

*Environmental Field Surveys*  
*Waterbody Photo Page*



**Waterbody data point ssup023 facing east across bank.**

# Linear Waterbody Data Sheet

<b>Survey Description</b>			
Project Name: <b>ACP</b>	Waterbody Name: <b>4N70 Cohoon Creek</b>	Waterbody ID: <b>ssup022</b>	Date: <b>1/6/16</b>
State: <b>VA</b>	County/Parish: <b>Suffolk</b>	Company: <b>ESI</b>	Crew Member Initials: <b>MKS, NWM</b>
Photos: <b>NW, S, NE</b>			
Tract Number(s): <b>26-060-A031</b>		Nearest Milepost: <b>56.3</b>	Associated Wetland ID(s): <b>wsup033</b>
Survey Type: (check one) <input type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
<b>Physical Attributes</b>			
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: <b>2</b> ft.	OHWM Indicator: (check all that apply)	<input type="checkbox"/> Clear line on bank	<input type="checkbox"/> Shelving
OHWM Height: <b>0.3</b> ft.	<input type="checkbox"/> Bent, matted, or missing vegetation	<input checked="" type="checkbox"/> Wrack line	<input type="checkbox"/> Litter and debris
N/A <input type="checkbox"/>		<input type="checkbox"/> Wrested vegetation	<input checked="" 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: <b>6</b> ft.	Width of Waterbody - Toe of Slope to Toe of Slope: <b>3</b> ft.	Width of Waterbody - Water Edge to Water Edge: <b>2</b> ft.	Depth of Water: (Approx.) <b>0.3</b> 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.) <b>&lt; 1</b> fps	Bank height Right: <b>4</b> ft. Left: <b>2</b> ft.	Bank slope Right: <b>70</b> degrees Left: <b>45</b> degrees
N/A <input type="checkbox"/>	N/A <input type="checkbox"/>		
<b>Qualitative Attributes</b>			
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: _____% _____% _____% _____% <b>20%</b> <b>60%</b> <b>20%</b> _____%			
Width of Riparian Zone: <b>6</b> ft.	Vegetative Layers: (check all that apply)		
N/A <input type="checkbox"/>	<input type="checkbox"/> Trees:	<input checked="" type="checkbox"/> Saplings/Shrubs:	<input checked="" type="checkbox"/> Herbs
	Avg. DBH of Dominants: (approx.) _____ in.	<b>2</b> in.	<b>NA</b> in.
Dominant Bank Vegetation (list): <b>Lonicera japonica, Ilex opaca</b>			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): <b>leaf pack</b>			
Aquatic Organisms Observed (list): <b>None</b>			
T&E Species Observed (list): <b>None</b>			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): <b>Agriculture runoff</b>			
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 type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low			

Waterbody ID:

SSUP 022

**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.

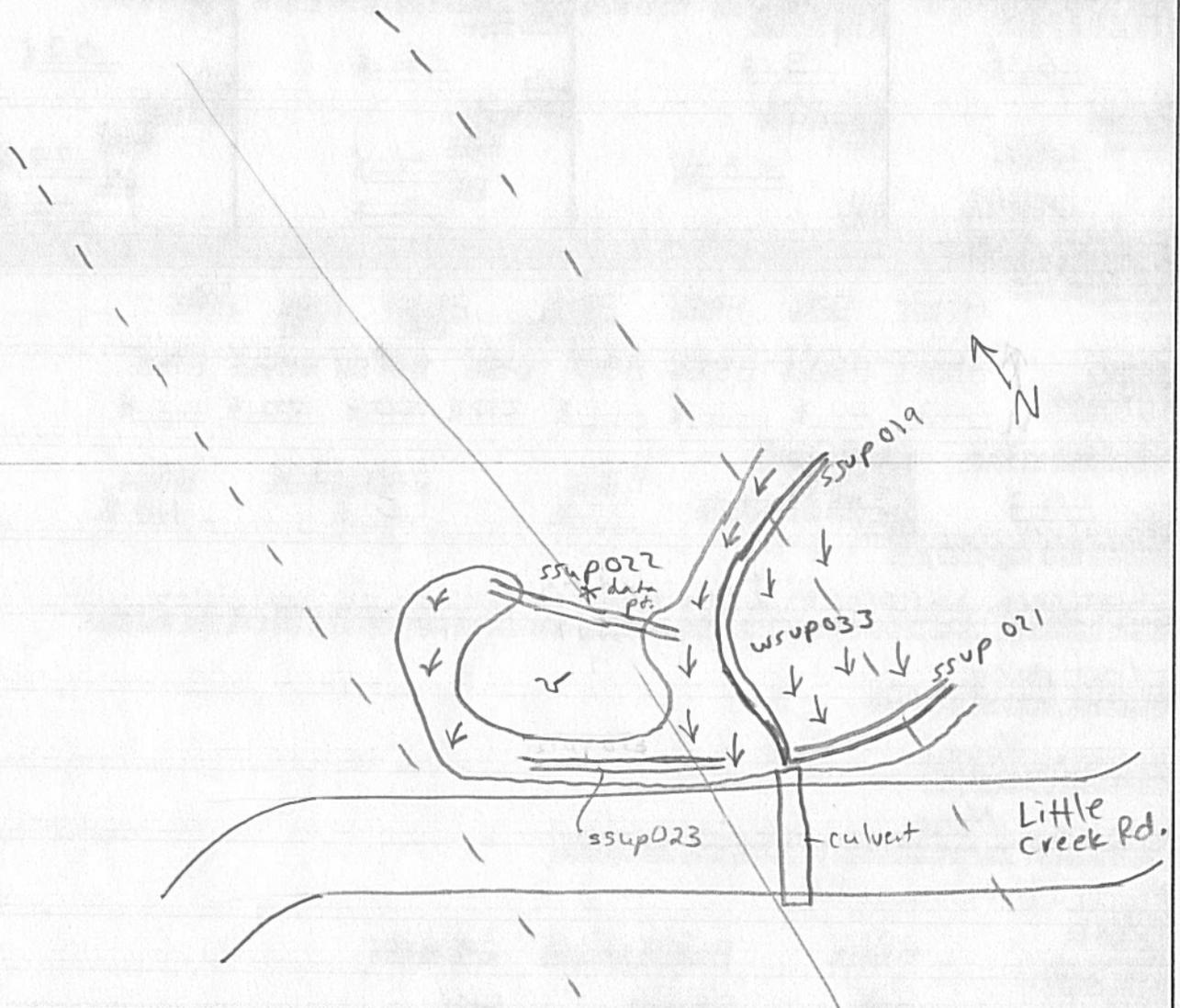
**Moderate Quality:** Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film;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

little to no aquatic habitat

**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 ssup022 facing northwest upstream.**



**Waterbody data point ssup022 facing south downstream.**

*Environmental Field Surveys*  
*Waterbody Photo Page*



**Waterbody data point ssup022 facing northeast across bank.**

# Linear Waterbody Data Sheet

<b>Survey Description</b>			
Project Name: <u>ACP</u>	Waterbody Name: <u>UNT to Cohoon Creek</u>	Waterbody ID: <u>SSUP 024</u>	Date: <u>1/6/16</u>
State: <u>VA</u>	County/Parish: <u>Suffolk</u>	Company: <u>ESI</u>	Crew Member Initials: <u>MKS NWM</u>
Photos: <u>S, N, E</u>			
Tract Number(s): <u>26-060-A031, 26-060-A032</u>		Nearest Milepost: <u>56.4</u>	Associated Wetland ID(s): <u>WSUP 024</u>
Survey Type: (check one) <input type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
<b>Physical Attributes</b>			
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: <u>6</u> ft.		OHWM Indicator: (check all that apply)	
Height: <u>1</u> ft.		<input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input checked="" 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	
N/A <input type="checkbox"/>			
Width of Waterbody - Top of Bank to Top of Bank: <u>8</u> ft.	Width of Waterbody - Toe of Slope to Toe of Slope: <u>6</u> ft.	Width of Waterbody - Water Edge to Water Edge: <u>6</u> ft.	Depth of Water: (Approx.) <u>1</u> ft.
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: (Approx.) <u>&lt;1</u> fps	Bank height Right: <u>1.5</u> ft. Left: <u>1.5</u> ft.
N/A <input type="checkbox"/>		Bank slope Right: <u>50</u> degrees Left: <u>50</u> degrees	
<b>Qualitative Attributes</b>			
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) <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: _____% _____% _____% _____% <u>60</u> % <u>10</u> % <u>30</u> % _____%			
Width of Riparian Zone: <u>175</u> ft.	Vegetative Layers: (check all that apply)		
N/A <input type="checkbox"/>	<input type="checkbox"/> Trees: _____ in. <input type="checkbox"/> Saplings/Shrubs: _____ in. <input checked="" type="checkbox"/> Herbs: <u>NA</u> in.		
Avg. DBH of Dominants: (approx.) _____ in.			
Dominant Bank Vegetation (list): <u>Typha latifolia</u>			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): <u>large submerged wood, leaf pack, deep pools</u>			
Aquatic Organisms Observed (list): <u>crayfish</u>			
T&E Species Observed (list): <u>None</u>			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): <u>Powerline maintenance</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:

SSUP024

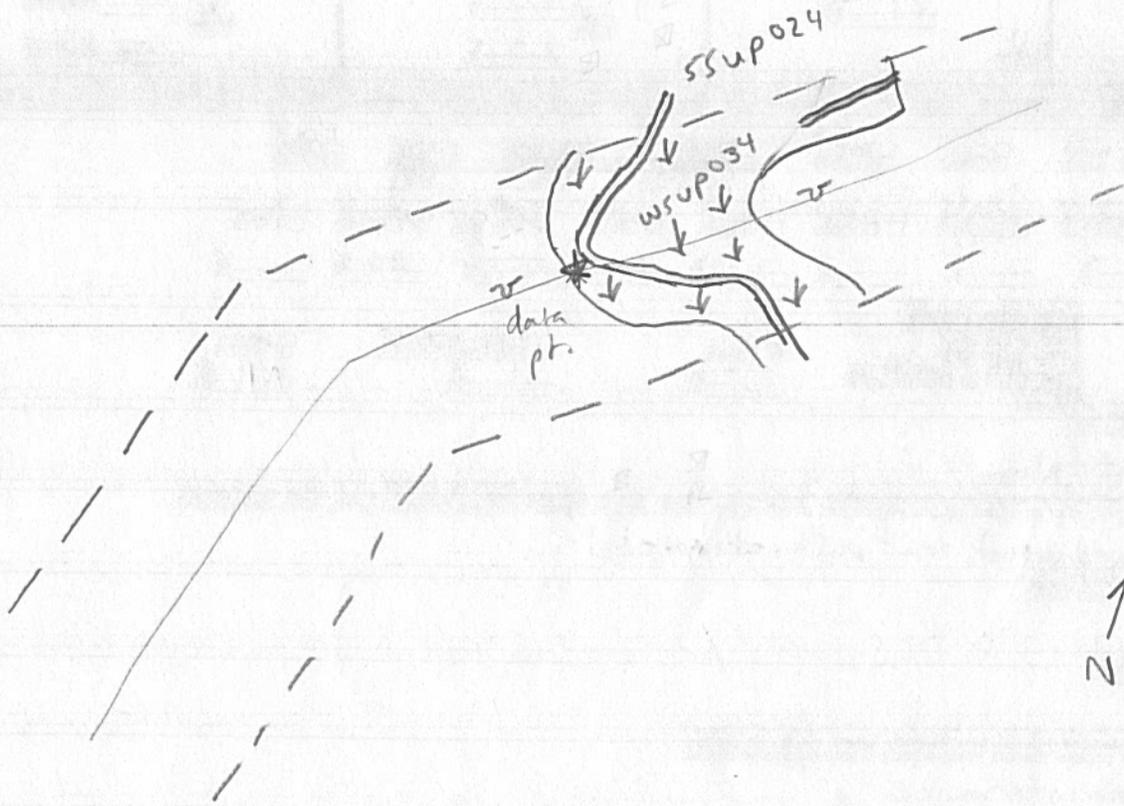
• **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance 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 ssup024 facing south upstream.**



**Waterbody data point ssup024 facing north downstream.**

*Environmental Field Surveys*  
*Waterbody Photo Page*



**Waterbody data point ssup024 facing east across bank.**

# Linear Waterbody Data Sheet

<b>Survey Description</b>					
Project Name: <u>ACP</u>		Waterbody Name: <u>LNT to Cohoon Creek</u>		Waterbody ID: <u>SSUP026</u>	Date: <u>11/7/16</u>
State: <u>VA</u>	County/Parish: <u>Suffolk</u>	Company: <u>ESI</u>	Crew Member Initials: <u>MKS NWM</u>	Photos: <u>E, W, N</u>	
Tract Number(s): <u>26-060-A032</u>		Nearest Milepost: <u>56.6</u>		Associated Wetland ID(s): <u>WSUP035</u>	
Survey Type: (check one) <input type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:					
<b>Physical Attributes</b>					
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>2</u> ft.	OHWM Height: <u>0.3</u> ft.	OHWM Indicator: (check all that apply)	<input checked="" type="checkbox"/> Clear line on bank	<input type="checkbox"/> Shelving	<input type="checkbox"/> Wrested vegetation
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 checked="" type="checkbox"/> Scouring
<input type="checkbox"/> Water staining	<input type="checkbox"/> Soil characteristic change	<input type="checkbox"/> Abrupt plant community change	<input type="checkbox"/> Soil characteristic change	<input type="checkbox"/> Abrupt plant community change	<input type="checkbox"/> Soil characteristic change
Width of Waterbody - Top of Bank to Top of Bank: <u>3</u> ft.		Width of Waterbody - Toe of Slope to Toe of Slope: <u>2.5</u> ft.		Width of Waterbody - Water Edge to Water Edge: <u>2</u> ft.	Depth of Water: (Approx.) <u>0.3</u> ft.
N/A <input type="checkbox"/>	N/A <input type="checkbox"/>	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.) <u>&lt;1</u> fps	Bank height Right: <u>1</u> ft. Left: <u>1</u> ft.	Bank slope Right: _____ degrees Left: _____ degrees	N/A <input type="checkbox"/>	N/A <input type="checkbox"/>
<b>Qualitative Attributes</b>					
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) <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: _____% _____% _____% _____% <u>10</u> % <u>70</u> % <u>20</u> % _____%					
Width of Riparian Zone: <u>50</u> ft.		Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: <u>6</u> in. <input checked="" type="checkbox"/> Saplings/Shrubs: <u>4</u> in. <input checked="" type="checkbox"/> Herbs: <u>1</u> in.			
N/A <input type="checkbox"/>	N/A <input type="checkbox"/>	N/A <input type="checkbox"/>	N/A <input type="checkbox"/>	N/A <input type="checkbox"/>	N/A <input type="checkbox"/>
Dominant Bank Vegetation (list): <u>Arundinaria gigantea, Ilex opaca, Smilax laurifolia, Acer rubrum</u>					
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): <u>Leaf packs</u>					
Aquatic Organisms Observed (list): <u>Benthic macroinvertebrates</u>					
T&E Species Observed (list): <u>None</u>					
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): <u>Dumping</u>					
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 type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low					

Waterbody ID:

SSUP026

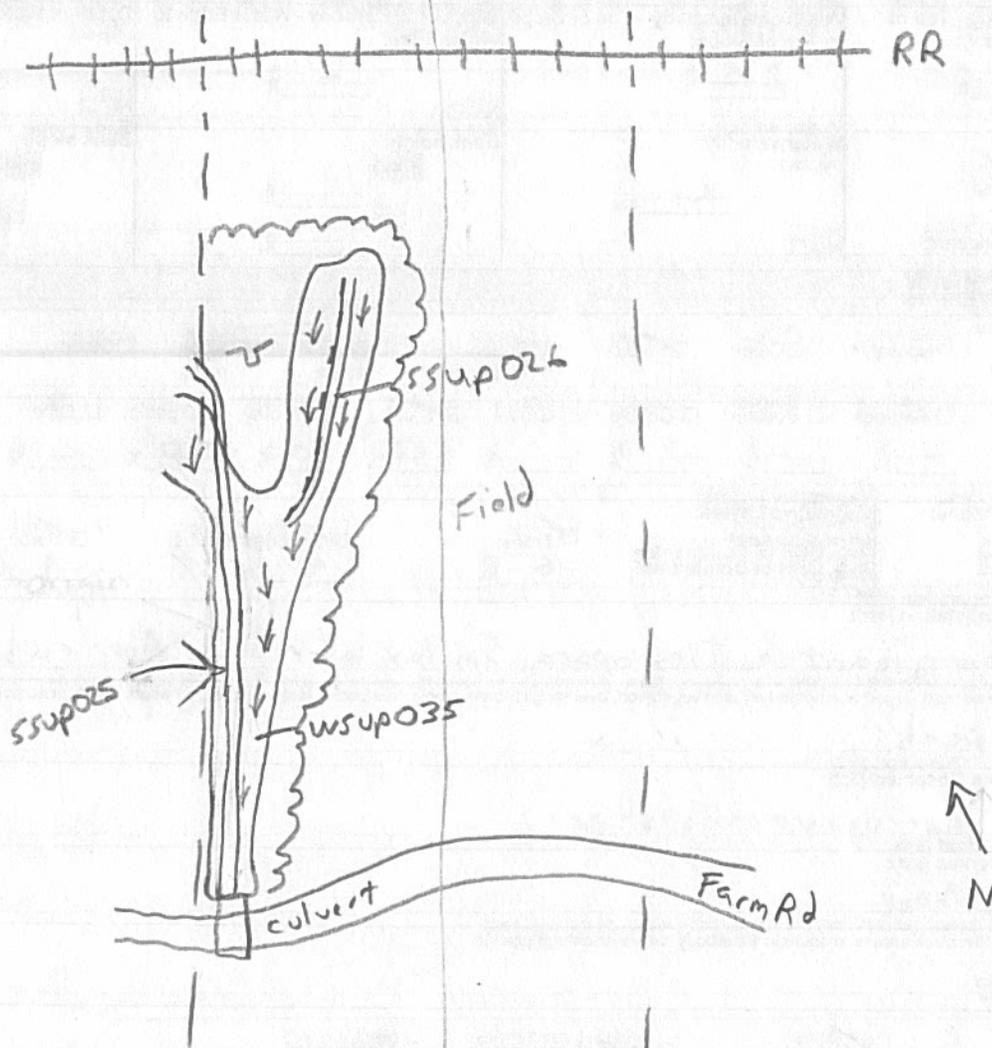
▪ **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance 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 ssup026 facing east upstream.**



**Waterbody data point ssup026 facing west downstream.**

**Linear Waterbody Data Sheet**

<b>Survey Description</b>				
Project Name: <u>ACP</u>		Waterbody Name: <u>UNT to Cohoon Creek</u>		Waterbody ID: <u>SSUP023</u>
Date: <u>1/6/16</u>				
State: <u>VA</u>	County/Parish: <u>Suffolk</u>	Company: <u>ESI</u>	Crew Member Initials: <u>MKS / NWM</u>	Photos: <u>NW, S, E</u>
Tract Number(s): <u>26-060-A031</u>		Nearest Milepost: <u>56.3</u>	Associated Wetland ID(s): <u>WSUP033</u>	
Survey Type: (check one) <input type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
<b>Physical Attributes</b>				
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>0.5</u> ft.		OHWM Indicator: (check all that apply)		
Height: <u>0.2</u> 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 <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 checked="" type="checkbox"/> Soil characteristic change		
N/A <input type="checkbox"/>				
Width of Waterbody - Top of Bank to Top of Bank: <u>1.5</u> ft.	Width of Waterbody - Toe of Slope to Toe of Slope: <u>1.0</u> ft.	Width of Waterbody - Water Edge to Water Edge: <u>0.5</u> ft.	Depth of Water: (Approx.) <u>0.2</u> 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.) <u>&lt; 1</u> fps	Bank height: Right: <u>3</u> ft. Left: <u>1</u> ft.	Bank slope: Right: <u>75</u> degrees Left: <u>45</u> degrees	
N/A <input type="checkbox"/>		N/A <input type="checkbox"/>		
<b>Qualitative Attributes</b>				
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: _____% _____% _____% _____% <u>20</u> % <u>70</u> % <u>10</u> % _____%				
Width of Riparian Zone: <u>30</u> ft.		Vegetative Layers: (check all that apply)		
N/A <input type="checkbox"/>		<input type="checkbox"/> Trees: _____ in. <input checked="" type="checkbox"/> Saplings/Shrubs: <u>3</u> in. <input checked="" type="checkbox"/> Herbs: <u>NA</u> in.		
N/A <input type="checkbox"/>		N/A <input type="checkbox"/>		
Dominant Bank Vegetation (list): <u>Lonicera japonica, Smilax rotundifolia, Ilex opaca, Arundinaria gigantea</u>				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): <u>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>Agriculture runoff</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 type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low				

Waterbody ID:  
SSUP023

▪ **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.

