🗹 Dito	ch 🗆 Cana	d □ Other			
OHWM Width: Z ft	OHWM Indica (check all that appl)	tor:	☐ Clear line on bank	□Shelvin	g	□Scourie	ng Water staining
Height O.\ ft	MBent, r	natted, or missin n	g □Wrack line	Litter ar debris	nd Carlot p community	change	characteristic change
N/A□ Width of Waterbody -	- Top of Width	of Waterbody -	Toe of Slope W	idth of Waterb	ody - Water Edge to	Depth of Wat	er:
Bank to Top of Bank	to Toe	of Slope:	W	ater Edge:	2		0 ft.
_ 5_f	t	ft.	N		<u>ft.</u>	N/A□	
Sinuosity:	Water	velocity:	THE RESERVE OF THE PERSON NAMED IN	ank height		Bank slope	
check one)	(Арргох.)	. 1		Right:	1 .	Righ	nt: 45 degrees
Elotraight		< \ _fi	ps	Left:	ft.	Le	ft: 1.F
□Meande	ering N/A□				ft.		degrees
Qualitative Attrib	outes						
Water Appearance:			550	Пен	rface □Algal	□Other:	
check one)	□No water □0	Clear □Turb		AND AND DESCRIPTION OF THE PARTY OF THE PART	um mats		
	□ Bedrock □ Bo	ulder 🗆 Cobb	ole 🗆 Gravel	□ Sand	Silt clay Orga	anic Other:	
Substrate: check all that apply)				0/	100 %	%%	
% of Substrate:	%	_%	%	76	70		Early 11 and the State of the S
Width of Riparian Zo	ne: Vegetativ		Π-		☐ Saplings/Shrubs:	☐ Herbs	
10 ft.	(check all that	of Dominants:	☐ Trees:		in.	NA	in.
VAC	(approx.)		and the second			And the second s	
Dominant Bank Vege							
Festuci	a rubra,	Rosa mi	ultiflora				
Aquatic Habitats (ex	submerged or emerge	d aquatic vegetation	on, overhanging ba	nks/roots, leaf pag	cks, large submerged w	ood, rimes, deep po	ous).
E. har	rged aquate	vegetation					
Aquatic Organisms	Observed (list):						
		7					
() L&E Species Observ	one tose	rves					
Disturbances (ex. live	Observed	in waterbody wast	te discharge nines				
			a aracitarye pipes				
	side ditch						
Tributary is: (check one)	□ Natural	ПА	rtificial, man-mac	le Manip	pulated		Little Live Control
Stream Quality ::	— Natural			,			
	□ High	ПМ	loderate	□ Low			- Burney Colors

Waterbody	10);	
Sau	_	0	18

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

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

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

Notes:

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features) Deerfield Valley Road culvert Sour oll want oll treeline



Waterbody data point saur018 facing west upstream.



Waterbody data point saur018 facing east downstream.



Waterbody data point saur018 facing north across bank.

Survey Description								
Project Name:		Waterbody Nai	ne:		W	aterbody ID:		Date:
ACP		Hamilton Bra	ınch		Sa	auf003		4/21/2016
State:	County:		Company:		Crew N	lember Initials:	Photos:	
Virginia	Bath		NRG		SH, S	SA .	W/E/S	
Tract Number(s):			Nearest Mile	post:		Associated Wet	land ID(s):	
07-001-F044, 07-0	01-F045		108			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	anal 🗆 Other:	:			
OHWM Width: ft.	OHWM Indicat (check all that apply		☐ Clear lin	e □Shelvin	9	□Wrested vegetation	⊠Scourin	g □Water staining
Height: 2_ft. N/A□	⊠Bent, n vegetatio	natted, or missin n	g □Wrack lii	ne ⊠Litter ar debris	nd	⊠ Abrupt plant community char		haracteristic change
Width of Waterbody - To Bank to Top of Bank:		of Waterbody - · of Slope:	Toe of Slope	Width of Waterbo Water Edge:	ody - W		epth of Wate	r:
_ <u>30_</u> ft.	_	_ <u>12_</u> ft.		 N/A□	<u>15 _</u> ft.	N	_ /A□	ft.
Sinuosity: (check one) ☐Straight	(Approx.)	velocity:		Bank height Right: Left:	_7_ft.	В	ank slope Right Lef	90 degrees
⊠Meanderin	1,7,7,2				_4_ft.			30 degrees
Qualitative Attribut	es							
Water Appearance: (check one) □	No water ⊠C	Clear □Turb		een □Sur surface scu		□Algal □ mats	Other:	
Substrate: (check all that apply) % of Substrate:	Bedrock ⊠ Bo % <u>5</u> %		le ⊠ Grave	el □ Sand □ % _	□ Silt/ c %	lay □ Organic%	☐ Other:%	
Width of Riparian Zone:	(check all that		⊠ Trees:			ngs/Shrubs:	⊠ Herbs	
 N/A⊠	(approx.)	or Dominants.	<u>_10</u> _in.	-	_ <u>2</u> _in.			
Dominant Bank Vegetat Autumn olive, Rose,		ack cherry, s	vcamore					
Aquatic Habitats (ex: sul	• • •	•	•	hanka/raata laaf naal	la larga	aubmarad waad r	iffice does not	la).
Riffles, pools, large		a aquatic vegetatio	n, overnanging	pariks/roots, teat pact	ks, large	submergea wood, r	illies, deep poo	is):
Aquatic Organisms Obs	served (list):							
Fish, minnows								
T&E Species Observed	(list):							
None								
Disturbances (ex: livesto	ck access, manure in	n waterbody, waste	discharge pipe	es):				
Bank failures, large	rip rap in one ı	meandering s	ection nea	r home				
Tributary is: (check one)	⊠ Natural	□ Art	ificial, man-m	ade 🗆 Manipu	ulated			
Stream Quality ^a : (check one)	⊠ High	□ Мо	oderate	□ Low				

Waterbody ID:
Sauf003

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.



Waterbody SAUF003 facing west upstream



Waterbody SAUF003 facing east downstream



Waterbody SAUF003 facing south across

Survey Description	n							
Project Name:	Waterbody Name:			W	aterbody ID:		Date:	
ACP		UNT to Ham	ilton Branch	ı	Sa	auf002		4/21/2016
State:	County:		Company:		Crew N	lember Initials:	Photos:	<u> </u>
Virginia	Bath		NRG		SH, S	Α	W/E/N	
Tract Number(s):			Nearest Mile	post:		Associated We	tland ID(s):	
07-001-F046, 07-0	001-F049, 07-0	01-F047	108			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 ⊠ Str	eam 🗆 Dito	h □ Ca	nal				
OHWM Width: _4_ft.	OHWM Indica (check all that apply		☐ Clear line	e □Shelvino	9	□Wrested vegetation	□Scourin	g □Water staining
Height: 0.5_ft. N/A□	⊠Bent, n vegetatio	natted, or missin n	g □Wrack lir	ne ⊠Litter an debris	ıd	□ Abrupt plant community cha		haracteristic change
Width of Waterbody - T Bank to Top of Bank:		of Waterbody - ⁻		Width of Waterbo Water Edge:	ody - W		Depth of Wate	r:
_ <u>8_</u> ft.	_	<u>3_</u> ft.		N/A⊠	ft.	N	J/A⊠	ft.
Sinuosity: (check one) ⊠Straight	Water (Approx.)	velocity: fps		Bank height Right: Left:	<u>2_</u> ft.	В	Bank slope Right Lef	70 degrees
□Meanderir	ng N/A⊠				<u>2_</u> ft.			80 degrees
Qualitative Attribu	tes							
Water Appearance: (check one) ⊠	³ No water □0	Clear □Turb	-	een □Sur surface scu		□Algal □ mats	Other:	
Substrate: [check all that apply] % of Substrate:	Bedrock DBo	ulder ⊠ Cobb _% <u>10</u> %	le ⊠ Grave _85_%	I ⊠ Sand □	□ Silt/ cl %	lay □ Organic%	□ Other:	
Width of Riparian Zone	(check all that Avg. DBH		☐ Trees:		☑ Saplin _1_in.	gs/Shrubs:	⊠ Herbs	
N/A⊠ Dominant Bank Vegeta	(approx.)							
Autumn olive, Rubu	, ,	o. black locus	t, red cedar					
Aquatic Habitats (ex: su	ubmerged or emerged	d aquatic vegetation	n, overhanging b	panks/roots, leaf pack	ks, large	submerged wood,	riffles, deep pool	s):
None								
Aquatic Organisms Ob None	served (list):							
T&E Species Observed	l (list):							
None								
Disturbances (ex: livesto	ock access, manure i	n waterbody, waste	discharge pipe	s):				
None	,	•	3 112	•				
Tributary is: (check one)	⊠ Natural	□ Art	ificial, man-ma	ade 🗆 Manipu	ulated			
Stream Quality ^a : (check one)	☐ High	⊠ Mc	derate	□ Low				

Waterbody ID:
Sauf002

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.	nabitat,
Notes:	
Moderate quality, stream is an unnamed tributary to Hamilton Branch.	
Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated a	features)



