

Linear Waterbody Data Sheet

Survey Description				
Project Name: ACP		Waterbody Name: UNT to WESTERN BRANCH RESERVOIR	Waterbody ID: SSU0100	Date: 3-8-16
State: VA	County/Parish: Suffolk	Company: ESI	Crew Member Initials: LR, WV	Photos: Facing E, W, N
Tract Number(s): 26-060-4068		Nearest Milepost: 61.8	Associated Wetland ID(s): WSU0029	
Survey Type: (check one) <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial				
Waterbody Type: (check one) <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:				
OHWM Width: 3 ft.	OHWM Height: 0.5 ft.	OHWM Indicator: (check all that apply) <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input checked="" type="checkbox"/> Water staining <input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change		
N/A <input type="checkbox"/>				
Width of Waterbody - Top of Bank to Top of Bank: 4 ft.	Width of Waterbody - Toe of Slope to Toe of Slope: 3 ft.	Width of Waterbody - Water Edge to Water Edge: 2 ft.	Depth of Water: (Approx.) 0.5 ft.	
N/A <input type="checkbox"/>		N/A <input type="checkbox"/>	N/A <input type="checkbox"/>	
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: (Approx.) < 1 fps	Bank height Right: 2 ft. Left: 2 ft.	Bank slope Right: 75 degrees Left: 60 degrees	
N/A <input type="checkbox"/>	N/A <input type="checkbox"/>			
Qualitative Attributes				
Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: (check all that apply) % of Substrate: _____% _____% _____% _____% 100% _____% _____% _____%				
Width of Riparian Zone: 20 ft.	Vegetative Layers: (check all that apply) Avg. DBH of Dominants: (approx.)	<input checked="" type="checkbox"/> Trees: 6 in.	<input checked="" type="checkbox"/> Saplings/Shrubs: 2 in.	<input checked="" type="checkbox"/> Herbs: NA in.
N/A <input type="checkbox"/>				
Dominant Bank Vegetation (list): <i>Ligustrum sinense, Ilex opaca, Pinus taeda</i>				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): <i>leaf packs, overhanging banks</i>				
Aquatic Organisms Observed (list): <i>None observed</i>				
T&E Species Observed (list): <i>None observed</i>				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): <i>None</i>				
Tributary Is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality*: (check one) <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low				

Waterbody ID:

SS40100

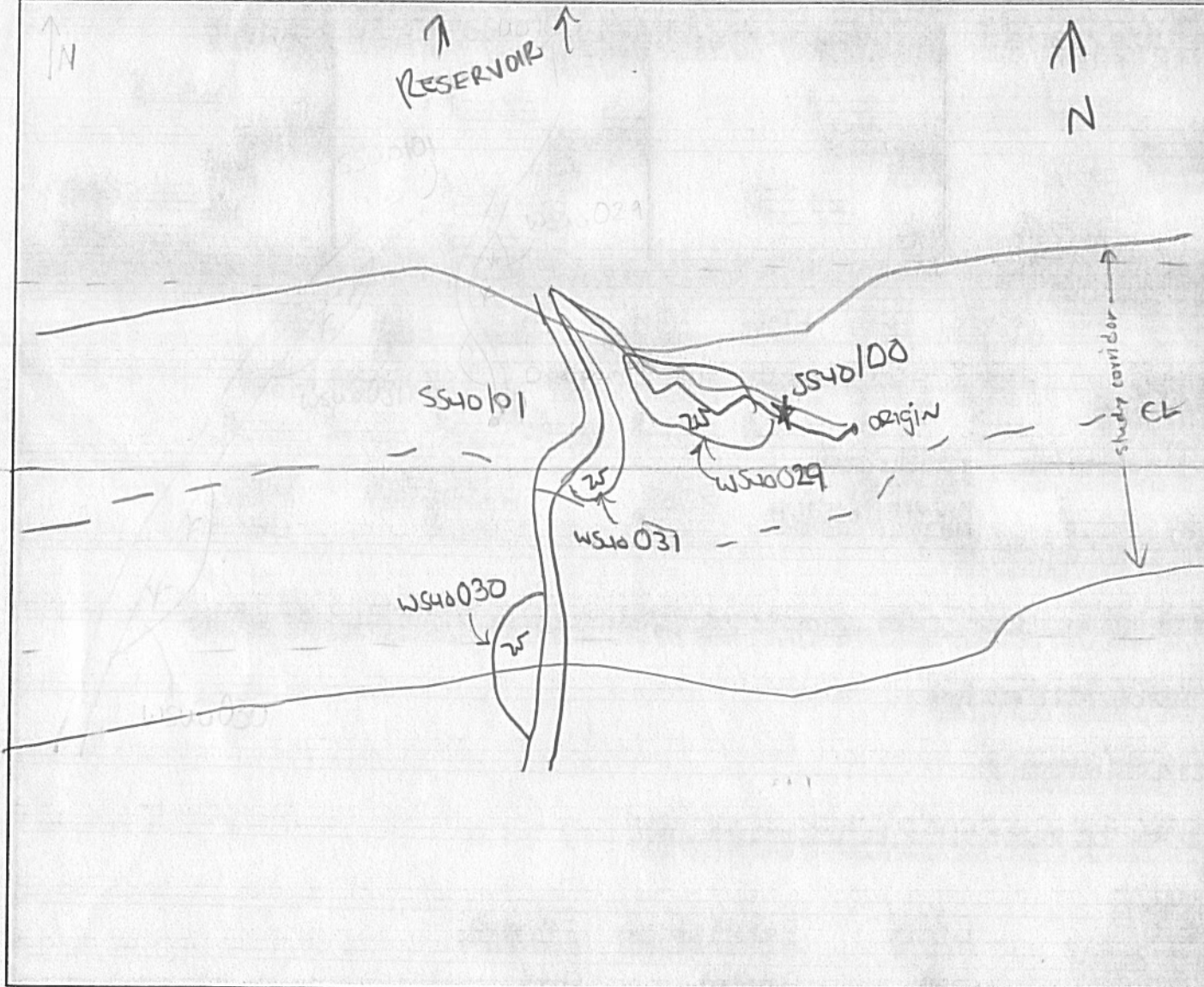
High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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



Environmental Field Surveys
Waterbody Photo Page



Waterbody data point ssuo100 facing east upstream.



Waterbody data point ssuo100 facing west downstream.

Environmental Field Surveys
Waterbody Photo Page



Waterbody data point ssuo100 facing north across.

Linear Waterbody Data Sheet

Survey Description			
Project Name: Atlantic Coast Pipeline		Waterbody Name: UNT to Western Branch Reservoir	
Waterbody ID: ssua400		Date: 2/25/2016	
State: Virginia	County: Suffolk	Company: NRG	Crew Member Initials: GB, CR
Photos: 3 photos			
Tract Number(s): 26-060-A069; 26-060-A070		Nearest Milepost: 62.4 – VNG Lateral	Associated Wetland ID(s): none
Survey Type: <small>(check one)</small> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <small>(check one)</small> <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial			
Waterbody Type: <small>(check one)</small> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:			
OHWM Width: 2.0 ft.		OHWM Indicator: <small>(check all that apply)</small>	
OHWM Height: 0.33 ft.		<input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining	
N/A <input type="checkbox"/>		<input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change	
Width of Waterbody - Top of Bank to Top of Bank: 4.0 ft.	Width of Waterbody - Toe of Slope to Toe of Slope: 1.0 ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input checked="" type="checkbox"/> _____ ft.	Depth of Water: <small>(Approx.)</small> N/A <input checked="" type="checkbox"/> _____ ft.
Sinuosity: <small>(check one)</small> <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering	Water velocity: <small>(Approx.)</small> _____ fps N/A <input checked="" type="checkbox"/>	Bank height Right: 2.5 ft. Left: 2.0 ft.	Bank slope Right: 60 degrees Left: 65 degrees
Qualitative Attributes			
Water Appearance: <small>(check one)</small> <input checked="" type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: <small>(check all that apply)</small> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Other:			
% of Substrate: _____ % _____ % _____ % _____ % 65 % 15 % 20 % _____ %			
Width of Riparian Zone: N/A <input checked="" type="checkbox"/> _____ ft.	Vegetative Layers: <small>(check all that apply)</small> <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs		
	Avg. DBH of Dominants: <small>(approx.)</small> 9.0 in. 1.0 in.		
Dominant Bank Vegetation <small>(list)</small> : sweetgum, American holly, yellow poplar, loblolly pine, red maple, beech, ironwood, mountain laurel, ryegrass, slender wood oats, ebony spleenwort, greenbrier, grape			
Aquatic Habitats <small>(ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools)</small> : leaf packs			
Aquatic Organisms Observed <small>(list)</small> : none			
T&E Species Observed <small>(list)</small> : none			
Disturbances <small>(ex: livestock access, manure in waterbody, waste discharge pipes)</small> : sediment in run-off from agricultural field; parallels existing pipeline ROW			
Tributary is: <small>(check one)</small> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Stream Quality ³ : <small>(check one)</small> <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> 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.

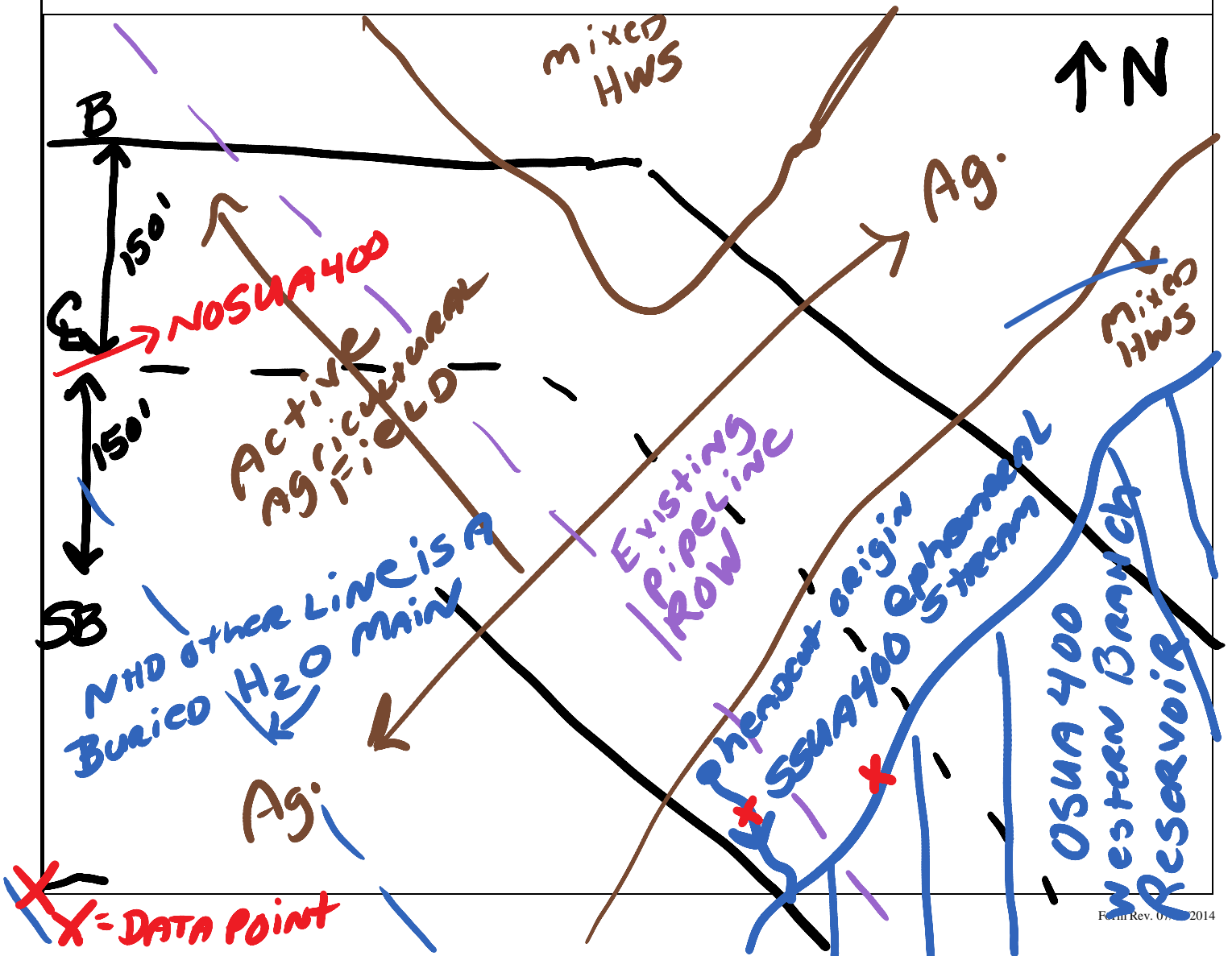
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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

Begins within corridor at headcut at edge of agricultural field; parallels existing pipeline ROW; downstream flows into reservoir osua400 near edge of survey corridor.

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





Waterbody ssua400 facing northwest upstream



Waterbody ssua400 facing southeast downstream



Waterbody ssua400 facing northeast across

Open Waterbody Data Sheet

Survey Description			
Project Name: Atlantic Coast Pipeline		Waterbody Name: Lake Western Branch	
Waterbody ID: osua400		Date: 2/25/2016	
State: Virginia	County: Suffolk	Company: NRG	Crew Member Initials: GB, CR
Photos: 3 photos			
Tract Number(s): 26-060-A069		Nearest Milepost: 62.4; VNG Lateral	
Associated Wetland ID(s): none			
Survey Type: <small>(check one)</small> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Waterbody Type: <small>(check one)</small> <input type="checkbox"/> Stock Pond <input type="checkbox"/> Natural Pond <input type="checkbox"/> Lake <input checked="" type="checkbox"/> Reservoir <input type="checkbox"/> Impoundment <input type="checkbox"/> Oxbow <input type="checkbox"/> Other:			
Hydrologic Regime: <input checked="" type="checkbox"/> Permanently Flooded <input type="checkbox"/> Semipermanently Flooded <input type="checkbox"/> Seasonally Flooded <input type="checkbox"/> Temporarily Flooded			
OHWM Height: <u>15.0</u> ft.		OHWM Indicator: <small>(check all that apply)</small> <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining	
<input type="checkbox"/> Bent, matted, or missing vegetation		<input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change	
Depth of Water: N/A <input type="checkbox"/> <u>13.0</u> ft.		Bank height (average): <u>6.0</u> ft.	
Bank slope (average): <u>15</u> degrees			
Qualitative Attributes			
Water Appearance: <small>(check one)</small> <input type="checkbox"/> No water <input type="checkbox"/> Clear <input checked="" type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: <small>(check all that apply)</small> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <input type="checkbox"/> Other:			
% of Substrate: _____% _____% _____% _____% <u>50</u> % <u>50</u> % _____% _____%			
Width of Riparian Zone: N/A <input type="checkbox"/> <u>150</u> ft.		Vegetative Layers: <small>(check all that apply)</small> <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input type="checkbox"/> Herbs	
Avg. DBH of Dominants: <small>(approx.)</small> <u>10.0</u> in. <u>1.0</u> in.			
Dominant Bank Vegetation <i>(list)</i> : Beech, sweetgum, loblolly pine, white oak, American holly, iron wood, yellow poplar, red maple, mountain laurel, greenbrier, huckleberry, slender wood oats			
Aquatic Habitats <small>(ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.)</small> : Deep pools, some overhanging roots, large submerged woody debris			
Aquatic Organisms Observed <i>(list)</i> : Waterfowl, fish			
T&E Species Observed <i>(list)</i> : none			
Disturbances <small>(ex: livestock access, manure in waterbody, waste discharge pipes)</small> : Existing pipeline ROW			
Waterbody is: <small>(check one)</small> <input type="checkbox"/> Natural <input checked="" type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Waterbody Quality ^a : <small>(check one)</small> <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low			

Waterbody ID:

osua400

^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.