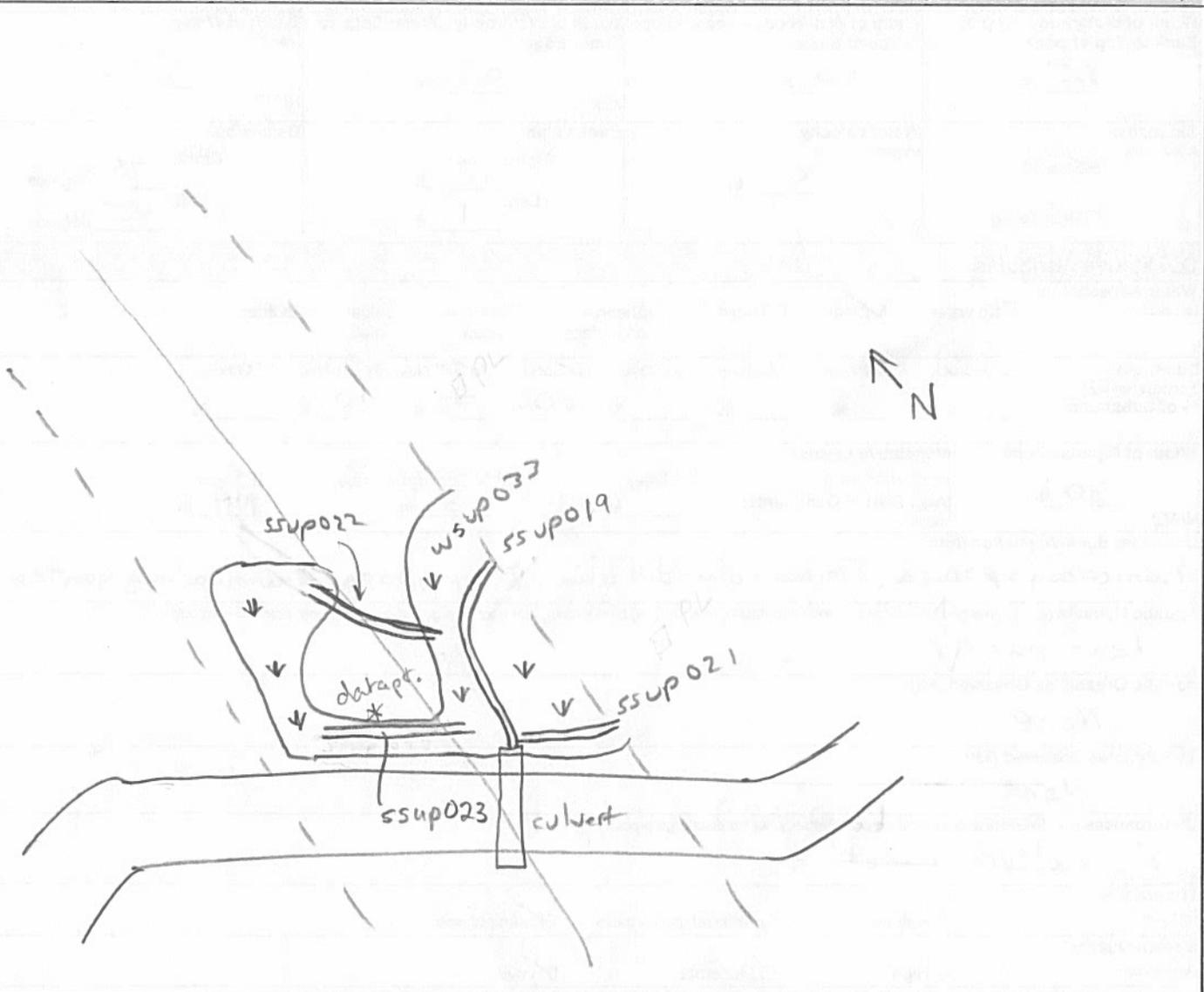
**Moderate Quality:** Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film;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

Little to no aquatic habitat

**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 ssup023 facing northwest upstream.**



**Waterbody data point ssup023 facing south downstream.**

*Environmental Field Surveys*  
*Waterbody Photo Page*



**Waterbody data point ssup023 facing east across bank.**

**Linear Waterbody Data Sheet**

<b>Survey Description</b>						
Project Name: <u>ACP</u>		Waterbody Name: <u>4N70 Cohoon Creek</u>	Waterbody ID: <u>ssup022</u>	Date: <u>1/6/16</u>		
State: <u>VA</u>	County/Parish: <u>Suffolk</u>	Company: <u>ESI</u>	Crew Member Initials: <u>MKS, NWM</u>	Photos: <u>NW, S, NE</u>		
Tract Number(s): <u>26-060-A031</u>		Nearest Milepost: <u>56.3</u>	Associated Wetland ID(s): <u>wsup033</u>			
Survey Type: (check one) <input type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:						
<b>Physical Attributes</b>						
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>2</u> ft.	OHWM Indicator: (check all that apply)	<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
Height: <u>0.3</u> ft.	<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	
N/A <input type="checkbox"/>						
Width of Waterbody - Top of Bank to Top of Bank: <u>6</u> ft.	Width of Waterbody - Toe of Slope to Toe of Slope: <u>3</u> ft.	Width of Waterbody - Water Edge to Water Edge: <u>2</u> ft.	Depth of Water: (Approx.) <u>0.3</u> ft.	N/A <input type="checkbox"/>		
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: (Approx.) <u>&lt;1</u> fps	Bank height Right: <u>4</u> ft. Left: <u>2</u> ft.	Bank slope Right: <u>70</u> degrees Left: <u>45</u> degrees			
N/A <input type="checkbox"/>						
<b>Qualitative Attributes</b>						
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: _____%	_____%	_____%	_____%	<u>20</u> %	<u>60</u> %	<u>20</u> % _____%
Width of Riparian Zone: <u>6</u> ft.	Vegetative Layers: (check all that apply)	<input type="checkbox"/> Trees:	<input checked="" type="checkbox"/> Saplings/Shrubs:	<input checked="" type="checkbox"/> Herbs		
N/A <input type="checkbox"/>	Avg. DBH of Dominants: _____ in.		<u>2</u> in.	<u>NA</u> in.		
Dominant Bank Vegetation (list): <u>Lonicera japonica, Ilex opaca</u>						
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): <u>leaf pack</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>Agriculture runoff</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 type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low						

Waterbody ID:

SSUP 022

**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.

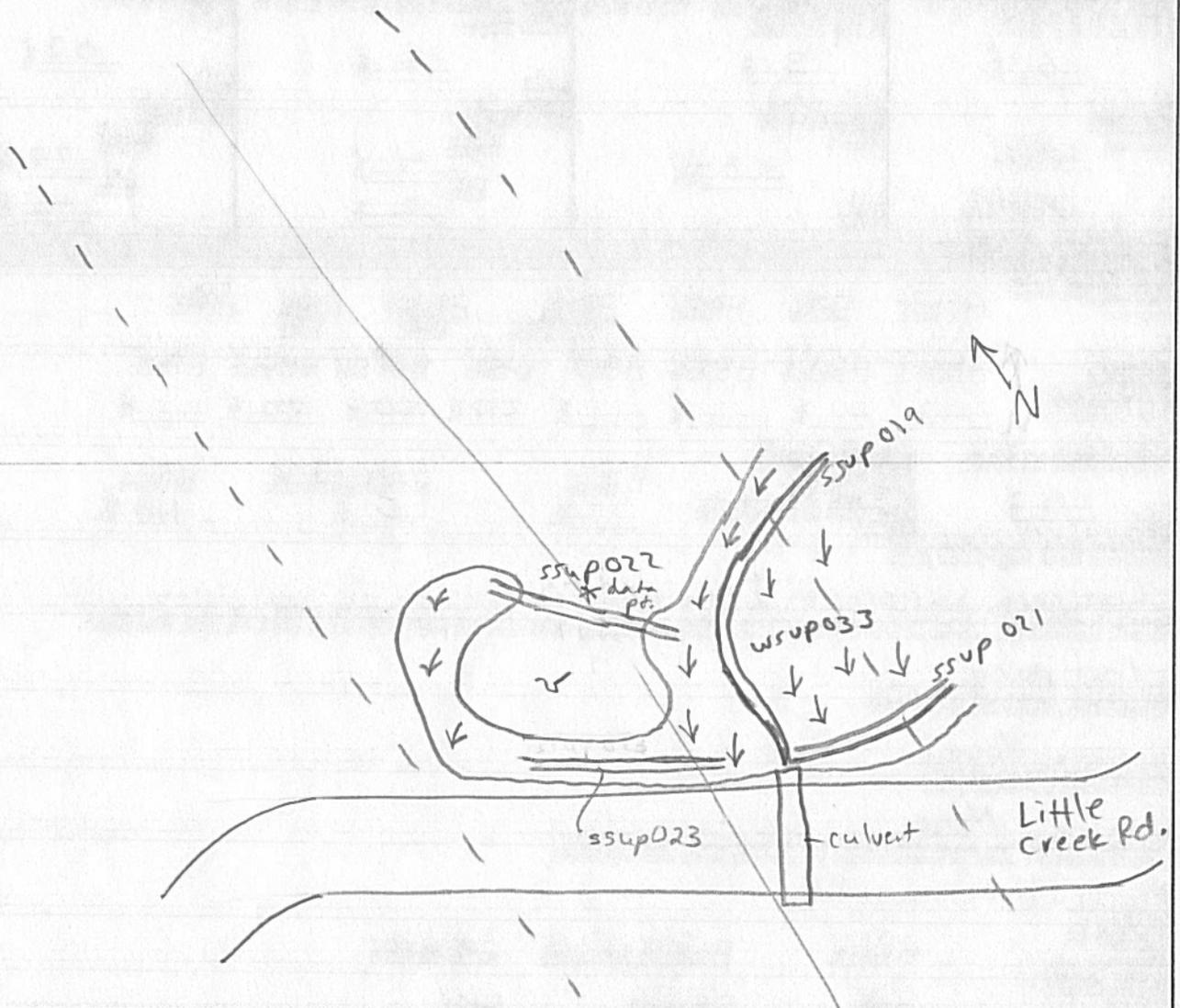
**Moderate Quality:** Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film;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

little to no aquatic habitat

**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 ssup022 facing northwest upstream.**



**Waterbody data point ssup022 facing south downstream.**

*Environmental Field Surveys*  
*Waterbody Photo Page*



**Waterbody data point ssup022 facing northeast across bank.**

**Linear Waterbody Data Sheet**

<b>Survey Description</b>			
Project Name: <u>ACP</u>		Waterbody Name: <u>UNT to Cohoon Creek</u>	Waterbody ID: <u>SSUP 024</u>
Date: <u>1/6/16</u>			
State: <u>VA</u>	County/Parish: <u>Suffolk</u>	Company: <u>ESI</u>	Crew Member Initials: <u>MKS NWM</u>
Photos: <u>S, N, E</u>			
Tract Number(s): <u>26-060-A031, 26-060-A032</u>		Nearest Milepost: <u>56.4</u>	Associated Wetland ID(s): <u>WSUP 024</u>
Survey Type: (check one) <input type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
<b>Physical Attributes</b>			
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: <u>6</u> ft.		OHWM Indicator: (check all that apply)	
Height: <u>1</u> ft.		<input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input checked="" 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: <u>8</u> ft.	Width of Waterbody - Toe of Slope to Toe of Slope: <u>6</u> ft.	Width of Waterbody - Water Edge to Water Edge: <u>6</u> ft.	Depth of Water: (Approx.) <u>1</u> ft.
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: (Approx.) <u>&lt;1</u> fps	Bank slope Right: <u>50</u> degrees Left: <u>50</u> degrees
N/A <input type="checkbox"/>		Bank height Right: <u>1.5</u> ft. Left: <u>1.5</u> ft.	
<b>Qualitative Attributes</b>			
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) <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: _____% _____% _____% _____% <u>60</u> % <u>10</u> % <u>30</u> % _____%			
Width of Riparian Zone: <u>175</u> ft.	Vegetative Layers: (check all that apply)		
N/A <input type="checkbox"/>	<input type="checkbox"/> Trees: _____ in. <input type="checkbox"/> Saplings/Shrubs: _____ in. <input checked="" type="checkbox"/> Herbs: <u>NA</u> in.		
Dominant Bank Vegetation (list): <u>Typha latifolia</u>			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): <u>large submerged wood, leaf pack, deep pools</u>			
Aquatic Organisms Observed (list): <u>crayfish</u>			
T&E Species Observed (list): <u>None</u>			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): <u>Powerline maintenance</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:

SSUP024

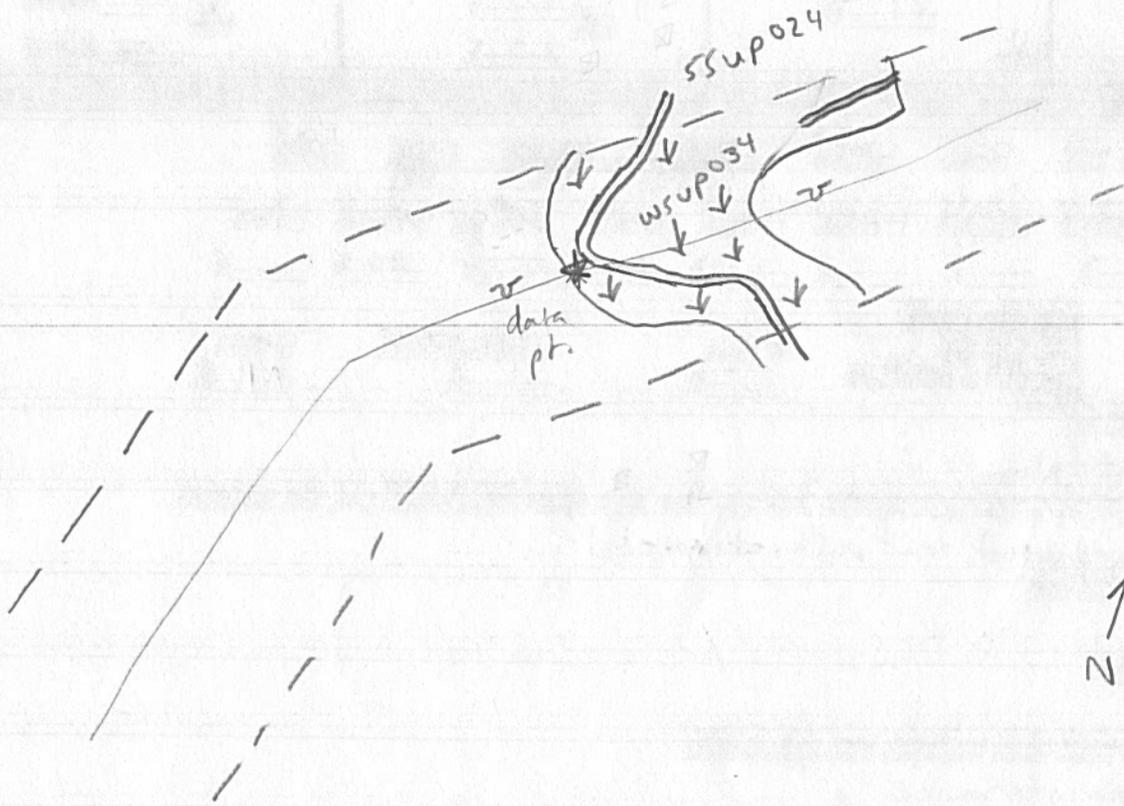
• **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance 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 ssup024 facing south upstream.**



**Waterbody data point ssup024 facing north downstream.**

*Environmental Field Surveys*  
*Waterbody Photo Page*



**Waterbody data point ssup024 facing east across bank.**

**Linear Waterbody Data Sheet**

<b>Survey Description</b>					
Project Name: <u>ACP</u>		Waterbody Name: <u>LNT to Cohoon Creek</u>		Waterbody ID: <u>SSUP026</u>	Date: <u>11/7/16</u>
State: <u>VA</u>	County/Parish: <u>Suffolk</u>	Company: <u>ESI</u>	Crew Member Initials: <u>MKS NWM</u>	Photos: <u>E, W, N</u>	
Tract Number(s): <u>26-060-A032</u>		Nearest Milepost: <u>56.6</u>		Associated Wetland ID(s): <u>WSUP035</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:					
<b>Physical Attributes</b>					
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>2</u> ft.	OHWM Height: <u>0.3</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
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 checked="" type="checkbox"/> Scouring	<input type="checkbox"/> Water staining				
Width of Waterbody - Top of Bank to Top of Bank: <u>3</u> ft.		Width of Waterbody - Toe of Slope to Toe of Slope: <u>2.5</u> ft.		Width of Waterbody - Water Edge to Water Edge: <u>2</u> ft.	Depth of Water: <small>(Approx.)</small> <u>0.3</u> ft.
N/A <input type="checkbox"/>		N/A <input type="checkbox"/>		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>&lt;1</u> fps	N/A <input type="checkbox"/>	Bank height
					Right: <u>1</u> ft.
					Left: <u>1</u> ft.
					Right: _____ degrees
					Left: _____ degrees
<b>Qualitative Attributes</b>					
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 checked="" type="checkbox"/> Organic	<input type="checkbox"/> Other:				
% of Substrate: _____%	_____%	_____%	_____%	<u>10</u> %	<u>70</u> %
<u>20</u> %	_____%				
Width of Riparian Zone: <u>50</u> ft.		N/A <input type="checkbox"/>	Vegetative Layers: <small>(check all that apply)</small>	<input checked="" type="checkbox"/> Trees:	<input checked="" type="checkbox"/> Saplings/Shrubs:
			Avg. DBH of Dominants: <small>(approx.)</small>	<u>6</u> in.	<u>4</u> in.
				<u>1</u> in.	
Dominant Bank Vegetation (list): <u>Arundinaria gigantea, Ilex opaca, Smilax laurifolia, Acer rubrum</u>					
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): <u>Leaf packs</u>					
Aquatic Organisms Observed (list): <u>Benthic macroinvertebrates</u>					
T&E Species Observed (list): <u>None</u>					
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): <u>Dumping</u>					
Tributary Is: <small>(check one)</small> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated					
Stream Quality *: <small>(check one)</small> <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low					

Waterbody ID:

SSUP026

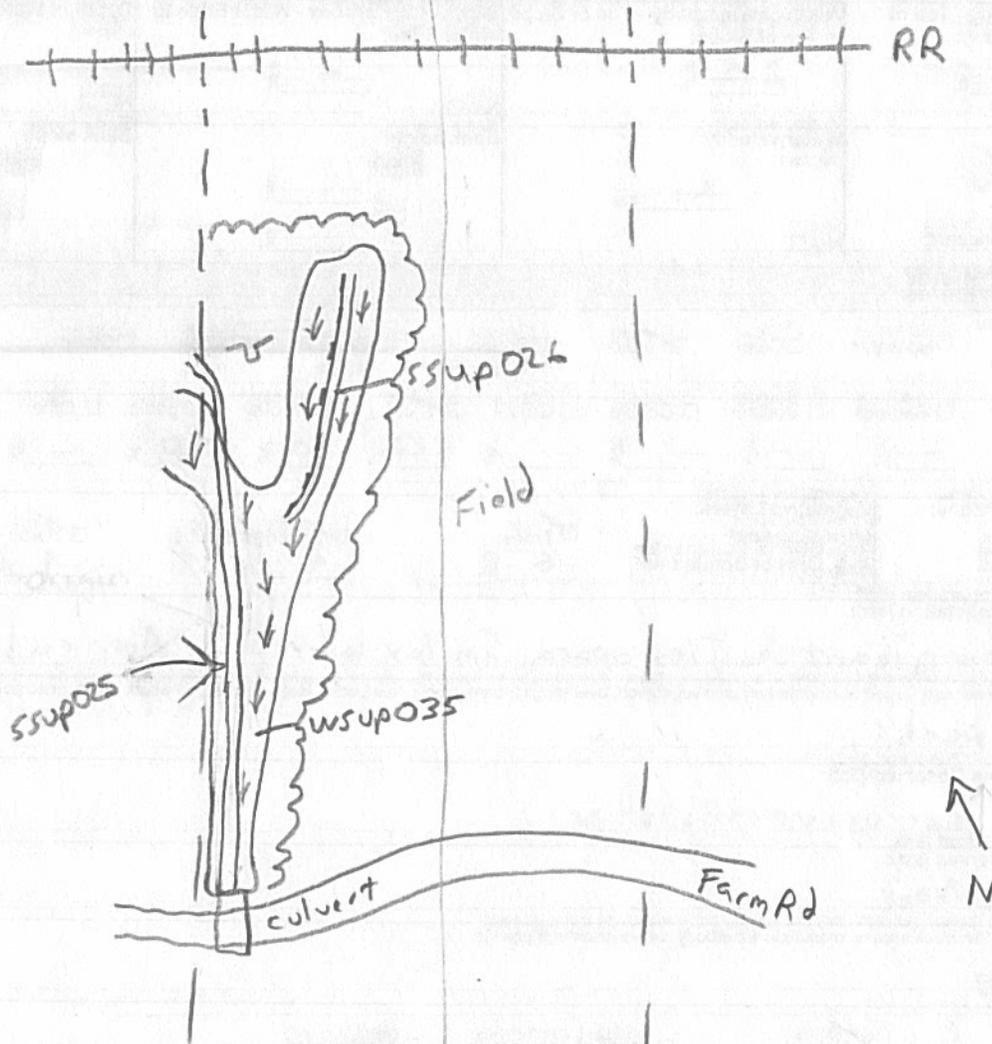
▪ **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance 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 ssup026 facing east upstream.**



**Waterbody data point ssup026 facing west downstream.**

*Environmental Field Surveys*  
*Waterbody Photo Page*



**Waterbody data point ssup026 facing north across bank.**

**Linear Waterbody Data Sheet**

<b>Survey Description</b>				
Project Name: <u>ACP</u>		Waterbody Name: <u>LINT to Elgy Swamp</u>		Waterbody ID: <u>SSUP 033</u>
Date: <u>1/7/16</u>				
State: <u>VA</u>	County/Parish: <u>Suffolk</u>	Company: <u>ESI</u>	Crew Member Initials: <u>MKS, NWM</u>	Photos: <u>NW, SE, NE</u>
Tract Number(s): <u>26-060-A035, 26-060-A036</u>		Nearest Milepost: <u>57</u>	Associated Wetland ID(s): <u>None</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:				
<b>Physical Attributes</b>				
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: <u>2.5</u> ft.		OHWM Indicator: <small>(check all that apply)</small>		
Height: <u>1</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 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>3</u> ft.	Width of Waterbody - Toe of Slope to Toe of Slope: <u>2.5</u> ft.	Width of Waterbody - Water Edge to Water Edge: <u>2.5</u> ft.	Depth of Water: <small>(Approx.)</small> <u>1</u> ft.	
Sinuosity: <small>(check one)</small> <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering		Water velocity: <small>(Approx.)</small> <u>0</u> fps	Bank height Right: <u>3</u> ft. Left: <u>2</u> ft.	Bank slope Right: <u>80</u> degrees Left: <u>80</u> degrees
N/A <input type="checkbox"/>		N/A <input type="checkbox"/>		
<b>Qualitative Attributes</b>				
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 checked="" type="checkbox"/> Organic <input type="checkbox"/> Other:				
% of Substrate:    _____%    _____%    _____%    _____%    _____% <u>80</u> % <u>20</u> %    _____%				
Width of Riparian Zone: <u>5</u> ft.		Vegetative Layers: <small>(check all that apply)</small>		
N/A <input type="checkbox"/>		<input type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs		
		Avg. DBH of Dominants:    _____ in. <u>2</u> in. <u>NA</u> in.		
Dominant Bank Vegetation (list): <u>Festuca rubra, Acer rubrum, Juncus effusus</u>				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): <u>None</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>Mowing, ditch maintenance</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 type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low				

Waterbody ID:

SSUP033

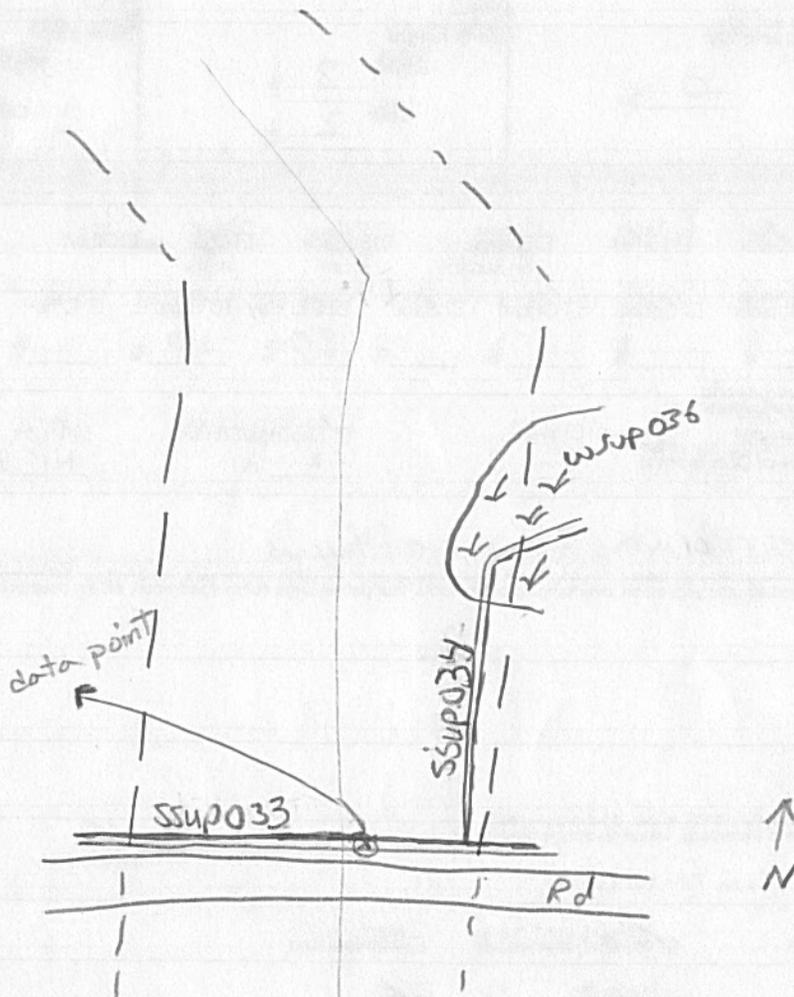
• **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance 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 ssup033 facing northwest upstream.**