Waterbody SAUF002 facing west upstream



Waterbody SAUF002 facing east downstream



Waterbody SAUF002 facing north across

Survey Description	1							
Project Name:		Waterbody Nar	ne:		W	aterbody ID:		Date:
ACP		UNT to Hami	ilton Branch	1	Sa	auf001		4/21/2016
State:	County:	l	Company:		Crew N	Member Initials:	Photos:	
Virginia	Bath		NRG		SH, S	SA	NW, S	E, SW
Tract Number(s):			Nearest Mile	post:	•	Associated We	tland ID(s):	
07-001-F049			108			None		
Survey Type: (check one)	⊠Centerline	Re-R	Route	□Access Road		□Other:		
Physical Attributes Stream Classification:	3							
(check one)	□Ephemera	ıl ⊠Inter	mittent	□Perennial				
Waterbody Type: (check one)	River ⊠ Stre	eam 🗆 Ditc	h □ Ca	nal Other:				
OHWM Width: <u>6</u> ft.	OHWM Indicat (check all that apply		☐ Clear line	e ⊠Shelvino	g	□Wrested vegetation	⊠Scourin	g □Water staining
Height: <u>.75</u> ft. N/A□	vegetatio			debris		☐Abrupt plant community cha		characteristic change
Width of Waterbody - To Bank to Top of Bank:		of Waterbody - 1 of Slope:		Width of Waterbo Water Edge:	ody - W		epth of Wate Approx.)	r:
_ <u>16_</u> ft.	_	<u>2_</u> ft.		_ N/A□	<u>3</u> _ft.	N	//A□	<u>.25</u> ft.
Sinuosity: (check one) ⊠Straight	(Approx.)	velocity:		Bank height Right: Left:	_4_ft.	В	ank slope Righ Lef	50 degrees
□Meanderin	1477.			_	<u>3.5_</u> ft.			30 degrees
Qualitative Attribut	tes							
Water Appearance: (check one) □	No water ⊠C	Clear □Turb		een □Sur surface scu		□Algal □ mats	Other:	
Substrate: (check all that apply) % of Substrate:	Bedrock DBo	ulder ⊠ Cobb % <u>70_</u> %	le ⊠ Grave _25_%	l □ Sand □%	⊠ Silt/ c <u>5</u> %	elay □ Organic%	□ Other:	
Width of Riparian Zone	(check all that	•	☐ Trees:			ngs/Shrubs:	⊠ Herbs	
N/A⊠	(approx.)			in	_ <u>1_</u> in.			
Dominant Bank Vegeta Autumn olive, Rubus		p. Carex spp.						
Aquatic Habitats (ex: su	bmerged or emerged	d aquatic vegetation	n, overhanging b	panks/roots, leaf pacl	ks, large	submerged wood, r	riffles, deep poo	ls):
Riffles, Pools						-		
Aquatic Organisms Obs	served (list):							
Fish, minnows, snai	ls, amphibians	(toads - calls	s and egg r	nasses in pool	s)			
T&E Species Observed	(list):							
None								
Disturbances (ex: livesto Driveway to trailer g				s):				
	oes unougn st	ieaiii ilo bild(ge/cuiveit					
Tributary is: (check one)		□ Art	ificial, man-ma	ade 🗆 Manipu	ulated			
Stream Quality ^a : (check one)	☐ High	⊠ Mo	derate	□ Low				

Waterbody ID:
Sauf001

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: Moderate quality, stream is an unnamed tributary to Hamilton Branch. Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)



Waterbody SAUF001 facing northwest upstream



Waterbody SAUF001 facing southeast downstream



Waterbody SAUF001 facing southwest across

Survey Description	1								
Project Name:	Waterbody Name:				Waterbody ID:			Date:	
Atlantic Coast Pipeline		Hamilton Branch			sa	sauz004			6/14/2016
State:	County:		Company:		Crew N	Member Initials	: P	hotos:	
ů .	Augusta		ERM		SS			1-3	
Tract Number(s):			Nearest Mile	post:		Associated W	etland I	D(s):	
07-001-A049			108.5			None			
Survey Type: (check one)	□Centerline	□Re-F	Route	⊠Access Road		□Other:			
Physical Attributes Stream Classification:	3								
(check one)	□Ephemera	I □Inter	mittent	⊠Perennial					
Waterbody Type: (check one)	River ⊠ Stre	eam 🗆 Dito	ch □ Ca	anal 🗆 Other:					
OHWM Width: _25_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 lin	ne □Litter ar debris	nd	☐ Abrupt plan community ch		□Soil ch	aracteristic change
Width of Waterbody - T Bank to Top of Bank:		of Waterbody -	Toe of Slope	Width of Waterbo Water Edge:	ody - W	ater Edge to	Depth o	of Water	1
<u>27</u> ft.	_	ft.		_ N/A□	<u>25_</u> ft.		N/A□		_1_ft.
Sinuosity: (check one) ⊠Straight	Water (Approx.)	velocity:		Bank height Right: Left:	<u>5</u> ft.		Bank sl	ope Right: Left:	45 degrees
□Meanderin	g N/A□				<u>6</u> _ft.				45 degrees
Qualitative Attribut	tes								
Water Appearance: (check one)	No water ⊠C	clear □Turb		een □Sur surface scu		□Algal mats	□Other:		
Substrate: (check all that apply) % of Substrate:	Bedrock Bo	ulder ⊠ Cobb % <u>40</u> %	le ⊠ Grave _60_%	el □ Sand □ % _	□ Silt/ c	lay □ Organio _%%		ther: %	
Width of Riparian Zone						/01 1			
_ <u>50_ft</u> - N/A□	(check all that Avg. DBH (approx.)	of Dominants:	⊠ Trees: _ <u>6</u> _in.		⊴ Sapıır _1_in.	ngs/Shrubs:	×	Herbs	
Dominant Bank Vegeta	tion (list):								
American sycamore	, Black locust,	Rosa multiflo	ora						
Aquatic Habitats (ex: su	bmerged or emerged	aquatic vegetatio	n, overhanging	banks/roots, leaf pacl	ks, large	submerged wood	, riffles, d	leep pools	s):
Overhanging bank r	oots.								
Aquatic Organisms Obs	served (list):								
None									
T&E Species Observed	(list):								
None									
Disturbances (ex: livesto	ck access, manure in	waterbody, waste	e discharge pipe	es):					
None									
Tributary is: (check one)	⊠ Natural	□ Ari	tificial, man-m	ade 🗆 Manipu	ulated				
Stream Quality ^a : (check one)	☐ High		oderate	⊠ Low					

Waterbody	ID
sauz004	

^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:

This is Hamilton Creek, a moderately sized perennial stream.

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

300'Consider Sauzoou eerfield Valley



Waterbody sauz004 facing west upstream



Waterbody sauz004 facing east downstream



Waterbody sauz004 facing south across

Survey Description	1								
Project Name:		Waterbody Nai	ne:		W	aterbody ID:		D	ate:
Atlantic Coast Pipeline		Hughart Rui	า		sa	aua414		7	/18/2016
State:	County:	I.	Company:		Crew N	Member Initials:	Pr	hotos:	
	Augusta		NRG/ERM		GB, S			photo:	S
Tract Number(s):			Nearest Mile	epost:		Associated We	etland ID	O(s):	
07-001-F050; 07-001-F0	51		108.8			none			
Survey Type: (check one)	⊠Centerline	□Re-F	Route	□Access Road		□Other:			
Physical Attributes Stream Classification:	S								
(check one)	□Ephemera	ıl □Inter	mittent	⊠Perennial					
Waterbody Type: (check one)	River 🗵 Str	eam 🗆 Dito	:h □ Ca	anal 🗆 Other:					
OHWM Width: 18.0ft.	OHWM Indicat (check all that apply		⊠ Clear lin on bank	ne □Shelving	g	□Wrested vegetation	⊠S	Scouring	□Water staining
Height: ft. N/A□	□Bent, n vegetatio	natted, or missin n	g ⊠Wrack lii	ne ⊠Litter ar debris	nd	□ Abrupt plant community cha		∃Soil cha	aracteristic change
Width of Waterbody - T Bank to Top of Bank:		of Waterbody -	Toe of Slope	Width of Waterbo	ody - W		Depth of (Approx.)	f Water:	
ft.		<u>15.0</u> ft.			<u>15.0</u> ft.		√A□		<u>0.50</u> ft.
Sinuosity: (check one) ⊠Straight	Water (Approx.)	/elocity: 1.0fps	;	Bank height Right: Left:	<u>15.0_</u> ft		Bank slo	ppe Right: Left:	_75_ degrees
□Meanderin	ng N/A□			_	<u>7.0_</u> ft.				60 degrees
Qualitative Attribut	tes								
Water Appearance: (check one)	[]] No water ⊠C	Clear □Turb		een □Sur surface scu		□Algal □ mats	□Other:		
Substrate: (check all that apply) % of Substrate:	Bedrock ⊠ Bo%15_%			el ⊠ Sand ∑ _10_%	⊠ Silt/ c <u>5</u> %	elay ⊠ Organic	□ Oth %		
Width of Riparian Zone	: Vegetative		⊠ Trees:		7 Sanlir	ngs/Shrubs:	M H	lerbs	
<u>ft</u> . N/A⊠	ľ	of Dominants:	<u>9.0</u> in.		<u> 1.5</u> in.	-	_·	ieibs	
Dominant Bank Vegeta									
White pine, sweet b	spiny thistle	_		•		•			•
Aquatic Habitats (ex: su Wrack piles, coarse		-		•	_	submerged wood,	riffles, de	eep pools)	:
Aquatic Organisms Ob	served (list):								
Minnows, crayfish, v	, ,	oocket snails							
T&E Species Observed	(list):								
none									
Disturbances (ex: livesto	ock access, manure i	n waterbody, waste	discharge pipe	es):					
Gravel road crossin cattle	g east of CL –	no culvert or	bridge; live	estock access;	highly	entrenched of	due to l	bank d	amage from
Tributary is: (check one)	Natural	□ Art	ificial, man-m	ade 🗆 Manipu	ulated				
Stream Quality ^a : (check one)	□ High	⊠ Mo	oderate	□ Low					

Waterbody ID: saua414

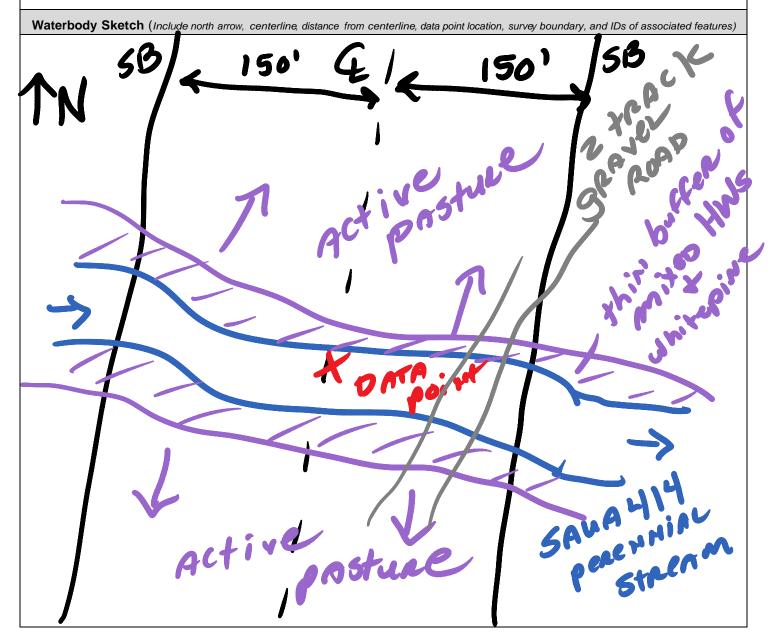
^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

Perennial stream – Hughart Run; continues out of corridor in both directions; only a very thin buffer of trees along stream course; flows through active livestock pasture; high algal load due to manure; highly entrenched.