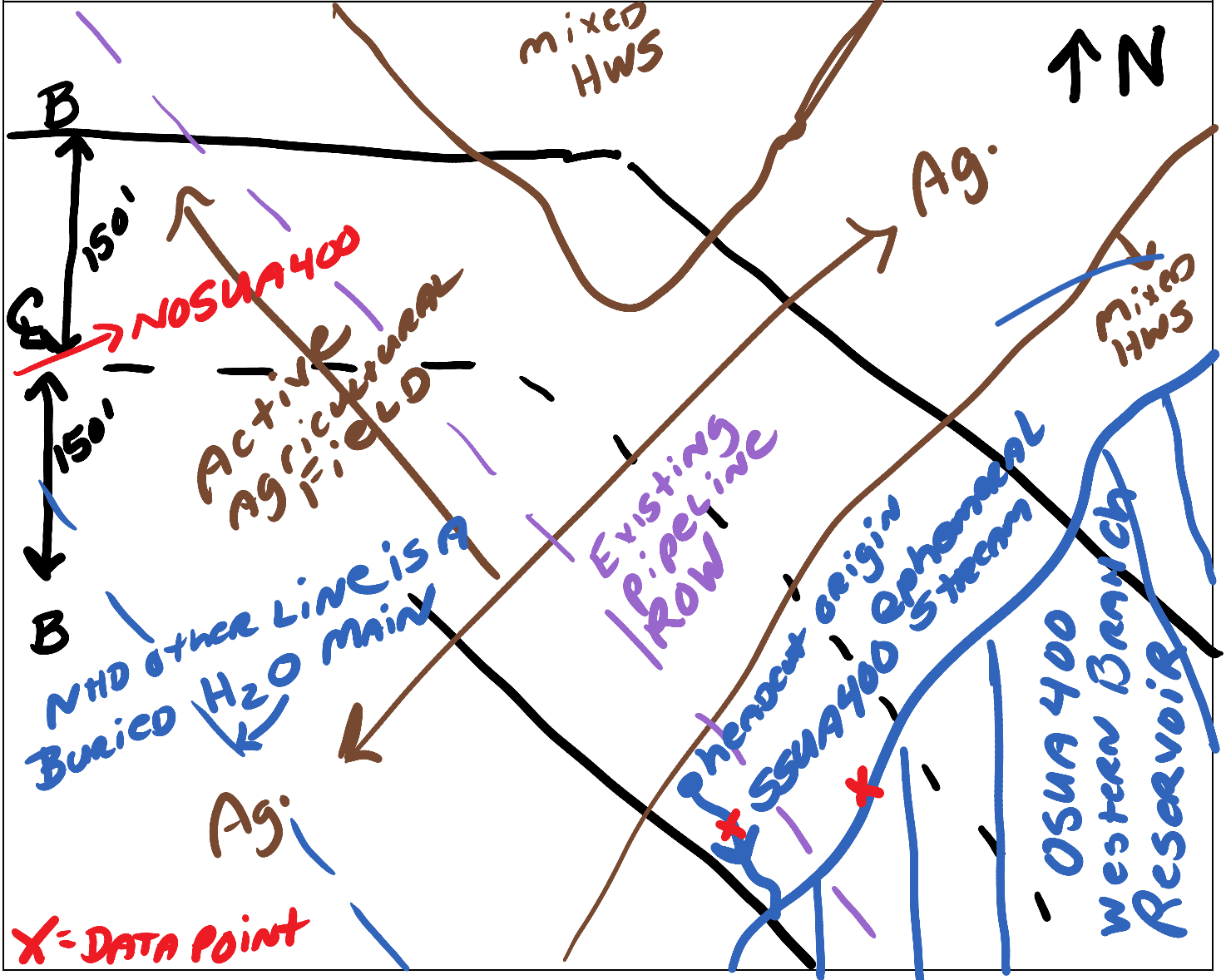
Moderate Quality: Altered by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or bank vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers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

Artificial water supply reservoir; ephemeral stream ssua400 is a tributary; crossing is at an arm of reservoir.

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





Open waterbody OSUA400 facing east



Open waterbody OSUA400 facing northeast



Open waterbody OSUA400 facing southeast

Linear Waterbody Data Sheet

Survey Description			
Project Name: ACP		Waterbody Name: LNT to Western Branch Reser.	Waterbody ID: 55u0114
State: VA		County/Parish: Suffolk	Date: 5/4/16
Company: ESI	Crew Member Initials: LR, JB	Photos: Facing S, N, E	
Tract Number(s): 26-060-A075		Nearest Milepost: 62.7	Associated Wetland ID(s): WSU0041
Survey Type: (check one) <input type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial			
Waterbody Type: (check one) <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:			
OHWM Width: 3 ft.	OHWM Indicator: (check all that apply)	<input checked="" type="checkbox"/> Clear line on bank	<input type="checkbox"/> Shelving
OHWM Height: 0.5 ft.	<input checked="" type="checkbox"/> Bent, matted, or missing vegetation	<input type="checkbox"/> Wrack line	<input type="checkbox"/> Litter and debris
N/A <input type="checkbox"/>	<input type="checkbox"/> Wrested vegetation	<input type="checkbox"/> Scouring	<input type="checkbox"/> Water staining
<input type="checkbox"/> Abrupt plant community change	<input type="checkbox"/> Soil characteristic change		
Width of Waterbody - Top of Bank to Top of Bank: 5 ft.	Width of Waterbody - Toe of Slope to Toe of Slope: 3 ft.	Width of Waterbody - Water Edge to Water Edge: 2 ft.	Depth of Water: (Approx.) 0.5 ft.
N/A <input type="checkbox"/>	N/A <input type="checkbox"/>	N/A <input type="checkbox"/>	N/A <input type="checkbox"/>
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: (Approx.) < 1 fps	Bank height Right: 1 ft. Left: 1 ft.	Bank slope Right: 45 degrees Left: 45 degrees
N/A <input type="checkbox"/>	N/A <input type="checkbox"/>	N/A <input type="checkbox"/>	N/A <input type="checkbox"/>
Qualitative Attributes			
Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <input type="checkbox"/> Other:			
% of Substrate: _____%	% of Substrate: _____%	% of Substrate: 30%	% of Substrate: 70%
Width of Riparian Zone: 100 ft.	Vegetative Layers: (check all that apply)	<input checked="" type="checkbox"/> Trees: 8 in.	<input checked="" type="checkbox"/> Saplings/Shrubs: 2 in.
N/A <input type="checkbox"/>	Avg. DBH of Dominants: (approx.)	N/A in.	N/A in.
Dominant Bank Vegetation (list): Acer rubrum, Microstegium vimineum, Saururus cernuus, Kalmia			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): leaf packs			
Aquatic Organisms Observed (list): none			
T&E Species Observed (list): none			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): none			
Tributary is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Stream Quality ^a : (check one) <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low			

Waterbody ID:

SSU0114

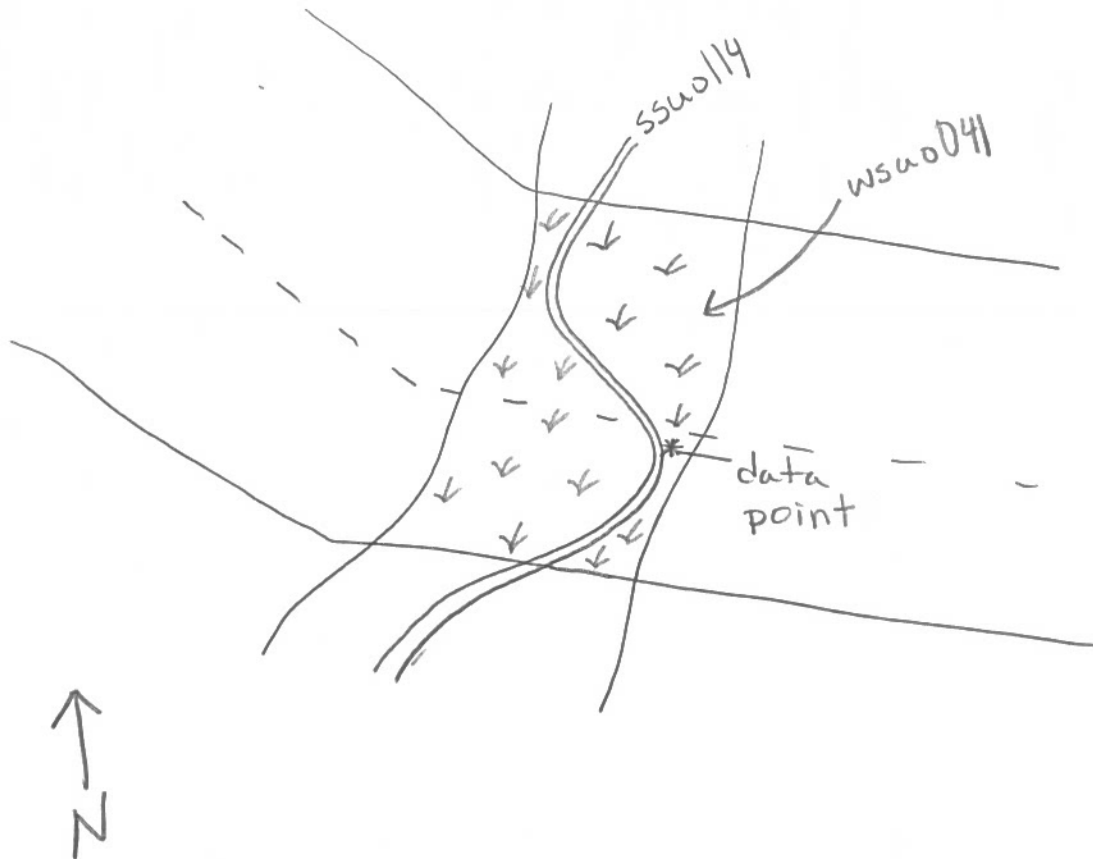
▪ **High Quality:** Natural, natural bank vegetation around entire waterbody; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

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

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

Notes:

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



Environmental Field Surveys
Waterbody Photo Page



Waterbody data point ssuo114 facing south upstream.



Waterbody data point ssuo114 facing north downstream.

Environmental Field Surveys
Waterbody Photo Page



Waterbody data point ssuo114 facing east across bank.

Linear Waterbody Data Sheet

Survey Description			
Project Name: ACP	Waterbody Name: LNT to Western Branch Reservoir	Waterbody ID: SSUO116	Date: 5/4/16
State: VA	County/Parish: Suffolk	Company: ESI	Crew Member Initials: LR, JB
Tract Number(s): 26-060-A075		Nearest Milepost: 63.0	Associated Wetland ID(s): WSUO042
Survey Type: (check one) <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial			
Waterbody Type: (check one) <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:			
OHWM Width: 2 ft.	OHWM Indicator: (check all that apply)	<input type="checkbox"/> Clear line on bank	<input type="checkbox"/> Shelving
OHWM Height: 0.5 ft.	<input checked="" type="checkbox"/> Bent, matted, or missing vegetation	<input type="checkbox"/> Wrack line	<input type="checkbox"/> Litter and debris
N/A <input type="checkbox"/>		<input type="checkbox"/> Wrested vegetation	<input type="checkbox"/> Scouring
		<input type="checkbox"/> Abrupt plant community change	<input type="checkbox"/> Water staining
Width of Waterbody - Top of Bank to Top of Bank: 3 ft.	Width of Waterbody - Toe of Slope to Toe of Slope: 1 ft.	Width of Waterbody - Water Edge to Water Edge: 1 ft.	Depth of Water: (Approx.) 0.5 ft.
		N/A <input type="checkbox"/>	N/A <input type="checkbox"/>
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: (Approx.) 41 fps	Bank height Right: 2 ft. Left: 2 ft.	Bank slope Right: 75 degrees Left: 75 degrees
N/A <input type="checkbox"/>	N/A <input type="checkbox"/>		
Qualitative Attributes			
Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <input type="checkbox"/> Other:			
% of Substrate: _____% _____% _____% _____% 60% 40% _____% _____%			
Width of Riparian Zone: 100 ft.	Vegetative Layers: (check all that apply)	<input checked="" type="checkbox"/> Trees: Avg. DBH of Dominants: 5 in.	<input checked="" type="checkbox"/> Saplings/Shrubs: 2 in.
N/A <input type="checkbox"/>			<input checked="" type="checkbox"/> Herbs NA in.
Dominant Bank Vegetation (list): Microstegium vimineum, Acer rubrom			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): leaf packs			
Aquatic Organisms Observed (list): frogs			
T&E Species Observed (list): none			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): none			
Tributary Is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Stream Quality *: (check one) <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low			

Waterbody ID:

SSU0116

• **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.

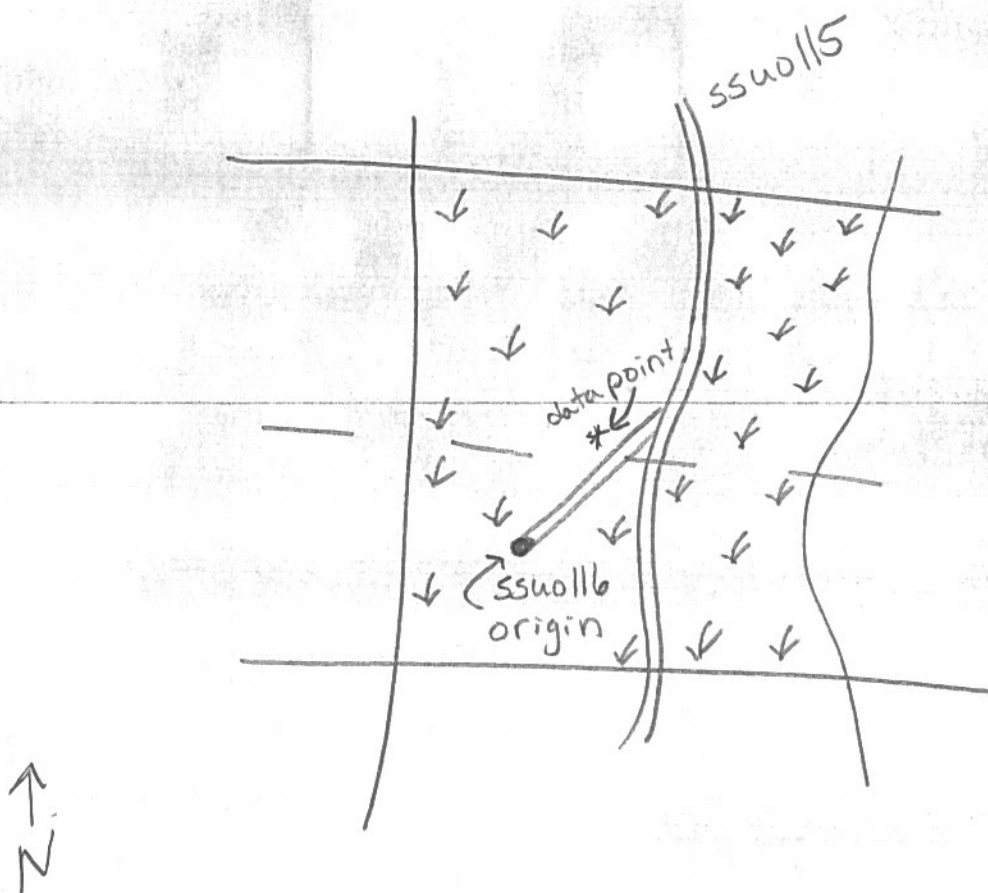
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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

origin within corridor

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 ssuo116 facing south upstream.



Waterbody data point ssuo116 facing north downstream.

Environmental Field Surveys
Waterbody Photo Page



Waterbody data point ssuo116 facing east across bank.