**Waterbody ssup033 facing southeast downstream.**

*Environmental Field Surveys*  
*Waterbody Photo Page*



**Waterbody ssup033 facing northeast across bank.**

# Linear Waterbody Data Sheet

<b>Survey Description</b>				
Project Name: <u>ACP</u>		Waterbody Name: <u>LINT to ELEY Swamp</u>	Waterbody ID: <u>SSU0105</u>	Date: <u>3-10-16</u>
State: <u>VA</u>	County/Parish: <u>Suffolk</u>	Company: <u>ESI</u>	Crew Member Initials: <u>LR, WV</u>	Photos: <u>Facing N,S,W</u>
Tract Number(s): <u>26-060-A039 &amp; 26-060-A040</u>		Nearest Milepost: <u>58.0</u>	Associated Wetland ID(s): <u>WSU0033</u>	
Survey Type: (check one) <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
<b>Physical Attributes</b>				
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: <u>5</u> ft.	OHWM Height: <u>1</u> 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	<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	N/A <input type="checkbox"/>
Width of Waterbody - Top of Bank to Top of Bank: <u>7</u> ft.	Width of Waterbody - Toe of Slope to Toe of Slope: <u>4</u> ft.	Width of Waterbody - Water Edge to Water Edge: <u>4</u> ft.	Depth of Water: (Approx.) <u>1</u> ft.	
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: (Approx.) <u>&lt; 1</u> fps	Bank height Right: <u>2</u> ft. Left: <u>2</u> ft.	Bank slope Right: <u>80</u> degrees Left: <u>80</u> degrees	
<b>Qualitative Attributes</b>				
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: _____% _____% _____% _____% <u>20</u> % <u>80</u> % _____% _____%				
Width of Riparian Zone: <u>50</u> ft.	Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: <u>5</u> in. <input checked="" type="checkbox"/> Saplings/Shrubs: <u>1</u> in. <input checked="" type="checkbox"/> Herbs: <u>NA</u> in.	Avg. DBH of Dominants: (approx.) <u>5</u> in.	N/A <input type="checkbox"/>	
Dominant Bank Vegetation (list): <u>Taxodium distichum, Ligustrum sinense, Chasmanthum laxum</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, deep pools</u>				
Aquatic Organisms Observed (list): <u>crayfish burrows</u>				
T&E Species Observed (list): <u>none observed</u>				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): <u>none</u>				
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:

SSU0105

**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.

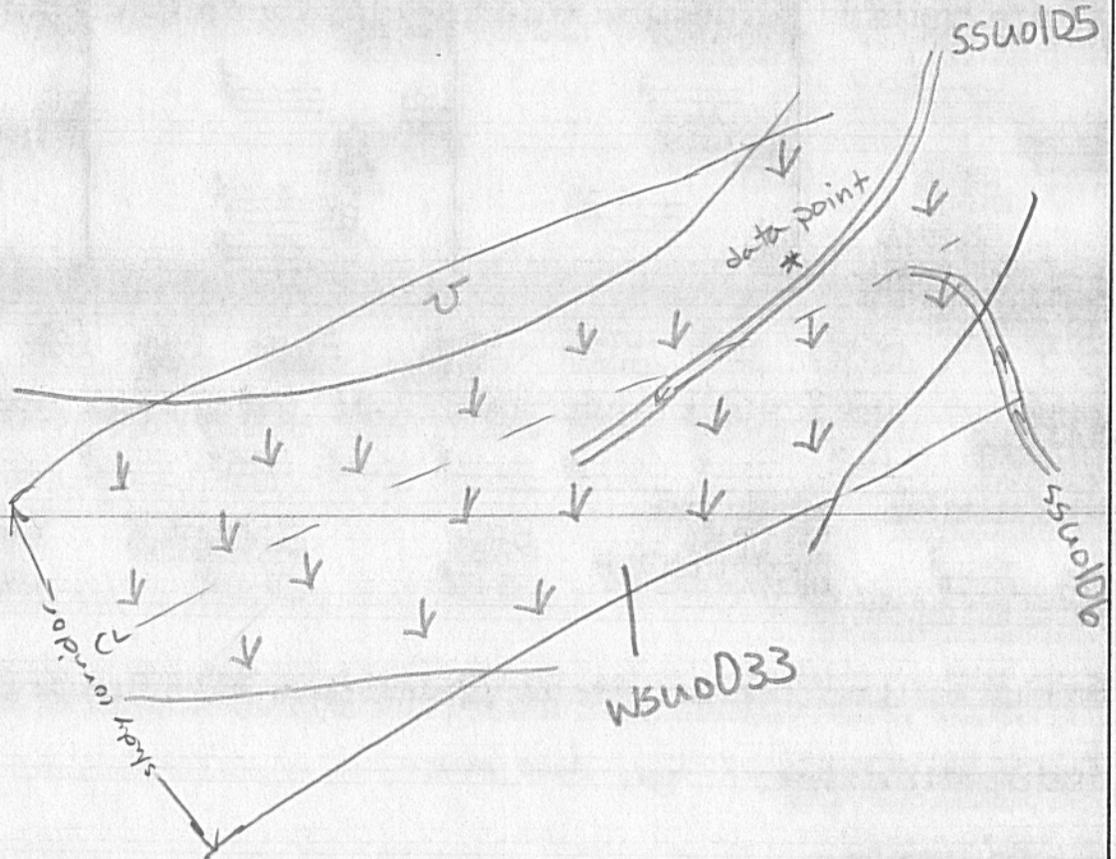
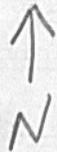
**Moderate Quality:** Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film;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

Flows into WSU033

**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 ssuo105 facing north upstream.**



**Waterbody data point ssuo105 facing south downstream.**

*Environmental Field Surveys*  
*Waterbody Photo Page*



**Waterbody data point ssuo105 facing west across.**

**Linear Waterbody Data Sheet**

<b>Survey Description</b>		<b>Waterbody Name:</b>		<b>Waterbody ID:</b>		<b>Date:</b>	
Project Name: ACP		UNT to ELEY SWAMP		ssu0106		3-10-16	
<b>State:</b>		<b>County/Parish:</b>		<b>Company:</b>		<b>Crew Member Initials:</b>	
VA		Suffolk		ESI		LR, WV	
<b>Tract Number(s):</b>		<b>Nearest Milepost:</b>		<b>Associated Wetland ID(s):</b>			
26-060-A039 ; 26-060-A040		58.1		WSu0033			
<b>Survey Type:</b> (check one) <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:							
<b>Physical Attributes</b>							
<b>Stream Classification:</b> (check one) <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial							
<b>Waterbody Type:</b> (check one) <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:							
<b>OHWM Width:</b>		<b>OHWM Indicator:</b> (check all that apply)		<input checked="" type="checkbox"/> Clear line on bank		<input type="checkbox"/> Shelving	
Width: <u>2</u> ft.		<input type="checkbox"/> Wrested vegetation		<input type="checkbox"/> Scouring		<input type="checkbox"/> Water staining	
Height: <u>1</u> ft.		<input 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"/> Abrupt plant community change		<input type="checkbox"/> Soil characteristic change			
<b>Width of Waterbody - Top of Bank to Top of Bank:</b>		<b>Width of Waterbody - Toe of Slope to Toe of Slope:</b>		<b>Width of Waterbody - Water Edge to Water Edge:</b>		<b>Depth of Water:</b> (Approx.)	
<u>3</u> ft.		<u>1</u> ft.		N/A <input type="checkbox"/> <u>1.5</u> ft.		N/A <input type="checkbox"/> <u>2</u> ft.	
<b>Sinuosity:</b> (check one)		<b>Water velocity:</b> (Approx.)		<b>Bank height</b>		<b>Bank slope</b>	
<input type="checkbox"/> Straight		<u>&lt;1</u> fps		Right: <u>2</u> ft.		Right: <u>70</u> degrees	
<input checked="" type="checkbox"/> Meandering		N/A <input type="checkbox"/>		Left: <u>2</u> ft.		Left: <u>70</u> degrees	
<b>Qualitative Attributes</b>							
<b>Water Appearance:</b> (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:							
<b>Substrate:</b> (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 type="checkbox"/> Organic <input type="checkbox"/> Other:							
% of Substrate: _____% _____% _____% _____% <u>100</u> % _____% _____% _____%							
<b>Width of Riparian Zone:</b>		<b>Vegetative Layers:</b> (check all that apply)					
<u>20</u> ft.		<input checked="" type="checkbox"/> Trees:		<input checked="" type="checkbox"/> Saplings/Shrubs:		<input checked="" type="checkbox"/> Herbs	
N/A <input type="checkbox"/>		Avg. DBH of Dominants: <u>7</u> in.		<u>1</u> in.		<u>NA</u> in.	
<b>Dominant Bank Vegetation (list):</b>							
<u>Ilex opaca, Fagus grandifolia, Ligustrum sinense</u>							
<b>Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools):</b>							
<u>leaf packs</u>							
<b>Aquatic Organisms Observed (list):</b>							
<u>None observed</u>							
<b>T&amp;E Species Observed (list):</b>							
<u>None observed</u>							
<b>Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes):</b>							
<u>None</u>							
<b>Tributary Is:</b> (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated							
<b>Stream Quality*:</b> (check one) <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low							

Waterbody ID:

SSuo1063

**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.

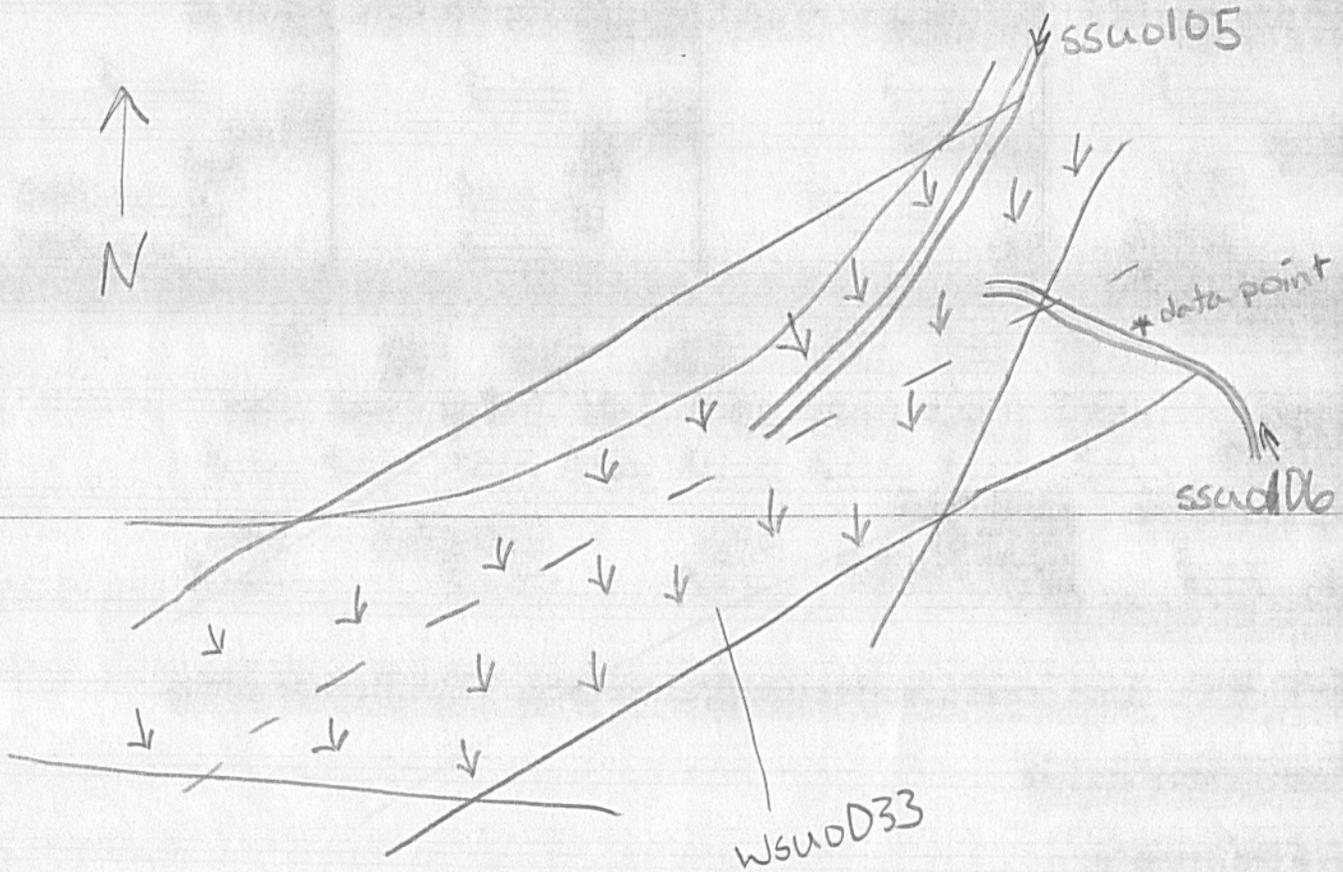
**Moderate Quality:** Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film;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

Flows into wswu033

**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 ssuo106 facing east upstream.**



**Waterbody data point ssuo106 facing west downstream.**

*Environmental Field Surveys*  
*Waterbody Photo Page*



**Waterbody data point ssuo106 facing south across.**

*Environmental Field Surveys*  
*Waterbody Photo Page*



**Waterbody dsup009 facing north upstream.**



**Waterbody dsup009 facing south downstream.**

# Linear Waterbody Data Sheet

<b>Survey Description</b>				
Project Name: <u>ACP</u>		Waterbody Name: <u>UNT to Lake Prince</u>		Waterbody ID: <u>SSU0107</u>
Date: <u>3-15-16</u>				
State: <u>VA</u>	County/Parish: <u>Suffolk</u>	Company: <u>ESI</u>	Crew Member Initials: <u>LR, WV</u>	Photos: <u>W, E, N Facing</u>
Tract Number(s): <u>2G-060-A047, A049</u>		Nearest Milepost: <u>59.3</u>	Associated Wetland ID(s): <u>WSU0034</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:				
<b>Physical Attributes</b>				
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 checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:				
OHWM Width: <u>3</u> ft.		OHWM Indicator: <small>(check all that apply)</small>		
Height: <u>1</u> ft.		<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		
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: <u>5</u> ft.	Width of Waterbody - Toe of Slope to Toe of Slope: <u>3</u> ft.	Width of Waterbody - Water Edge to Water Edge: <u>4</u> ft.	Depth of Water: <small>(Approx.)</small> <u>0.5</u> ft.	
Sinuosity: <small>(check one)</small> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: <small>(Approx.)</small> <u>1</u> fps	Bank height: Right: <u>2</u> ft. Left: <u>2</u> ft.	Bank slope: Right: <u>45</u> degrees Left: <u>45</u> degrees
N/A <input type="checkbox"/>		N/A <input type="checkbox"/>		
<b>Qualitative Attributes</b>				
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 type="checkbox"/> Organic <input type="checkbox"/> Other:				
% of Substrate:    _____%    _____%    _____%    _____% <u>100</u> %    _____%    _____%    _____%				
Width of Riparian Zone: <u>50</u> ft.		Vegetative Layers: <small>(check all that apply)</small>		
N/A <input type="checkbox"/>		<input checked="" type="checkbox"/> Trees: <u>10</u> in. <input checked="" type="checkbox"/> Saplings/Shrubs: <u>2</u> in. <input checked="" type="checkbox"/> Herbs: <u>NA</u> in.		
N/A <input type="checkbox"/>		Avg. DBH of Dominants: <small>(approx.)</small> <u>10</u> in. <u>2</u> in. <u>NA</u> in.		
Dominant Bank Vegetation (list): <u>Fagus grandifolia, Ilex opaca, Ligustrum sinense</u>				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): <u>deep pools, leaf packs</u>				
Aquatic Organisms Observed (list): <u>water strider</u>				
T&E Species Observed (list): <u>None observed</u>				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): <u>None observed</u>				
Tributary Is: <small>(check one)</small> <input checked="" type="checkbox"/> Natural <input 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:

SSu0107

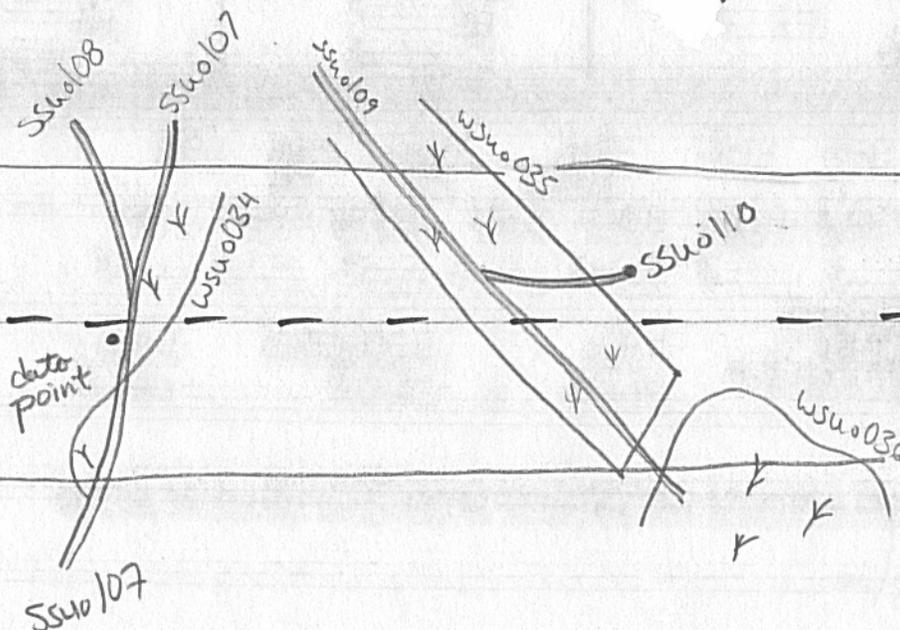
• **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance 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 ssuo107 facing west upstream.**



**Waterbody data point ssuo107 facing east downstream.**

*Environmental Field Surveys*  
*Waterbody Photo Page*



**Waterbody data point ssuo107 facing north across.**

# Linear Waterbody Data Sheet

Survey Description				
Project Name: <u>ACP</u>		Waterbody Name: <u>UNT to Lake Prince</u>	Waterbody ID: <u>SSU0109</u>	Date: <u>3-15-16</u>
State: <u>VA</u>	County/Parish: <u>Suffolk</u>	Company: <u>ESI</u>	Crew Member Initials: <u>LR, WV</u>	Photos: <u>S, N, W</u> Facing
Tract Number(s): <u>26-060-A050, A049</u>		Nearest Milepost: <u>59.4</u>	Associated Wetland ID(s): <u>WSU0035, WSU0036</u>	
Survey Type: <small>(check one)</small> <input 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 checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:				
OHWM Width: <u>5</u> ft.	OHWM Height: <u>3</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 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 checked="" type="checkbox"/> Scouring
				<input type="checkbox"/> Water staining
N/A <input type="checkbox"/>				
Width of Waterbody - Top of Bank to Top of Bank: <u>7</u> ft.	Width of Waterbody - Toe of Slope to Toe of Slope: <u>3</u> ft.	Width of Waterbody - Water Edge to Water Edge: <u>4</u> ft.	Depth of Water: <small>(Approx.)</small> <u>3</u> ft.	
		N/A <input type="checkbox"/>	N/A <input type="checkbox"/>	
Sinuosity: <small>(check one)</small>	Water velocity: <small>(Approx.)</small>	Bank height	Bank slope	
<input type="checkbox"/> Straight	<u>1</u> fps	Right: <u>4</u> ft.	Right: <u>70</u> degrees	
<input checked="" type="checkbox"/> Meandering	N/A <input type="checkbox"/>	Left: <u>4</u> ft.	Left: <u>70</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 type="checkbox"/> Organic
				<input type="checkbox"/> Other:
% of Substrate:				
				<u>100</u> %
Width of Riparian Zone: <u>100</u> ft.	Vegetative Layers: <small>(check all that apply)</small>			
N/A <input type="checkbox"/>		<input checked="" type="checkbox"/> Trees:	<input checked="" type="checkbox"/> Saplings/Shrubs:	<input checked="" type="checkbox"/> Herbs
	Avg. DBH of Dominants: <small>(approx.)</small> <u>11</u> in.		<u>3</u> in.	
Dominant Bank Vegetation (list): <u>Liquidambar styraciflua, Pinus taeda, Ilex opaca</u>				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): <u>deep pools, overhanging banks/roots, riffles</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>culvert under dirt road</u>				
Tributary Is: <small>(check one)</small> <input checked="" type="checkbox"/> Natural <input 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:

