

Linear Waterbody Data Sheet

Survey Description				
Project Name: Southeast Reliability		Waterbody Name: UNNAMED TRIB TO PERKINS CREEK		Waterbody ID: SCUK029
State: Virginia		County: CUMBERLAND	Company: W&C	Crew Member Initials: WM, JD
Tract Number(s): 10-001		Nearest Milepost: 208	Associated Wetland ID(s): NA	
Survey Type: <i>(check one)</i> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: <i>(check one)</i> <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial				
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:				
OHWM Width: <u>3</u> ft. Height: <u>1</u> ft. N/A <input type="checkbox"/>		OHWM Indicator: <i>(check all that apply)</i> <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 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 checked="" 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: N/A <input checked="" type="checkbox"/> ___ ft.	Depth of Water: <i>(Approx.)</i> ___ ft.	
Sinuosity: <i>(check one)</i> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: <i>(Approx.)</i> ___ fps N/A <input checked="" type="checkbox"/>	Bank height Right: <u>4</u> ft. Left: <u>2</u> ft.	Bank slope Right: <u>65</u> degrees Left: <u>45</u> degrees	
Qualitative Attributes				
Water Appearance: <i>(check one)</i> <input checked="" type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: <i>(check all that apply)</i> <input type="checkbox"/> Bedrock <input checked="" type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <input type="checkbox"/> Other: % of Substrate: <u>NA</u> % <u>10</u> % <u>15</u> % <u>20</u> % <u>NA</u> % <u>55</u> % <u>NA</u> % _____ %				
Width of Riparian Zone: <u>>100</u> ft. N/A <input type="checkbox"/>	Vegetative Layers: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs Avg. DBH of Dominants: <i>(approx.)</i> <u>12</u> in. <u>3</u> in.			
Dominant Bank Vegetation <i>(list)</i> : PINUS SPP, SHAGBARK HICKORY, BLACK OAK, WHITE OAK, CEDAR, CHRISTMAS FERN, CHASMANTHIUM				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): NA				
Aquatic Organisms Observed <i>(list)</i> : NA				
T&E Species Observed <i>(list)</i> : NA				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): NA				
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality ^a : <i>(check one)</i> <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low				

Waterbody ID:

SCUK029

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

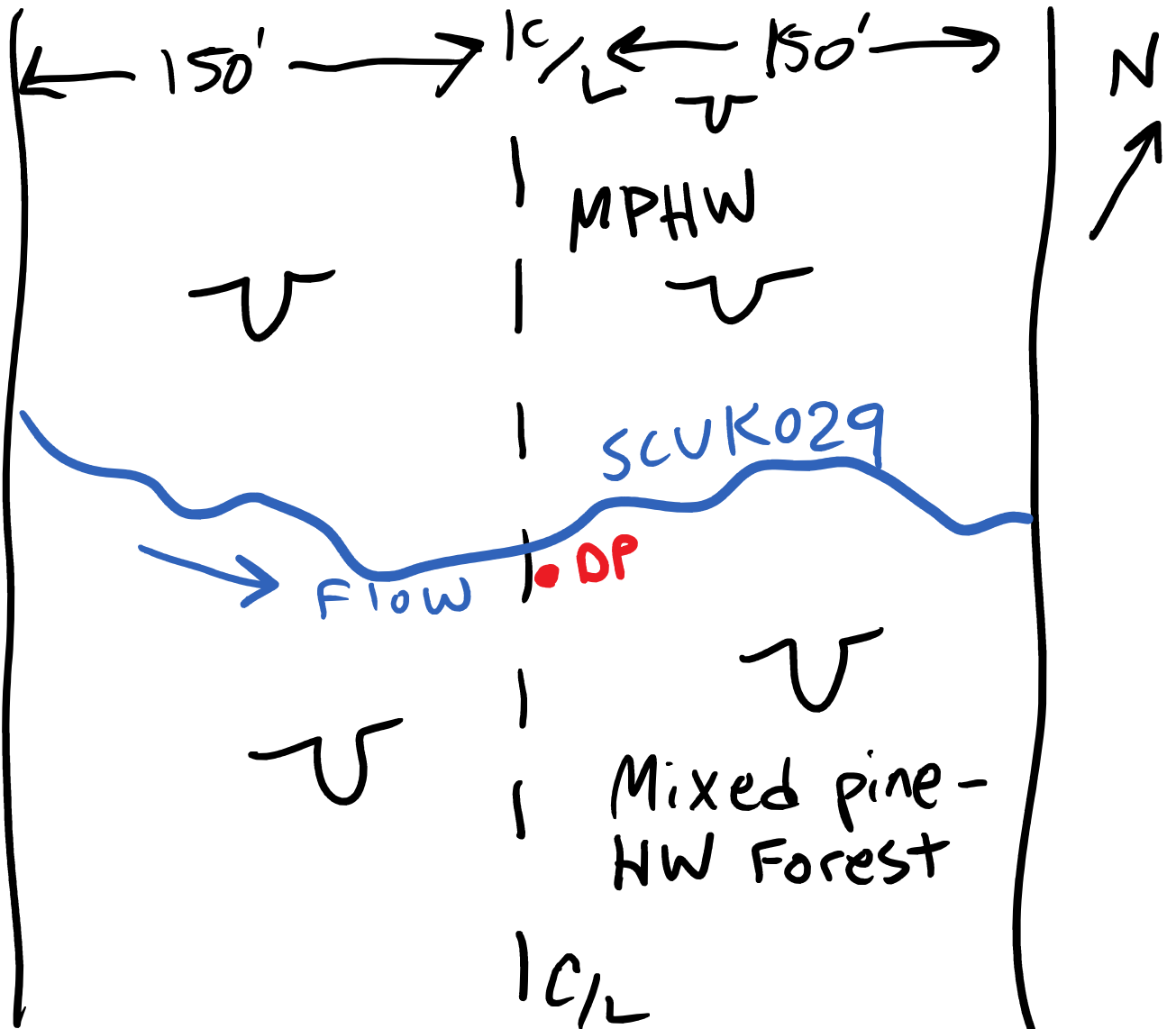
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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

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

Notes:

HEADWATER EPHEMERAL STREAM IN MIXED PINE-HW FOREST WITH NO FLOW, MINIMUM HUMAN DISTURBANCE. AREA HAS GOOD ROOSTING TREES FOR BATS.

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





Waterbody point scuk029 facing north and downstream



Waterbody point scuk029 facing south and upstream



Waterbody point scuk029 facing east and across

Linear Waterbody Data Sheet

Survey Description				
Project Name: Southeast Reliability		Waterbody Name: UNNAMED TRIB TO PERKINS CREEK		Waterbody ID: SCUK027
State: Virginia		County: CUMBERLAND	Company: W&C	Crew Member Initials: WM, JD
Tract Number(s): 10-001		Nearest Milepost: 208		Photos: 100-0546 TO 0548
Associated Wetland ID(s): NA				
Survey Type: <i>(check one)</i> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: <i>(check one)</i> <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial				
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:				
OHWM Width: <u>12</u> ft.		OHWM Indicator: <i>(check all that apply)</i>		
Height: <u>2</u> ft.		<input checked="" type="checkbox"/> Clear line on bank		
N/A <input type="checkbox"/>		<input checked="" type="checkbox"/> Shelving		
		<input checked="" type="checkbox"/> Wrested vegetation		
		<input checked="" 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 checked="" type="checkbox"/> Soil characteristic change		
Width of Waterbody - Top of Bank to Top of Bank: <u>16</u> ft.		Width of Waterbody - Toe of Slope to Toe of Slope: <u>12</u> ft.		Width of Waterbody - Water Edge to Water Edge: N/A <input type="checkbox"/> <u>4</u> ft.
				Depth of Water: <i>(Approx.)</i> N/A <input type="checkbox"/> <u>0.5</u> ft.
Sinuosity: <i>(check one)</i> <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering		Water velocity: <i>(Approx.)</i> ___ fps		Bank height Right: <u>6</u> ft. Left: <u>6</u> ft.
		N/A <input checked="" type="checkbox"/>		Bank slope Right: <u>75</u> degrees Left: <u>75</u> degrees
Qualitative Attributes				
Water Appearance: <i>(check one)</i> <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: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Bedrock <input checked="" type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <input type="checkbox"/> Other:				
% of Substrate: <u>10</u> % <u>20</u> % <u>30</u> % <u>25</u> % <u>NA</u> % <u>15</u> % <u>NA</u> % _____%				
Width of Riparian Zone: <u>>100</u> ft.		Vegetative Layers: <i>(check all that apply)</i>		
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: <i>(approx.)</i> <u>18</u> in. <u>3</u> in.		
Dominant Bank Vegetation <i>(list)</i> : PINUS SPP., SHAGBARK HICKORY, BLACKGUM, WHITE OAK, CEDAR, CHRISTMAS FERN, DOGWOOD, REDBUD				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): STAGNANT POOLS				
Aquatic Organisms Observed <i>(list)</i> : WATER STRIDERS				
T&E Species Observed <i>(list)</i> : NA				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): NA				
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality ^a : <i>(check one)</i> <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low				