Linear Waterbody Data Sheet

Survey Description				
Project Name: ACP		Waterbody Name: LNT to Western Branch Reservoir	Waterbody ID: 5540115	Date: 5/4/16
State: VA	County/Parish: Suffolk	Company: ESI	Crew Member Initials: LR, JB	Photos: Facing SE, NW, NE
Tract Number(s): 26-060-A075		Nearest Milepost: 63.0	Associated Wetland ID(s): WSU042	
Survey Type: (check one) <input type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial				
Waterbody Type: (check one) <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:				
OHWM Width: 3 ft.	OHWM Height: 0.5 ft.	OHWM Indicator: (check all that apply) <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining		
N/A <input type="checkbox"/>	<input checked="" type="checkbox"/> Bent, matted, or missing vegetation	<input type="checkbox"/> Wrack line	<input type="checkbox"/> Litter and debris	<input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change
Width of Waterbody - Top of Bank to Top of Bank: 5 ft.	Width of Waterbody - Toe of Slope to Toe of Slope: 2 ft.	Width of Waterbody - Water Edge to Water Edge: 2 ft.	Depth of Water: (Approx.) 0.5 ft.	
N/A <input type="checkbox"/>	N/A <input type="checkbox"/>	N/A <input type="checkbox"/>	N/A <input type="checkbox"/>	
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: (Approx.) <1 fps	Bank height: Right: 2 ft. Left: 2 ft.	Bank slope: Right: 60 degrees Left: 80 degrees	
N/A <input type="checkbox"/>	N/A <input type="checkbox"/>	N/A <input type="checkbox"/>	N/A <input type="checkbox"/>	
Qualitative Attributes				
Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/clay <input type="checkbox"/> Organic <input type="checkbox"/> Other:				
% of Substrate: _____% _____% _____% _____% 60% 40% _____% _____%				
Width of Riparian Zone: 100 ft.	Vegetative Layers: (check all that apply)	<input checked="" type="checkbox"/> Trees: 6 in.	<input checked="" type="checkbox"/> Saplings/Shrubs: 2 in.	<input checked="" type="checkbox"/> Herbs: NA in.
N/A <input type="checkbox"/>	Avg. DBH of Dominants: (approx.)	N/A <input type="checkbox"/>	N/A <input type="checkbox"/>	N/A <input type="checkbox"/>
Dominant Bank Vegetation (list): Microstegium vimineum, Acer rubrum, Saururus cernuus				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): overhanging roots, leaf packs				
Aquatic Organisms Observed (list): frogs				
T&E Species Observed (list): none				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): none				
Tributary is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality #: (check one) <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low				

Waterbody ID:

SSU0115

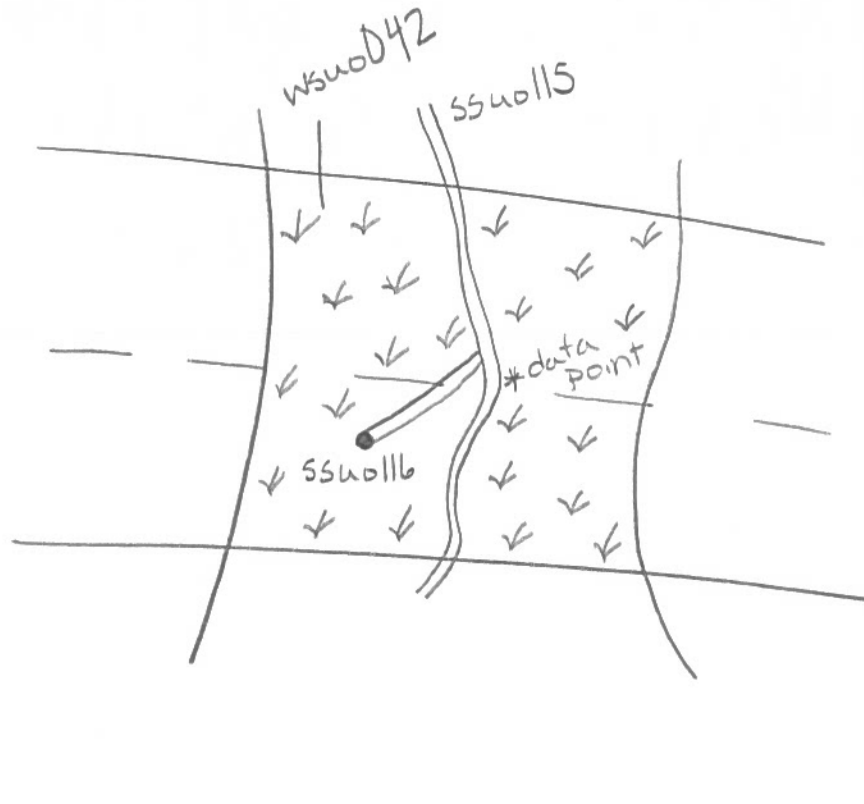
▪ **High Quality:** Natural, natural bank vegetation around entire waterbody; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

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

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

Notes:

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



Environmental Field Surveys
Waterbody Photo Page



Waterbody data point ssuo115 facing southeast upstream.



Waterbody data point ssuo115 facing northwest downstream.

Environmental Field Surveys
Waterbody Photo Page



Waterbody data point ssuo115 facing northeast across bank.

Linear Waterbody Data Sheet

Survey Description				
Project Name: ACP		Waterbody Name: LYNT to Western Branch of Nansemond River		Waterbody ID: SSUP014
Date: 10/29/15				
State: VA	County/Parish: Suffolk	Company: ESI	Crew Member Initials: RT, KM	Photos: Facing SW, E, S
Tract Number(s): 26-060-A080		Nearest Milepost: 61.2	Associated Wetland ID(s): WSUP015	
Survey Type: (check one) <input type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial				
Waterbody Type: (check one) <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:				
OHWM Width: 2 ft.		OHWM Indicator: (check all that apply) <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining		
Height: 0.2 ft.		<input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change		
N/A <input type="checkbox"/>				
Width of Waterbody - Top of Bank to Top of Bank: 3 ft.	Width of Waterbody - Toe of Slope to Toe of Slope: 1.5 ft.	Width of Waterbody - Water Edge to Water Edge: 2 ft.	Depth of Water: (Approx.) 0.2 ft.	
N/A <input type="checkbox"/>		N/A <input type="checkbox"/>		
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: (Approx.) 1 fps		Bank slope Right: 45 degrees Left: 45 degrees
N/A <input type="checkbox"/>		N/A <input type="checkbox"/>		
Qualitative Attributes				
Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <input type="checkbox"/> Other:				
% of Substrate: _____% _____% _____% _____% 90 % 10 % _____% _____%				
Width of Riparian Zone: 100 ft.		Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: 8 in. <input type="checkbox"/> Saplings/Shrubs: _____ in. <input checked="" type="checkbox"/> Herbs: NA in.		
N/A <input type="checkbox"/>		N/A <input type="checkbox"/>		
Dominant Bank Vegetation (list): Salix nigra, Taxodium distichum, Spartina alterniflora				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): leaf packs				
Aquatic Organisms Observed (list): Midges				
T&E Species Observed (list): none observed				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): none observed				
Tributary Is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality*: (check one) <input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low				

Waterbody ID:
ssup 014

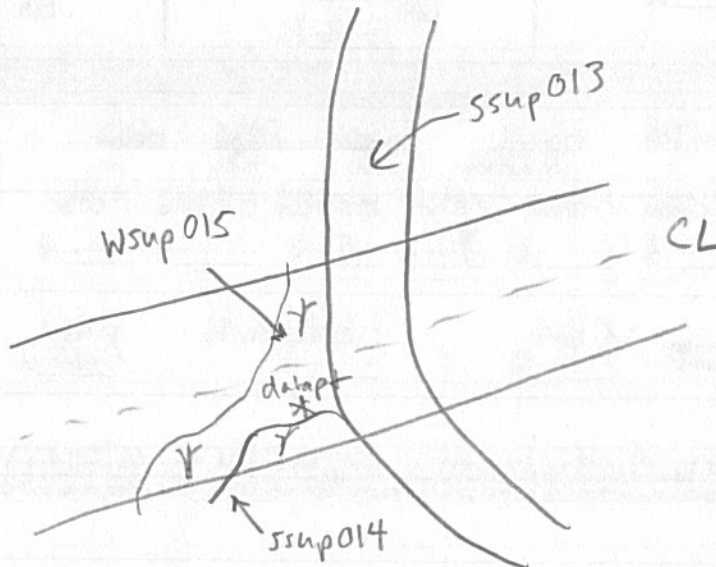
▪ **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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



Environmental Field Surveys
Waterbody Photo Page



Waterbody ssup014 facing southwest upstream.



Waterbody ssup014 facing east downstream.

Environmental Field Surveys
Waterbody Photo Page



Waterbody ssup014 facing south across bank.

Linear Waterbody Data Sheet

Survey Description					
Project Name: ACP		Waterbody Name: WESTERN BRANCH to Nansemond River		Waterbody ID: SSUP013	Date: 10/29/15
State: VA	County/Parish: Suffolk	Company: ESI	Crew Member Initials: RT, KM	Photos: Facing S, N, E	
Tract Number(s): 26-060-A078, 26-060-A079, 26-060-A080		Nearest Milepost: 61.2	Associated Wetland ID(s): WSUP015		
Survey Type:					
<input type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:					
Physical Attributes					
Stream Classification:					
<input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial					
Waterbody Type:					
<input checked="" type="checkbox"/> River <input type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:					
OHWM					
Width: 160 ft. Height: 6 ft. N/A <input type="checkbox"/>		OHWM Indicator: (check all that apply) <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input checked="" type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input checked="" type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Width of Waterbody - Top of Bank to Top of Bank: 160 ft.		Width of Waterbody - Toe of Slope to Toe of Slope: 45 ft.		Width of Waterbody - Water Edge to Water Edge: N/A <input type="checkbox"/> 55 ft.	
Depth of Water: (Approx.) N/A <input type="checkbox"/> 5 ft.		Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: (Approx.) 2 fps N/A <input type="checkbox"/>	
Bank height Right: 10 ft. Left: 10 ft.		Bank slope Right: 80 degrees Left: 80 degrees			
Qualitative Attributes					
Water Appearance:					
<input type="checkbox"/> No water <input type="checkbox"/> Clear <input checked="" type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:					
Substrate:					
<input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <input type="checkbox"/> Other:					
% of Substrate: _____% _____% _____% _____% 90 % 10 % _____% _____%					
Width of Riparian Zone:					
N/A <input type="checkbox"/> 50 ft.		Vegetative Layers: (check all that apply) <input type="checkbox"/> Trees: _____ in. <input type="checkbox"/> Saplings/Shrubs: _____ in. <input checked="" type="checkbox"/> Herbs: NA in.			
Dominant Bank Vegetation (list):					
Spartina alterniflora					
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools):					
submerged logs, coastal marsh					
Aquatic Organisms Observed (list):					
none observed					
T&E Species Observed (list):					
none observed					
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes):					
none observed					
Tributary is:					
<input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated					
Stream Quality*:					
<input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low					

Waterbody ID:

ssup013

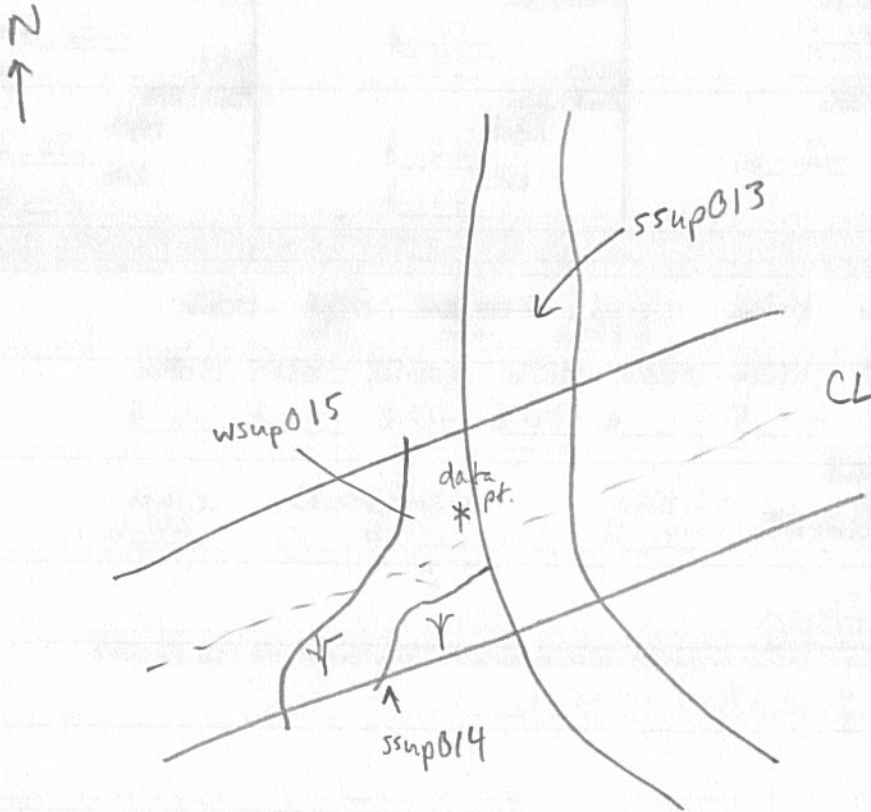
• **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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



Environmental Field Surveys
Waterbody Photo Page



Waterbody ssup013 facing south upstream.



Waterbody ssup013 facing north downstream.

Environmental Field Surveys
Waterbody Photo Page



Waterbody ssup013 facing east across bank.

Linear Waterbody Data Sheet

Survey Description				
Project Name: ACP	Waterbody Name: UNT to Great Dismal Swamp	Waterbody ID: SSUS004	Date: 8/2/16	
State: VA	County/Parish: SUSSEX	Company: EST	Crew Member Initials: SB, KM	Photos: S, N, E
Tract Number(s): 26-060-A084.2 / unnumbered tract		Nearest Milepost: 66	Associated Wetland ID(s): wsuo018	
Survey Type: <small>(check one)</small> <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: <small>(check one)</small> <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial				
Waterbody Type: <small>(check one)</small> <input type="checkbox"/> River <input type="checkbox"/> Stream <input checked="" type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:				
OHWM Width: 5 ft.	OHWM Indicator: <small>(check all that apply)</small> <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input checked="" type="checkbox"/> Water staining			
OHWM Height: 0.5 ft.	<input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
N/A <input type="checkbox"/>				
Width of Waterbody - Top of Bank to Top of Bank: 6 ft.	Width of Waterbody - Toe of Slope to Toe of Slope: 5 ft.	Width of Waterbody - Water Edge to Water Edge: 5 ft.	Depth of Water: <small>(Approx.)</small> 1 ft.	
N/A <input type="checkbox"/>				
Sinuosity: <small>(check one)</small> <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering	Water velocity: <small>(Approx.)</small> 0 fps (not flowing)	Bank height: Right: 1.5 ft. Left: 1.5 ft.		Bank slope: Right: 45 degrees Left: 45 degrees
N/A <input type="checkbox"/>				
Qualitative Attributes				
Water Appearance: <small>(check one)</small> <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: <small>(check all that apply)</small> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Other:				
% of Substrate: _____% _____% _____% _____% 10% 80% 10% _____%				
Width of Riparian Zone: N/A <input type="checkbox"/> >100 ft.	Vegetative Layers: <small>(check all that apply)</small> <input type="checkbox"/> Trees: _____ in. <input checked="" type="checkbox"/> Saplings/Shrubs: 3 in. <input checked="" type="checkbox"/> Herbs: NA in.			
N/A <input type="checkbox"/>				
Dominant Bank Vegetation <small>(list)</small> : Liquidambar styraciflua, Acer rubrum, Arundinaria gigantea				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): leaf packs				
Aquatic Organisms Observed <small>(list)</small> : none				
T&E Species Observed <small>(list)</small> : none				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): man-made ditch				
Tributary is: <small>(check one)</small> <input type="checkbox"/> Natural <input checked="" type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality ^a : <small>(check one)</small> <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low				