SSu0109

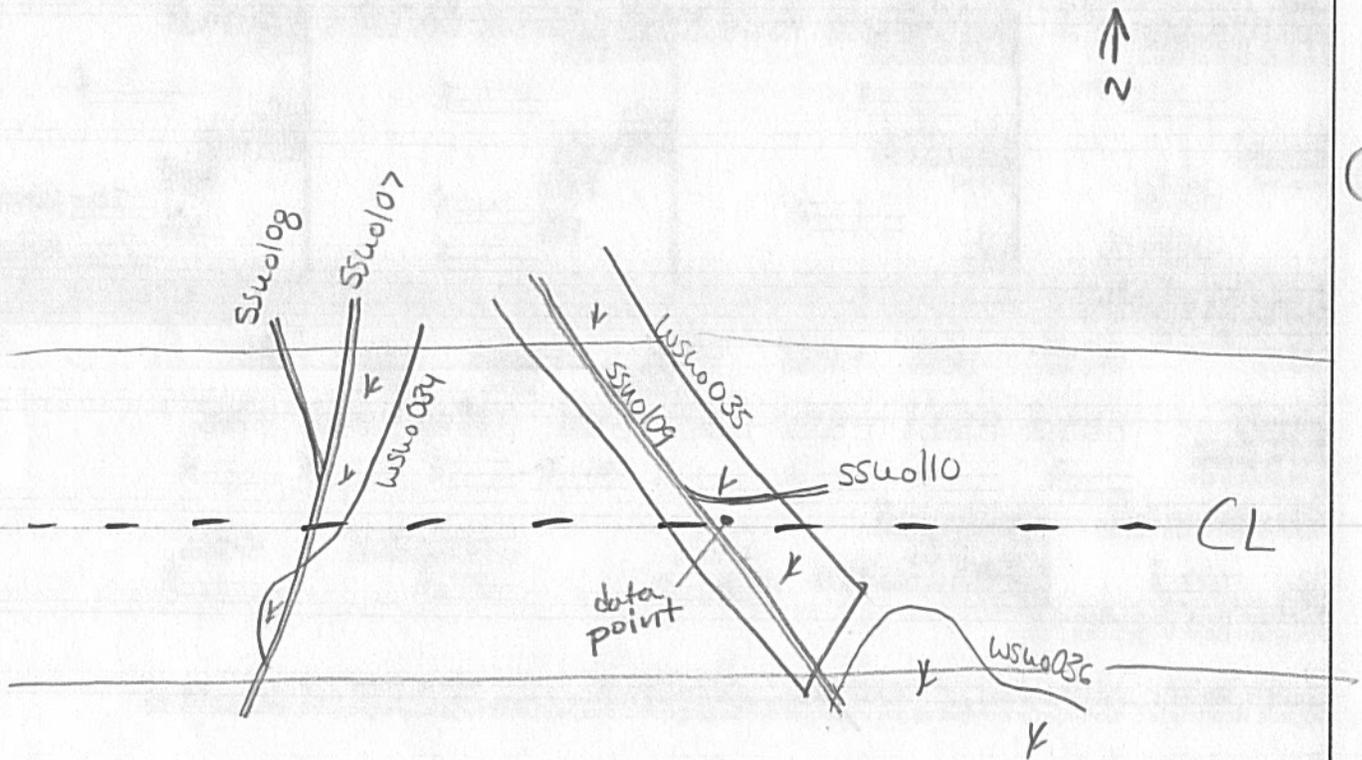
• **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance 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 ssuo109 facing south upstream.**



**Waterbody data point ssuo109 facing north downstream.**

*Environmental Field Surveys*  
*Waterbody Photo Page*



**Waterbody data point ssuo109 facing west across.**

# Linear Waterbody Data Sheet

<b>Survey Description</b>				
Project Name: <u>ACP</u>		Waterbody Name: <u>UNF Lake PINE</u>	Waterbody ID: <u>SSU0110</u>	Date: <u>3-15-16</u>
State: <u>VA</u>	County/Parish: <u>Suffolk</u>	Company: <u>ESI</u>	Crew Member Initials: <u>LR, WV</u>	Photos: <u>Facing E, N, NE</u>
Tract Number(s): <u>26-060-A049, A050</u>		Nearest Milepost: <u>59.3</u>	Associated Wetland ID(s): <u>WSU035</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:				
<b>Physical Attributes</b>				
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>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
Height: <u>0.5</u> 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
N/A <input type="checkbox"/>				<input type="checkbox"/> Scouring <input type="checkbox"/> Water staining
Width of Waterbody - Top of Bank to Top of Bank: <u>2</u> ft.	Width of Waterbody - Toe of Slope to Toe of Slope: <u>1</u> ft.	Width of Waterbody - Water Edge to Water Edge: <u>1</u> ft.	Depth of Water: <small>(Approx.)</small> <u>0.5</u> ft.	
N/A <input type="checkbox"/>		N/A <input type="checkbox"/>	N/A <input type="checkbox"/>	
Sinuosity: <small>(check one)</small> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: <small>(Approx.)</small> <u>&lt;1</u> fps	Bank height Right: <u>2</u> ft. Left: <u>2</u> ft.	Bank slope Right: <u>90</u> degrees Left: <u>60</u> degrees	
N/A <input type="checkbox"/>	N/A <input type="checkbox"/>			
<b>Qualitative Attributes</b>				
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 type="checkbox"/> Organic <input type="checkbox"/> Other:				
% of Substrate: _____% _____% _____% _____% <u>100</u> % _____% _____% _____%				
Width of Riparian Zone: <u>30</u> ft.	Vegetative Layers: <small>(check all that apply)</small> <input checked="" type="checkbox"/> Trees: <u>11</u> in. <input checked="" type="checkbox"/> Saplings/Shrubs: <u>3</u> in. <input checked="" type="checkbox"/> Herbs: <u>NA</u> in.			
N/A <input type="checkbox"/>	Avg. DBH of Dominants: <small>(approx.)</small> _____ in.			
Dominant Bank Vegetation (list): <u>Liquidambar styraciflua, Ligustrum Sinese</u>				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): <u>leaf packs</u>				
Aquatic Organisms Observed (list): <u>water strider</u>				
T&E Species Observed (list): <u>none observed</u>				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): <u>none</u>				
Tributary is: <small>(check one)</small> <input checked="" type="checkbox"/> Natural <input 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:

SSU0110

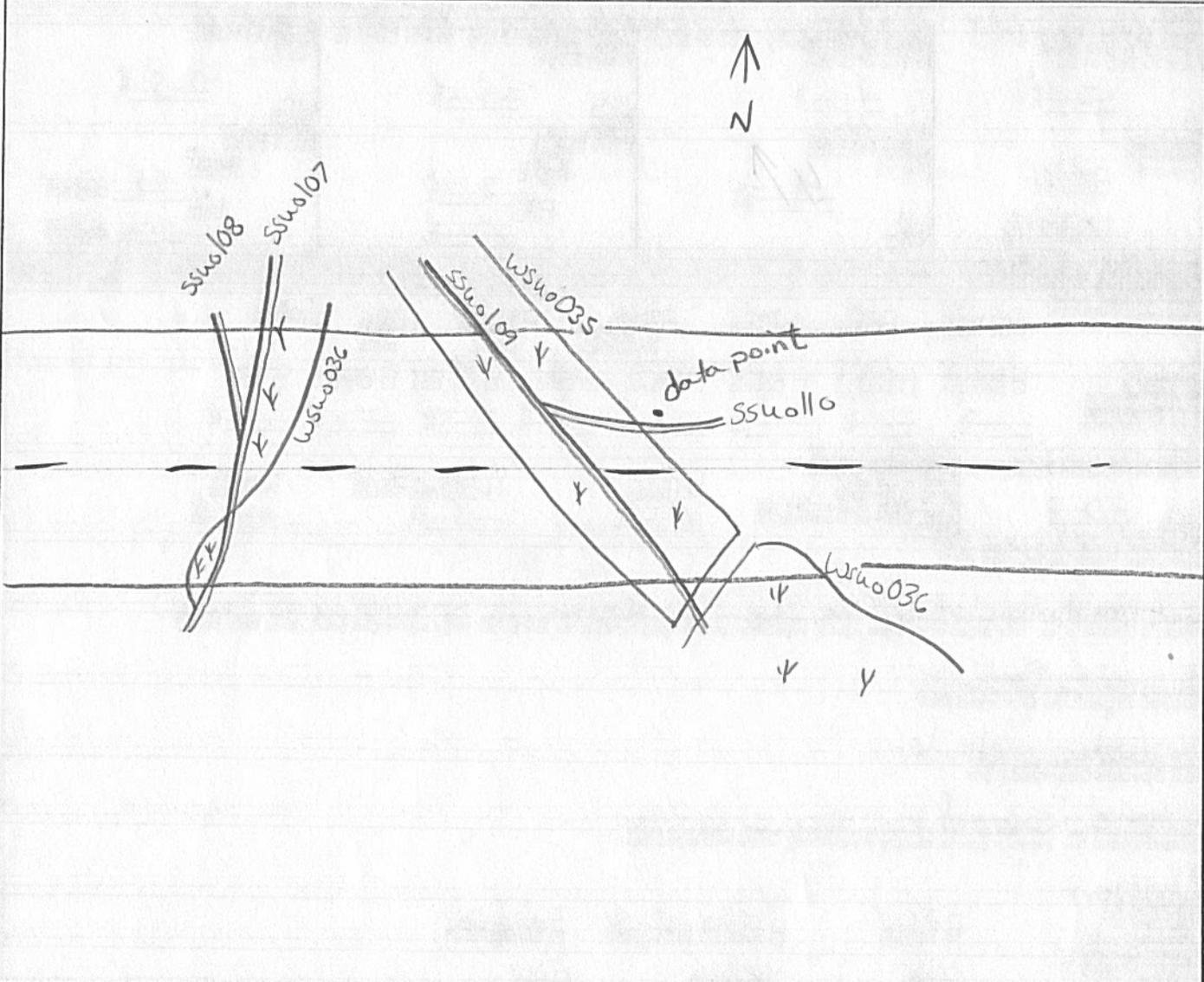
• **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance 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 ssuo110 facing east upstream.**



**Waterbody data point ssuo110 facing north downstream.**

*Environmental Field Surveys*  
*Waterbody Photo Page*



**Waterbody data point ssu0110 facing northeast across.**

# Linear Waterbody Data Sheet

<b>Survey Description</b>			
Project Name: <b>ACP</b>		Waterbody Name: <b>UNT to Prince Lake</b>	
Waterbody ID: <b>SSW0011</b>		Date: <b>01/12/16</b>	
State: <b>VA</b>	County/Parish: <b>Suffolk</b>	Company: <b>ESI</b>	Crew Member Initials: <b>LR, SI</b>
Photos: <b>Facing SW, NE, SW</b>			
Tract Number(s): <b>26-060-A057</b>		Nearest Milepost: <b>60.5</b>	Associated Wetland ID(s): <b>NA</b>
Survey Type: (check one) <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
<b>Physical Attributes</b>			
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: <b>2</b> 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 checked="" type="checkbox"/> Water staining	
Height: <b>0.5</b> ft.		<input 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	
N/A <input type="checkbox"/>			
Width of Waterbody - Top of Bank to Top of Bank: <b>4</b> ft.	Width of Waterbody - Toe of Slope to Toe of Slope: <b>1</b> ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input type="checkbox"/> <b>1</b> ft.	Depth of Water: (Approx.) N/A <input type="checkbox"/> <b>0.5</b> ft.
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: (Approx.) <b>&lt; 1</b> fps N/A <input type="checkbox"/>	Bank height Right: <b>2</b> ft. Left: <b>2</b> ft.	Bank slope Right: <b>45</b> degrees Left: <b>45</b> degrees
<b>Qualitative Attributes</b>			
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: _____% _____% _____% _____% <b>10</b> % <b>90</b> % _____% _____%			
Width of Riparian Zone: <b>30</b> ft. N/A <input type="checkbox"/>	Vegetative Layers: (check all that apply) Avg. DBH of Dominants: <b>9</b> in. <b>1</b> in. <b>NA</b> in. <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs: <b>NA</b>		
Dominant Bank Vegetation (list): <b>Ilex opaca, Arundinaria gigantea</b>			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): <b>leaf packs</b>			
Aquatic Organisms Observed (list): <b>none observed</b>			
T&E Species Observed (list): <b>none observed</b>			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): <b>none observed</b>			
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:

SSU0D11

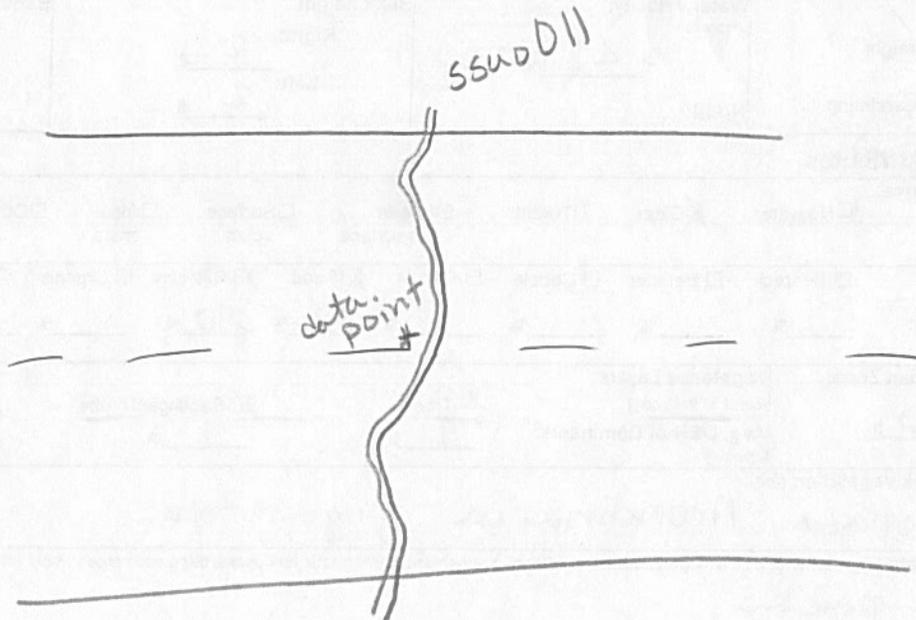
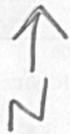
High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance 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 ssuo011 facing southwest upstream.**



**Waterbody data point ssuo011 facing northeast downstream.**

*Environmental Field Surveys*  
*Waterbody Photo Page*



**Waterbody data point ssuo011 facing northwest across bank.**

# Linear Waterbody Data Sheet

<b>Survey Description</b>			
Project Name: ACP	Waterbody Name: LWT to PRINCE LAKE	Waterbody ID: SSUO 013	Date: 01/12/11
State: VA	County/Parish: Suffolk	Company: ESI	Crew Member Initials: L.R, S.I
Photos: S, N, E			
Tract Number(s): 26-060-A057		Nearest Milepost: 60.9	Associated Wetland ID(s): NA
Survey Type: (check one) <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
<b>Physical Attributes</b>			
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: 2 ft.	OHWM Indicator: (check all that apply)	<input checked="" type="checkbox"/> Clear line on bank	<input type="checkbox"/> Shelving
OHWM Height: 2 ft.	<input type="checkbox"/> Bent, matted, or missing vegetation	<input checked="" type="checkbox"/> Wrack line	<input type="checkbox"/> Wrested vegetation
N/A <input type="checkbox"/>		<input checked="" type="checkbox"/> Litter and debris	<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: 3 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.) 1 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	Bank height Right: 4 ft. Left: 3 ft.	Bank slope Right: 50 degrees Left: 70 degrees
N/A <input type="checkbox"/>	N/A <input type="checkbox"/>		
<b>Qualitative Attributes</b>			
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 type="checkbox"/> Organic <input type="checkbox"/> Other:			
% of Substrate: _____% _____% _____% _____% _____% 100% _____% _____%			
Width of Riparian Zone: 10 ft.	Vegetative Layers: (check all that apply)		
N/A <input type="checkbox"/>	Avg. DBH of Dominants: (approx.) 9 in.	<input checked="" type="checkbox"/> Trees: 2 in.	<input checked="" type="checkbox"/> Saplings/Shrubs: N/A in.
Dominant Bank Vegetation (list): Ilex opaca, Fagus grandifolia, Unknown sample			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): overhanging banks and roots, 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): N/A			
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:

SSU0013

▪ **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.

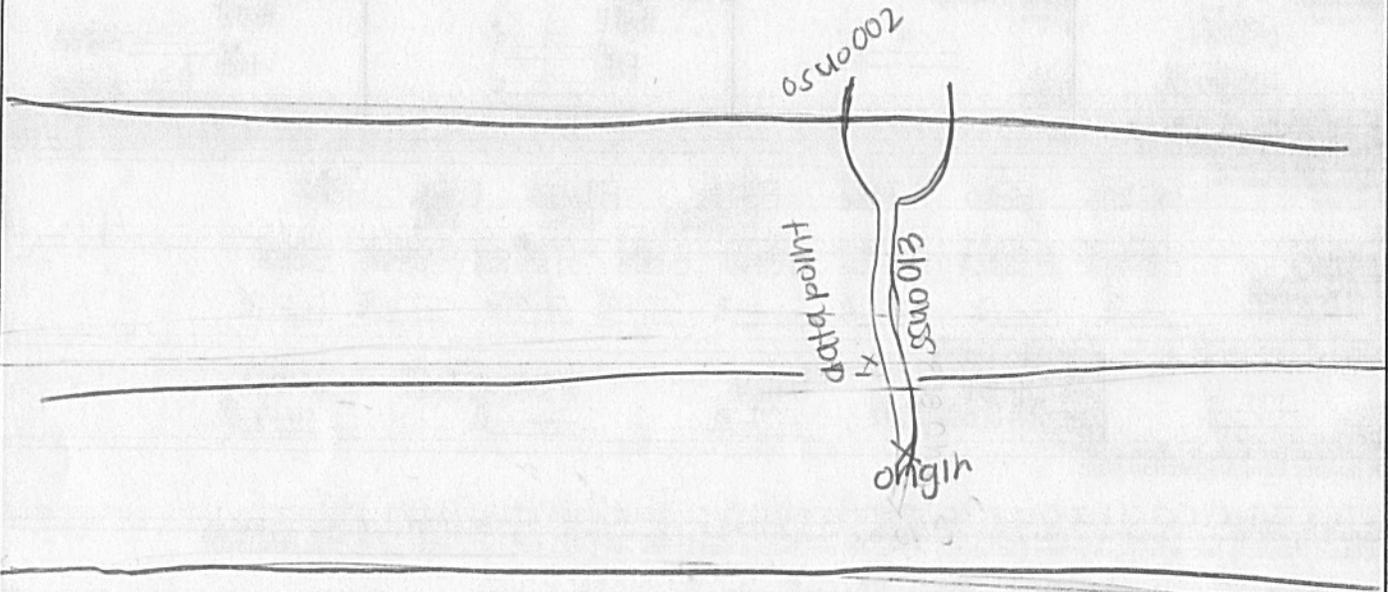
**Moderate Quality:** Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film;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

N ↑



*Environmental Field Surveys*  
*Waterbody Photo Page*



**Waterbody data point ssuo013 facing south upstream.**



**Waterbody data point ssuo013 facing north downstream.**

*Environmental Field Surveys*  
*Waterbody Photo Page*



**Waterbody data point ssuo013 facing east across bank.**

# Open Waterbody Data Sheet

<b>Survey Description</b>				
Project Name: <u>ACP</u>		Waterbody Name: <u>PRINCE LAKE</u>		Waterbody ID: <u>OSUR001</u>
Date: <u>12 Jan 2016</u>				
State: <u>VA</u>	County: <u>Suffolk</u>	Company: <u>ESI</u>	Crew Member Initials: <u>CAS, CSM</u>	Photos: <u>N, SW</u>
Tract Number(s): <u>26-060-A063</u>		Nearest Milepost: <u>61</u>	Associated Wetland ID(s): <u>None</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:				
<b>Physical Attributes</b>				
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>68</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 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>5</u> ft.		Bank height (average): <u>5</u> ft.		Bank slope (average): <u>40</u> degrees
N/A <input type="checkbox"/>				
<b>Qualitative Attributes</b>				
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 type="checkbox"/> Organic <input type="checkbox"/> Other:				
% of Substrate:            _____%            _____%            _____%            _____% <u>95</u> % <u>5</u> %            _____%            _____%				
Width of Riparian Zone: <u>10</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		
N/A <input type="checkbox"/>		Avg. DBH of Dominants: <small>(approx.)</small>		
		<u>10</u> in. <u>6</u> in.            _____ in.		
Dominant Bank Vegetation (list): <u>Fraxinus pennsylvanica, Symplocos tinctoria</u>				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): <u>Overhanging Roots, Submerged logs</u>				
Aquatic Organisms Observed (list): <u>Mollusk</u>				
T&E Species Observed (list): <u>None</u>				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): <u>None</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 checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low				

Waterbody ID:

OSUR 001

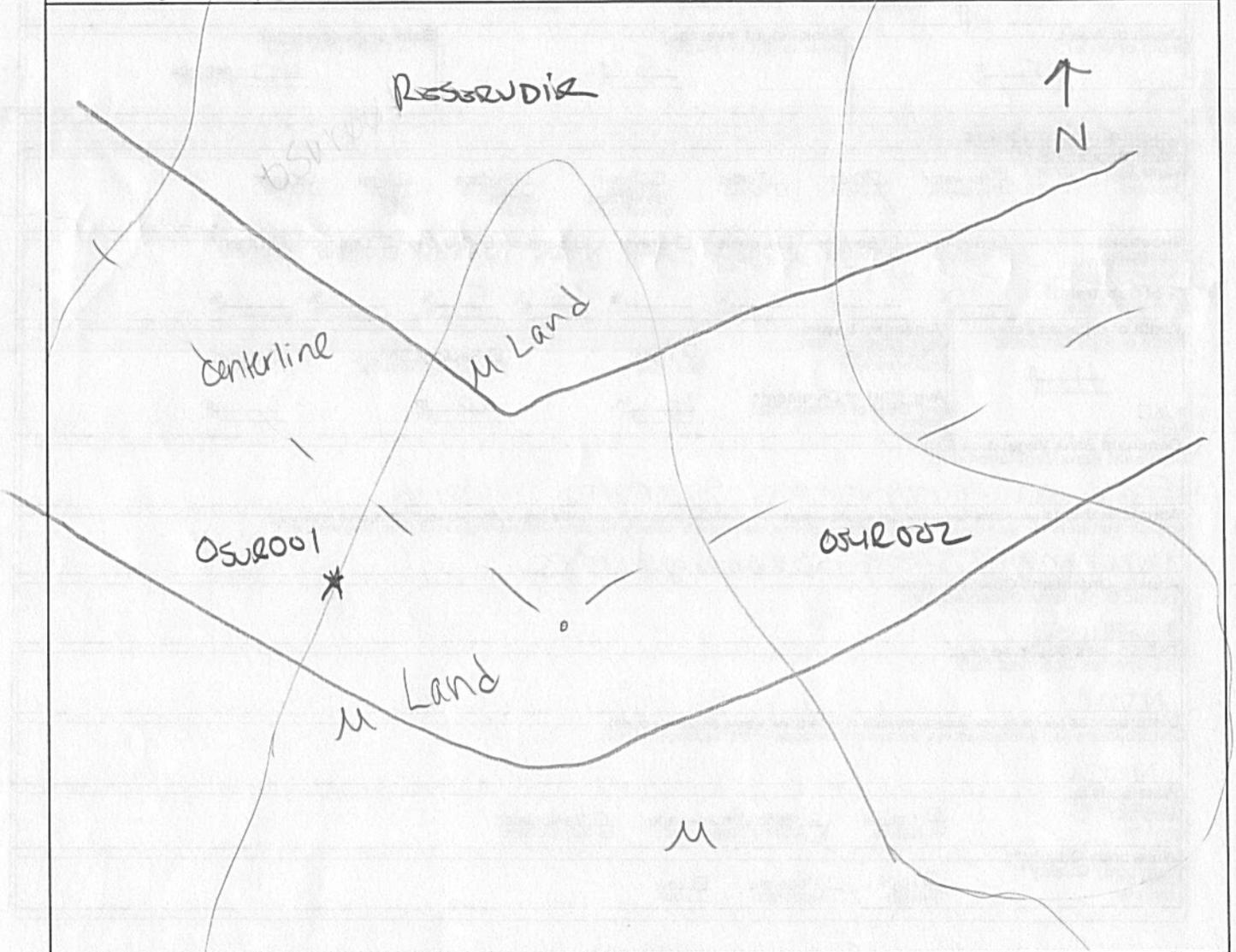
High Quality: Natural, natural bank vegetation around entire waterbody; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