Waterbody ID:

SCUK027

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

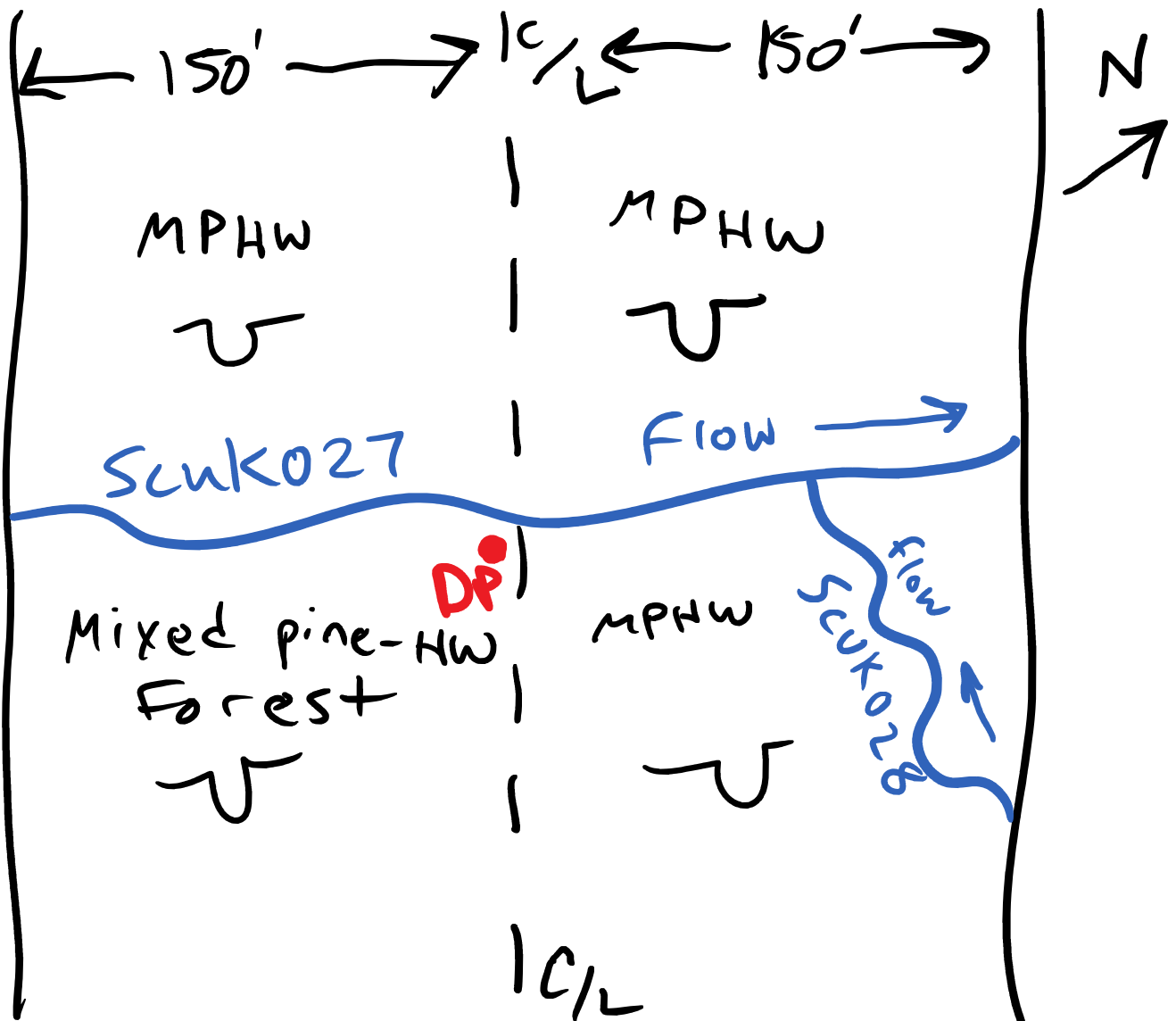
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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