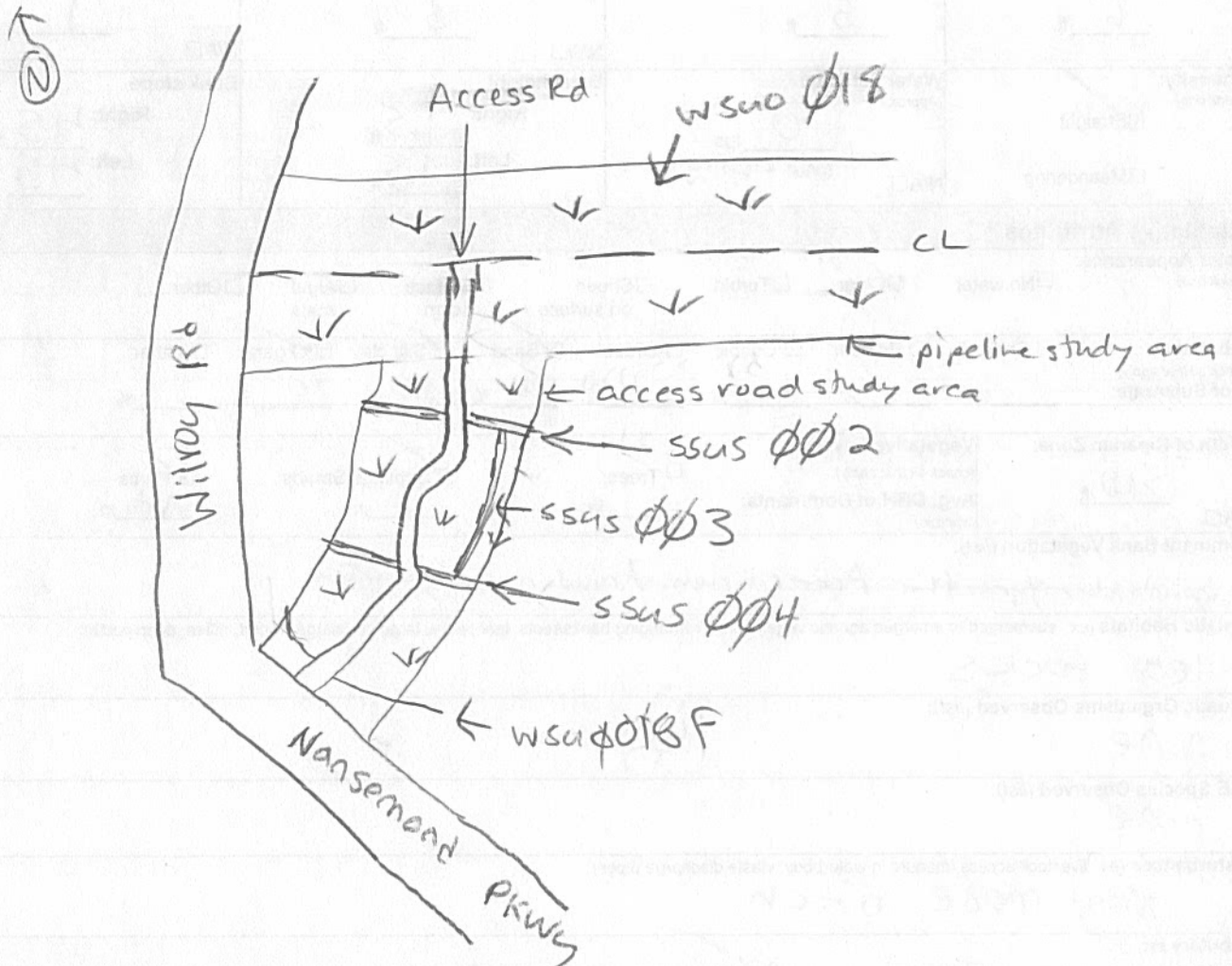
Waterbody ID:

SSUS ~~004~~

- **High Quality:** Natural, natural bank vegetation around entire waterbody; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.
- **Moderate Quality:** Altered by rip-rap, natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or bank vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.
- **Low Quality:** Rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

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



Environmental Field Surveys
Waterbody Photo Page



Waterbody data point ssus004 facing south upstream.



Waterbody data point ssus004 facing north downstream.

Environmental Field Surveys
Waterbody Photo Page



Waterbody data point ssus004 facing east across bank.

Linear Waterbody Data Sheet

Survey Description				
Project Name: ACP		Waterbody Name: LNT to Great Dismal Swamp		Waterbody ID: SSUS003
Date: 8/2/16				
State: VA	County/Parish: SUFFOLK	Company: ESI	Crew Member Initials: SB, KM	Photos: W, E, S
Tract Number(s): 26-060-A084.2 / unnumbered tract		Nearest Milepost: 66	Associated Wetland ID(s): WSU0018	
Survey Type: (check one) <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial				
Waterbody Type: (check one) <input type="checkbox"/> River <input type="checkbox"/> Stream <input checked="" type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:				
OHWM Width: 7 ft. Height: 0.5 ft. N/A <input type="checkbox"/>		OHWM Indicator: (check all that apply) <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input checked="" type="checkbox"/> Water staining <input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change		
Width of Waterbody - Top of Bank to Top of Bank: 8 ft.	Width of Waterbody - Toe of Slope to Toe of Slope: 7 ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input type="checkbox"/> 7 ft.	Depth of Water: (Approx.) N/A <input type="checkbox"/> 1 ft.	
Sinuosity: (check one) <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering	Water velocity: (Approx.) N/A <input type="checkbox"/> 0 fps (not flowing)	Bank height Right: 1 ft. Left: 1 ft.	Bank slope Right: 45 degrees Left: 45 degrees	
Qualitative Attributes				
Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/clay <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Other: % of Substrate: _____% _____% _____% _____% 10% 80% 10% _____%				
Width of Riparian Zone: N/A <input type="checkbox"/> 2100 ft.	Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: 7 in. <input checked="" type="checkbox"/> Saplings/Shrubs: 2 in. <input checked="" type="checkbox"/> Herbs: NA in.			
Dominant Bank Vegetation (list): Liquidambar, Acer rubrum, styraciflua, Fagus grandifolia, smilax rotundifolia, Arundinaria gigantea				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): leaf packs, submerged logs				
Aquatic Organisms Observed (list): none				
T&E Species Observed (list): none				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): man-made ditch				
Tributary is: (check one) <input type="checkbox"/> Natural <input checked="" type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality ^a : (check one) <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low				

Waterbody ID:

SSUS 003

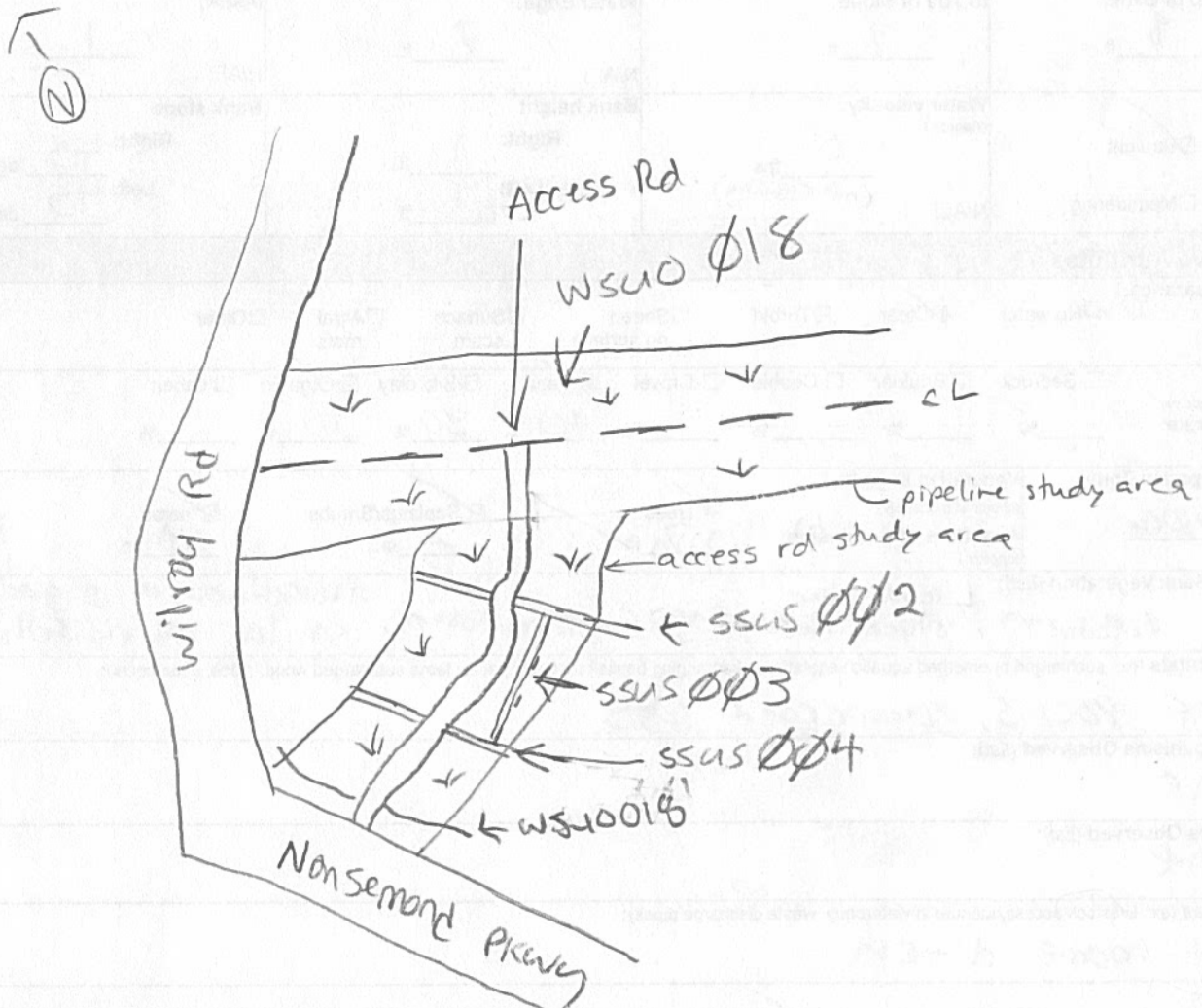
High Quality: Natural, natural bank vegetation around entire waterbody; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

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

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

Notes:

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



Environmental Field Surveys
Waterbody Photo Page



Waterbody data point ssus003 facing west upstream.



Waterbody data point ssus003 facing east downstream.

Environmental Field Surveys
Waterbody Photo Page



Waterbody data point ssus003 facing south across bank.

Linear Waterbody Data Sheet

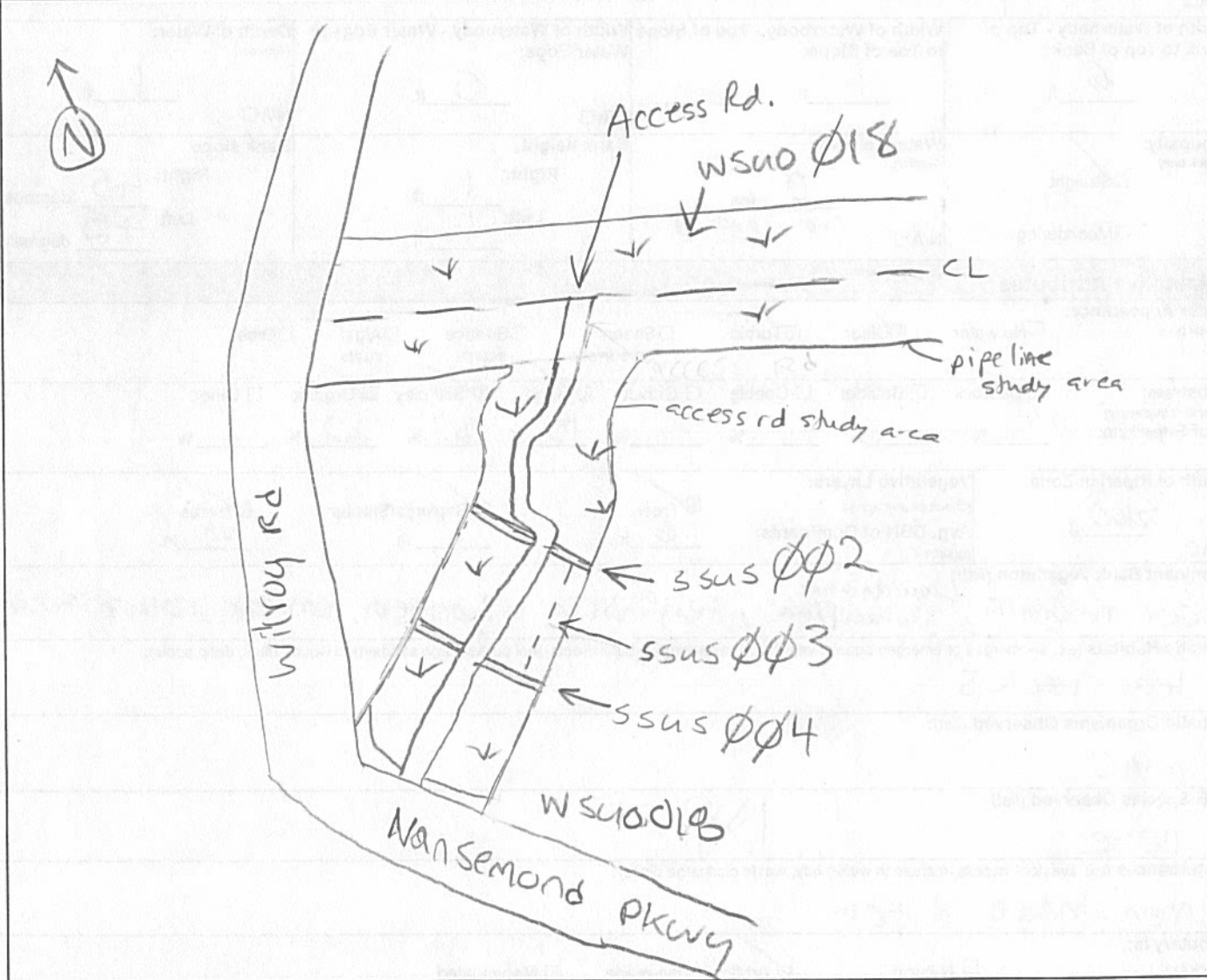
Survey Description			
Project Name: ACP	Waterbody Name: LWT to Great Dismal Swamp	Waterbody ID: SSUS002	Date: 8/2/16
State: VA	County/Parish: SUFFOLK	Company: ESI	Crew Member Initials: SB, KM
Photos: S, N, W			
Tract Number(s): 26-060-A084.2 / unnumbered tract		Nearest Milepost: 66	Associated Wetland ID(s): WSUO018
Survey Type: <small>(check one)</small> <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <small>(check one)</small> <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial			
Waterbody Type: <small>(check one)</small> <input type="checkbox"/> River <input type="checkbox"/> Stream <input checked="" type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:			
OHWM Width: 5 ft.	OHWM Indicator: <small>(check all that apply)</small>	<input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input checked="" type="checkbox"/> Water staining	
OHWM Height: 0.5 ft.	<input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris	<input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change	
N/A <input type="checkbox"/>			
Width of Waterbody - Top of Bank to Top of Bank: 6 ft.	Width of Waterbody - Toe of Slope to Toe of Slope: 5 ft.	Width of Waterbody - Water Edge to Water Edge: 5 ft.	Depth of Water: <small>(Approx.)</small> 1 ft.
N/A <input type="checkbox"/>			
Sinuosity: <small>(check one)</small> <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering	Water velocity: <small>(Approx.)</small> 0 fps (not flowing)	Bank height Right: 1 ft. Left: 1 ft.	Bank slope Right: 45 degrees Left: 45 degrees
N/A <input type="checkbox"/>			
Qualitative Attributes			
Water Appearance: <small>(check one)</small> <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: <small>(check all that apply)</small> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/clay <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Other:			
% of Substrate: _____% _____% _____% _____% 10% 80% 10% _____%			
Width of Riparian Zone: 700 ft.	Vegetative Layers: <small>(check all that apply)</small>		
N/A <input type="checkbox"/>			
Avg. DBH of Dominants: <small>(approx.)</small> 6 in. 1 in. NA in.			
<input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs			
Dominant Bank Vegetation (list): Acer rubrum, Liquidambar, styraciflua, Arundinaria gigantea, smilax rotundifolia			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): leaf packs			
Aquatic Organisms Observed (list): none			
T&E Species Observed (list): none			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): man-made ditch			
Tributary is: <small>(check one)</small> <input type="checkbox"/> Natural <input checked="" type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Stream Quality ^a : <small>(check one)</small> <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low			

Waterbody ID:
SSUS 002

- **High Quality:** Natural, natural bank vegetation around entire waterbody; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.
- Moderate Quality:** Altered by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or bank vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.
- Low Quality:** Rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

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



Environmental Field Surveys
Waterbody Photo Page



Waterbody data point ssus002 facing south upstream.