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*  
*Open Water Point Photo Page*



**Open Waterbody osur001 facing northwest.**



**Open Waterbody osur001 facing southwest.**

# Open Waterbody Data Sheet

<b>Survey Description</b>			
Project Name: ACP	Waterbody Name: PRINCE LAKE	Waterbody ID: OSUR001	Date: 01/12/18
State: VA	County: SUFFOLK	Company: ESI	Crew Member Initials: L.R., S.I.
Tract Number(s): 26-060-A057		Nearest Milepost: 60.9	Photos: E, N
Associated Wetland ID(s): NA			
Survey Type: (check one) <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
<b>Physical Attributes</b>			
Waterbody Type: (check one) <input type="checkbox"/> Stock Pond <input checked="" 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: 1.5 ft.	OHWM Indicator: (check all that apply)	<input type="checkbox"/> Clear line on bank	<input type="checkbox"/> Shelving
	<input type="checkbox"/> Bent, matted, or missing vegetation	<input type="checkbox"/> Wrack line	<input checked="" type="checkbox"/> Litter and debris
		<input type="checkbox"/> Wrested vegetation	<input type="checkbox"/> Scouring
		<input type="checkbox"/> Abrupt plant community change	<input type="checkbox"/> Soil characteristic change
Depth of Water: N/A <input type="checkbox"/> 1 ft.	Bank height (average): 3 ft.	Bank slope (average): 35 degrees	
<b>Qualitative Attributes</b>			
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 type="checkbox"/> Organic <input type="checkbox"/> Other:			
% of Substrate: _____% _____% _____% _____% _____% 100% _____% _____%			
Width of Riparian Zone: N/A <input type="checkbox"/> 20 ft.	Vegetative Layers: (check all that apply)	<input checked="" type="checkbox"/> Trees:	<input checked="" type="checkbox"/> Saplings/Shrubs:
	Avg. DBH of Dominants: (approx.)	20 in.	3 in.
			<input checked="" type="checkbox"/> Herbs
Dominant Bank Vegetation (list): Pinus taeda, Ilex opaca, Fagus grandifolia, Arundinaria gigantea			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Leaf debris/packs, overhanging banks and roots, pools			
Aquatic Organisms Observed (list): None observed			
T&E Species Observed (list): None observed			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): N/A			
Waterbody is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Waterbody Quality*: (check one) <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low			

Waterbody ID:

OSUR001

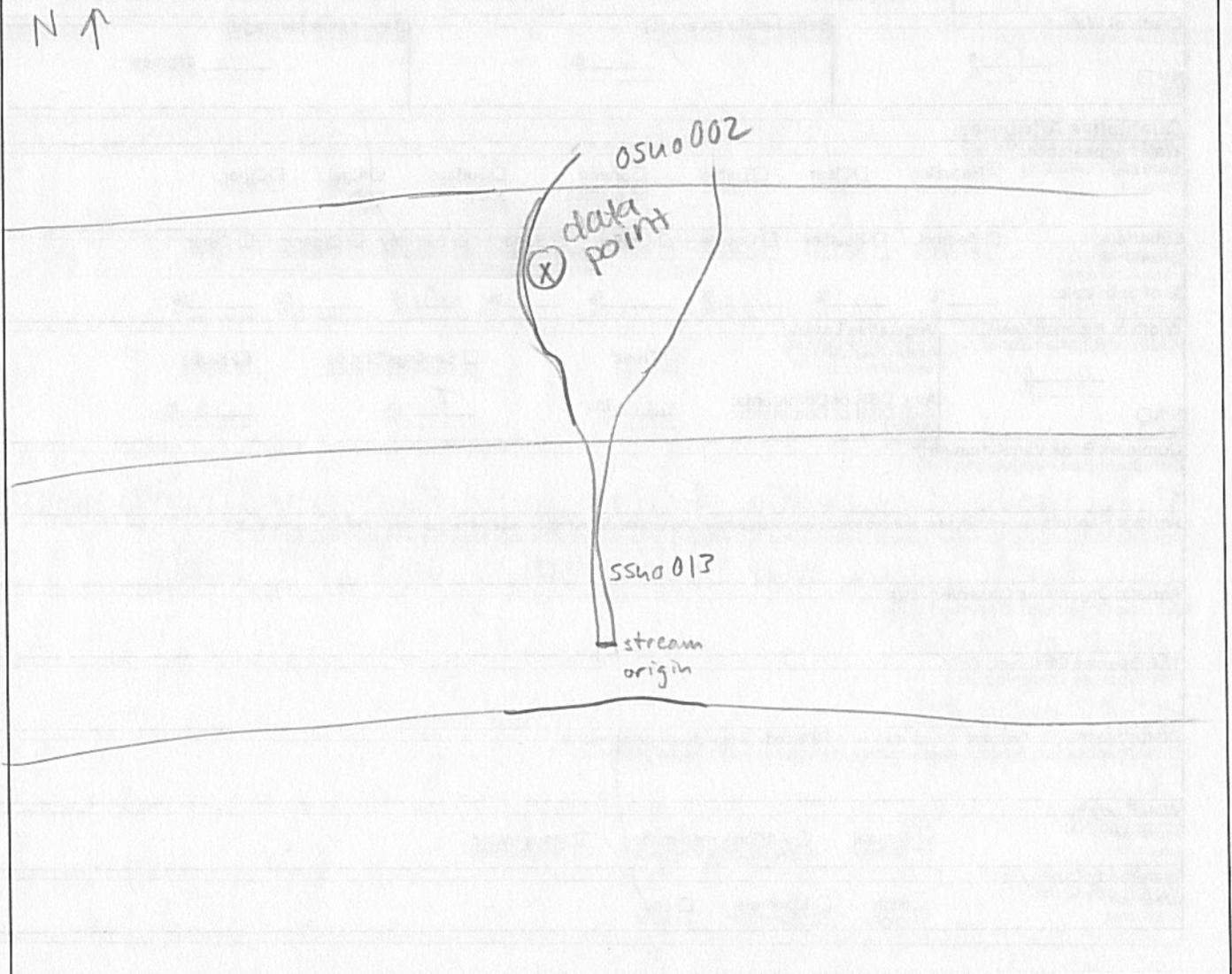
High Quality: Natural, natural bank vegetation around entire waterbody; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

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*



**Open Waterbody osur001 facing east**



**Open Waterbody osur001 facing north**

# Open Waterbody Data Sheet

<b>Survey Description</b>				
Project Name: <u>ACP</u>		Waterbody Name: <u>Prince Lake</u>		Waterbody ID: <u>OSUR001</u>
Date: <u>19 Jan 2016</u>				
State: <u>VA</u>	County: <u>Suffolk</u>	Company: <u>ESI</u>	Crew Member Initials: <u>CAD CSM</u>	Photos: <u>NE, SE</u>
Tract Number(s): <u>26-060-4063</u>		Nearest Milepost: <u>61.1</u>		Associated Wetland ID(s): <u>None</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:				
<b>Physical Attributes</b>				
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>68</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 type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change		
Depth of Water: <u>5</u> ft.		Bank height (average): <u>5</u> ft.		Bank slope (average): <u>40</u> degrees
N/A <input type="checkbox"/>				
<b>Qualitative Attributes</b>				
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 type="checkbox"/> Organic <input type="checkbox"/> Other:				
% of Substrate:    _____%    _____%    _____%    _____% <u>95</u> % <u>5</u> %    _____%    _____%				
Width of Riparian Zone: <u>10</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: <u>10</u> in. <u>6</u> in.    _____ in. <small>(approx.)</small>		
N/A <input type="checkbox"/>				
Dominant Bank Vegetation (list): <u>Fraxinus pennsylvanica, Symplocos tinctoria</u>				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): <u>Overhanging Roots, Submerged Logs</u>				
Aquatic Organisms Observed (list): <u>Mollusk</u>				
T&E Species Observed (list): <u>None</u>				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): <u>None</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 checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low				

Waterbody ID:

OSUR001

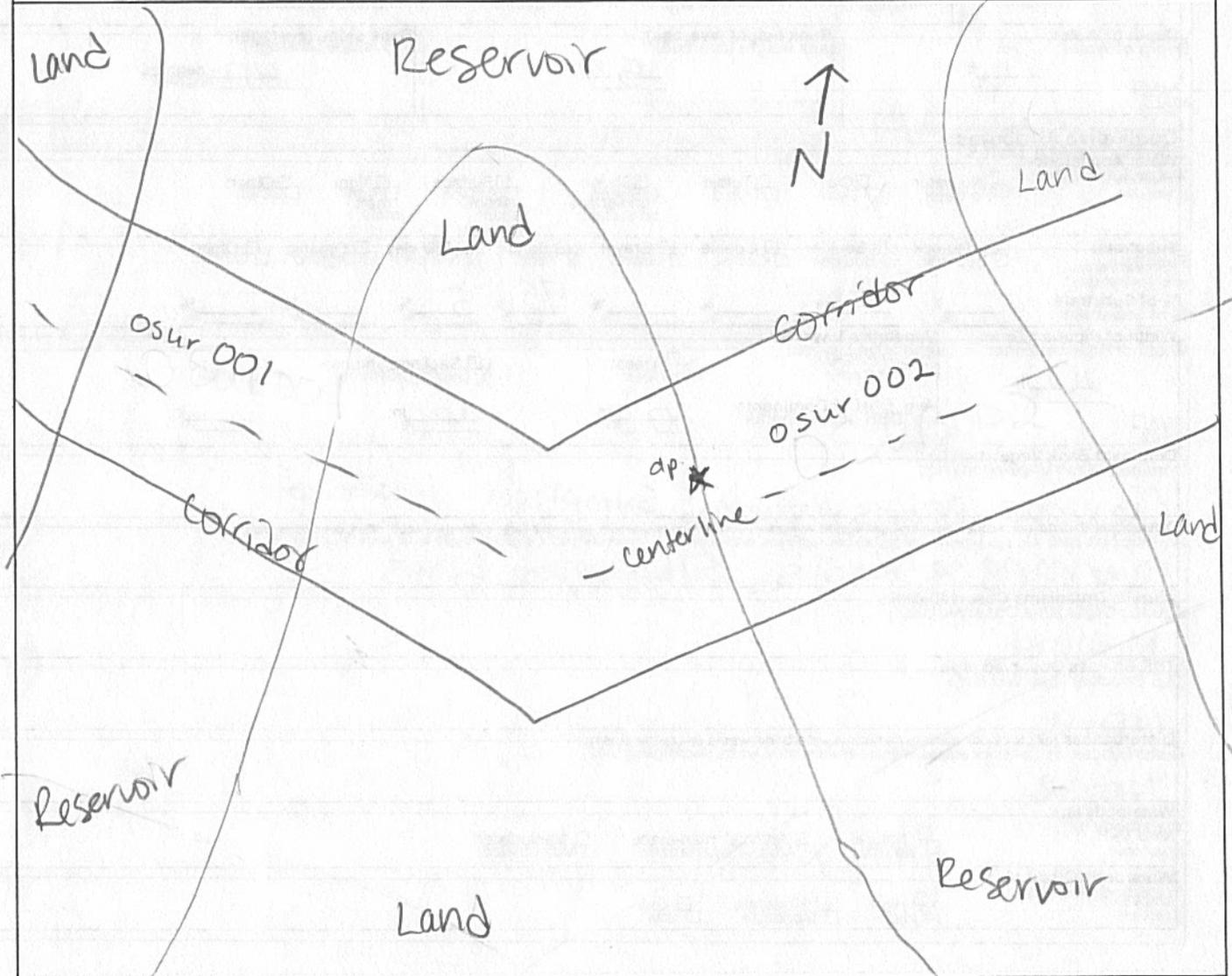
High Quality: Natural, natural bank vegetation around entire waterbody; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

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*  
*Open Water Point Photo Page*



**Open Waterbody osur001 facing northeast.**



**Open Waterbody osur001 facing southeast.**

**Linear Waterbody Data Sheet**

<b>Survey Description</b>				
Project Name: <u>ACP</u>		Waterbody Name: <u>UNT to PRINCE LAKE</u>		Waterbody ID: <u>55ur002</u>
Date: <u>12 Jan 2016</u>				
State: <u>VA</u>	County/Parish: <u>Suffolk</u>	Company: <u>ESI</u>	Crew Member Initials: <u>CAS CSM</u>	Photos: <u>EWB</u>
Tract Number(s): <u>26-060-A065</u>		Nearest Milepost: <u>61</u>	Associated Wetland ID(s): <u>None</u>	
Survey Type: (check one) <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
<b>Physical Attributes</b>				
Stream Classification: (check one) <input checked="" type="checkbox"/> Ephemeral <input 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>1</u> ft.		OHWM Indicator: (check all that apply)		
Height: <u>0.2</u> ft.		<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 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: <u>3</u> ft.	Width of Waterbody - Toe of Slope to Toe of Slope: <u>1</u> ft.	Width of Waterbody - Water Edge to Water Edge: <u>1</u> ft.	Depth of Water: (Approx.) <u>0.1</u> 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.) <u>0.2</u> fps		Bank height
N/A <input type="checkbox"/>		N/A <input type="checkbox"/>		Right: <u>1</u> ft. Left: <u>1</u> ft.
Bank slope				
Right: <u>80</u> degrees Left: <u>90</u> degrees				
<b>Qualitative Attributes</b>				
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: _____% _____% _____% _____% <u>90</u> % <u>10</u> % _____% _____%				
Width of Riparian Zone: <u>8</u> ft.		Vegetative Layers: (check all that apply)		
N/A <input type="checkbox"/>		Avg. DBH of Dominants: <input checked="" type="checkbox"/> Trees: <u>10</u> in. <input checked="" type="checkbox"/> Saplings/Shrubs: _____ in. <input type="checkbox"/> Herbs: _____ in.		
Dominant Bank Vegetation (list): <u>Liriodendron styraciflua, Ligustrum sinense, Ilex vomitoria</u>				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): <u>Overhanging roots</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 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:

SSUR 002

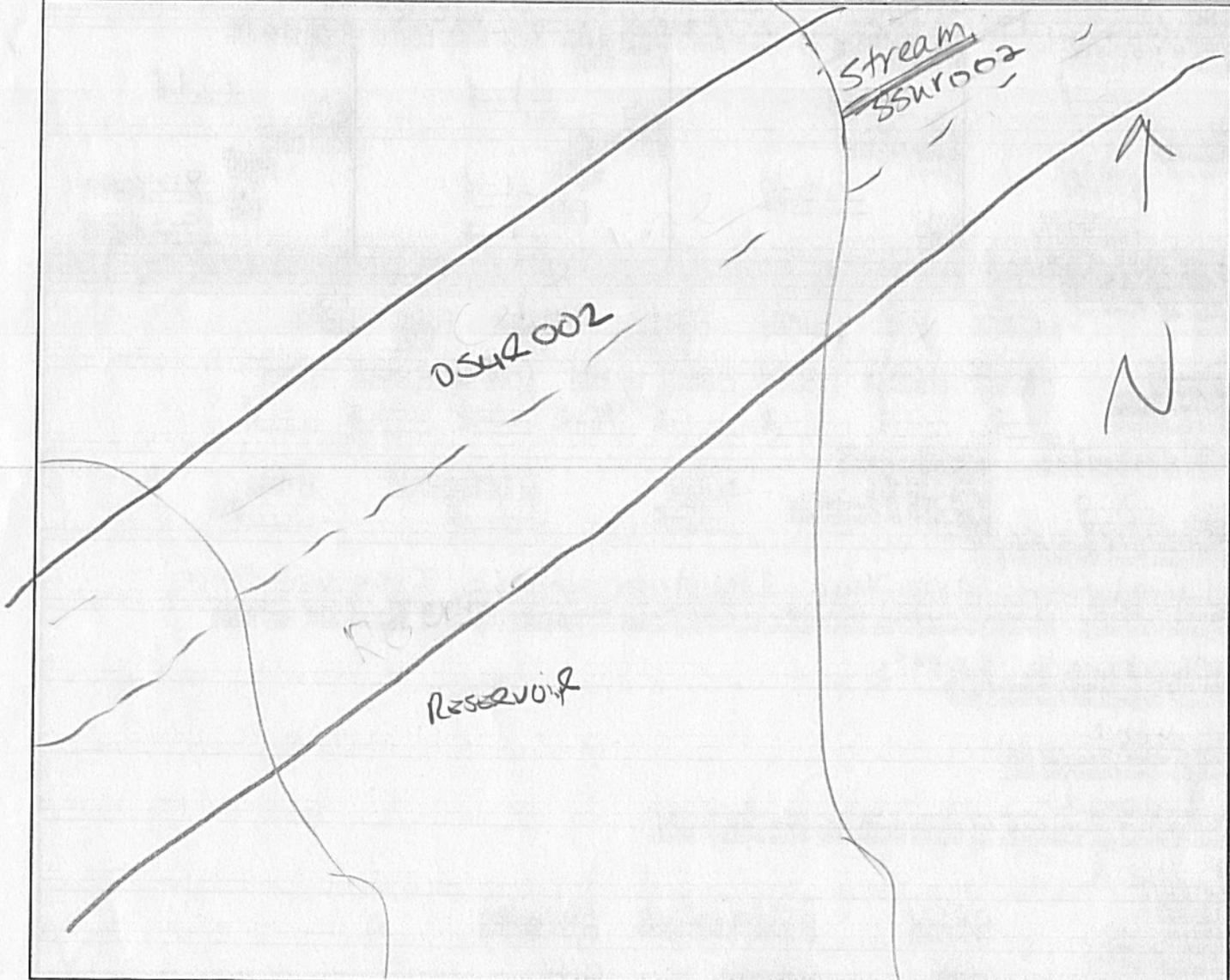
**High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance 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 ssur002 facing east upstream.**



**Waterbody ssur002 facing west downstream.**

*Environmental Field Surveys*  
*Waterbody Photo Page*



**Waterbody ssur002 facing north across bank.**

# Linear Waterbody Data Sheet

<b>Survey Description</b>				
Project Name: <u>ACP</u>		Waterbody Name: <u>4NT to Western Branch Reservoir</u>	Waterbody ID: <u>SSU0103</u>	Date: <u>3-8-16</u>
State: <u>VA</u>	County/Parish: <u>Suffolk</u>	Company: <u>ESI</u>	Crew Member Initials: <u>LR, WV</u>	Photos: <u>Facing W, E, N</u>
Tract Number(s): <u>26-060-A067</u>		Nearest Milepost: <u>61.7</u>	Associated Wetland ID(s): <u>None</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:				
<b>Physical Attributes</b>				
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>1</u> ft.	OHWM Height: <u>&lt; 0.5</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"/> 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"/> Scouring
				<input type="checkbox"/> Water staining
Width of Waterbody - Top of Bank to Top of Bank: <u>2</u> ft.	Width of Waterbody - Toe of Slope to Toe of Slope: <u>2</u> ft.	Width of Waterbody - Water Edge to Water Edge: <u>1</u> ft.	Depth of Water: <small>(Approx.)</small> <u>&lt; 0.5</u> ft.	
Sinuosity: <small>(check one)</small> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: <small>(Approx.)</small> <u>&lt; 1</u> fps	Bank height Right: <u>1</u> ft. Left: <u>1</u> ft.	Bank slope Right: <u>45</u> degrees Left: <u>45</u> degrees	
<b>Qualitative Attributes</b>				
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 type="checkbox"/> Organic <input type="checkbox"/> Other:				
% of Substrate:    _____%    _____%    _____%    _____% <u>100</u> %    _____%    _____%    _____%				
Width of Riparian Zone: <u>20</u> ft.	Vegetative Layers: <small>(check all that apply)</small>			
	Avg. DBH of Dominants: <small>(approx.)</small> <u>8</u> in.	<input checked="" type="checkbox"/> Trees:	<input checked="" type="checkbox"/> Saplings/Shrubs:	<input type="checkbox"/> Herbs
		<u>2</u> in.	<u>NA</u> in.	
Dominant Bank Vegetation (list): <u>Ilex opaca, Ligustrum sinense</u>				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): <u>leaf packs</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>None observed</u>				
Tributary Is: <small>(check one)</small> <input checked="" type="checkbox"/> Natural <input 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:

SSUD103

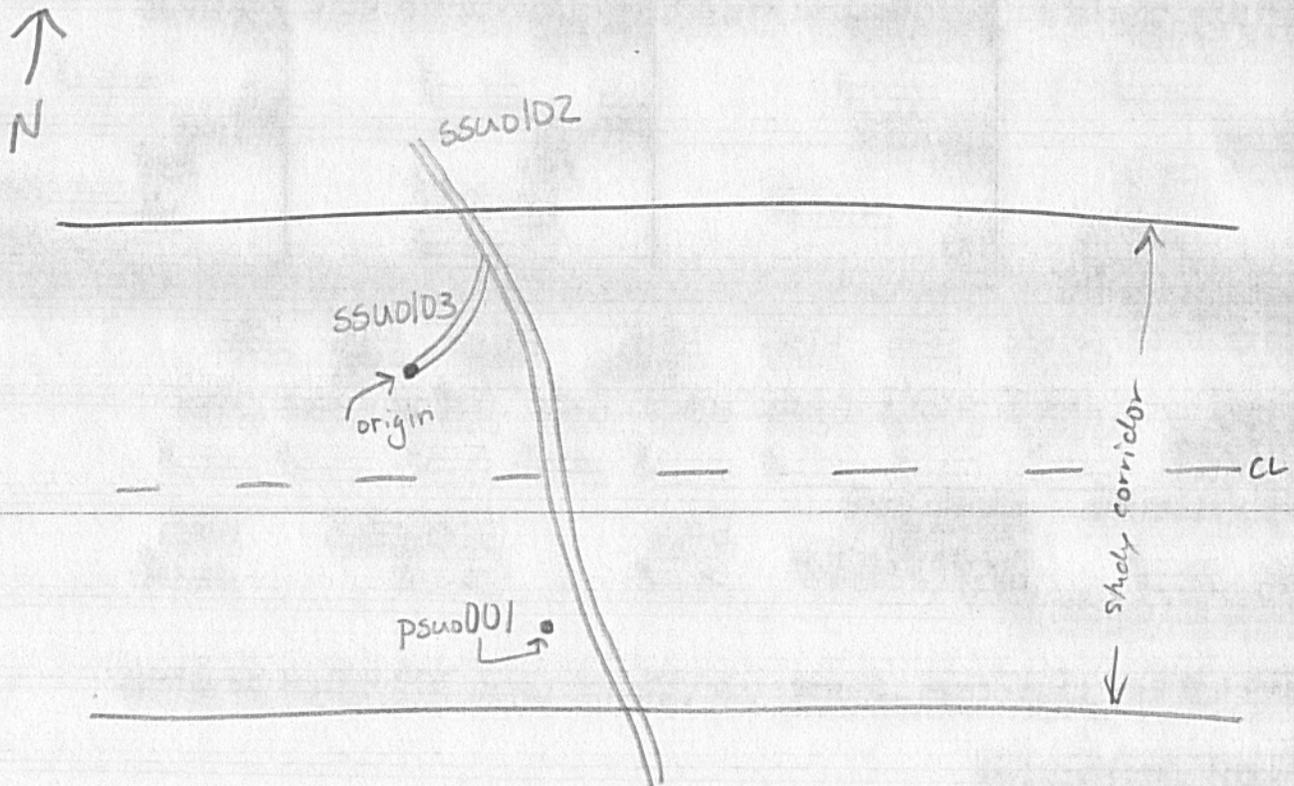
• **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance 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 ssuo103 facing west upstream.**