Waterbody saua414 facing northwest upstream



Waterbody saua414 facing southeast downstream



Waterbody saua414 facing north across

Open Waterbody Data Sheet

Open waterboo	iy Data Sileet							
Survey Description	on							
Project Name:	Waterbody Name:				Waterbody ID:		Date:	
Atlantic Coast Pipeli	ne	Unnamed Pond			oaua400 7/·		7/18/2016	
State:	County:		Company:		Crew	/ Member Initials:	Photos:	
Virginia	Augusta		NRG/ERM		GB,	SS	One ph	noto
Tract Number(s):			Nearest Milepos	t:		Associated Wetland	ID(s):	
07-001-F051			108.8			none		
Survey Type: (check one)	⊠Centerlin	e □F	Re-Route	□Access Ro	ad	□Other:		
Physical Attribut	es							
Waterbody Type: (check one) ⊠Stoo	ck Pond Natura	I Pond □ La	ke Reservoir	☐ Impoundme	ent [☐ Oxbow ☐ Other:		
Hydrologic Regime:	☐ Permanently	Flooded 🗵	Semipermanentl	y Flooded	Sea	sonally Flooded	Temporar	ily Flooded
ОНWМ	OHWM Indi		□ Ol1		L. 2			
Height:	(check all that ap	opiy)		ne □She	lving	□Wrested vegetation	□Sco	uring □Water staining
<u>3.0</u> ft.	□Bent vegeta	, ,	, matted, or missing □Wrack □Litter and				□Soil cl ange	naracteristic change
Depth of Water:	I	Bank heig	ht (average):			Bank slope (aver	age):	
	ft.		5.0	_ft.		_	<u>70</u> degre	es
Qualitative Attrib	utes	_						
Water Appearance: (check one)	□No water □	Clear ⊠T	urbid □She on sui		Surfac	e ⊠Algal □0 mats	Other:	
Substrate: (check all that apply)	☐ Bedrock ☐ Be	oulder 🗵 C	obble 🛮 Grave	☐ Sand	⊠ S	ilt/ clay □ Organic	☐ Other:	
% of Substrate:	%	% _ <u>10_</u>	% <u>10</u> %	%	_%	<u>80</u> %%		
Width of Riparian Zor	ne: Vegetative	Layers:						
ft.	(check all that	apply)	☐ Trees:		⊠ Sa	plings/Shrubs:	⊠ Herbs	
	Avg. DBH	of Dominants	s: <u>7.0</u> in.		1.0	_in		
N/A 🗵	(approx.)							
Dominant Bank Vege White pine, multifle	• •	thistle, ox e	eye daisy, fesc	ue, orchard	grass	s, foxtail, jumpsee	d, planta	in, ragweed
Aquatic Habitats (ex: s	submerged or emerged ac	uatic vegetation, o	overhanging banks/roots	, leaf packs, large s	ubmerge	ed wood, riffles, deep pools, e	etc.):	
Pool, some emerg	ent vegetation							
Aquatic Organisms C	Observed (list):							
Frogs, water stride	ers, adult drago	nflies						
T&E Species Observe	ed (list):							
none								
Disturbances (ex: lives	stock access, manure	in waterbody, w	aste discharge pipes	s):				
Livestock access								
Waterbody is:								
(check one)	☐ Natural		al, man-made	☐ Manipulated	d			
Waterbody Quality a: (check one)	□ High	☐ Moderate	e 🛭 Low					

Waterbody	ID
Waterbody oaua400	

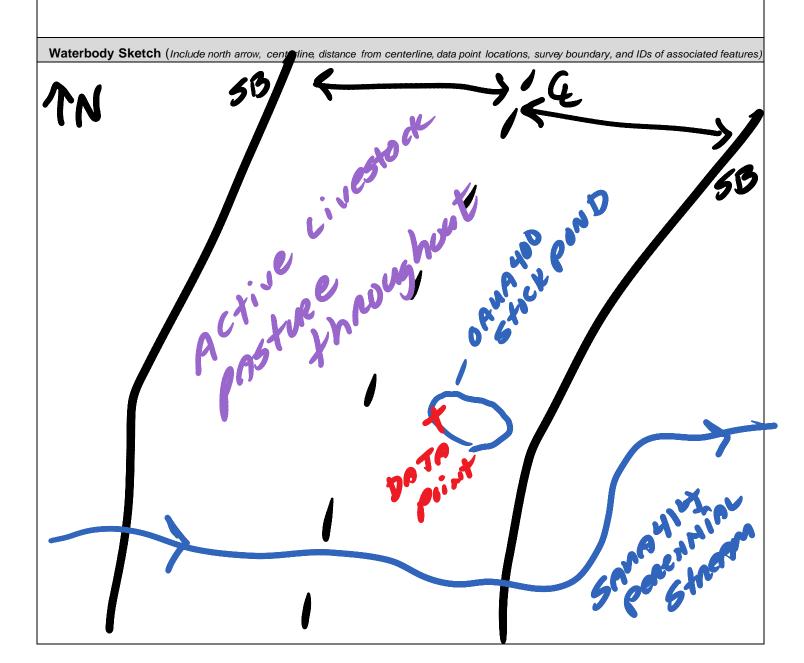
^a **High Quality:** Natural, natural bank vegetation around entire waterbody; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

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:

Semi-permanently flooded stock pond in an active cattle pasture; artificial - excavated, no inlet or outlet.





Open waterbody oaua400 facing southeast

Survey Description	1							
Project Name:		Waterbody Nar	ne:		W	/aterbody ID:		Date:
Southeast Reliability	/	UNT to Ham	nilton Brand	:h	S	aua415		7/18/2016
State:	County:	•	Company:		Crew I	Member Initials:	: F	Photos:
	Augusta		NRG/ERM		GB, S			3 photos
Tract Number(s):			Nearest Mile	post:		Associated Wo	etland	ID(s):
07-001-F051			108.85			none		
Survey Type: (check one)	⊠Centerline	□Re-F	Route	□Access Road		□Other:		
Physical Attributes Stream Classification:	3							
(check one)	□Ephemera	ıl ⊠Inter	mittent	□Perennial				
Waterbody Type: (check one)	River ⊠ Stre	eam 🗆 Dito	:h □ Ca	anal 🗆 Other:	:			
OHWM Width: _6.0_ft.	OHWM Indicat (check all that apply		□ Clear ling on bank	e □Shelvin	g	□Wrested vegetation	\boxtimes	Scouring
Height: 	vegetatio			debris		☐Abrupt plant community ch		☐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 (<i>Approx.</i>)	of Water:
<u>_12.0_</u> ft.	_	<u>5.0</u> ft.		 N/A⊠	ft.	ı	N/A□	ft.
Sinuosity: (check one) ☐Straight	(Approx.)	velocity:fps		Bank height Right: Left:	3.0_ft.		Bank s	lope Right: 60 degrees Left:
⊠Meanderin	9 N/A⊠			_	<u>8.0_</u> ft.			90 degrees
Qualitative Attribut	tes							
Water Appearance: (check one)	No water □C	Clear □Turb		een □Sur surface scu		□Algal □ mats	□Other	:
Substrate: (check all that apply) % of Substrate:	Bedrock □ Bo	ulder ⊠ Cobb				clay ⊠ Organic % <u>5</u> % _		Other: _%
Width of Riparian Zone 100 ft N/A□	(check all that		⊠ Trees: <u>9.0</u> in.	Σ-	☑ Saplir <u>1.5</u> in	ngs/Shrubs:	_·	Herbs
Dominant Bank Vegeta	,							
White pine, sweet bi walnut. Japanese st	rch, white oak ilt grass, white	snakeroot, ra	aspberry, w	ild rve. violet			-	
Aquatic Habitats (ex: su Wrack piles, coarse			n, overhanging	banks/roots, leaf pac	ks, large	submerged wood,	, riffles, o	deep pools):
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):				
Gravel road crossing	g east of CL –	no culvert or	bridge; live	stock access				
Tributary is: (check one)	Natural	□ Art	ificial, man-m	ade 🗆 Manipı	ulated			
Stream Quality ^a : (check one)	\Box High	⊠ Mo	derate	□ Low				

Waterbody ID: saua415

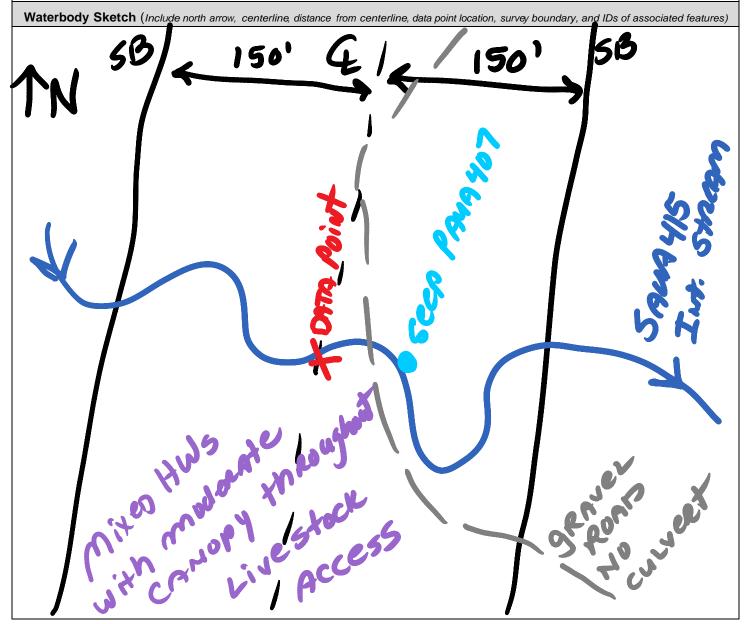
^a High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

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

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

Notes:

Continues out of corridor in both directions; overflow scour common on floodplain; gravel road crossing east of CL with no culvert in place; receives output from intermittent seep paua407 adjacent to stream.