Waterbody data point ssus002 facing north downstream.

Environmental Field Surveys
Waterbody Photo Page



Waterbody data point ssus002 facing west across bank.

Linear Waterbody Data Sheet

Survey Description					
Project Name: <u>ACP</u>		Waterbody Name: <u>Untto Dism. & Swamp</u>		Waterbody ID: <u>SSUO 019</u>	Date: <u>11/3/15</u>
State: <u>VA</u>	County/Parish: <u>Suffolk</u>	Company: <u>ESI</u>	Crew Member Initials: <u>L.R, S.I</u>	Photos: <u>SW, NE, W</u>	
Tract Number(s): <u>20-060-A088</u>		Nearest Milepost: <u>NA</u>		Associated Wetland ID(s): <u>MSUO 018</u>	
Survey Type: (check one) <input type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:					
Physical Attributes					
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial					
Waterbody Type: (check one) <input type="checkbox"/> River <input type="checkbox"/> Stream <input checked="" type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:					
OHWM Width: <u>8</u> ft.		OHWM Indicator: (check all that apply)		OHWM Height: <u>3</u> ft.	
N/A <input type="checkbox"/>		<input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining		<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input checked="" type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change	
Width of Waterbody - Top of Bank to Top of Bank: <u>9</u> ft.	Width of Waterbody - Toe of Slope to Toe of Slope: <u>80</u> ft.	Width of Waterbody - Water Edge to Water Edge: <u>8</u> ft.	Depth of Water: (Approx.) <u>3</u> ft.		
N/A <input type="checkbox"/>	N/A <input type="checkbox"/>	N/A <input type="checkbox"/>	N/A <input type="checkbox"/>		
Sinuosity: (check one) <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering	Water velocity: (Approx.) _____ fps	Bank height Right: <u>3</u> ft. Left: <u>3</u> ft.	Bank slope Right: <u>90</u> degrees Left: <u>90</u> degrees		
N/A <input type="checkbox"/>	N/A <input type="checkbox"/>	N/A <input type="checkbox"/>	N/A <input type="checkbox"/>		
Qualitative Attributes					
Water Appearance: (check one) <input type="checkbox"/> No water <input type="checkbox"/> Clear <input checked="" type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:					
Substrate: (check all that apply) % of Substrate: _____% _____% _____% <u>70</u> % <u>20</u> % <u>10</u> % _____% _____%					
Width of Riparian Zone: <u>N/A</u> ft.	Vegetative Layers: (check all that apply) Avg. DBH of Dominants: (approx.) _____ in.				
N/A <input type="checkbox"/>	<input type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <u>2</u> in. <input checked="" type="checkbox"/> Herbs: <u>N/A</u> in.				
Dominant Bank Vegetation (list): <u>Pinus taeda, Arundinaria gigantea, Rubus argutus.</u>					
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): <u>Deep standing water, submerged vegetation</u>					
Aquatic Organisms Observed (list): <u>None</u>					
T&E Species Observed (list): <u>None</u>					
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): <u>Culvert</u>					
Tributary is: (check one) <input type="checkbox"/> Natural <input checked="" type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated					
Stream Quality*: (check one) <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low					

Waterbody ID:

5540019

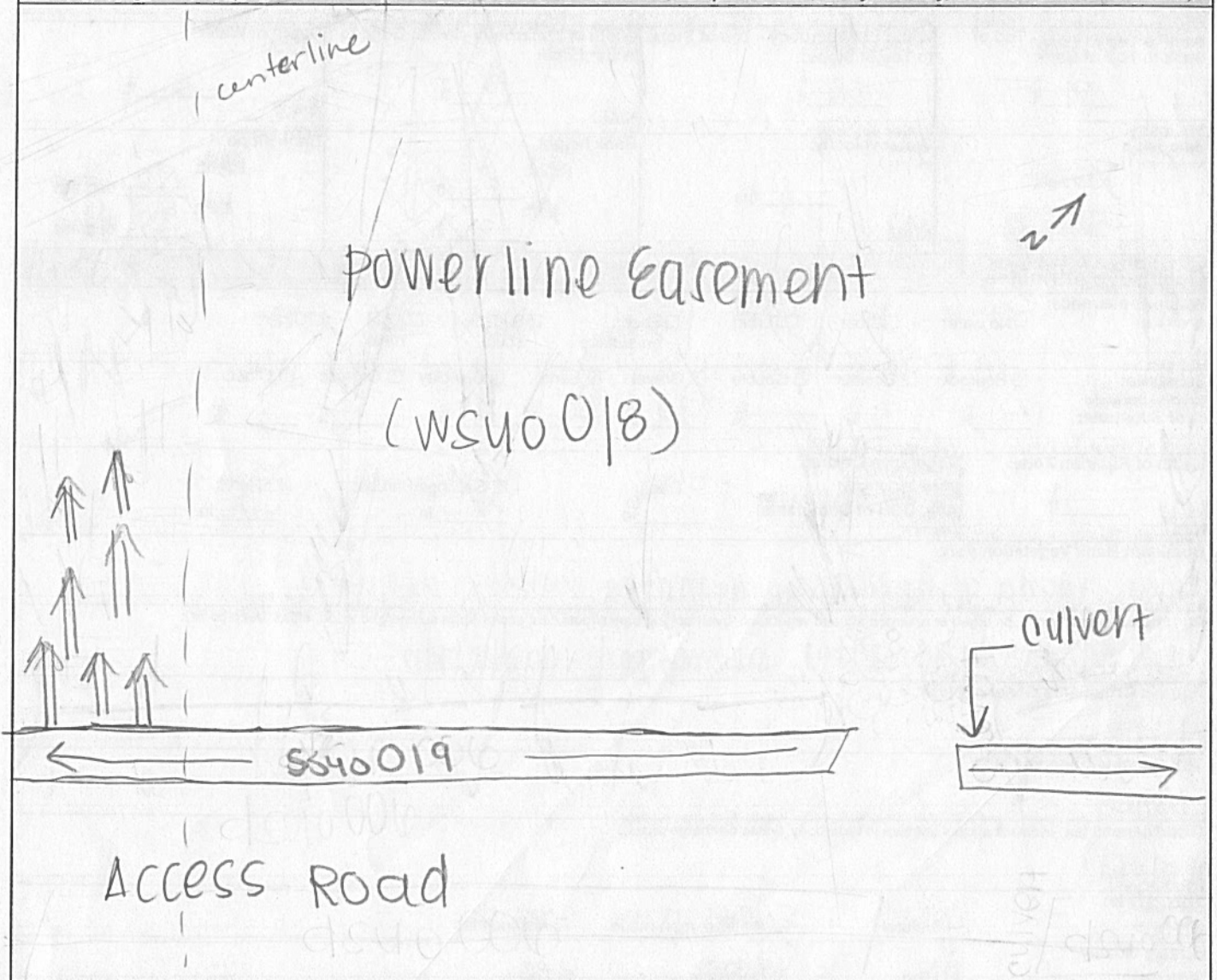
High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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



Environmental Field Surveys
Waterbody Photo Page



Waterbody ssuo019 facing southwest upstream.



Waterbody ssuo019 facing northeast downstream.

Environmental Field Surveys
Waterbody Photo Page



Waterbody ssuo019 facing west across bank.

Linear Waterbody Data Sheet

Survey Description			
Project Name: ACP		Waterbody Name: CWT to Dismal Swamp	
Waterbody ID: SSUO 020		Date: 11/3/15	
State: VA	County/Parish: Suffolk	Company: ESI	Crew Member Initials: L.R. J.I
Photos: NE, SW, SE			
Tract Number(s): 26-060-A090		Nearest Milepost: NA	Associated Wetland ID(s): WSUO019
Survey Type: (check one) <input type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial			
Waterbody Type: (check one) <input type="checkbox"/> River <input type="checkbox"/> Stream <input checked="" type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:			
OHWM Width: 5 ft.		OHWM Indicator: (check all that apply)	
OHWM Height: 1 ft.		<input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining	
N/A <input type="checkbox"/>		<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change	
Width of Waterbody - Top of Bank to Top of Bank: 7 ft.	Width of Waterbody - Toe of Slope to Toe of Slope: 5 ft.	Width of Waterbody - Water Edge to Water Edge: 5 ft.	Depth of Water: (Approx.) 1 ft.
Sinuosity: (check one) <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering		Water velocity: (Approx.) N/A <input checked="" type="checkbox"/>	Bank height: Right: 3 ft. Left: 3 ft.
		Bank slope: Right: 45 degrees Left: 45 degrees	
Qualitative Attributes			
Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/clay <input type="checkbox"/> Organic <input type="checkbox"/> Other:			
% of Substrate: _____% _____% _____% 70% 20% 10% _____% _____%			
Width of Riparian Zone: N/A <input checked="" type="checkbox"/>	Vegetative Layers: (check all that apply) <input type="checkbox"/> Trees: _____ in. <input checked="" type="checkbox"/> Saplings/Shrubs: 2 in. <input checked="" type="checkbox"/> Herbs: N/A in.		
Dominant Bank Vegetation (list): Liquidambar styraciflua Pinus taeda, Arundinaria gigantea, Juncus effusus			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): submerged and overhanging vegetation.			
Aquatic Organisms Observed (list): None			
T&E Species Observed (list): None			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Artificially man made ditch along powerline easement			
Tributary Is: (check one) <input type="checkbox"/> Natural <input checked="" type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Stream Quality*: (check one) <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low			

Waterbody ID:

SSU0020

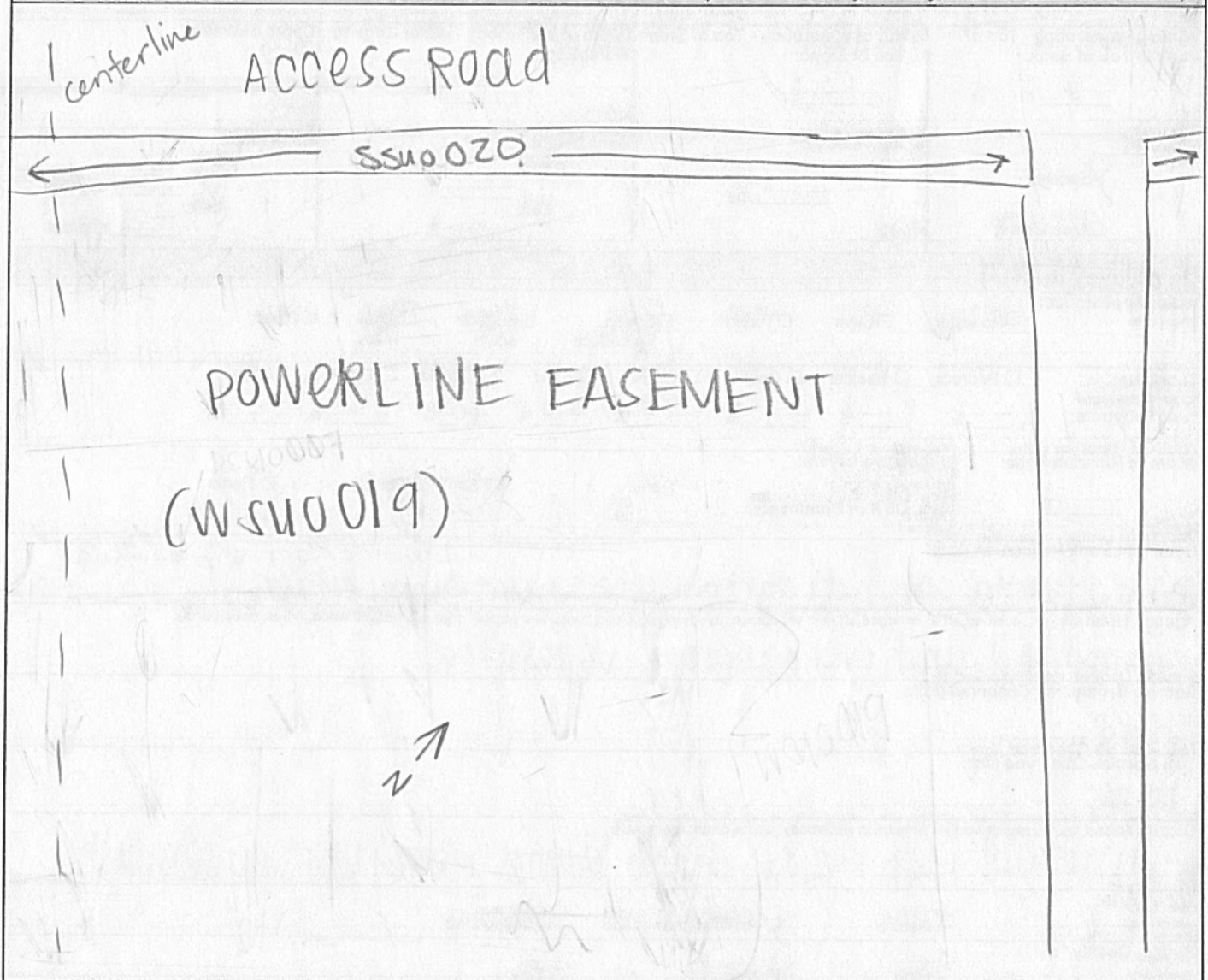
• **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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



Environmental Field Surveys
Waterbody Photo Page



Waterbody ssuo020 facing northeast upstream.



Waterbody ssuo020 facing west downstream.

Environmental Field Surveys
Waterbody Photo Page



Waterbody ssuo020 facing southeast across bank.