**Waterbody data point ssuo103 facing east downstream.**

*Environmental Field Surveys*  
*Waterbody Photo Page*



**Waterbody data point ssuo103 facing north across.**

# Linear Waterbody Data Sheet

<b>Survey Description</b>				
Project Name: <b>ACP</b>		Waterbody Name: <b>LINT to WESTERN BRANCH RESERVOIR</b>	Waterbody ID: <b>SSU0102</b>	Date: <b>3-8-16</b>
State: <b>NC</b>	County/Parish: <b>Suffolk</b>	Company: <b>ESI</b>	Crew Member Initials: <b>LR, WV</b>	Photos: <b>Faling S, N, E</b>
Tract Number(s): <b>26-060-A067</b>		Nearest Milepost: <b>61.7</b>	Associated Wetland ID(s): <b>None</b>	
Survey Type: (check one) <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
<b>Physical Attributes</b>				
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: <b>3</b> 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: <b>0.5</b> 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: <b>4</b> ft.	Width of Waterbody - Toe of Slope to Toe of Slope: <b>2</b> ft.	Width of Waterbody - Water Edge to Water Edge: <b>2</b> ft.	Depth of Water: (Approx.) <b>0.5</b> ft.	
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: (Approx.) <b>&lt; 1</b> fps	Bank height Right: <b>2</b> ft. Left: <b>2</b> ft.	Bank slope Right: <b>75</b> degrees Left: <b>75</b> degrees	
<b>Qualitative Attributes</b>				
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 type="checkbox"/> Organic <input type="checkbox"/> Other:				
% of Substrate: _____% _____% _____% _____% <b>100</b> % _____% _____% _____%				
Width of Riparian Zone: <b>30</b> ft.	Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: <b>10</b> in. <input checked="" type="checkbox"/> Saplings/Shrubs: <b>1</b> in. <input type="checkbox"/> Herbs: <b>NA</b> in.	Avg. DBH of Dominants: <b>10</b> in.	N/A <input type="checkbox"/>	
Dominant Bank Vegetation (list): <b>Fraxinus pennsylvanica, Ilex opaca, Ligustrum Sincense</b>				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): <b>leaf packs, overhanging roots</b>				
Aquatic Organisms Observed (list): <b>None Observed</b>				
T&E Species Observed (list): <b>None Observed</b>				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): <b>None Observed</b>				
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:

SSu0102

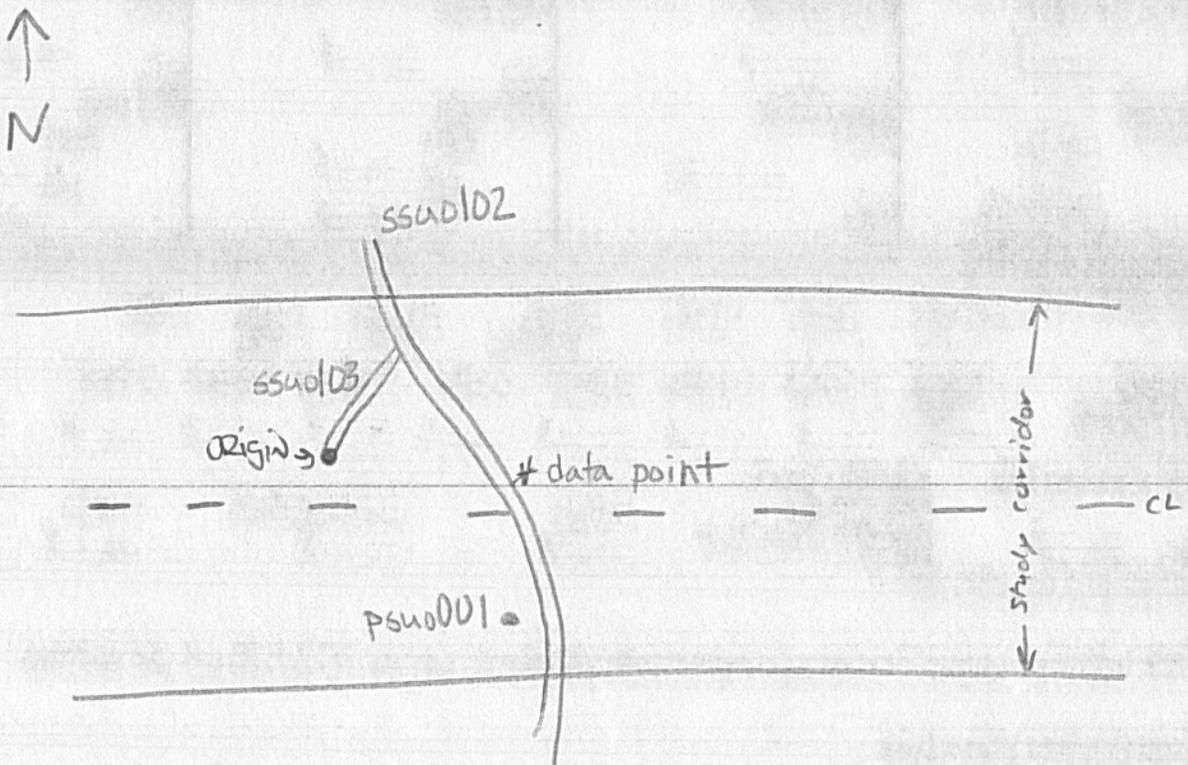
• **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance 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 ssuo102 facing south upstream.**



**Waterbody data point ssuo102 facing north downstream.**

*Environmental Field Surveys*  
*Waterbody Photo Page*



**Waterbody data point ssuo102 facing east across.**

# Linear Waterbody Data Sheet

<b>Survey Description</b>			
Project Name: <u>ACP</u>	Waterbody Name: <u>4th to Western Branch Reservoir</u>	Waterbody ID: <u>SSU0101</u>	Date: <u>3-8-16</u>
State: <u>VA</u>	County/Parish: <u>Suffolk</u>	Company: <u>ESI</u>	Crew Member Initials: <u>LR, WV</u>
Tract Number(s): <u>26-060-A068, 26-060-A067</u>		Nearest Milepost: <u>61.7</u>	Associated Wetland ID(s): <u>WSU031, WSU030</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:			
<b>Physical Attributes</b>			
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 checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:			
OHWM Width: <u>3</u> ft.	OHWM Indicator: <small>(check all that apply)</small>	<input checked="" type="checkbox"/> Clear line on bank	<input type="checkbox"/> Shelving
Height: <u>0.5</u> ft.	<input checked="" type="checkbox"/> Bent, matted, or missing vegetation	<input checked="" 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"/> 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: <u>2</u> ft.	Depth of Water: <small>(Approx.)</small> <u>0.5</u> ft.
Sinuosity: <small>(check one)</small> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: <small>(Approx.)</small> <u>&lt;1</u> fps	Bank height Right: <u>2</u> ft. Left: <u>2</u> ft.	Bank slope Right: <u>70</u> degrees Left: <u>70</u> degrees
<b>Qualitative Attributes</b>			
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 type="checkbox"/> Organic <input type="checkbox"/> Other:			
% of Substrate: _____% _____% _____% _____% <u>100</u> % _____% _____%			
Width of Riparian Zone: <u>40</u> ft.	Vegetative Layers: <small>(check all that apply)</small>		
N/A <input type="checkbox"/>	Avg. DBH of Dominants: <small>(approx.)</small> <u>8</u> in.	<input checked="" type="checkbox"/> Trees: <u>2</u> in.	<input checked="" type="checkbox"/> Saplings/Shrubs: <u>2</u> in.
		<input type="checkbox"/> Herbs	<u>NA</u> in.
Dominant Bank Vegetation (list): <u>Ligustrum sinense, vitis rotundifolia, Ilex opaca</u>			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): <u>leaf packs</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>None Observed</u>			
Tributary Is: <small>(check one)</small> <input checked="" type="checkbox"/> Natural <input 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:

SSuo101

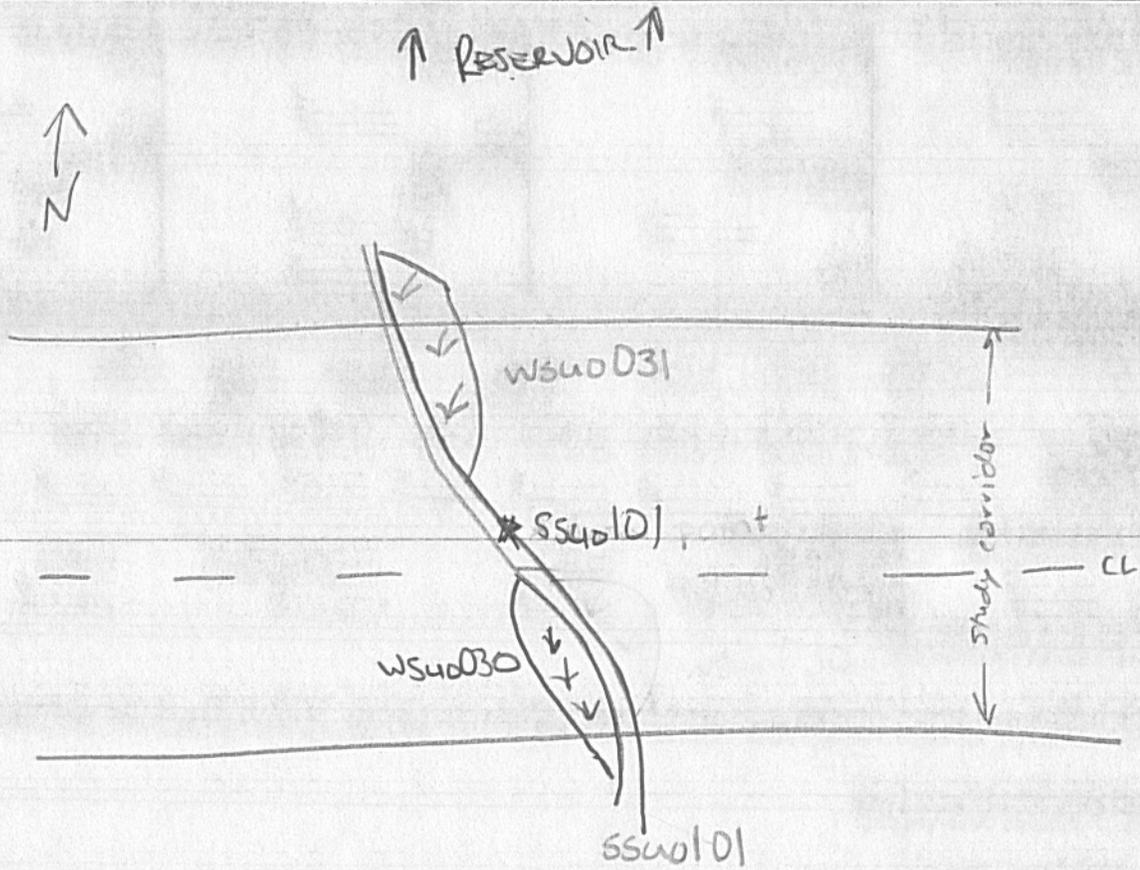
**High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance 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 ssuo101 facing south upstream.**



**Waterbody data point ssuo101 facing north downstream.**

*Environmental Field Surveys*  
*Waterbody Photo Page*



**Waterbody data point ssuo101 facing west across.**

# Linear Waterbody Data Sheet

<b>Survey Description</b>				
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:				
<b>Physical Attributes</b>				
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"/>			
<b>Qualitative Attributes</b>				
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:

SS40/00

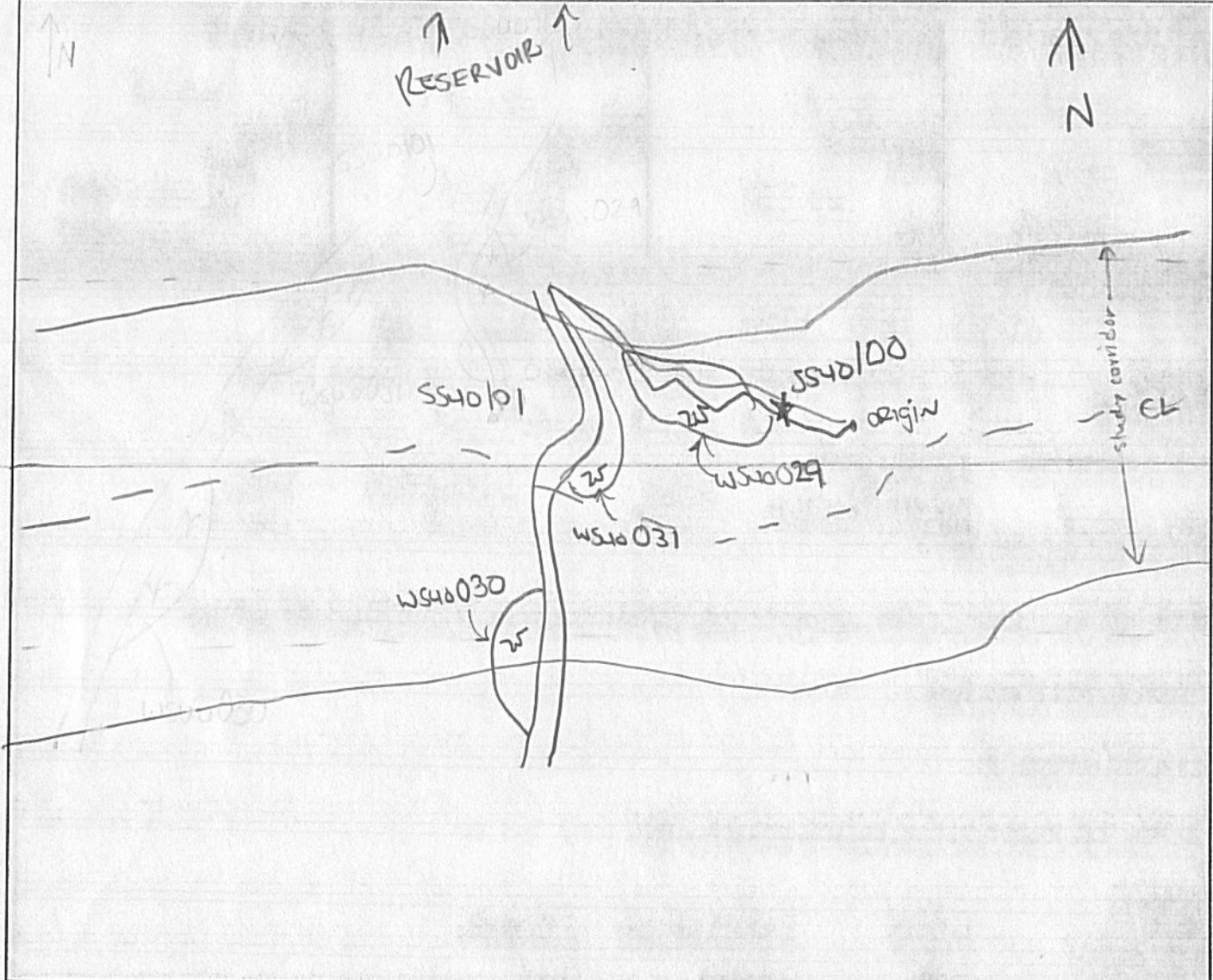
**High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

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

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

**Notes:**

**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.**

# 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: <u>13.0</u> ft. N/A <input type="checkbox"/>		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: <u>150</u> ft. N/A <input type="checkbox"/>		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 <sup>a</sup> : <small>(check one)</small> <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low			

<sup>a</sup> **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.

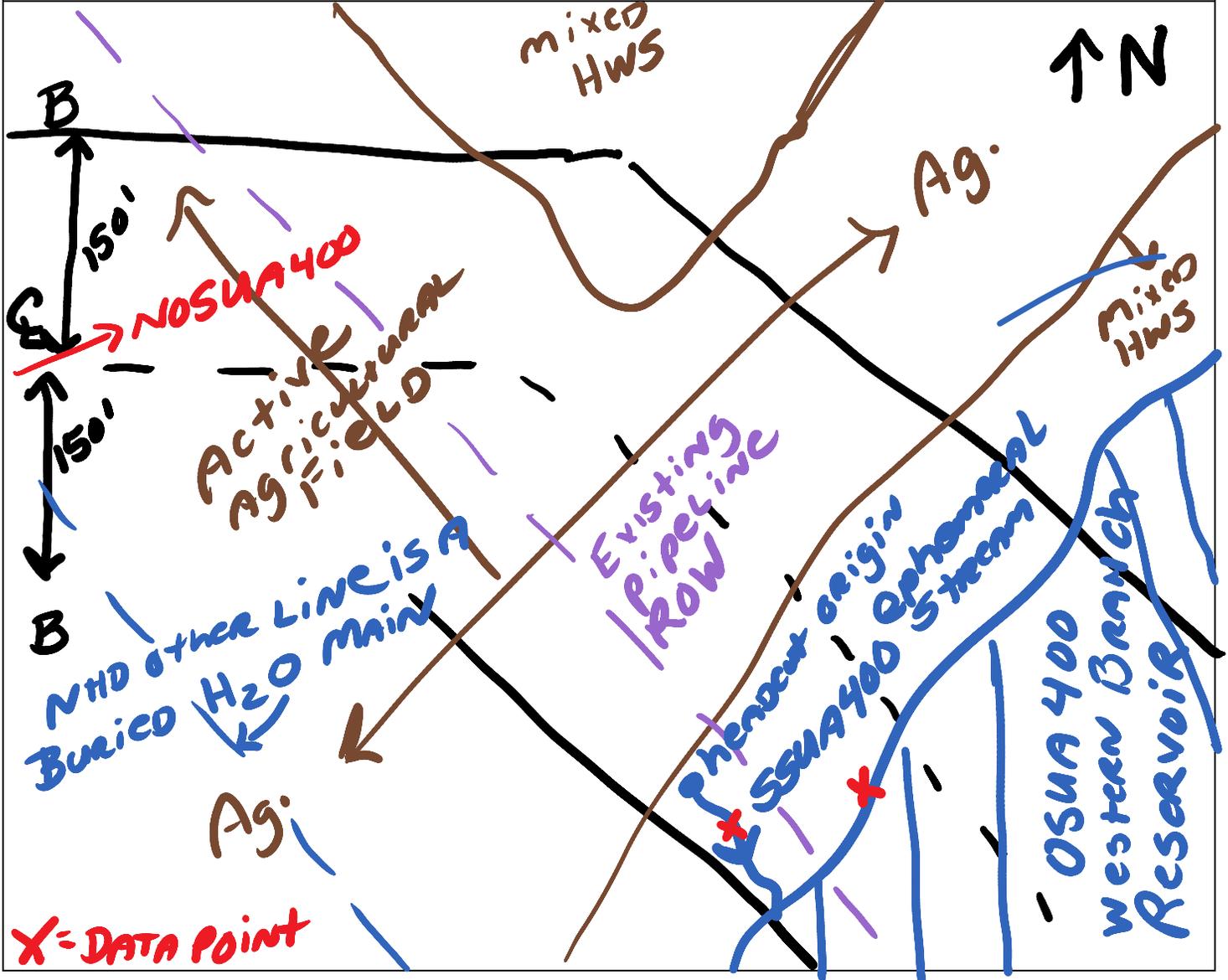
**Moderate Quality:** Altered by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or bank vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor 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 Reservoir	Waterbody ID: 55u0114
State: VA	County/Parish: Suffolk	Company: ESI	Date: 5/4/16
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 Height: 0.5 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	
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: 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:	%	%	%
30%	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. <input checked="" type="checkbox"/> Herbs: NA in.		
N/A <input type="checkbox"/>	Avg. DBH of Dominants: (approx.)		
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 <sup>a</sup> : (check one) <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low			

Waterbody ID:

SSU0114

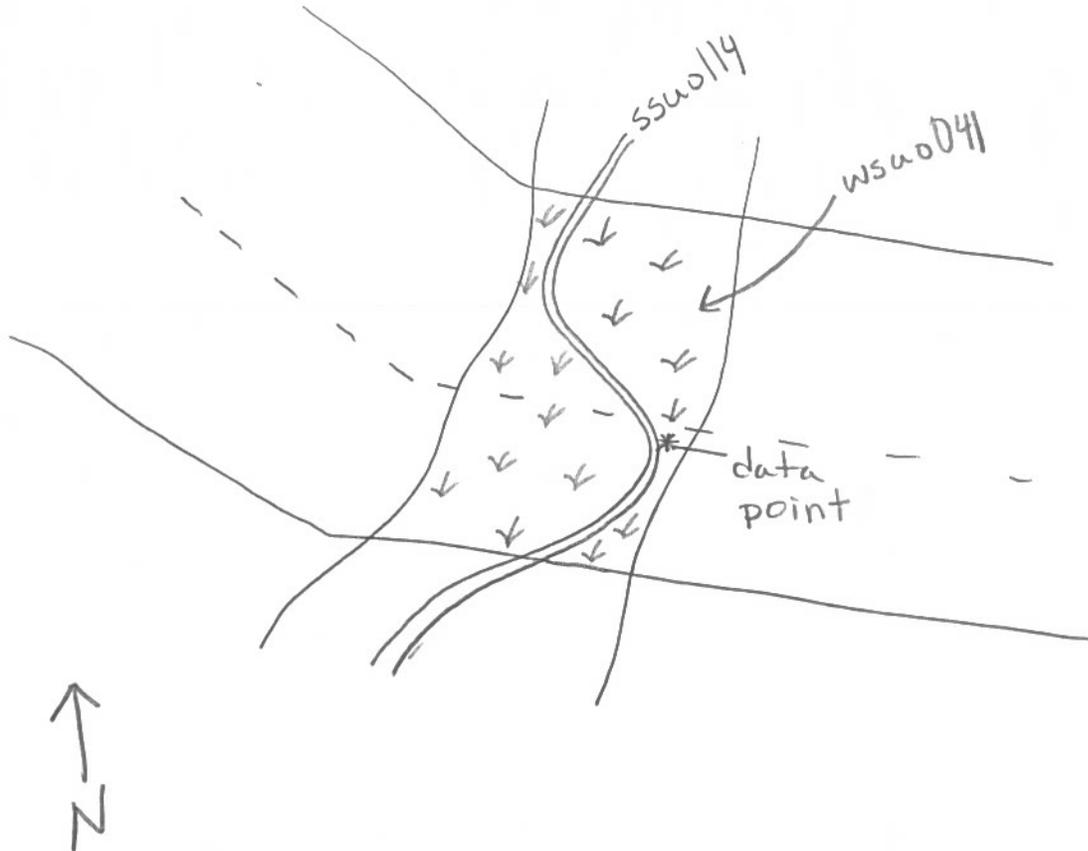
▪ **High Quality:** Natural, natural bank vegetation around entire waterbody; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

**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

<b>Survey Description</b>			
Project Name: ACP	Waterbody Name: LNT to Western Branch Reseal	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	Photos: S, N, E
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:			
<b>Physical Attributes</b>			
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 <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	
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"/>			
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.
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: (Approx.) 41 fps	Bank slope Right: 75 degrees Left: 75 degrees
N/A <input type="checkbox"/>		Bank height Right: 2 ft. Left: 2 ft.	
<b>Qualitative Attributes</b>			
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: 5 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.)		
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.