Waterbody saua415 facing north upstream



Waterbody saua415 facing south downstream



Waterbody saua415 facing east across

Linear Waterbody Data Sheet Survey Description Waterbody Name: Waterbody ID: Project Name: 3/17/16 sauros C Crew Member Initials: Photos: County/Parish: State: Augusta J Benton WIE, N Associated Wetland ID(s): Tract Number(s): Nearest Milepost: 09 07-001- F029 Survey Type: (check one) □ Centerline Re-Route ☐ Access Road Other: Physical Attributes Stream Classification: (check one) Perennial □ Ephemeral □Intermittent Waterbody Type: (check one) Stream ☐ Other: ☐ Ditch □ Canal □River OHWM OHWM Indicator: ☑ Clear line ☐ Shelving □Wrested □ Scouring **BW** ater Width: vegetation staining on bank ⊠Soil characteristic change Height: Bent, matted, or missing Wrack line Litter and ☐ Abrupt plant 0.5 vegetation debris community change N/A Width of Waterbody - Toe of Slope Width of Waterbody - Water Edge to Depth of Water: Width of Waterbody - Top of Bank to Top of Bank: Water Edge: to Toe of Slope: 0.2 ft 8.5 ft. N/AD N/A Bank slope Bank height Sinuosity: Water velocity: (check one) (Approx.) □ Straight degrees Meandering degrees N/AD Qualitative Attributes Water Appearance: □ No water (check one) Clear □Turbid □Sheen □Surface □Algal Other: on surface scum Substrate: ☐ Bedrock ☐ Boulder K Cobble ⊠ Sand ☐ Silt/ clay ☐ Organic (check all that apply) % of Substrate: 40 % 35 % 15 % Width of Riparian Zone: Vegetative Layers: Trees: Saplings/Shrubs: (check all that apply) ☐ Herbs 7106 ft. Avg. DBH of Dominants: in. Dominant Bank Vegetation (list): Pinus Strobus, Quercus alba, Kalmia latifolia Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Submerged wood, leaf packs, riffles Aquatic Organisms Observed (list): T&E Species Observed (list): observed Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): None observed Tributary is: X Natural (check one) ☐ Manipulated □ Artificial, man-made Stream Quality *: (check one) ☐ High Moderate □ Low

Waterbody	ID:
saur	00

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.

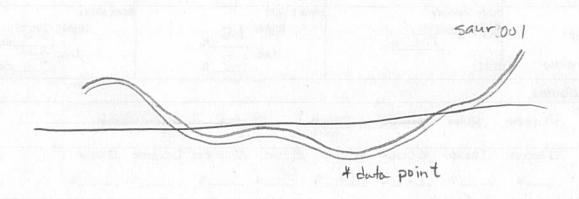
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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

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



NT - _ _ centerline

Environmental Field Surveys Waterbody Photo Page



Waterbody data point saur001 facing west upstream.



Waterbody data point saur001 facing east downstream.

Environmental Field Surveys Waterbody Photo Page



Waterbody data point saur001 facing north across bank.

Linear Waterbody Data Sheet Survey Description Waterbody ID: Waterbody Name: Project Name: to Guy Hollow top 3/17/16 Saur 002 Crew Member Initials: County/Parish: State: JBenton Avgusta EST NW, SE, NE Associated Wetland ID(s): Tract Number(s): Nearest Milepost: 07-001 - F029 09 None Survey Type: DRe-Route □ Centerline (check one) ☐ Access Road □Other: Physical Attributes Stream Classification: (check one) □ Ephemeral ⊠Intermittent □ Perennial Waterbody Type: X Stream (check one) □River ☐ Ditch ☐ Canal Other: OHWM Indicator: OHWM **W**W ater (check all that apply) Clear line □ Shelving □Wrested ☐ Scouring Width: vegetation staining Height: ⊠Bent, matted, or missing □Wrack line ☐ Litter and ☐ Abrupt plant Soil characteristic change vegetation debris community change N/AD Depth of Water: Width of Waterbody - Toe of Slope Width of Waterbody - Water Edge to Width of Waterbody - Top of Bank to Top of Bank: Water Edge: to Toe of Slope: 0.Z ft. N/A N/A Sinuosity: Water velocity: Bank height Bank slope (check one) (Approx.) Right: ☐ Straight degrees Left: Meandering degrees N/A Qualitative Attributes Water Appearance: □ No water MClear . □Algal (check one) □Turbid □Sheen □Surface Other: on surface mats scum ☑ Cobble Silt/ clay ☐ Organic Substrate: ☑ Gravel ☑ Sand ☐ Bedrock ☐ Boulder (check all that apply) 50 % 10 % % of Substrate: Width of Riparian Zone: Vegetative Layers: Trees: Saplings/Shrubs: (check all that apply) M Herbs Avg. DBH of Dominants: Dominant Bank Vegetation (list): Rhus strobus, Kalmin latifolia, Festica Sp. Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): submerged wood, leaf packs, riffles Aquatic Organisms Observed (list): Agratic worms, NO EPT T&E Species Observed (list): None observed Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): livestock access Tributary is: (check one) Natural N ☐ Artificial, man-made □ Manipulated Stream Quality *: ☐ High (check one) 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.

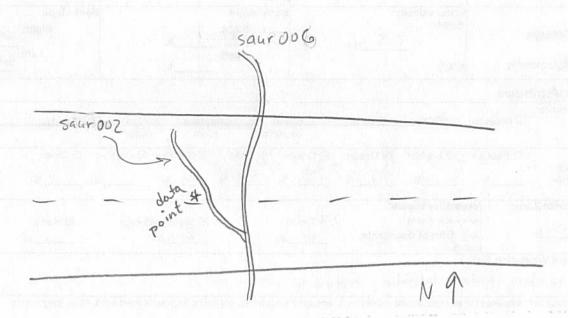
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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

Intermittent channel, impacted by livestock, trib to sauroo6

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



Environmental Field Surveys Waterbody Photo Page



Waterbody data point saur002 facing northwest upstream.



Waterbody data point saur002 facing southeast downstream.

Environmental Field Surveys Waterbody Photo Page



Waterbody data point saur002 facing northeast across bank.

Linear Waterbody Data Sheet Survey Description Waterbody ID: Project Name: Waterbody Name: Saurook Crew Member Initials: County/Parish: State: VA EST Augusta JBenton NIS, E Associated Wetland ID(s): Tract Number(s): Nearest Milepost: 09 07-001- FOZ9 None Survey Type: Re-Route □ Centerline □Other: (check one) ☐ Access Road Physical Attributes Stream Classification: Perennial (check one) □ Ephemeral □Intermittent Waterbody Type: (check one) □River Stream □ Ditch ☐ Canal Other: OHWM Indicator: OHWM **W** ater Clear line □ Shelving (check all that apply) □Wrested ☐ Scouring Width: vegetation staining Litter and Height: Bent, matted, or missing Wrack line ⊠Soil characteristic change ☐ Abrupt plant vegetation debris community change N/A Depth of Water: Width of Waterbody - Toe of Slope Width of Waterbody - Water Edge to Width of Waterbody - Top of Bank to Top of Bank: to Toe of Slope: Water Edge: 0-3 # 12 ft N/A N/A Sinuosity: Water velocity: Bank height Bank slope (check one) (Approx.) Right: ☐ Straight degrees Meandering degrees N/A Qualitative Attributes Water Appearance: □ No water □Algal **⊠Clear** Other: (check one) □Turbid ☐ Sheen □ Surface on surface scum mats Cobble ☑ Gravel Sand ☐ Silt/ clay ☐ Organic Substrate: ☐ Boulder Other: ☐ Bedrock (check all that apply) 40 % 35 % % of Substrate: Width of Riparian Zone: Vegetative Layers: (check all that apply) Saplings/Shrubs: ☐ Herbs Avg. DBH of Dominants: Dominant Bank Vegetation (list): Pinus Strobus, Pinus Cerhinata, Liguidambur Styraciflua.

Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Submurged wood, leaf packs, riffles Aquatic Organisms Observed (list): T&E Species Observed (list): None observed Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): livestock access Tributary is: (check one) Natural Natural ☐ Artificial, man-made ☐ Manipulated Stream Quality *:

(check one)

☐ High

Moderate

□ Low

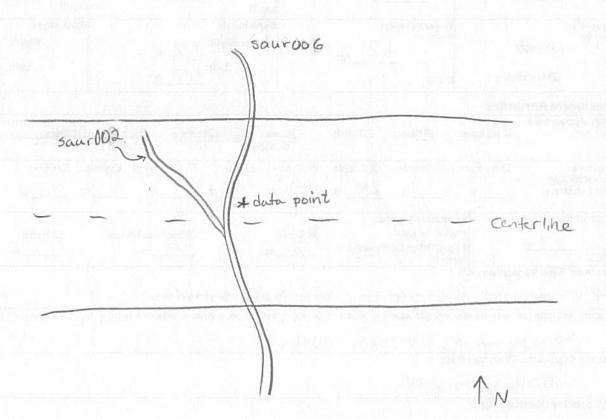
a High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

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

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

Notes:

Perennial Channel, impacted by livestock





Waterbody data point saur006 facing north upstream.