Linear Waterbody Data Sheet

Survey Description				
Project Name: AOP		Waterbody Name: LNT to Diamond Swamp	Waterbody ID: SSUO021	Date: 11/3/19
State: VA	County/Parish: Suffolk	Company: ESI	Crew Member Initials: LR, J.I.	Photos: NE, SE, SW
Tract Number(s): 26-060-A092		Nearest Milepost: NA	Associated Wetland ID(s): none	
Survey Type: (check one) <input type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial				
Waterbody Type: (check one) <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:				
OHWM Width: 5 ft.	OHWM Height: 0.5 ft.	OHWM Indicator: (check all that apply)		
N/A <input type="checkbox"/>		<input type="checkbox"/> Clear line on bank	<input type="checkbox"/> Shelving	<input checked="" type="checkbox"/> Wrested vegetation
		<input type="checkbox"/> Scouring	<input type="checkbox"/> Water staining	
<input type="checkbox"/> Bent, matted, or missing vegetation	<input type="checkbox"/> Wrack line	<input type="checkbox"/> Litter and debris	<input type="checkbox"/> Abrupt plant community change	<input type="checkbox"/> Soil characteristic change
Width of Waterbody - Top of Bank to Top of Bank: 6 ft.	Width of Waterbody - Toe of Slope to Toe of Slope: 5 ft.	Width of Waterbody - Water Edge to Water Edge: 4 ft.	Depth of Water: (Approx.) 0.5 ft.	
N/A <input type="checkbox"/>		N/A <input type="checkbox"/>	N/A <input type="checkbox"/>	
Sinuosity: (check one) <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering	Water velocity: (Approx.) N/A <input checked="" type="checkbox"/>	Bank height Right: 5 ft. Left: 3 ft.	Bank slope Right: 90 degrees Left: 90 degrees	
Qualitative Attributes				
Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/clay <input type="checkbox"/> Organic <input type="checkbox"/> Other:				
% of Substrate: _____% _____% _____% 70% 20% 10% _____% _____%				
Width of Riparian Zone: N/A <input type="checkbox"/>	Vegetative Layers: (check all that apply)			
	Avg. DBH of Dominants: (approx.)	<input checked="" type="checkbox"/> Trees: 6 in.	<input checked="" type="checkbox"/> Saplings/Shrubs: 2 in.	<input checked="" type="checkbox"/> Herbs: N/A in.
Dominant Bank Vegetation (list): Pinus taeda, Arundinaria gigantea, Quercus phellos, Acer rubrum				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): vegetation & leaf packs				
Aquatic Organisms Observed (list): None				
T&E Species Observed (list): None				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Artificially man-made ditch in powerline easement.				
Tributary is: (check one) <input type="checkbox"/> Natural <input checked="" type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality*: (check one) <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low				

Waterbody ID:

SSUO 021

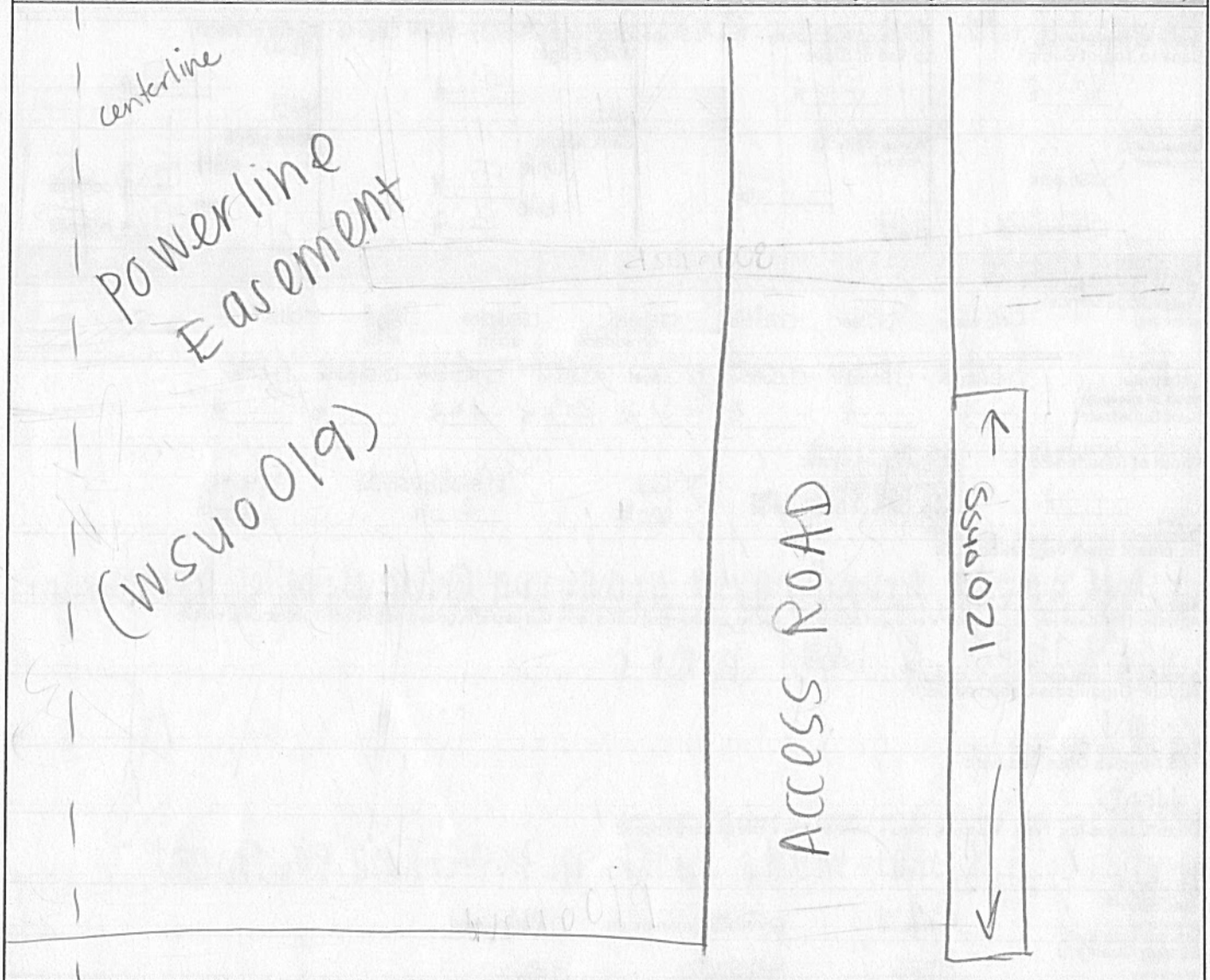
▪ **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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



Environmental Field Surveys
Waterbody Photo Page



Waterbody ssuo021 facing northwest upstream.



Waterbody ssuo021 facing southeast downstream.

Environmental Field Surveys
Waterbody Photo Page



Waterbody ssuo021 facing northeast across bank.

Linear Waterbody Data Sheet

Survey Description				
Project Name: ACP		Waterbody Name: UNT to Dismal Swamp	Waterbody ID: SSUP 028	Date: 12/1/15
State: VA	County/Parish: Suffolk	Company: ESI-1	Crew Member Initials: MKS, KSM	Photos: Facing E, W, S
Tract Number(s): 26-060-A092		Nearest Milepost: NA	Associated Wetland ID(s): WSU019	
Survey Type: (check one) <input type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial				
Waterbody Type: (check one) <input type="checkbox"/> River <input type="checkbox"/> Stream <input type="checkbox"/> Ditch <input checked="" type="checkbox"/> Canal <input type="checkbox"/> Other:				
OHWM Width: 15 ft.	OHWM Indicator: (check all that apply)	<input checked="" type="checkbox"/> Clear line on bank	<input checked="" type="checkbox"/> Shelving	<input checked="" type="checkbox"/> Wrested vegetation
OHWM Height: 2 ft.	<input type="checkbox"/> Bent, matted, or missing vegetation	<input type="checkbox"/> Wrack line	<input type="checkbox"/> Litter and debris	<input type="checkbox"/> Abrupt plant community change
N/A <input type="checkbox"/>				<input checked="" type="checkbox"/> Scouring
				<input checked="" type="checkbox"/> Water staining
Width of Waterbody - Top of Bank to Top of Bank: 20 ft.	Width of Waterbody - Toe of Slope to Toe of Slope: 15 ft.	Width of Waterbody - Water Edge to Water Edge: 15 ft.	Depth of Water: (Approx.) 4 ft.	
N/A <input type="checkbox"/>	N/A <input type="checkbox"/>	N/A <input type="checkbox"/>	N/A <input type="checkbox"/>	
Sinuosity: (check one) <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering	Water velocity: (Approx.) <1 fps	Bank height Right: 5 ft. Left: 5 ft.	Bank slope Right: 45 degrees Left: 45 degrees	
N/A <input type="checkbox"/>	N/A <input type="checkbox"/>			
Qualitative Attributes				
Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/clay <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Other:				
% of Substrate: _____%	_____%	_____%	_____%	80% 20% _____%
Width of Riparian Zone: 100 ft.	Vegetative Layers: (check all that apply)	<input type="checkbox"/> Trees:	<input checked="" type="checkbox"/> Saplings/Shrubs: 3 in.	<input checked="" type="checkbox"/> Herbs: N/A in.
N/A <input type="checkbox"/>	Avg. DBH of Dominants: _____ in.			
Dominant Bank Vegetation (list): Arundinaria gigantea, Quercus nigra				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): submerged logs, leaf packs				
Aquatic Organisms Observed (list): none observed				
T&E Species Observed (list): none observed				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): man-made canal				
Tributary Is: (check one) <input type="checkbox"/> Natural <input checked="" type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality: (check one) <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low				

Waterbody ID:

SSUP 028

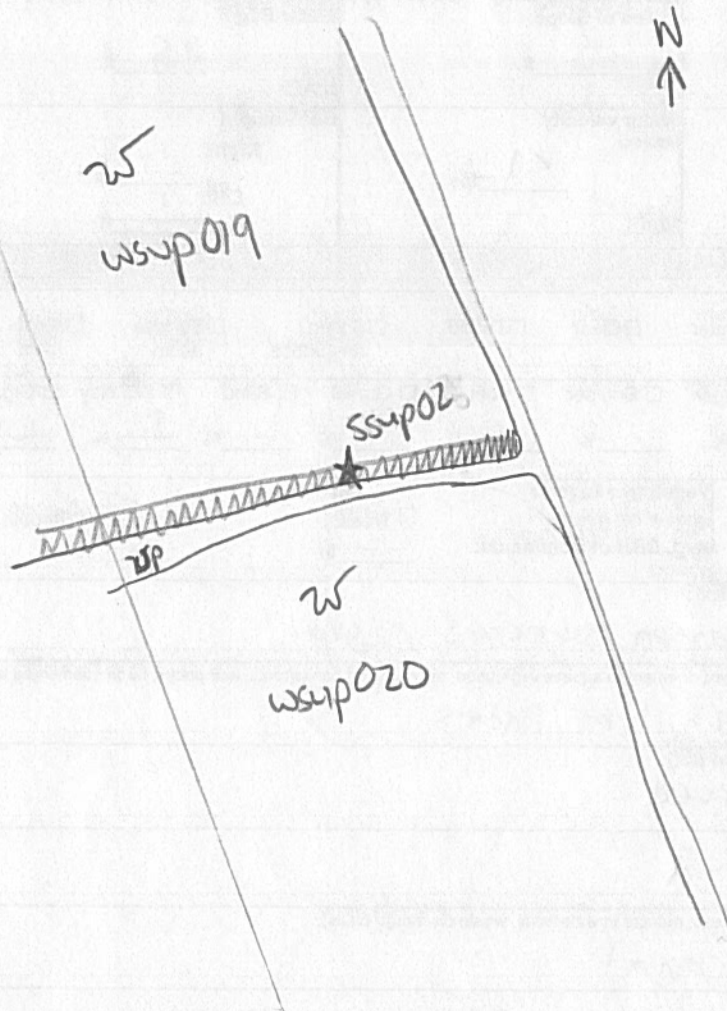
▪ **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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



Environmental Field Surveys
Waterbody Photo Page



Waterbody data point ssup028 facing east upstream.



Waterbody data point ssup028 facing west downstream.

Environmental Field Surveys
Waterbody Photo Page



Waterbody data point ssup028 facing south across bank.

Linear Waterbody Data Sheet

Survey Description			
Project Name: ACP		Waterbody Name: LNT to Dismal Swamp	
Waterbody ID: SSUP0293		Date: 12/1/15	
State: VA	County/Parish: SUFFOLK	Company: EST-1	Crew Member Initials: MKS, KSM
Tract Number(s): 26-060-A092, 26-166-B001		Nearest Milepost: NA	Associated Wetland ID(s): WSUP020
Survey Type: (check one) <input type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial			
Waterbody Type: (check one) <input type="checkbox"/> River <input type="checkbox"/> Stream <input type="checkbox"/> Ditch <input checked="" type="checkbox"/> Canal <input type="checkbox"/> Other:			
OHWM Width: 15 ft.		OHWM Indicator: (check all that apply) <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining	
Height: 2 ft.		<input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change	
N/A <input type="checkbox"/>			
Width of Waterbody - Top of Bank to Top of Bank: 20 ft.	Width of Waterbody - Toe of Slope to Toe of Slope: 15 ft.	Width of Waterbody - Water Edge to Water Edge: 15 ft.	Depth of Water: (Approx.) 3 ft.
N/A <input type="checkbox"/>		N/A <input type="checkbox"/>	
Sinuosity: (check one) <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering		Water velocity: (Approx.) < 1 fps	
N/A <input type="checkbox"/>		Bank height Right: 4 ft. Left: 4 ft.	
		Bank slope Right: 45 degrees Left: 45 degrees	
Qualitative Attributes			
Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/clay <input type="checkbox"/> Organic <input type="checkbox"/> Other:			
% of Substrate: _____% _____% _____% _____% 90% 10% _____% _____%			
Width of Riparian Zone: 100 ft.		Vegetative Layers: (check all that apply) <input type="checkbox"/> Trees: _____ in. <input checked="" type="checkbox"/> Saplings/Shrubs: 3 in. <input checked="" type="checkbox"/> Herbs: N/A in.	
N/A <input type="checkbox"/>		Avg. DBH of Dominants: (approx.) _____ in.	
Dominant Bank Vegetation (list): Arundinaria gigantea, Rubus argutus			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Submerged logs, leaf packs			
Aquatic Organisms Observed (list): none observed			
T&E Species Observed (list): none observed			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): man-made canal			
Tributary is: (check one) <input type="checkbox"/> Natural <input checked="" type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Stream Quality: (check one) <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low			

Waterbody ID:

SSUP029

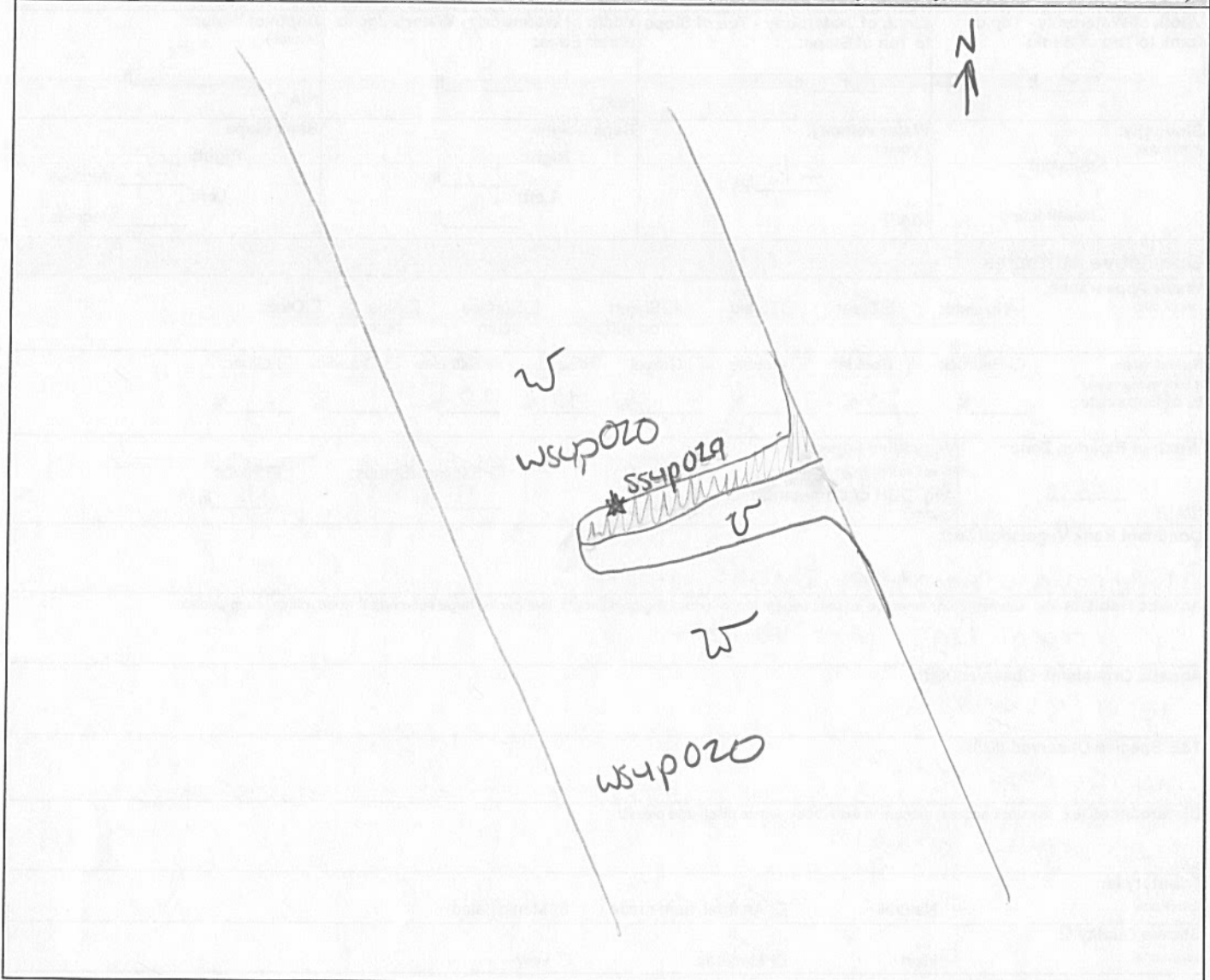
High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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



Environmental Field Surveys
Waterbody Photo Page



Waterbody data point ssup029 facing west upstream.