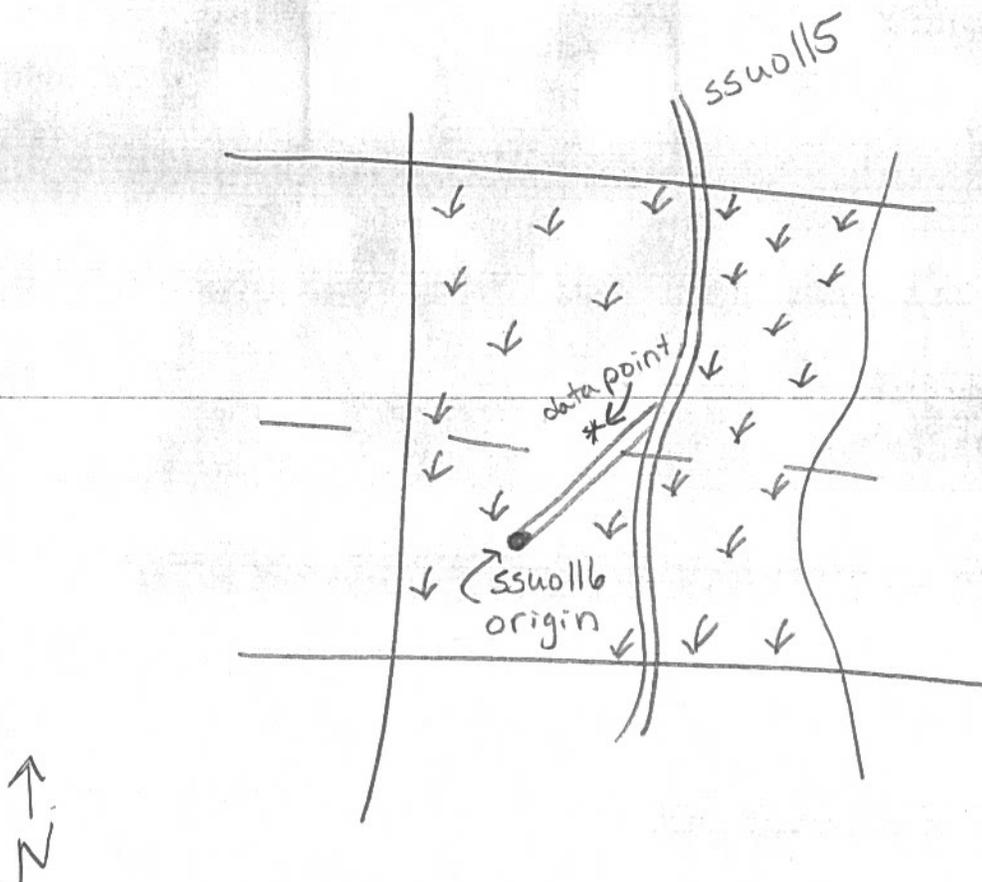
**Moderate Quality:** Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film;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

<b>Survey Description</b>			
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 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	
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 <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: 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"/>	
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.
N/A <input type="checkbox"/>		Bank slope: Right: 60 degrees Left: 80 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: _____% _____% _____% _____% 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.)	
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: 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: (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 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: (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) <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: 50 ft. N/A <input type="checkbox"/>	Vegetative Layers: (check all that apply) <input type="checkbox"/> Trees: _____ in. <input type="checkbox"/> Saplings/Shrubs: _____ in. <input checked="" type="checkbox"/> Herbs NA in. Avg. DBH of Dominants: (approx.)				
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: (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:

ssup013

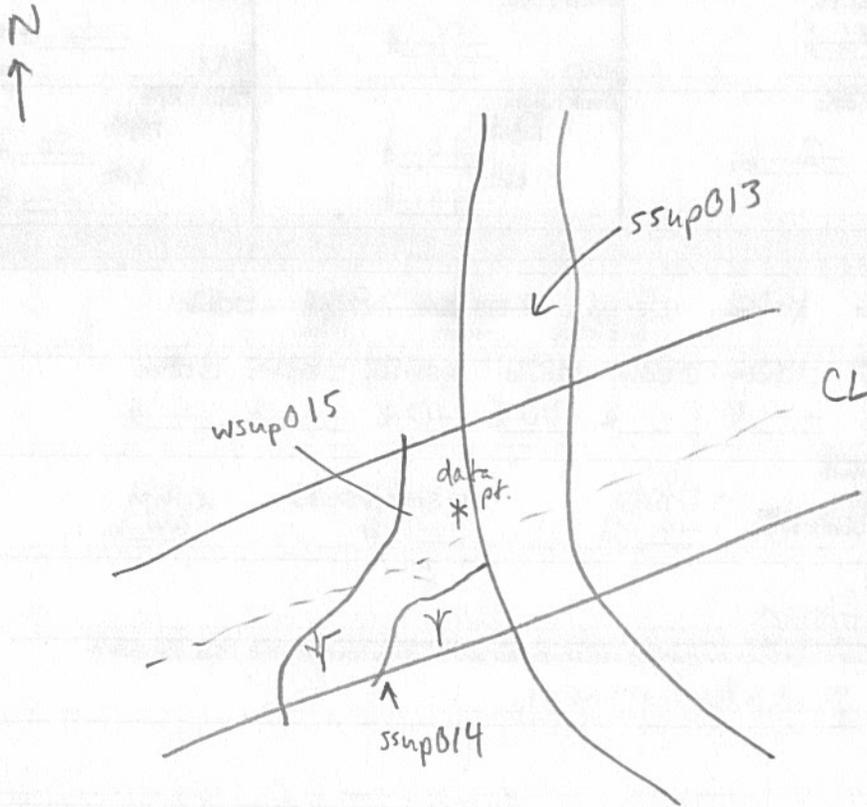
• **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance 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 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.			
Avg. DBH of Dominants: <small>(approx.)</small>				
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 <sup>a</sup> : <small>(check one)</small> <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low				

Waterbody ID:

SSUS ~~004~~

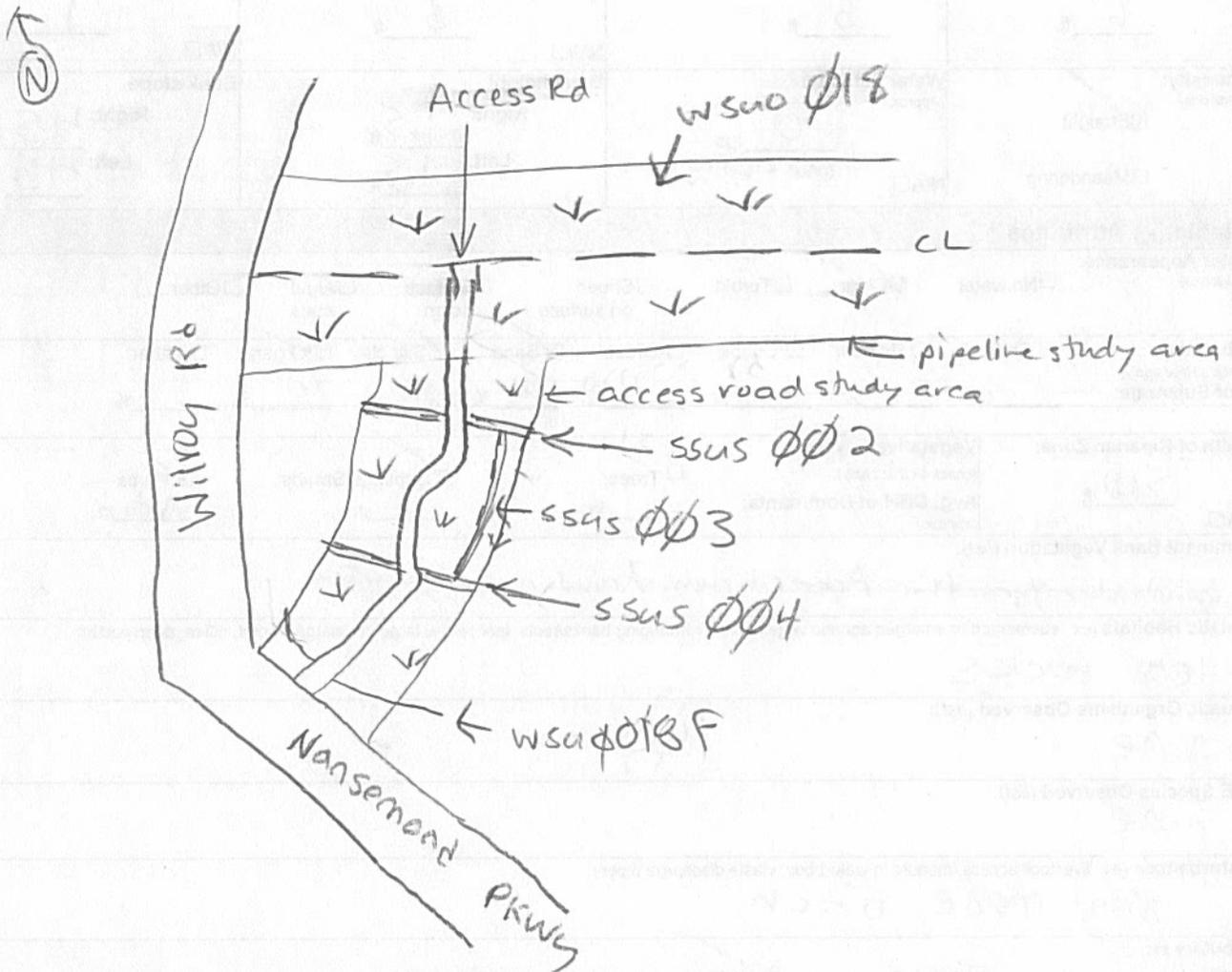
▪ **High Quality:** Natural, natural bank vegetation around entire waterbody; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

**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**

<b>Survey Description</b>				
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:				
<b>Physical Attributes</b>				
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	
<b>Qualitative Attributes</b>				
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 <sup>a</sup> : (check one) <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low				

Waterbody ID:

SSUS 003

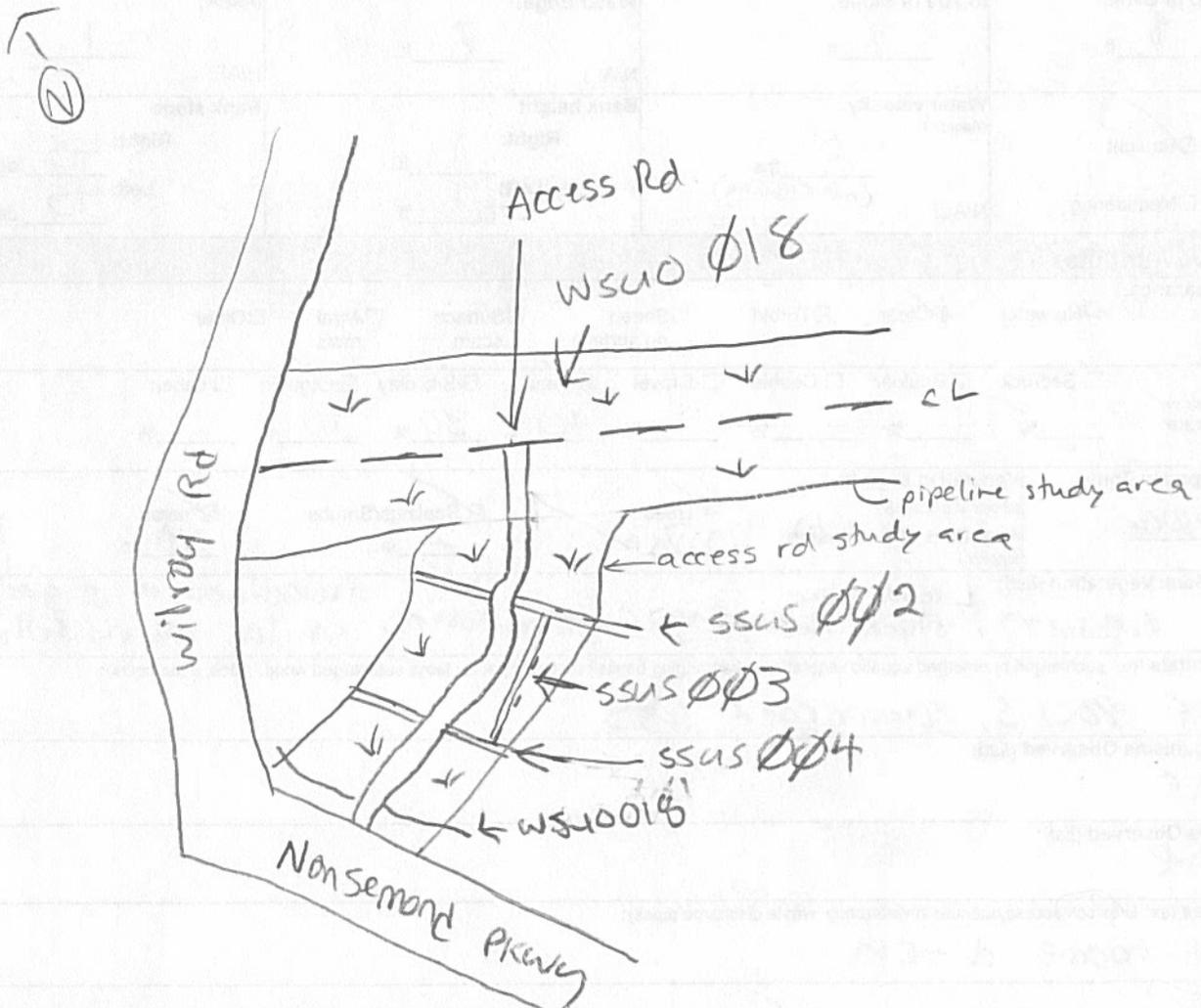
**High Quality:** Natural, natural bank vegetation around entire waterbody; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

**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

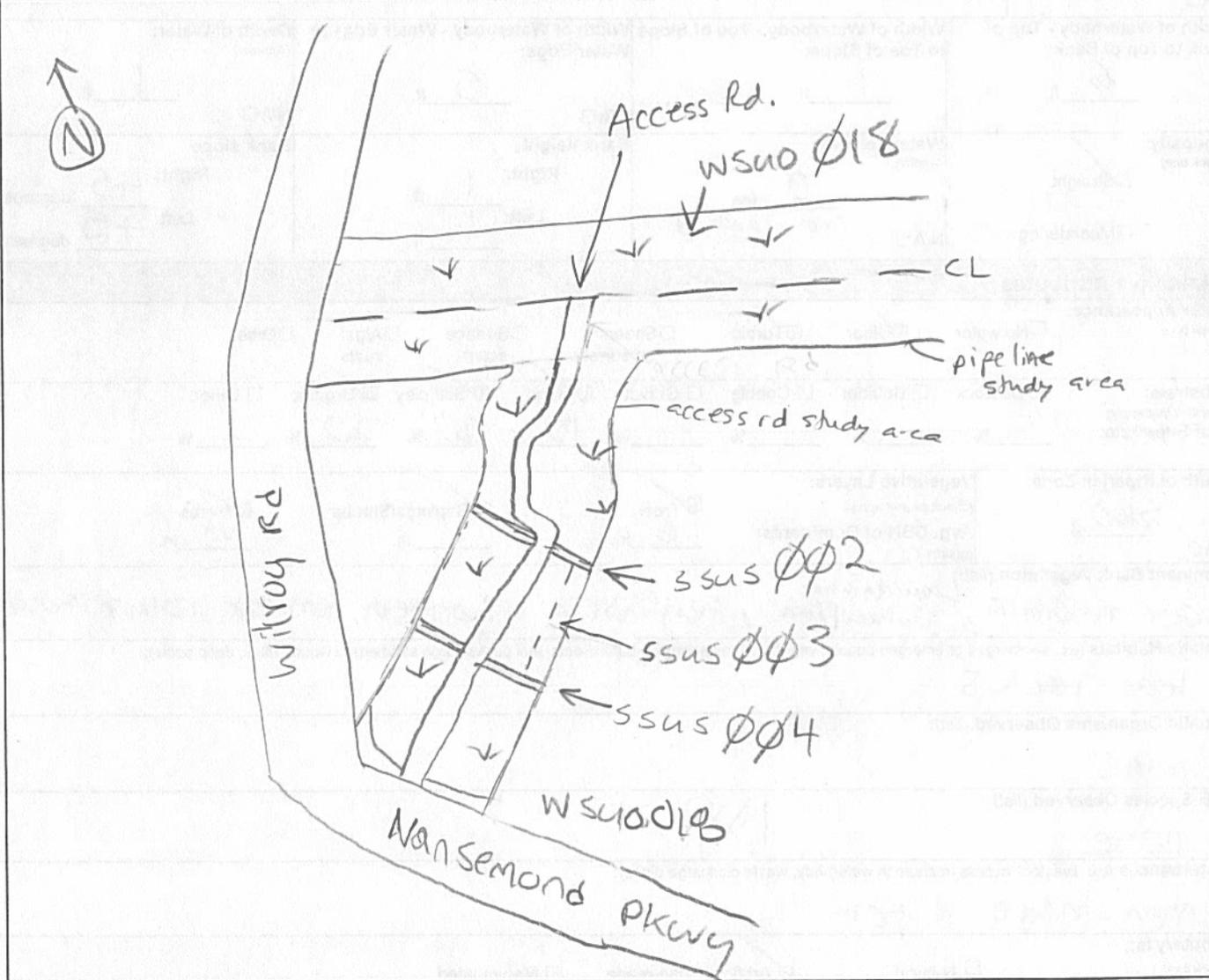
<b>Survey Description</b>				
Project Name: ACP		Waterbody Name: LWT to Great Dismal Swamp	Waterbody ID: SSUS002	Date: 8/2/16
State: VA	County/Parish: SUFFOLK	Company: ESI	Crew Member Initials: SB, KM	Photos: S, N, W
Tract Number(s): 26-060-A084.2 / unnumbered tract		Nearest Milepost: 66	Associated Wetland ID(s): WSU0018	
Survey Type: (check one) <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:				
<b>Physical Attributes</b>				
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) <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		
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: (Approx.) 1 ft.	
N/A <input type="checkbox"/>				
Sinuosity: (check one) <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering	Water velocity: (Approx.) 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"/>				
<b>Qualitative Attributes</b>				
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: 700 ft.	Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: 6 in. <input checked="" type="checkbox"/> Saplings/Shrubs: 1 in. <input checked="" type="checkbox"/> Herbs: NA in.			
N/A <input type="checkbox"/>				
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: (check one) <input type="checkbox"/> Natural <input checked="" type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality <sup>a</sup> : (check one) <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**

<b>Survey Description</b>					
Project Name: <u>ACP</u>		Waterbody Name: <u>Untto Dism. &amp; 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:					
<b>Physical Attributes</b>					
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"/>
<b>Qualitative Attributes</b>					
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)			
N/A <input type="checkbox"/>		<input type="checkbox"/> Trees: _____ 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, 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

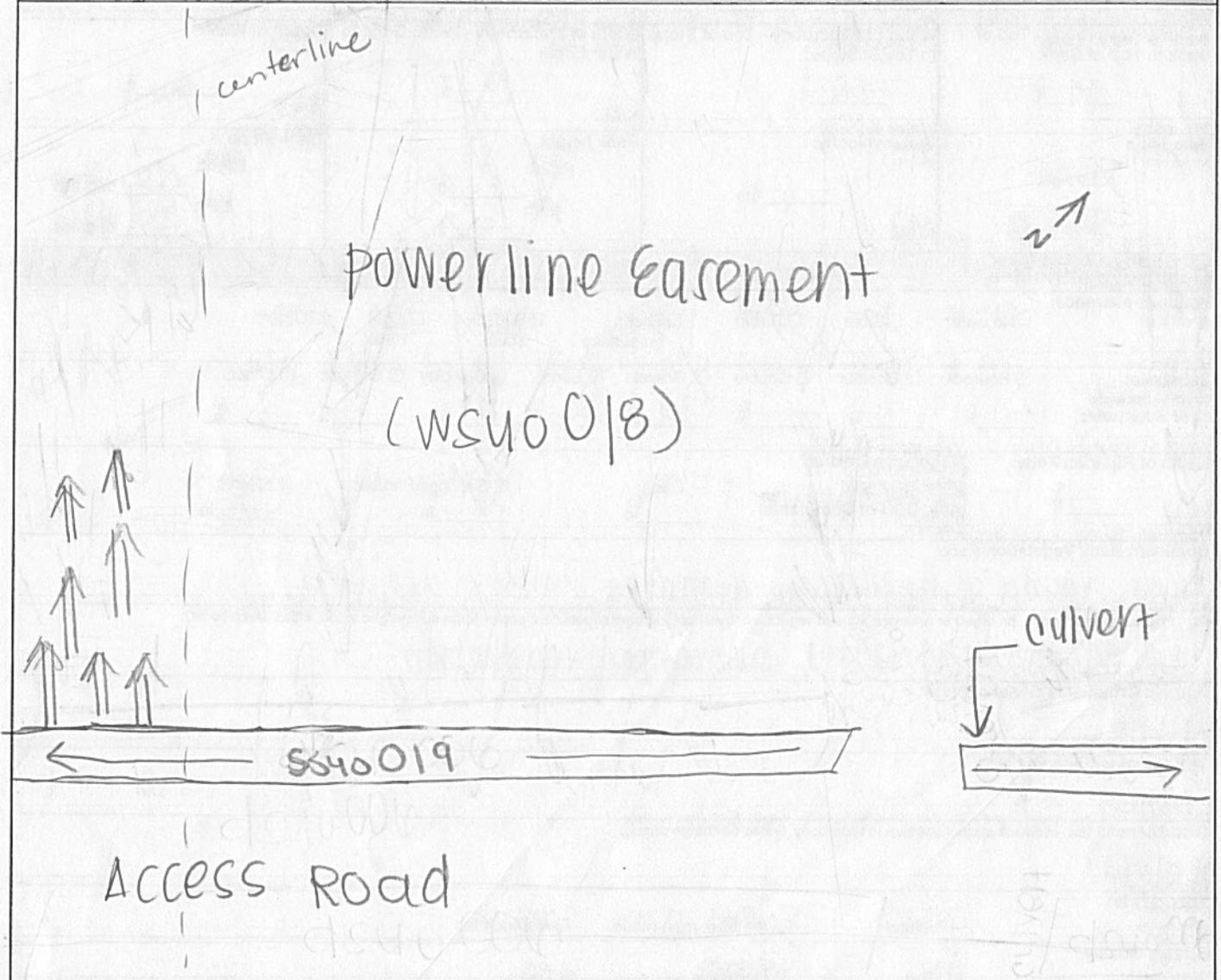
**High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