Waterbody data point saur006 facing south downstream.



Waterbody data point saur006 facing east across bank.

Linear Waterbody Data Sheet Survey Description Project Name: Waterbody Name: Waterbody ID: 3/17/16 Hamilton Beards Salroo3 ACP rew Member Initials: Company: Photos: State: County/Parish: -5T JBenton N,S,E Augusta Associated Wetland ID(s): Tract Number(s): Nearest Milepost: 07-001 0 None Survey Type: □ Centerline ⊠Re-Route ☐ Access Road Other: (check one) Physical Attributes Stream Classification: (check one) Perennial □ Ephemeral □Intermittent Waterbody Type: (check one) Other: Stream □ Ditch ☐ Canal □River OHWM **OHWM Indicator: ⊠**Water Clear line □ Shelving □Wrested ☐ Scouring Width: vegetation staining on bank ⊠Soil characteristic change Height: ⊠Bent, matted, or missing ⊠Wrack line □ Litter and ☐ Abrupt plant vegetation debris community change N/A Width of Waterbody - Toe of Slope Width of Waterbody - Water Edge to Depth of Water: Width of Waterbody - Top of Bank to Top of Bank: Water Edge: to Toe of Slope: 0.3 ft. 3.5 ft N/A N/A Bank slope Sinuosity: Bank height Water velocity: (check one) (Approx.) Right: □ Straight degrees Meandering degrees N/A Qualitative Attributes Water Appearance: (check one) □ No water Clear □Turbid □Sheen □Surface □Algal Other: on surface scum mats ☑ Gravel Substrate: □ Bedrock ☐ Boulder Cobble Sand Silt/ clay Organic (check all that apply) % of Substrate: 45 % 30 % Width of Riparian Zone: Vegetative Layers: A Trees: (check all that apply) Saplings/Shrubs: ⊠ Herbs Avg. DBH of Dominants: in. NIA Dominant Bank Vegetation (list): Pinus tacda, Festuca Sp. Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): leaf pucks, submerged wood, riffles, Aquatic Organisms Observed (list): None observed T&E Species Observed (list): None observed Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): live stock access - heavily impacted Tributary is: Natural (check one) ☐ Manipulated ☐ Artificial, man-made Stream Quality *: (check one) ☐ High ☐ Moderate Low

Waterbody	ID:	
saur	00	3

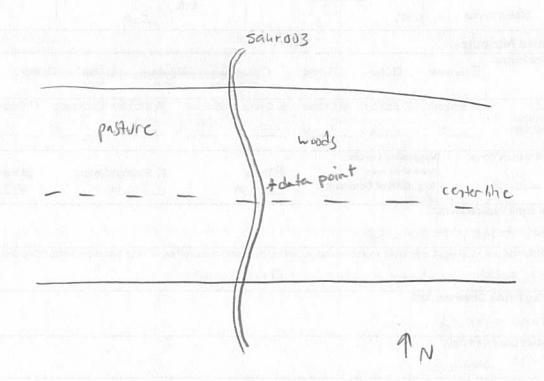
^a High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

Perennial channel, impacted by livestock





Waterbody data point saur003 facing north upstream.



Waterbody data point saur003 facing south downstream.



Waterbody data point saur003 facing east across bank.

Linear Waterbody Data Sheet Survey Description Project Name: Waterbody Name: Waterbody ID: Hamilton Branch ACP 5aur 004 3/17/16 Photos: Company: Crew Member Initials: County/Parish: State: ESI JBenton VA Augusta NE, SW, SE Associated Wetland ID(s): Nearest Milepost: Tract Number(s): 100 07-001- F029 Survey Type: □ Centerline NRe-Route ☐ Access Road Other: (check one) Physical Attributes Stream Classification: (check one) Perennial □ Ephemeral □Intermittent Waterbody Type: (check one) ✓ Stream Other: ☐ Ditch ☐ Canal □River OHWM OHWM Indicator: Clear line □ Shelving □Wrested □ Scouring **⊠**Water Width: vegetation staining on bank Soil characteristic change Height: Bent, matted, or missing Wrack line □ Litter and □ Abrupt plant vegetation debris community change N/A Width of Waterbody - Toe of Slope Width of Waterbody - Water Edge to Depth of Water: Width of Waterbody - Top of Bank to Top of Bank: Water Edge: to Toe of Slope: 0,2 ft 2.5 2 ft. 6 N/AD N/A Bank slope Bank height Sinuosity: Water velocity: (check one) (Approx.) Right: □ Straight degrees Meandering degrees N/AD Qualitative Attributes Water Appearance: (check one) □ No water Clear □Turbid Sheen □Surface □Algal Other: on surface mats Substrate: ☐ Bedrock ☐ Boulder ☐ Cobble ☑ Gravel ☑ Sand Silt clay Organic (check all that apply) % of Substrate: 20 % 50 % 30 % Width of Riparian Zone: Vegetative Layers: Trees: (check all that apply) Saplings/Shrubs: ☐ Herbs Avg. DBH of Dominants: 2 in. Dominant Bank Vegetation (list): Cornus Florida, Pinus taeda, Fostuca sp. Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): leaf packs, riffles, pools
Aquatic Organisms Observed (list): Aquatic worms, large stonfly T&E Species Observed (list): NONC Observed Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): heavily impacted livestock access Tributary is: X Natural (check one) ☐ Artificial, man-made ☐ Manipulated Stream Quality *: (check one) ☐ High ☐ Moderate Low

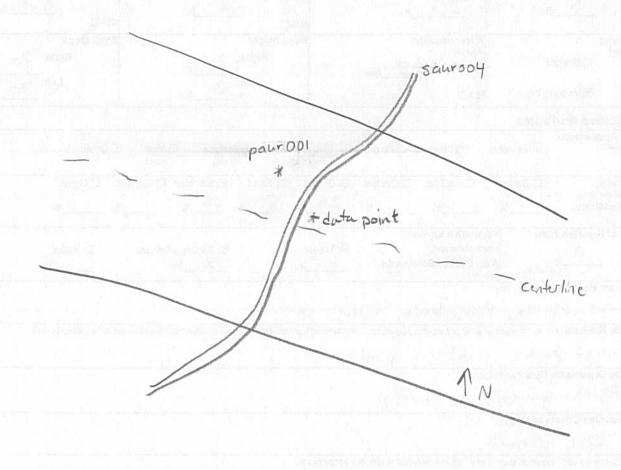
High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

Perennial Channel, severely impacted by livestock





Waterbody data point saur004 facing northeast upstream.



Waterbody data point saur004 facing southwest downstream.



Waterbody data point saur004 facing southeast across bank.

Survey Description)							-
Project Name:	Waterbody Name:				aterbody ID:	Date:		
Atlantic Coast Pipeli	ne	UNT to Ham	ilton Branci	n	Sa	auy002		7/11/2016
State:	County:		Company:		Crew N	Member Initials:	Phot	tos:
· ·	Augusta		Dominion		KO, A		1-3	
Tract Number(s):			Nearest Mile	epost:		Associated We	•	s):
CY GWNF-6 Spr 04	-A		109			Wauy003e_	W	
Survey Type: (check one)	□Centerline	□Re-F	Route	⊠Access Road		□Other: contr	actor yar	rd
Physical Attributes Stream Classification:								
(check one)	□Ephemera	ıl ⊠Inter	mittent	□Perennial				
Waterbody Type: (check one)	River ⊠ Str	eam 🗆 Dito	h 🗆 Ca	anal 🗆 Other:				
OHWM Width: <u>5</u> ft.	OHWM Indica (check all that apply		☐ Clear lin	e □Shelvin	g	□Wrested vegetation	⊠Sco	uring □Water staining
Height: <u>0.1</u> ft. N/A□	□Bent, n vegetatio	natted, or missin n	g □Wrack lir	ne □Litter ar debris	nd	☐ Abrupt plant community cha		oil characteristic change
Width of Waterbody - To Bank to Top of Bank:		of Waterbody - ⁻ of Slope:	Toe of Slope	Width of Waterbo Water Edge:	ody - W		Depth of W Approx.)	/ater:
<u>10</u> ft.	_	<u>5_</u> ft.		_ N/A⊠	ft.	1	N/A⊠	ft.
Sinuosity: (check one) ⊠Straight	Water (Approx.)	velocity: fps		Bank height Right: Left:	2_ft.	E		e ight: 25_ degrees Left:
□Meanderin	9 N/A⊠				<u>2</u> ft.			_15_ degrees
Qualitative Attribut	tes							
Water Appearance: (check one) ⊠	No water □C	Clear □Turb		een □Sur surface scu		□Algal □ mats	Other:	
Substrate: (check all that apply) % of Substrate:	Bedrock	ulder ⊠ Cobb _% _20_%	le ⊠ Grave		⊠ Silt/ c 60_%	lay □ Organic%	□ Other	<u>":</u> %
Width of Riparian Zone ft N/A⊠	(check all that Avg. DBH	•	☐ Trees	: [_in	∃ Saplin	ngs/Shrubs: _in.	⊠ Her	rbs
Dominant Bank Vegetat	(approx.)							
Scirpus atrovirens, p	oolygonum per	nnslvanicum,	persicaria l	hydropuperoide	es, bar	rnyard grass,	Festuca	paradoxa
Aquatic Habitats (ex: sul	bmerged or emerged	d aquatic vegetation	n, overhanging l	banks/roots, leaf pac	ks, large	submerged wood,	riffles, deep	pools):
Aquatic Organisms Obs	served (list):							
T&E Species Observed	(list):							
Disturbances (ex: livesto			discharge pipe	es):				
Livestock access, m	ianure in wate	rboay						
Tributary is: (check one)	☐ Natural	⊠ Art	ificial, man-ma	ade 🗆 Manipu	ulated			
Stream Quality ^a : (check one)	☐ High	□ Mc	derate	⊠ Low				