Waterbody data point ssup029 facing east downstream.

Environmental Field Surveys
Waterbody Photo Page



Waterbody data point ssup029 facing south across bank.

Open Waterbody Data Sheet

Survey Description					
Project Name: <u>ACP</u>		Waterbody Name: <u>UNNAMED POND</u>		Waterbody ID: <u>osup 002</u>	Date: <u>12/1/15</u>
State: <u>VA</u>	County: <u>SUFFOLK</u>	Company: <u>ESI-4</u>	Crew Member Initials: <u>MKS, KSM</u>	Photos: <u>facing west</u>	
Tract Number(s): <u>26-060-A092, 26-166-B001</u>		Nearest Milepost: <u>NA</u>		Associated Wetland ID(s): <u>wsup 020</u>	
Survey Type: <small>(check one)</small>					
<input type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:					
Physical Attributes					
Waterbody Type: <small>(check one)</small>					
<input checked="" type="checkbox"/> Stock Pond <input type="checkbox"/> Natural Pond <input type="checkbox"/> Lake <input type="checkbox"/> Reservoir <input type="checkbox"/> Impoundment <input type="checkbox"/> Oxbow <input type="checkbox"/> Other:					
Hydrologic Regime:					
<input type="checkbox"/> Permanently Flooded <input checked="" type="checkbox"/> Semipermanently Flooded <input type="checkbox"/> Seasonally Flooded <input type="checkbox"/> Temporarily Flooded					
OHWM Height: <u>2</u> ft.		OHWM Indicator: <small>(check all that apply)</small>			
		<input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input checked="" type="checkbox"/> Water staining			
		<input type="checkbox"/> Bent, matted, or missing vegetation <input checked="" type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Depth of Water: <u>4</u> ft.		Bank height (average): <u>3</u> ft.		Bank slope (average): <u>70</u> degrees	
N/A <input type="checkbox"/>					
Qualitative Attributes					
Water Appearance: <small>(check one)</small>					
<input type="checkbox"/> No water <input type="checkbox"/> Clear <input checked="" type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:					
Substrate: <small>(check all that apply)</small>					
<input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <input type="checkbox"/> Other:					
% of Substrate: _____% _____% _____% <u>10</u> % <u>10</u> % <u>80</u> % _____% _____%					
Width of Riparian Zone: <u>80</u> ft.		Vegetative Layers: <small>(check all that apply)</small>			
		<input type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs			
N/A <input type="checkbox"/>		Avg. DBH of Dominants: <small>(approx.)</small>			
		_____ in. <u>1</u> in. <u>NA</u> in.			
Dominant Bank Vegetation (list):					
<u>Arundinaria Gigantea, Rubus argutus</u>					
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.):					
<u>algal mats</u>					
Aquatic Organisms Observed (list):					
<u>none observed</u>					
T&E Species Observed (list):					
<u>none observed</u>					
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes):					
<u>man made pond</u>					
Waterbody is: <small>(check one)</small>					
<input type="checkbox"/> Natural <input checked="" type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated					
Waterbody Quality*: <small>(check one)</small>					
<input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low					

Waterbody ID:

054p002

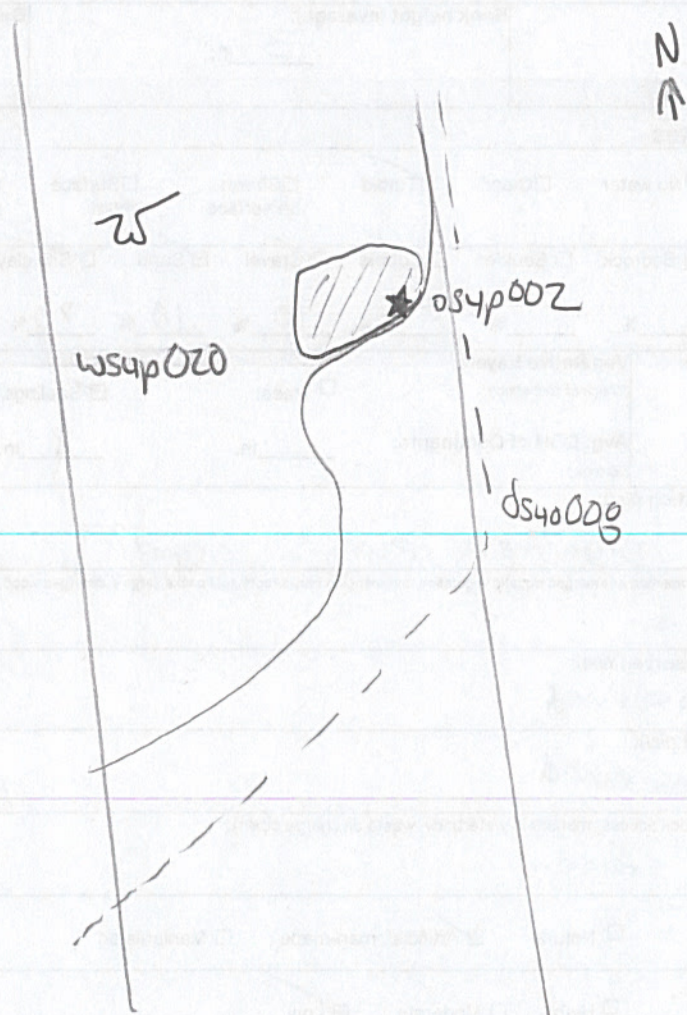
▪ **High Quality:** Natural, natural bank vegetation around entire waterbody; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

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

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

Notes:

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



Environmental Field Surveys
Waterbody Photo Page



Waterbody data point osup002 facing west.

Linear Waterbody Data Sheet

Survey Description			
Project Name: ACP	Waterbody Name: Unto Dismal Swamp	Waterbody ID: SSUP038	Date: 5/25/16
State: VA	County/Parish: SUFFOLK	Company: ESI	Crew Member Initials: RT, VSM
Tract Number(s): 26-166-B002	Nearest Milepost: 69.6	Photos: Facing N, S, E	
Associated Wetland ID(s): WS40009			
Survey Type: (check one) <input type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial			
Waterbody Type: (check one) <input type="checkbox"/> River <input type="checkbox"/> Stream <input type="checkbox"/> Ditch <input checked="" type="checkbox"/> Canal <input type="checkbox"/> Other:			
OHWB Width: 23 ft.	OHWB Indicator: (check all that apply)	<input checked="" type="checkbox"/> Clear line on bank	<input type="checkbox"/> Shelving
OHWB Height: 3 ft.	<input checked="" type="checkbox"/> Bent, matted, or missing vegetation	<input type="checkbox"/> Wrack line	<input type="checkbox"/> Litter and debris
N/A <input type="checkbox"/>		<input type="checkbox"/> Wrested vegetation	<input type="checkbox"/> Scouring
			<input checked="" type="checkbox"/> Water staining
		<input type="checkbox"/> Abrupt plant community change	<input type="checkbox"/> Soil characteristic change
Width of Waterbody - Top of Bank to Top of Bank: 27 ft.	Width of Waterbody - Toe of Slope to Toe of Slope: 2 ft.	Width of Waterbody - Water Edge to Water Edge: 23 ft.	Depth of Water: (Approx.) 3 ft.
N/A <input type="checkbox"/>		N/A <input type="checkbox"/>	N/A <input type="checkbox"/>
Sinuosity: (check one) <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering	Water velocity: (Approx.) < 1 fps	Bank height Right: 3 ft. Left: 3 ft.	Bank slope Right: 45 degrees Left: 45 degrees
N/A <input type="checkbox"/>	N/A <input type="checkbox"/>		
Qualitative Attributes			
Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Silt/clay <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Other:			
% of Substrate: _____% _____% _____% _____% 60% _____% 40% _____%			
Width of Riparian Zone: 700 ft.	Vegetative Layers: (check all that apply)	<input checked="" type="checkbox"/> Trees:	<input checked="" type="checkbox"/> Saplings/Shrubs:
N/A <input type="checkbox"/>	Avg. DBH of Dominants: (approx.) _____ in.	_____ in.	<input checked="" type="checkbox"/> Herbs NA in.
Dominant Bank Vegetation (list): Woodwardia oreolata, Clethra alnifolia, Liquidambar styraciflua, Asimina triloba, Acer rubrum			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): leaf packs, submerged logs			
Aquatic Organisms Observed (list): none			
T&E Species Observed (list): none			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Manipulated canal (spoil piles present)			
Tributary is: (check one) <input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated			
Stream Quality: (check one) <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low			

Waterbody ID:

SSUP038

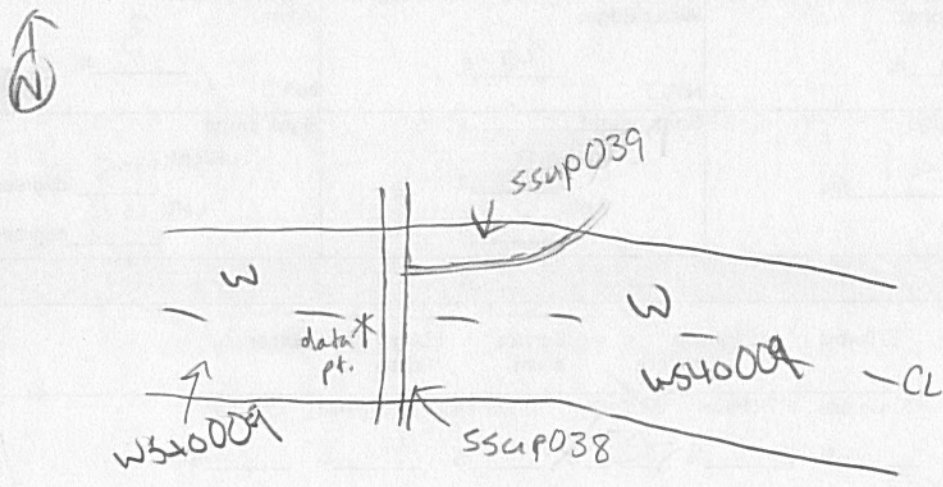
• **High Quality:** Natural, natural bank vegetation around entire waterbody; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

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

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

Notes:

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



Environmental Field Surveys
Waterbody Photo Page



Waterbody ssup038 facing north upstream.



Waterbody ssup038 facing south downstream.

Environmental Field Surveys
Waterbody Photo Page



Waterbody ssup038 facing east across bank.

Linear Waterbody Data Sheet

Survey Description				
Project Name: ACP	Waterbody Name: UNT to Dismal Swamp	Waterbody ID: SSUP 039	Date: 5/25/16	
State: VA	County/Parish: SUFFOLK	Company: ESI	Crew Member Initials: RT KSM	Photos: Facing: E, W, S
Tract Number(s): 26-166-B002		Nearest Milepost: 69.6	Associated Wetland ID(s): WSHO 009	
Survey Type: (check one) <input type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial				
Waterbody Type: (check one) <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:				
OHWM Width: <u>3</u> ft. Height: <u>1</u> ft. N/A <input type="checkbox"/>		OHWM Indicator: (check all that apply) <input checked="" type="checkbox"/> Clear line on bank <input checked="" type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input checked="" type="checkbox"/> Water staining <input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change		
Width of Waterbody - Top of Bank to Top of Bank: <u>4</u> ft.	Width of Waterbody - Toe of Slope to Toe of Slope: <u>3</u> ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input type="checkbox"/> <u>3</u> ft.	Depth of Water: (Approx.) N/A <input type="checkbox"/> <u>0.5</u> ft.	
Sinuosity: (check one) <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering	Water velocity: (Approx.) <u><1</u> fps N/A <input type="checkbox"/>	Bank height Right: <u>2</u> ft. Left: <u>2</u> ft.	Bank slope Right: <u>45</u> degrees Left: <u>45</u> degrees	
Qualitative Attributes				
Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Silt/clay <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Other: % of Substrate: _____% _____% _____% _____% <u>60</u> % _____% <u>40</u> % _____%				
Width of Riparian Zone: <u>700</u> ft. N/A <input type="checkbox"/>	Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: <u>6</u> in. <input checked="" type="checkbox"/> Saplings/Shrubs: <u>1</u> in. <input checked="" type="checkbox"/> Herbs: <u>NA</u> in.			
Dominant Bank Vegetation (list): <u>Acer rubrum, Arundinaria gigantea, Rubus argutus, Smilax rotundifolia</u>				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): <u>leaf packs, submerged logs</u>				
Aquatic Organisms Observed (list): <u>None</u>				
T&E Species Observed (list): <u>None</u>				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): <u>None</u>				
Tributary is: (check one) <input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated				
Stream Quality *: (check one) <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low				

Waterbody ID:

SSUP 039

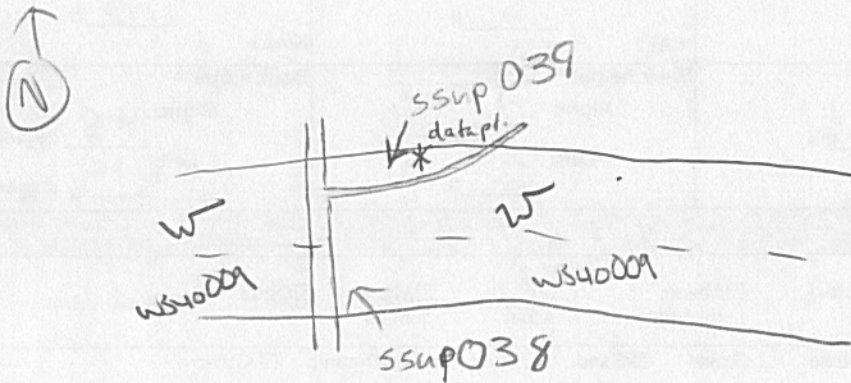
▪ **High Quality:** Natural, natural bank vegetation around entire waterbody; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

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

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

Notes:

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



Environmental Field Surveys
Waterbody Photo Page



Waterbody ssup039 facing east upstream.



Waterbody ssup039 facing west downstream.

Environmental Field Surveys
Waterbody Photo Page



Waterbody ssup039 facing south across bank.