<b>Survey Description</b>				
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:				
<b>Physical Attributes</b>				
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 Height: 1 ft.	OHWM Indicator: (check all that apply)		
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 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.	
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: 3 ft. Left: 3 ft.	Bank slope: Right: 45 degrees Left: 45 degrees	
<b>Qualitative Attributes</b>				
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:	<input checked="" type="checkbox"/> Saplings/Shrubs:	<input checked="" type="checkbox"/> Herbs
	Avg. DBH of Dominants: (approx.)	_____ in.	2 in.	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

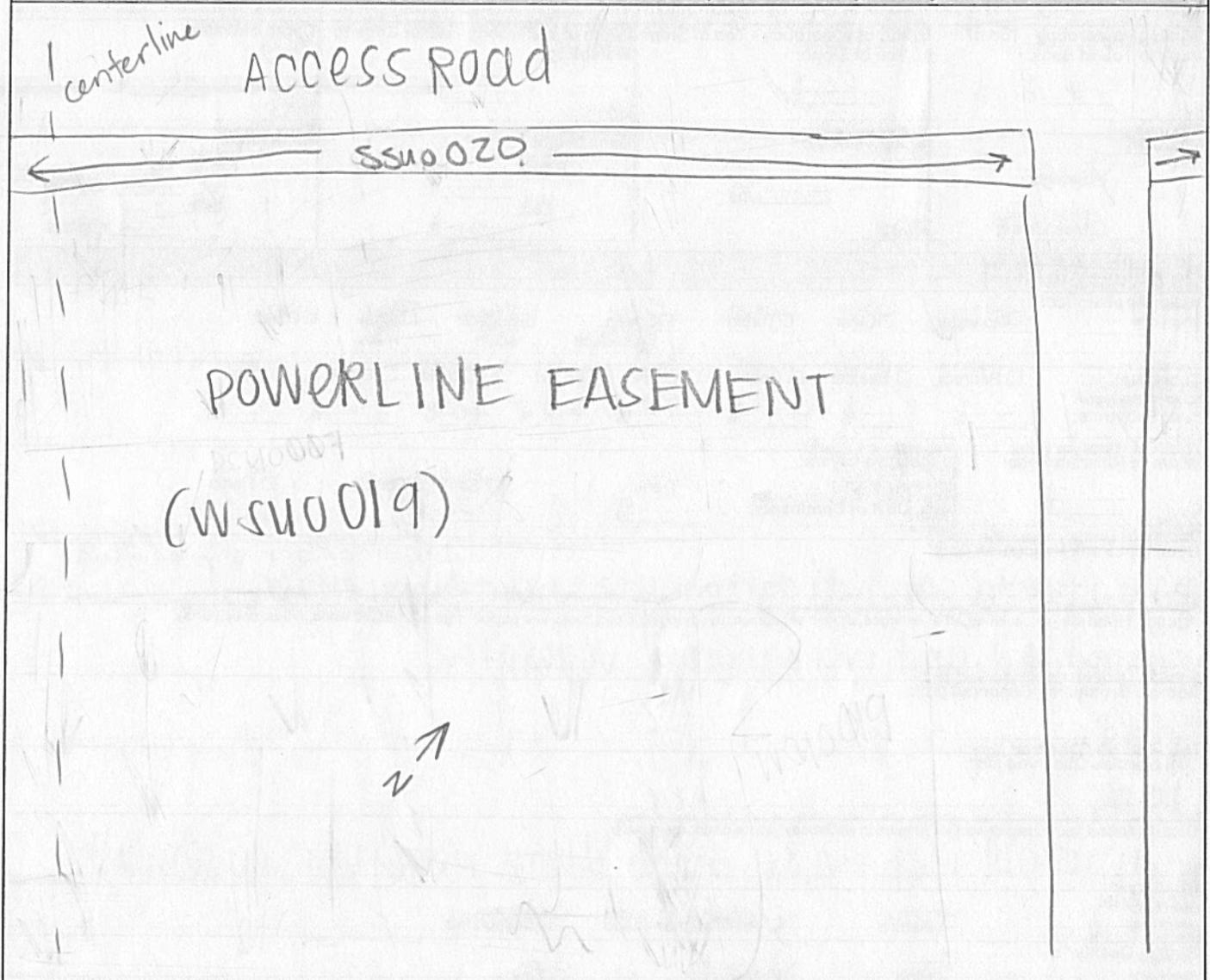
• **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

<b>Survey Description</b>				
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:				
<b>Physical Attributes</b>				
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"/>			
<b>Qualitative Attributes</b>				
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

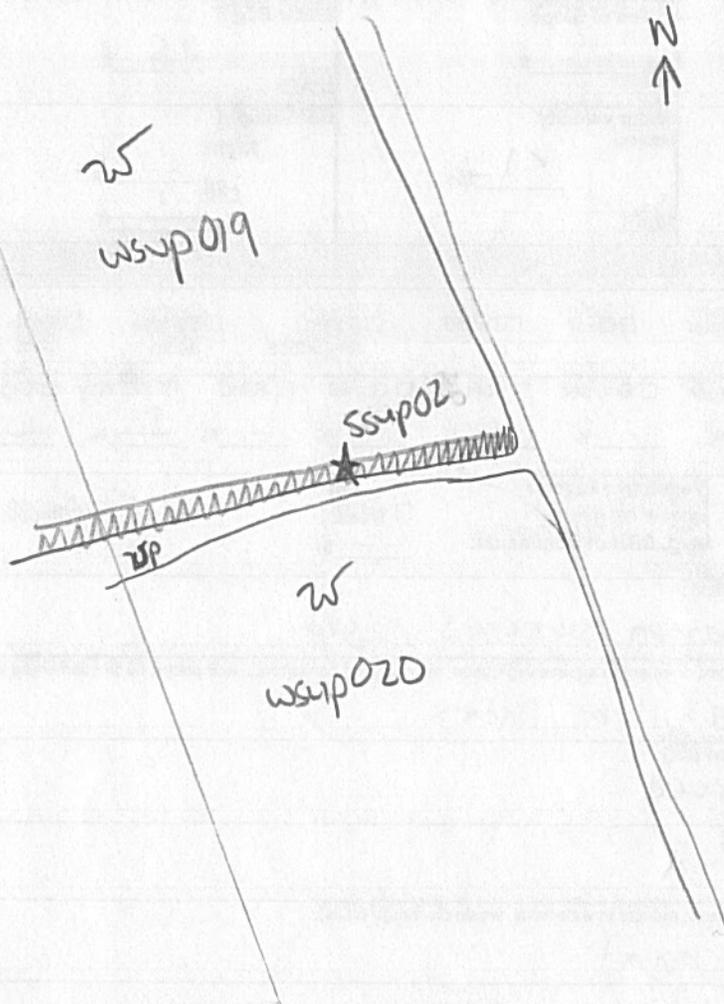
▪ **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

<b>Survey Description</b>				
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	Photos: Facing W, E, S
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:				
<b>Physical Attributes</b>				
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
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 type="checkbox"/> Scouring <input 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.) 3 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: 4 ft. Left: 4 ft.	Bank slope Right: 45 degrees Left: 45 degrees	
N/A <input type="checkbox"/>	N/A <input type="checkbox"/>			
<b>Qualitative Attributes</b>				
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"/> Organic	<input type="checkbox"/> Other:	<input checked="" type="checkbox"/> Silt/clay		
% of Substrate: _____%	% of Substrate: _____%	% of Substrate: _____%	% of Substrate: _____%	% of Substrate: 90%
% of Substrate: _____%	% of Substrate: _____%	% of Substrate: _____%	% of Substrate: _____%	% of Substrate: 10%
Width of Riparian Zone: 100 ft.	Vegetative Layers: (check all that apply)	<input type="checkbox"/> Trees:	<input checked="" type="checkbox"/> Saplings/Shrubs:	<input checked="" type="checkbox"/> Herbs
N/A <input type="checkbox"/>	Avg. DBH of Dominants: (approx.)	_____ in.	3 in.	N/A 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 <sup>a</sup> : (check one) <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low				

Waterbody ID:

SSUP029

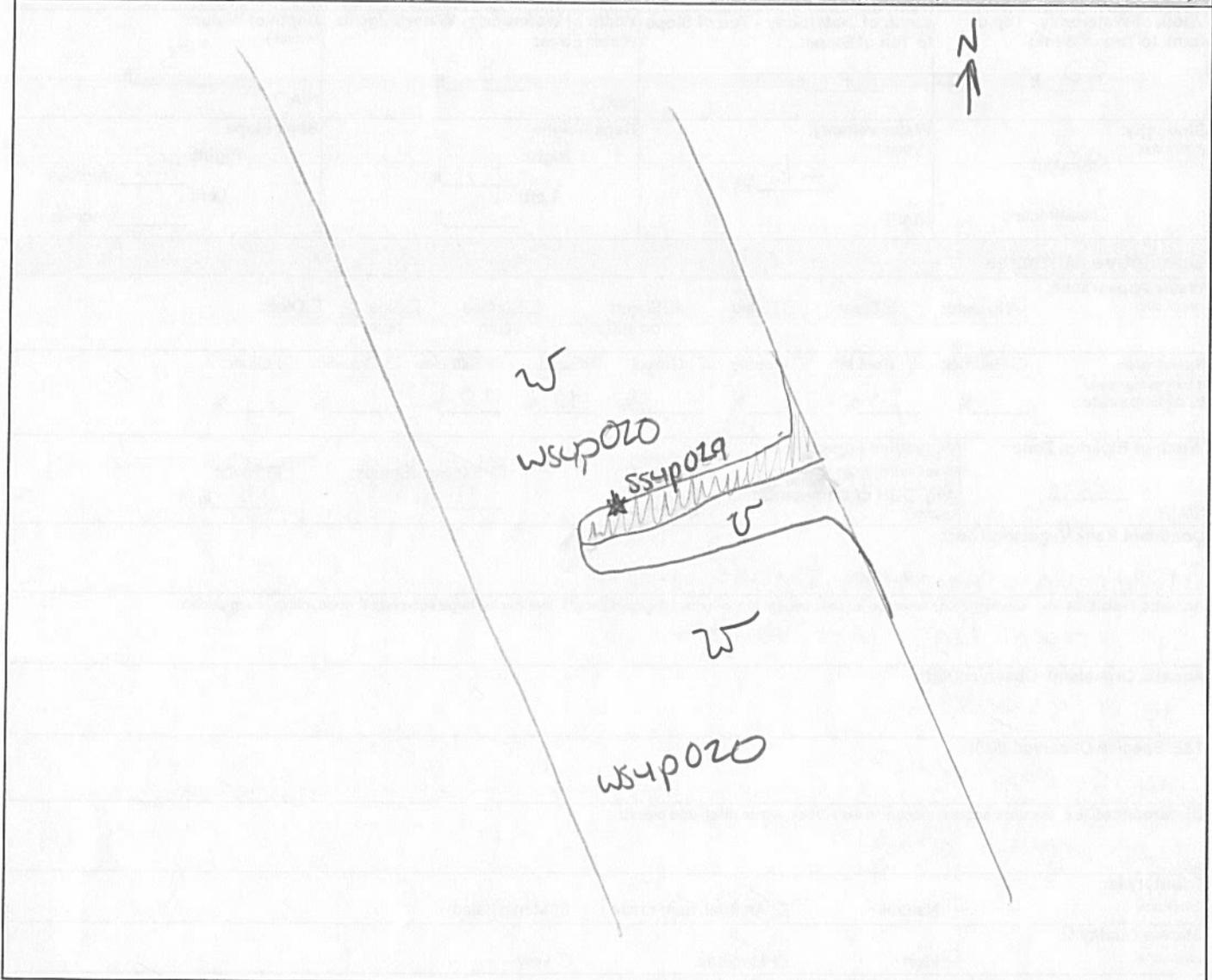
**High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

# Linear Waterbody Data Sheet

<b>Survey Description</b>			
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:			
<b>Physical Attributes</b>			
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 Indicator: (check all that apply) <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	
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: 4 ft.	Depth of Water: (Approx.) 0.5 ft.
Sinuosity: (check one) <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering		Water velocity: (Approx.) _____ fps	Bank slope Right: 90 degrees Left: 90 degrees
Bank height Right: 5 ft. Left: 3 ft.			
<b>Qualitative Attributes</b>			
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: _____ ft.	Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: _____ in. <input checked="" type="checkbox"/> Saplings/Shrubs: 2 in. <input checked="" type="checkbox"/> Herbs: N/A in.		
N/A <input type="checkbox"/>			
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

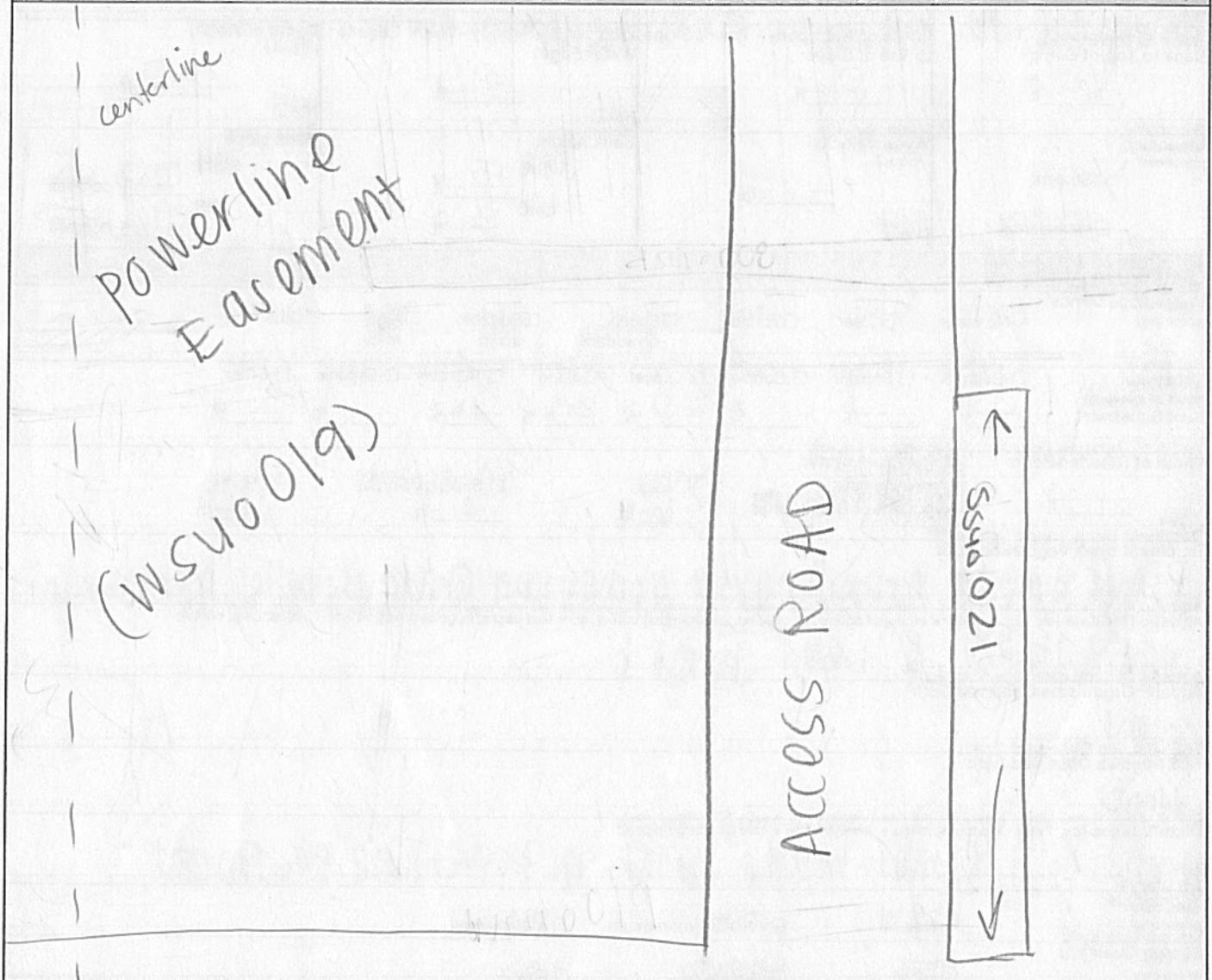
▪ **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

# Open Waterbody Data Sheet

<b>Survey Description</b>					
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:					
<b>Physical Attributes</b>					
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"/>					
<b>Qualitative Attributes</b>					
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

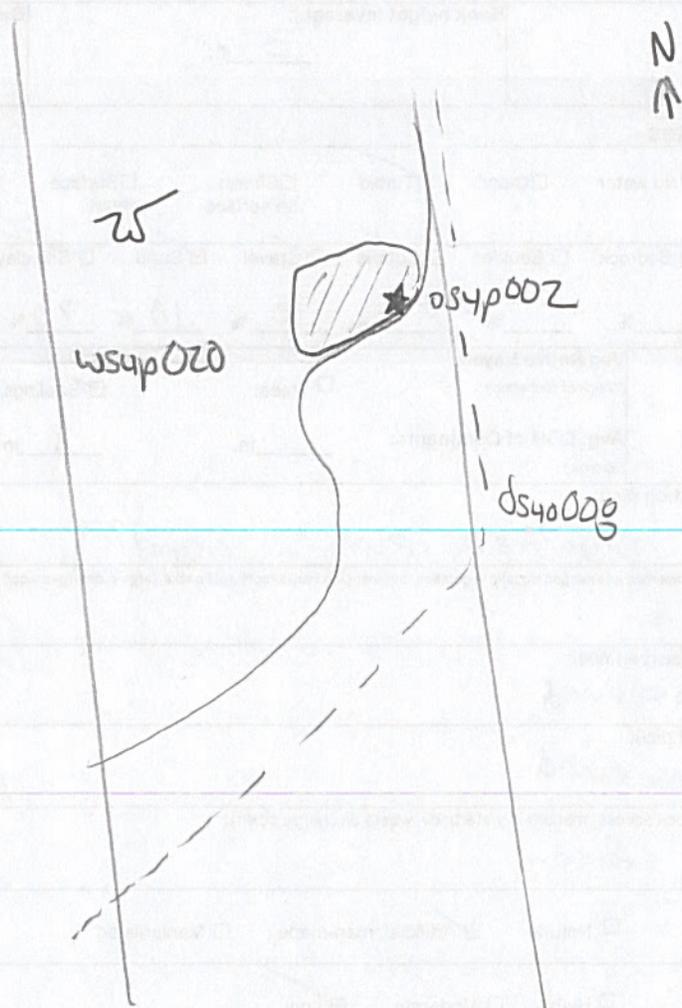
▪ **High Quality:** Natural, natural bank vegetation around entire waterbody; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

**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	Associated Wetland ID(s): WS40009
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 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: 23 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: 3 ft.	<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	N/A <input type="checkbox"/>	
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: <small>(Approx.)</small> 3 ft.
Sinuosity: <small>(check one)</small>		Bank height	
<input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering		Right: 3 ft. Left: 3 ft.	
Water velocity: <small>(Approx.)</small> < 1 fps		Bank slope	
N/A <input type="checkbox"/>		Right: 45 degrees Left: 45 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:    _____%    _____%    _____%    _____%    60%    _____%    40%    _____%			
Width of Riparian Zone: 700 ft.	Vegetative Layers: <small>(check all that apply)</small>		
N/A <input type="checkbox"/>	<input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs		
Avg. DBH of Dominants: <small>(approx.)</small> _____ in.    _____ in.    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: <small>(check one)</small>			
<input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated			
Stream Quality <sup>a</sup> : <small>(check one)</small>			
<input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low			

Waterbody ID:

SSUP038

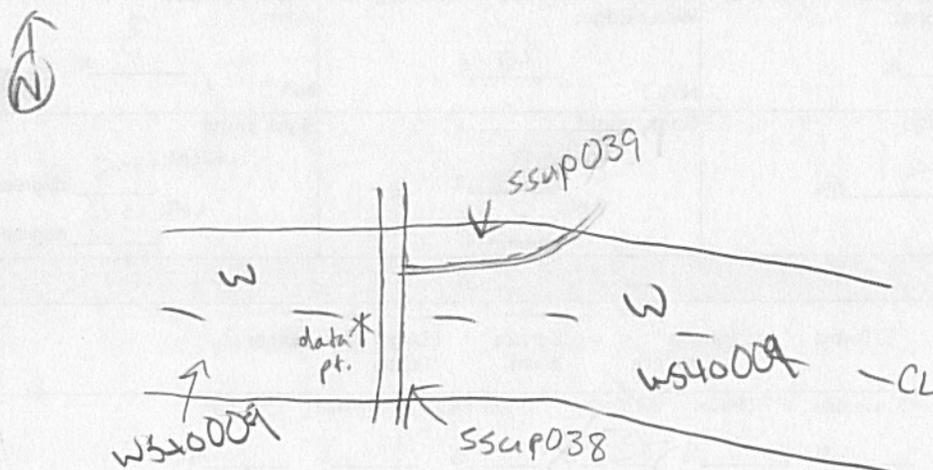
• **High Quality:** Natural, natural bank vegetation around entire waterbody; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

**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: LNT to Dismal Swamp	Waterbody ID: SSUP037	Date: 5/25/16
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State: VA	County/Parish: Suffolk	Company: ESI	Crew Member Initials: RT, KSM	Photos: Facing: SW, NE, SE
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Tract Number(s): 26-166-8002	Nearest Milepost: 70.2	Associated Wetland ID(s): WSU0009
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Survey Type: (check one)  Centerline  Re-Route  Access Road  Other:

## Physical Attributes

Stream Classification: (check one)  Ephemeral  Intermittent  Perennial

Waterbody Type: (check one)  River  Stream  Ditch  Canal  Other:

OHWM Width: <u>5</u> ft. Height: <u>0.5</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>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. N/A <input type="checkbox"/>	Depth of Water: (Approx.) <u>1</u> ft. N/A <input type="checkbox"/>
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Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: (Approx.) <u>0</u> fps N/A <input type="checkbox"/>	Bank height Right: <u>0.5</u> ft. Left: <u>0.5</u> ft.	Bank slope Right: <u>45</u> degrees Left: <u>45</u> degrees
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## Qualitative Attributes

Water Appearance: (check one)  No water  Clear  Turbid  Sheen on surface  Surface scum  Algal mats  Other:

Substrate: (check all that apply)  Bedrock  Boulder  Cobble  Gravel  Sand  Silt/clay  Organic  Other:  
% of Substrate: \_\_\_\_\_% \_\_\_\_\_% \_\_\_\_\_% \_\_\_\_\_% 60% \_\_\_\_\_% 40% \_\_\_\_\_%

Width of Riparian Zone: <u>7100</u> ft. N/A <input type="checkbox"/>	Vegetative Layers: (check all that apply) Avg. DBH of Dominants: (approx.)	<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.
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Dominant Bank Vegetation (list): *Woodwardia virginica, Magnolia virginiana, Liquidambar styraciflua, Acer rubrum, Asimina triloba*

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*

T&E Species Observed (list):  
*none*

Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes):  
*Impact by historic logging activities*

Tributary is: (check one)  Natural  Artificial, man-made  Manipulated

Stream Quality: (check one)  High  Moderate  Low