Waterbody ID: Sauv002

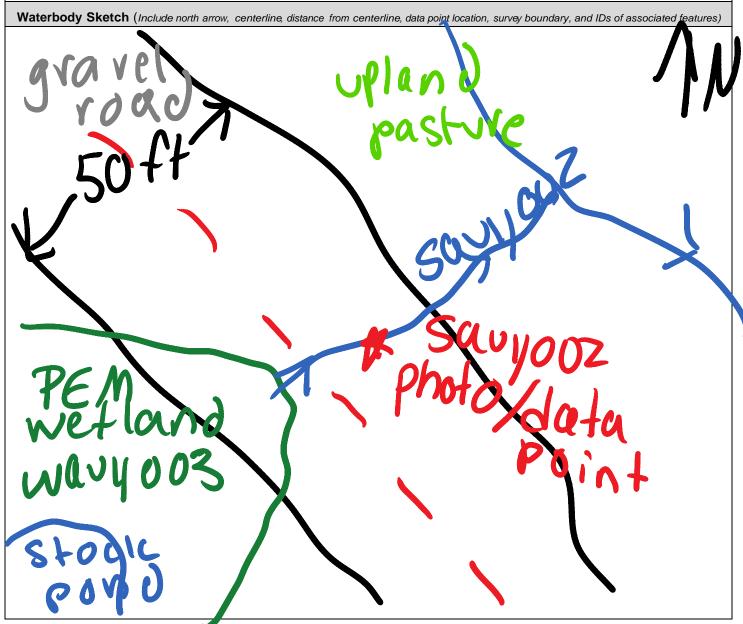
^a High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

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

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

Notes:

Stream originates in wetland wauy003, it crosses the road without a culvert or bridge.





Waterbody sauy002 facing southwest upstream



Waterbody sauy002 facing northwest downstream



Waterbody sauy002 facing northwest across

Linear Waterbody Data Sheet Survey Description Waterbody ID: Project Name: Waterbody Name: 3/17/16 Tamilton Branch ACP Saur 005 Photos: County/Parish: Company: Crew Member Initials: State: EST J Benton Augusta NW, SE, NE VA Associated Wetland ID(s): Tract Number(s): Nearest Milepost: 07-001-109 None Survey Type: □ Centerline (check one) ☑Re-Route ☐ Access Road Other: Physical Attributes Stream Classification: (check one) □ Ephemeral Intermittent □ Perennial Waterbody Type: (check one) Stream □ Ditch ☐ Canal Other: □River OHWM OHWM Indicator: Clear line □ Shelving W ater □Wrested ☐ Scouring Width: on bank vegetation staining Height: ☑Soil characteristic change Bent, matted, or missing □Wrack line □Litter and ☐ Abrupt plant 0.5 community change vegetation debris N/A Width of Waterbody - Toe of Slope Width of Waterbody - Water Edge to Depth of Water: Width of Waterbody - Top of Bank to Top of Bank: Water Edge: to Toe of Slope: 0.2 ft. 10 ft. N/A N/A Bank height Bank slope Water velocity: Sinuosity: (check one) (Approx.) Right: □Straight degrees Meandering degrees N/A Qualitative Attributes Water Appearance: (check one) □ No water © Clear □Turbid □Sheen □Surface □ Algal Other: on surface scum mats Substrate: ☐ Bedrock ☐ Boulder ☐ Cobble M Gravel A Sand ☑ Silt/ clay ☐ Organic Other: (check all that apply) 35 % 60 % % of Substrate: Width of Riparian Zone: Vegetative Layers: ☐ Trees: (check all that apply) ☐ Saplings/Shrubs: Herbs Avg. DBH of Dominants: N/A in. in. Dominant Bank Vegetation (list): Festuca Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Submerged veg. riffles Aquatic Organisms Observed (list): None observed T&E Species Observed (list): None observed Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): heavily impacted, livestock poor condition acces 5 Tributary is: (check one) Natural ☐ Artificial, man-made ☐ Manipulated Stream Quality *: (check one) ☐ High X Low ☐ Moderate

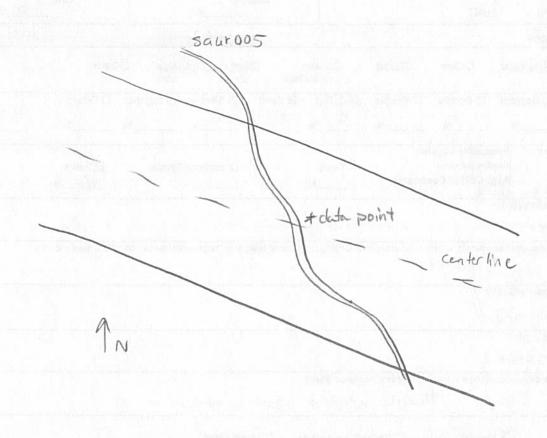
a High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

Intermittent channel, severely impacted by livestock





Waterbody data point saur005 facing northwest upstream.



Waterbody data point saur005 facing southeast downstream.



Waterbody data point saur005 facing northeast across bank.

Survey Description	1							
Project Name:	Waterbody Name:				aterbody ID:	Date:		
Atlantic Coast Pipeli	UNT to Hamilton Branch			Sa	auz003	5/25/2016		
State:	County:	•	Company:		Crew N	Member Initials:	Phot	os:
	Augusta		ERM		SS, A		1 - 3	
Tract Number(s):			Nearest Mile	post:		Associated We	etland ID(s)):
07-001-F029			109			None		
Survey Type: (check one)	⊠Centerline	Re-F	Route	□Access Road	<u> </u>	□ Other:		
Physical Attributes Stream Classification:	3							
(check one)	Ephemera	ıl ⊠Inter	mittent	□Perennial				
Waterbody Type: (check one)	River ⊠ Str	eam 🗆 Dito	:h □ Ca	ınal 🗆 Other:	•			
OHWM Width: <u>3</u> ft.	OHWM Indicat (check all that apply		☐ Clear lin	e ⊠Shelvin	g	□Wrested vegetation	□Sco	uring □Water staining
Height: <u>0.5</u> ft. N/A□	□Bent, n vegetatio	natted, or missin n	g □Wrack lir	ne □Litter ar debris	nd	☐ Abrupt plant community cha		oil characteristic change
Width of Waterbody - To Bank to Top of Bank:		of Waterbody - ' of Slope:		Width of Waterbo Water Edge:	ody - W		Depth of W (Approx.)	ater:
_ <u>4_</u> ft.	_	<u>2_</u> ft.		_ N/A□	_3_ft.	1	N/A□	<u>0.5</u> ft.
Sinuosity: (check one) ⊠Straight	(Approx.)	velocity: 0.5fps		Bank height Right: Left:	<u>0.5_</u> ft.			i ght: <u>45</u> degrees Left:
□Meanderin	- 14			_	<u>0.5_</u> ft.			_45_ degrees
Qualitative Attribut	tes							
Water Appearance: (check one) □	No water □0	Clear □Turb		een □Sui surface scu		□Algal □ mats	□Other:	
Substrate: (check all that apply) % of Substrate:	Bedrock DBo	ulder □ Cobb	le □ Grave	el □ Sand □ %	⊠ Silt/ c 100_%	elay □ Organic %		: %
Width of Riparian Zone	(check all that Avg. DBH	•	☐ Trees	: [_in.	□ Saplir	ngs/Shrubs: _in.	⊠ Her	bs
N/A □ Dominant Bank Vegeta	(approx.) tion (list):							
Poa pratense	,							
Aquatic Habitats (ex: su	bmerged or emerged	d aquatic vegetatio	n, overhanging l	oanks/roots, leaf pac	ks, large	submerged wood,	riffles, deep	pools):
None								
Aquatic Organisms Obs	served (list):							
None								
T&E Species Observed	(list):							
None								
Disturbances (ex: livesto	ck access, manure i	n waterbody, waste	e discharge pipe	s):				
None								
Tributary is: (check one)		□ Art	ificial, man-ma	ade 🗆 Manipi	ulated			
Stream Quality ^a : (check one)	☐ High	□ Мо	oderate	⊠ Low				

Waterbody ID: sauz003

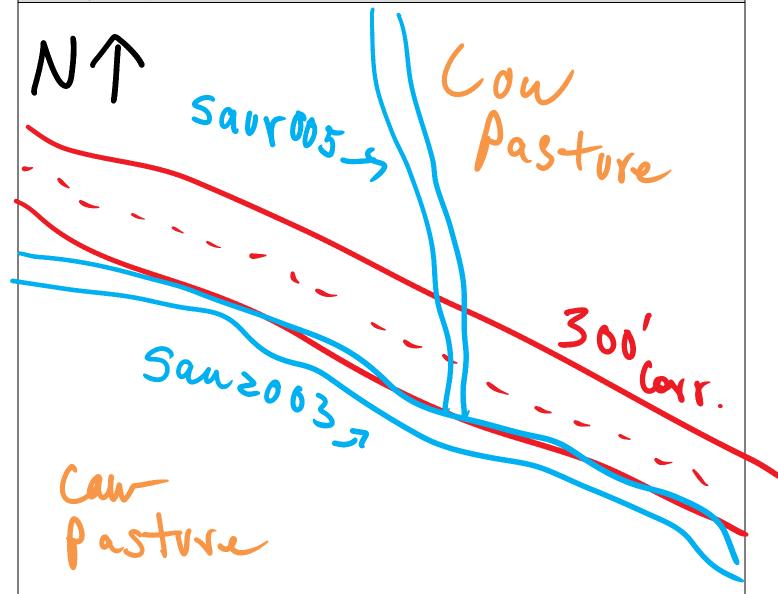
^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

This is an incised intermittent stream in a cattle pasture.