Linear Waterbody Data Sheet

Survey Description				
Project Name: ACP	Waterbody Name: LNT to Dismal Swamp	Waterbody ID: SSUP037	Date: 5/25/16	
State: VA	County/Parish: Suffolk	Company: ESI	Crew Member Initials: RT, KSM	Photos: Facing: SW, NE, SE
Tract Number(s): 26-166-8002		Nearest Milepost: 70.2	Associated Wetland ID(s): WSU0009	
Survey Type: <small>(check one)</small>				
<input type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: <small>(check one)</small>				
<input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial				
Waterbody Type: <small>(check one)</small>				
<input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:				
OHWM Width: <u>5</u> ft.		OHWM Indicator: <small>(check all that apply)</small>		
Height: <u>0.5</u> ft.		<input checked="" type="checkbox"/> Clear line on bank <input checked="" type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input checked="" type="checkbox"/> Water staining		
N/A <input type="checkbox"/>		<input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change		
Width of Waterbody - Top of Bank to Top of Bank: <u>5</u> ft.	Width of Waterbody - Toe of Slope to Toe of Slope: <u>5</u> ft.	Width of Waterbody - Water Edge to Water Edge: <u>5</u> ft.	Depth of Water: <small>(Approx.)</small> <u>1</u> ft.	
N/A <input type="checkbox"/>		N/A <input type="checkbox"/>		
Sinuosity: <small>(check one)</small>		Water velocity: <small>(Approx.)</small>		Bank height
<input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		<u>0</u> fps		Right: <u>0.5</u> ft.
N/A <input type="checkbox"/>		N/A <input type="checkbox"/>		Left: <u>0.5</u> ft.
Bank slope				
Right: <u>45</u> degrees				
Left: <u>45</u> degrees				
Qualitative Attributes				
Water Appearance: <small>(check one)</small>				
<input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: <small>(check all that apply)</small>				
<input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Other:				
% of Substrate: _____% _____% _____% _____% <u>60</u> % _____% <u>40</u> % _____%				
Width of Riparian Zone: <u>7100</u> ft.		Vegetative Layers: <small>(check all that apply)</small>		
N/A <input type="checkbox"/>		<input checked="" type="checkbox"/> Trees: <u>6</u> in. <input checked="" type="checkbox"/> Saplings/Shrubs: <u>2</u> in. <input checked="" type="checkbox"/> Herbs: <u>NA</u> in.		
Dominant Bank Vegetation (list): <u>Woodwardia virginica, Magnolia virginiana</u> <u>Liquidambar styraciflua, Acer rubrum, Asimina triloba</u>				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): <u>submerged logs, leaf packs</u>				
Aquatic Organisms Observed (list): <u>none</u>				
T&E Species Observed (list): <u>none</u>				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): <u>Impact by historic logging activities</u>				
Tributary is: <small>(check one)</small>				
<input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated				
Stream Quality ^a : <small>(check one)</small>				
<input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low				

Waterbody ID:

ssup037

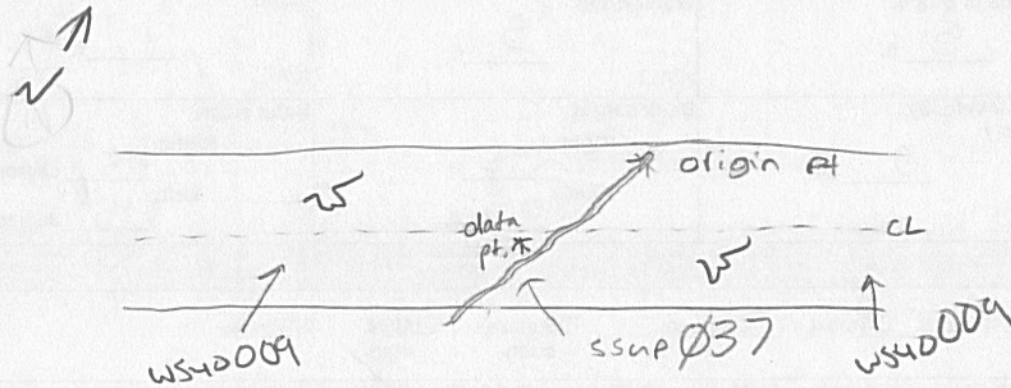
▪ **High Quality:** Natural, natural bank vegetation around entire waterbody; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

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

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

Notes:

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



Environmental Field Surveys
Waterbody Photo Page



Waterbody ssup037 facing northeast upstream.



Waterbody ssup037 facing southwest downstream.

Environmental Field Surveys
Waterbody Photo Page



Waterbody ssup037 facing southeast across bank.

Linear Waterbody Data Sheet

Survey Description				
Project Name: ACP		Waterbody Name: UT to East Ditch	Waterbody ID: SSUO 005	Date: 7/21/15
State: VA	County/Parish: Suffolk	Company: ESI	Crew Member Initials: JH, CM	Photos: Facing N, S, W
Tract Number(s): 26-060-A092		Nearest Milepost: 67.5	Associated Wetland ID(s): WSUO 009	
Survey Type: <small>(check one)</small> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: <small>(check one)</small> <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial				
Waterbody Type: <small>(check one)</small> <input type="checkbox"/> River <input type="checkbox"/> Stream <input type="checkbox"/> Ditch <input checked="" type="checkbox"/> Canal <input type="checkbox"/> Other:				
OHWM Width: 15 ft.	OHWM Height: 5 ft.	OHWM Indicator: <small>(check all that apply)</small>		
N/A <input type="checkbox"/>		<input checked="" type="checkbox"/> Clear line on bank	<input type="checkbox"/> Shelving	<input type="checkbox"/> Wrested vegetation
		<input checked="" type="checkbox"/> Bent, matted, or missing vegetation	<input type="checkbox"/> Wrack line	<input type="checkbox"/> Litter and debris
			<input checked="" type="checkbox"/> Abrupt plant community change	<input type="checkbox"/> Scouring
				<input type="checkbox"/> Water staining
Width of Waterbody - Top of Bank to Top of Bank: 15 ft.	Width of Waterbody - Toe of Slope to Toe of Slope: 15 ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input type="checkbox"/> 15 ft.	Depth of Water: <small>(Approx.)</small> 1.5 ft.	
Sinuosity: <small>(check one)</small> <input checked="" type="checkbox"/> Straight	Water velocity: <small>(Approx.)</small> 0 fps	Bank height Right: 5 ft. Left: 5 ft.	Bank slope Right: 90 degrees Left: 90 degrees	
<input type="checkbox"/> Meandering	N/A <input type="checkbox"/> NO apparent flow			
Qualitative Attributes				
Water Appearance: <small>(check one)</small> <input type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input checked="" type="checkbox"/> Surface scum <input checked="" type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: <small>(check all that apply)</small> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/clay <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Other:				
% of Substrate: _____% _____% _____% _____% _____% 50 % 50 % _____%				
Width of Riparian Zone: >100 ft.	Vegetative Layers: <small>(check all that apply)</small>	Trees: 12 in.	Saplings/Shrubs: 3 in.	Herbs: _____ in.
N/A <input type="checkbox"/> west side only	Avg. DBH of Dominants: <small>(approx.)</small>			
Dominant Bank Vegetation (list): Acer rubrum, Magnolia virginica, Clethra alnifolia, Scirpus cyperinus				
Aquatic Habitats (ex: submerged or emergent aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): leaf pack, submerged wood				
Aquatic Organisms Observed (list): Frogs				
T&E Species Observed (list): NA				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): NA				
Tributary is: <small>(check one)</small> <input type="checkbox"/> Natural <input checked="" type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality ² : <small>(check one)</small> <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low				

Waterbody ID:

SSUO 005

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.

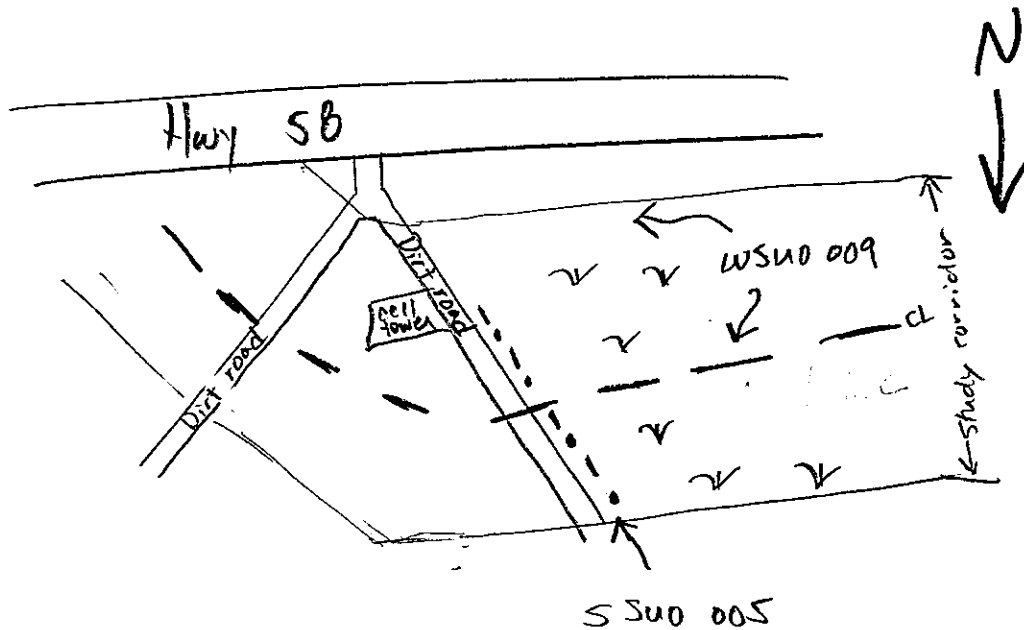
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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

Man-made canal that serves as UT to East Ditch. Had to flog downline side; could not cross canal.

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 ssuo005 facing north upstream.



Waterbody ssuo005 facing south downstream.

Environmental Field Surveys
Waterbody Photo Page



Waterbody ssuo005 facing west across bank.

Linear Waterbody Data Sheet

Survey Description			
Project Name: <u>ALP</u>		Waterbody Name: <u>UNT to Asmar Swamp</u>	
Waterbody ID: <u>SSUR006</u>		Date: <u>14 Jan 2016</u>	
State: <u>VA</u>	County/Parish: <u>Suffolk</u>	Company: <u>ESI</u>	Crew Member Initials: <u>CAS CSM W E S</u>
Tract Number(s): <u>26-166-B0041</u>		Nearest Milepost: <u>71.3</u>	Associated Wetland ID(s): <u>WSUD 011</u>
Survey Type: <small>(check one)</small>			
<input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <small>(check one)</small>			
<input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial			
Waterbody Type: <small>(check one)</small>			
<input type="checkbox"/> River <input type="checkbox"/> Stream <input checked="" type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:			
OHWM Width: <u>14</u> ft. Height: <u>2</u> ft. N/A <input type="checkbox"/>		OHWM Indicator: <small>(check all that apply)</small>	
		<input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input checked="" type="checkbox"/> Water staining	
		<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change	
Width of Waterbody - Top of Bank to Top of Bank: <u>16</u> ft.	Width of Waterbody - Toe of Slope to Toe of Slope: <u>12</u> ft.	Width of Waterbody - Water Edge to Water Edge: <u>14</u> ft. N/A <input type="checkbox"/>	Depth of Water: <small>(Approx.)</small> <u>1</u> ft. N/A <input type="checkbox"/>
Sinuosity: <small>(check one)</small> <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering	Water velocity: <small>(Approx.)</small> <u>1</u> fps N/A <input type="checkbox"/>	Bank height Right: <u>3</u> ft. Left: <u>3</u> ft.	Bank slope Right: <u>90</u> degrees Left: <u>90</u> degrees
Qualitative Attributes			
Water Appearance: <small>(check one)</small>			
<input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: <small>(check all that apply)</small>			
<input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/clay <input type="checkbox"/> Organic <input type="checkbox"/> Other:			
% of Substrate: _____% _____% _____% _____% _____% <u>100</u> % _____% _____%			
Width of Riparian Zone: <u>_____</u> ft. N/A <input type="checkbox"/>	Vegetative Layers: <small>(check all that apply)</small>		
	<input checked="" type="checkbox"/> Trees: <u>15</u> in. <input checked="" type="checkbox"/> Saplings/Shrubs: <u>2</u> in. <input checked="" type="checkbox"/> Herbs: <u>N/A</u> in.		
Dominant Bank Vegetation (list): <u>Pinus taeda, Arundinaria gigantea</u>			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): <u>Submerged wood</u>			
Aquatic Organisms Observed (list): <u>None</u>			
T&E Species Observed (list): <u>None</u>			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): <u>Road, Waterline easement</u>			
Tributary is: <small>(check one)</small>			
<input type="checkbox"/> Natural <input checked="" type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Stream Quality *: <small>(check one)</small>			
<input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low			

Waterbody ID:

SSUR006

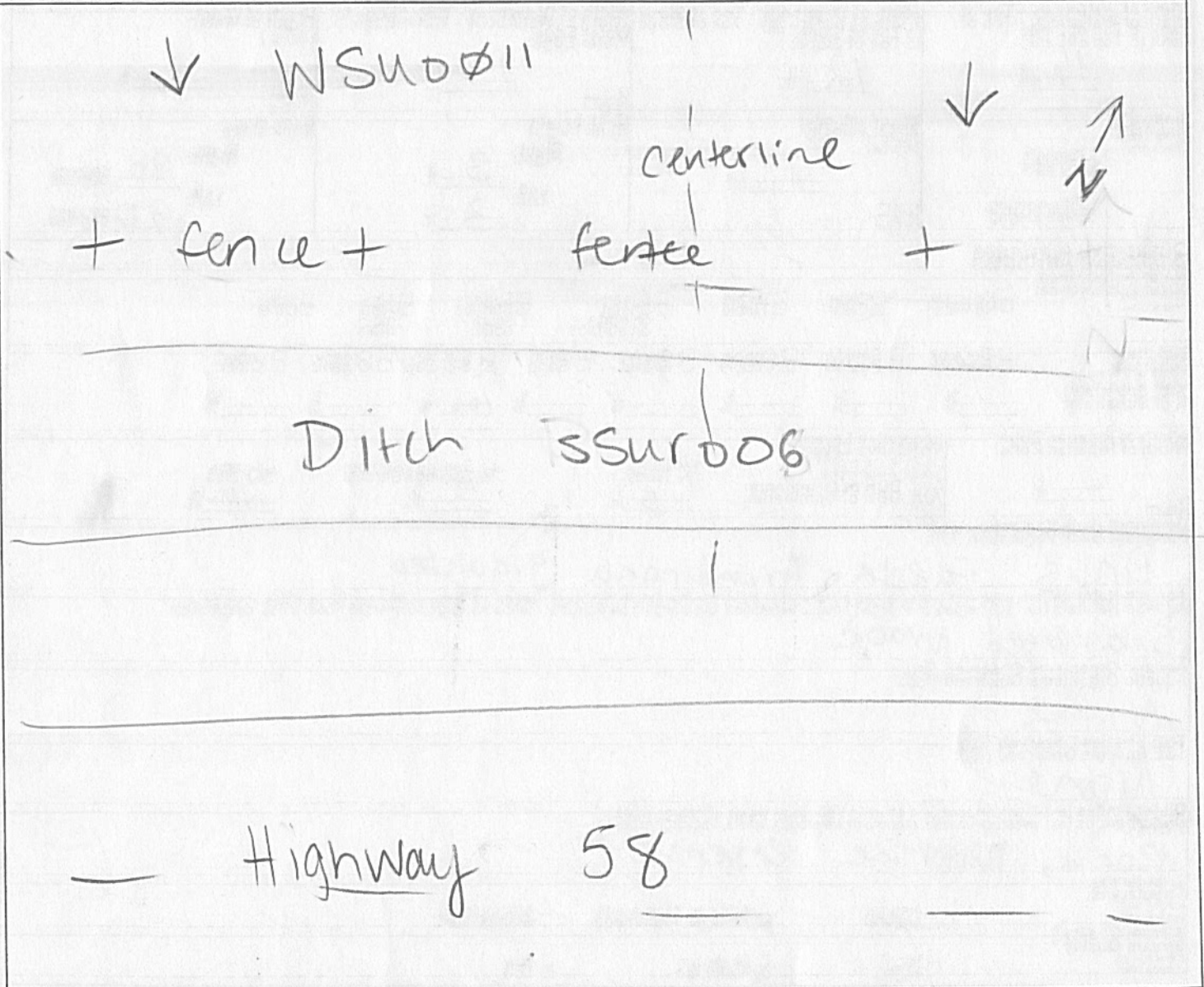
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Notes:

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 ssur006 facing east upstream.



Waterbody ssur006 facing west downstream.

Environmental Field Surveys
Waterbody Photo Page



Waterbody ssur006 facing south across bank.