Waterbody sauz003 facing west upstream



Waterbody sauz003 facing east downstream



Waterbody sauz003 facing south across

Open Waterbody Data Sheet

Open waterboo	ay Data Sneet							
Survey Descripti	on							
Project Name:		Waterbody N	lame:		[Waterbody ID:		Date:
Atlantic Coast Pip	eline	Unnamed	Pond			oauz001		5/25/2016
State:	County:		Company:		Crew	Member Initials:	Photos:	<u> </u>
Virginia	Augusta		ERM		SS,	AS	1 - 3	
Tract Number(s):			Nearest Milepost	l:	<u> </u>	Associated Wetland	I ID(s):	
07-001-F031			110			None		
Survey Type: (check one)	⊠Centerline	e □F	Re-Route	□ Access Ro	ad	□Other:		
Physical Attribut	es							
Waterbody Type: (check one) □ Sto	ck Pond Natural	Pond □ La	ke Reservoir	⊠ Impoundme	ent 🗆	Oxbow Other:		
Hydrologic Regime:	□ Permanently	Flooded	Semipermanentl	y Flooded	Seas	sonally Flooded	l Temporari	ily Flooded
OHWM	OHWM India						'	
Height:	(check all that ap	oply)	⊠ Clear li on bank	ne □She	elving	□Wrested vegetation	□Sco	uring □Water staining
<u>6</u> ft.	□Bent vegeta	, matted, or m tion	nissing □Wrack line	□Litte debris	er and	□Abrupt plan community ch	t □Soil ch ange	naracteristic change
Depth of Water:		Bank heig	ht (average):			Bank slope (ave	rage):	
<u>_5</u> N/A□	_ft.		<u>.7</u> f	t.		-	70 degree	es
Qualitative Attrib	outes	L						
Water Appearance: (check one)	□No water ⊠	Clear □T	urbid □She on sur		Surface	e □Algal □ mats	Other:	
Substrate: (check all that apply)	☐ Bedrock ☐ Bo	oulder 🗆 C	obble ⊠ Gravel	⊠ Sand	□ Si	lt/ clay ☐ Organic	☐ Other:	
% of Substrate:	%	%	<u>60</u> %	40_%		%%		%
Width of Riparian Zo	ne: Vegetative	-	☐ Trees:			olings/Shrubs:	⊠ Hei	rha
<u>250</u> ft.						Jiiigs/Siliubs.		105
N/A□	-	of Dominants	s :in	١.		in.		
Dominant Bank Vege	(approx.)							
Poa pratense	()							
Aquatic Habitats (ex:	submerged or emerged aq	uatic vegetation, o	overhanging banks/roots	, leaf packs, large s	ubmerge	d wood, riffles, deep pools,	etc.):	
A few Typha latifo	olia at northern e	nd.						
Aquatic Organisms (Observed (list):							
None								
T&E Species Observe	ed (list):							
None								
Disturbances (ex: live	stock access, manure	in waterbody, w	aste discharge pipes):				
None								
Waterbody is: (check one)	☐ Natural		Artificial, man-ma	de 🗆 Mar	nipulate	ed		
Waterbody Quality a :	: □ High		Moderate	⊠ Low				

Waterbody	ID
Waterbody oauz001	

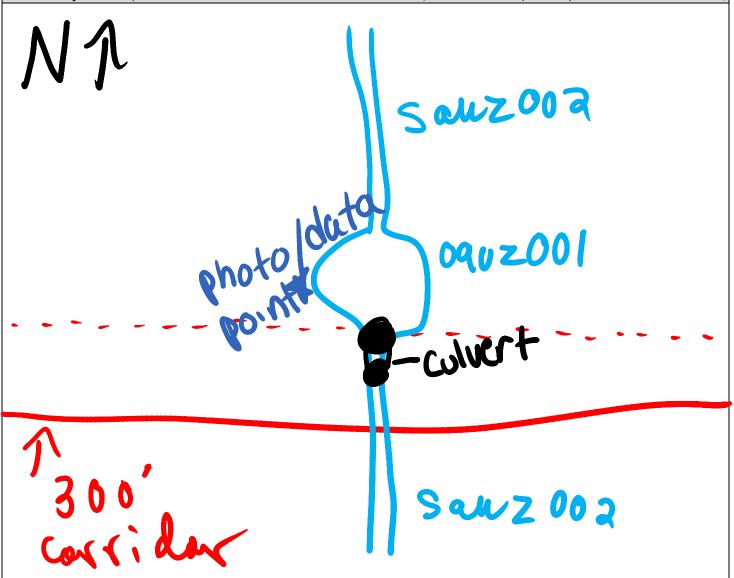
^a **High Quality:** Natural, natural bank vegetation around entire waterbody; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

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:

This is a man-made impoundment within a stream corridor.





Open waterbody oauz001 facing north



Open waterbody oauz001 facing northeast



Open waterbody oauz001 facing east

C								
Survey Description Project Name:	1	Waterbody Nai	ne.		lw	aterbody ID:		Date:
Atlantic Coast Pipeli	ne	UNT to Ham		1		auz002		5/25/2016
State:	County:		Company:		Crew N	Member Initials:	Photos	<u> </u> :
Virginia	Augusta		ERM		SS, A	S	1 - 3	
Tract Number(s):			Nearest Mile	post:		Associated We	etland ID(s):	
07-001-F031			110			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	ınal 🗆 Other:				
OHWM Width:	OHWM Indica (check all that apply		⊠ Clear line	e □Shelvin	g	□Wrested vegetation	□Scourir	ng □Water staining
Height: 0.5_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 - T Bank to Top of Bank:		of Waterbody - of Slope:		Width of Waterbo Water Edge:	ody - W		Depth of Wate	er:
_ <u>3_</u> ft.		<u>2_</u> ft.		· ·	<u>2</u> ft.	1	N/A□	<u>0.5_</u> ft.
Sinuosity: (check one) ⊠Straight	Water (Approx.)	velocity: 0.5fps		Bank height Right: Left:	_1_ft.		Bank slope Righ Le	60 degrees
□Meanderir	g N/A□				_1_ft.			60 degrees
Qualitative Attribut	tes							
Water Appearance: (check one)	No water ⊠0	Clear □Turb	-	een □Sur surface scu		□Algal □ mats	□Other:	
Substrate: (check all that apply) % of Substrate:	Bedrock DBo	ulder Cobb	le ⊠ Grave _95_%	sl ⊠ Sand □ _ <u>5</u> % _	□ Silt/ c	lay □ Organic % %	☐ Other:%	
Width of Riparian Zone 250 ft N/A□	(check all that Avg. DBH	-	☐ Trees.	: [_in	□ Saplir	ngs/Shrubs: _in.	⊠ Herbs	
Dominant Bank Vegeta Poa pratense	(approx.) tion (list):							
			<u> </u>				:00	
Aquatic Habitats (ex: su None	bmerged or emerged	aquatic vegetatio	n, overnanging t	oanks/roots, leaf paci	ks, large	submerged wood,	rimes, deep poo	os):
Aquatic Organisms Ob	served (list):							
None	, ,							
T&E Species Observed	(list):							
None								
Disturbances (ex: livesto	ck access, manure i	n waterbody, waste	discharge pipe	s):				
Tributary is: (check one)	Natural	□ Art	ificial, man-ma	ade 🗆 Manipu	ulated			
Stream Quality ^a : (check one)	☐ High	□ Mc	derate	⊠ Low				

Waterbody sauz002	ID:
sauz002	

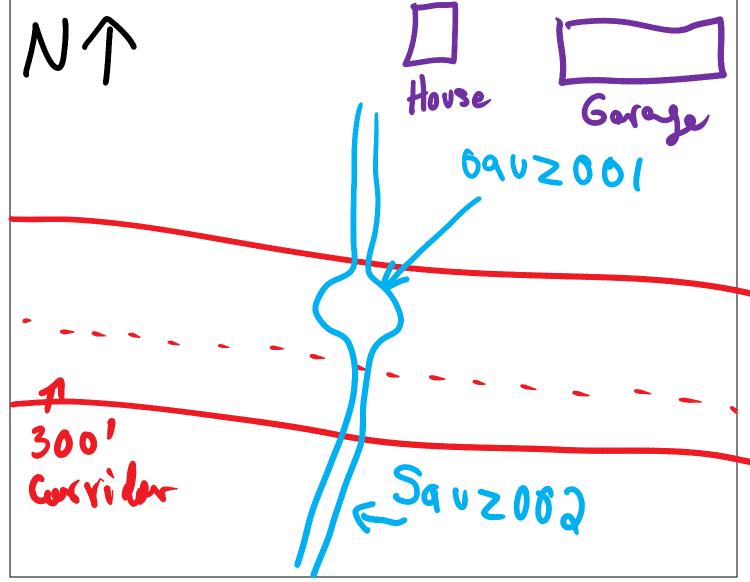
^a High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

This is an incised perennial stream in a maintained lawn.





Waterbody sauz002 facing north upstream



Waterbody sauz002 facing south downstream



Waterbody sauz002 facing west across

Survey Description	1							
Project Name:	•	Waterbody Nai	ne:		W	aterbody ID:		Date:
Atlantic Coast Pipeli	ne	UNT to Ham	ilton Branch	า	sa	auz001		5/25/2016
State:	County:		Company:		Crew N	lember Initials:	Photos:	
	Augusta		ERM		SS, A	S	1 - 3	
Tract Number(s):			Nearest Mile	post:		Associated We	tland ID(s):	
07-001-F035			110			None		
Survey Type: (check one)	⊠Centerline	e □Re-F	Route	□Access Road		□Other:		
Physical Attributes Stream Classification:	3							
(check one)	Ephemera	al □Inter	mittent	⊠Perennial				
Waterbody Type: (check one)	River ⊠ Str	eam 🗆 Dito	:h □ Ca	anal Other:				
OHWM Width:	OHWM Indica (check all that apply		☐ Clear lin	e ⊠Shelvinį	g	□Wrested vegetation	□Scourin	g □Water staining
Height: 	□Bent, r vegetatio	natted, or missin n	g □Wrack lir	ne □Litter an debris	nd	□ Abrupt plant community cha		haracteristic change
Width of Waterbody - T Bank to Top of Bank:		of Waterbody - of Slope:		Width of Waterbo Water Edge:	ody - W		epth of Wate	r:
_ <u>6_</u> ft.	_	<u>4_</u> ft.			<u>2</u> ft.	N	J/A□	<u>0.2</u> ft.
Sinuosity: (check one) ⊠Straight	Water (Approx.)	velocity:		Bank height Right: Left:	ft.	В	Bank slope Righ Lef	45 degrees
□Meanderin	g N/A□				<u>4_</u> ft.			90 degrees
Qualitative Attribut	tes							
Water Appearance: (check one)	No water ⊠0	Clear □Turb	-	een □Sur surface scu		□Algal □ mats	Other:	
Substrate: (check all that apply) % of Substrate:	Bedrock	ulder ⊠ Cobb % _ <u>5</u> %	le ⊠ Grave	el □ Sand □% _		lay □ Organic _%%	□ Other:	
Width of Riparian Zone 250 ft N/A□	(check all that	-	☐ Trees	: [_in	∃ Saplin	ngs/Shrubs: _in.	⊠ Herbs	
Dominant Bank Vegeta Poa pratense								
Aquatic Habitats (ex: su None	bmerged or emerged	d aquatic vegetatio	n, overhanging I	banks/roots, leaf pack	ks, large	submerged wood, I	riffles, deep poo	is):
Aquatic Organisms Obs None	served (list):							
T&E Species Observed	(list):							
None								
Disturbances (ex: livesto	ck access, manure i	n waterbody, waste	e discharge pipe	es):				
Tributary is: (check one)	Natural	□ Ari	ificial, man-ma	ade □ Manipu	ulated			
Stream Quality ^a :	□ High		oderate	⊠ Low	-			

Waterbody	ID
Waterbody sauz001	

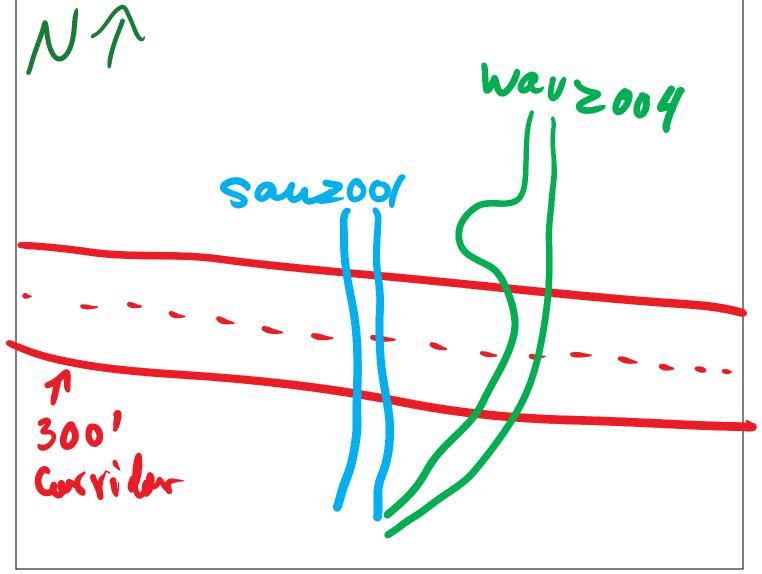
^a High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

This is a well incised perennial stream in an agricultural field.





Waterbody sauz001 facing northwest upstream



Waterbody sauz001 facing southeast downstream



Waterbody sauz001facing southwest across

Survey Description	1				<u> </u>			1-
Project Name:	Waterbody Name:				aterbody ID:	Date:		
Atlantic Coast Pipeli	ne	UNT to Ham	ilton Branch	1	sa	auz005		6/14/2016
State:	County:	1	Company:		Crew N	lember Initials:	Photos	:
•	Augusta		ERM		SS		1-3	
Tract Number(s):			Nearest Mile	post:		Associated Wet	land ID(s):	
07-001-F037			109.8			None		
Survey Type: (check one)	□Centerline	□Re-F	Route	⊠Access Road		□Other:		
Physical Attributes Stream Classification:	3							
(check one)	□Ephemera	ıl □Inter	mittent	⊠Perennial				
Waterbody Type: (check one)	River ⊠ Stre	eam 🗆 Dito	:h □ Ca	nal Other:	:			
OHWM Width: <u>6</u> ft.	OHWM Indicat (check all that apply		⊠ Clear line on bank	e □Shelvin	g	□Wrested vegetation	□Scouri	ng □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 char		characteristic change
Width of Waterbody - To Bank to Top of Bank:		of Waterbody - of Slope:		Width of Waterbo Water Edge:	ody - W	ater Edge to D	epth of Wate	er:
<u>8</u> ft.	_	<u>6</u> ft.		 N/A□	<u>6</u> _ft.	N	/A□	<u>0.25</u> ft.
Sinuosity: (check one) ⊠Straight	(Approx.)	velocity: 0.5fps		Bank height Right: Left:	_3_ft.	В	ank slope Righ Le	85 degrees
□Meanderin	9 N/A□				_3_ft.			_85_ degrees
Qualitative Attribut	tes							
Water Appearance: (check one) □	No water ⊠C	Clear □Turb		een □Sur surface scu		□Algal □ mats	Other:	
Substrate: (check all that apply) % of Substrate:	Bedrock DBo	ulder □ Cobb %%	lle ⊠ Grave	I □ Sand □		lay □ Organic %%	□ Other:%	
Width of Riparian Zone	(check all that Avg. DBH		□ Trees: in.		☑ Saplin <u>_2</u> _in.	ngs/Shrubs:	⊠ Herbs	
N/A □ Dominant Bank Vegeta	(approx.)							
Robinia pseudoacad								
Aquatic Habitats (ex: su	bmerged or emerged	d aquatic vegetatio	n, overhanging b	panks/roots, leaf pac	ks, large	submerged wood, r	iffles, 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	e discharge pipe	s):				
None		• •	5 112					
Tributary is: (check one)	⊠ Natural	□ Art	ificial, man-ma	ade 🗆 Manipu	ulated			
Stream Quality ^a : (check one)	☐ High	□ Мо	oderate	⊠ Low				

Waterbody sauz005	ID
sauz005	

^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:

This is a small perennial stream.

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

300 Consider Sauzoos Fire tation eerfield Valley



Waterbody sauz005 facing west upstream



Waterbody sauz005 facing east downstream



Waterbody sauz005 facing south across

0 5								
Survey Description Project Name:	1	Waterbody Nar	no:		lw	aterbody ID:		Date:
Atlantic Coast Pipeli	no	_		ar.		auc128	3/11/2016	
Alianilic Coast Pipeli	ne	UNT to Calfp	asiule Rive	31	Š	aucizo		3/11/2010
State:	County:		Company:		Crew N	Member Initials:	: Photos	3:
Virginia	Augusta		NRG		CR, S	SA	1-3	
Tract Number(s):			Nearest Mile	post:	I	Associated W	etland ID(s):	
07-001-F039			110			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	ınal 🗆 Other:	:			
OHWM Width:	OHWM Indica (check all that apply		⊠ Clear lin	e □Shelvin	g	□Wrested vegetation	⊠Scouri	ng □Water staining
Height: 0.5 ft.	⊠Bent, r vegetatio	natted, or missin n	g □Wrack lir	ne □Litter ar debris	nd	□Abrupt plant		characteristic change
Width of Waterbody - To				Width of Waterbo	ody - W		Depth of Wat	er:
Bank to Top of Bank:	to Toe	of Slope:		Water Edge:			(Approx.)	
_ <u>5</u> ft.	_	_1ft.		_ N/A□	_1_ft.	I	N/A□	<u>0.2</u> ft.
Sinuosity:		velocity:		Bank height		I	Bank slope	
(check one) ☐Straight	(Approx.)			Right:	2 #		Rigl	
		<u>0.5</u> fps		Left:	<u>2</u> ft.		Le	80 degrees
⊠Meanderin	9 N/A□				_2_ft.			80 degrees
Qualitative Attribut	es							
Water Appearance: (check one)	No water ⊠0	Clear □Turb	-	een □Sui surface sci		□Algal [mats	□Other:	
Substrate:	Bedrock ☐ Bo	ulder 🗵 Cobb	le ⊠ Grave	el ⊠ Sand 🏻	⊠ Silt/ c	lay 🗆 Organic	☐ Other:	
(check all that apply) % of Substrate:	%	% <u>_5</u> %	<u>40</u> %		<u>10</u> %	%		
Width of Riparian Zone	Vegetative	Lavers:						
20 ft	(check all that		⊠ Trees: _ <u>12</u> _in.		⊠ Saplir _2_in.	ngs/Shrubs:	⊠ Herbs	
N/A 🗆	(approx.)		_ <u></u>	-				
Dominant Bank Vegetar Red maple, sweet-g		ed-cedar, mul	tiflora rose,	dropseed				
Aquatic Habitats (ex: su	bmeraed or emeraed	d aquatic vegetation	n. overhanging b	panks/roots, leaf pac	ks. large	submerged wood.	riffles, deep po	ols):
None			,		-, - 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):				
Tributary is: (check one)		□ Art	ificial, man-ma	ade 🗆 Manipi	ulated			
Stream Quality ^a : (check one)	☐ High	⊠ Mc	derate	□ Low				

Waterbody	ID
Sauc128	

^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:

Wetland receives some water input from a PEM wetland located outside the study corridor