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

Notes:

LARGE INTERMITTENT STREAM IN MIXED PINE-HW FOREST WITH NO FLOW, ONLY POOLS; MINIMUM HUMAN DISTURBANCE. RIPARIAN CORRIDOR IS GOOD MIGRATORY BIRD/BAT HABITAT

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





Waterbody point scuk027 facing south and upstream



Waterbody point scuk027 facing north and downstream



Waterbody point scuk027 facing west and across

Linear Waterbody Data Sheet

Survey Description				
Project Name: Southeast Reliability		Waterbody Name: UNNAMED TRIB TO PERKINS CREEK		Waterbody ID: SCUK028
State: Virginia		County: CUMBERLAND	Company: W&C	Crew Member Initials: WM, JD
Tract Number(s): 10-001		Nearest Milepost: 208	Associated Wetland ID(s): NA	
Survey Type: <i>(check one)</i> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: <i>(check one)</i> <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial				
Waterbody Type: <i>(check one)</i> <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. Height: <u>1</u> ft. N/A <input type="checkbox"/>		OHWM Indicator: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Clear line on bank <input checked="" type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input checked="" 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 checked="" type="checkbox"/> Soil characteristic change		
Width of Waterbody - Top of Bank to Top of Bank: <u>12</u> ft.	Width of Waterbody - Toe of Slope to Toe of Slope: <u>5</u> ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input checked="" type="checkbox"/> <u> </u> ft.	Depth of Water: <i>(Approx.)</i> <u> </u> ft.	
Sinuosity: <i>(check one)</i> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: <i>(Approx.)</i> <u> </u> fps N/A <input checked="" type="checkbox"/>	Bank height Right: <u>4</u> ft. Left: <u>4</u> ft.	Bank slope Right: <u>65</u> degrees Left: <u>65</u> degrees	
Qualitative Attributes				
Water Appearance: <i>(check one)</i> <input checked="" type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: <i>(check all that apply)</i> <input type="checkbox"/> Bedrock <input checked="" type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <input type="checkbox"/> Other: % of Substrate: <u>NA</u> % <u>10</u> % <u>25</u> % <u>40</u> % <u>NA</u> % <u>25</u> % <u>NA</u> % <u> </u> %				
Width of Riparian Zone: <u>>100</u> ft. N/A <input type="checkbox"/>	Vegetative Layers: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs Avg. DBH of Dominants: <i>(approx.)</i> <u>18</u> in. <u>3</u> in.			
Dominant Bank Vegetation <i>(list)</i> : LOBLOLLY PINE, RED MAPLE, SWEETGUM, WHITE OAK, CEDAR, CHRISTMAS FERN, DOGWOOD, ELM				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): NA				
Aquatic Organisms Observed <i>(list)</i> : NA				
T&E Species Observed <i>(list)</i> : NA				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): NA				
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality ^a : <i>(check one)</i> <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low				

Waterbody ID:
SCUK028

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

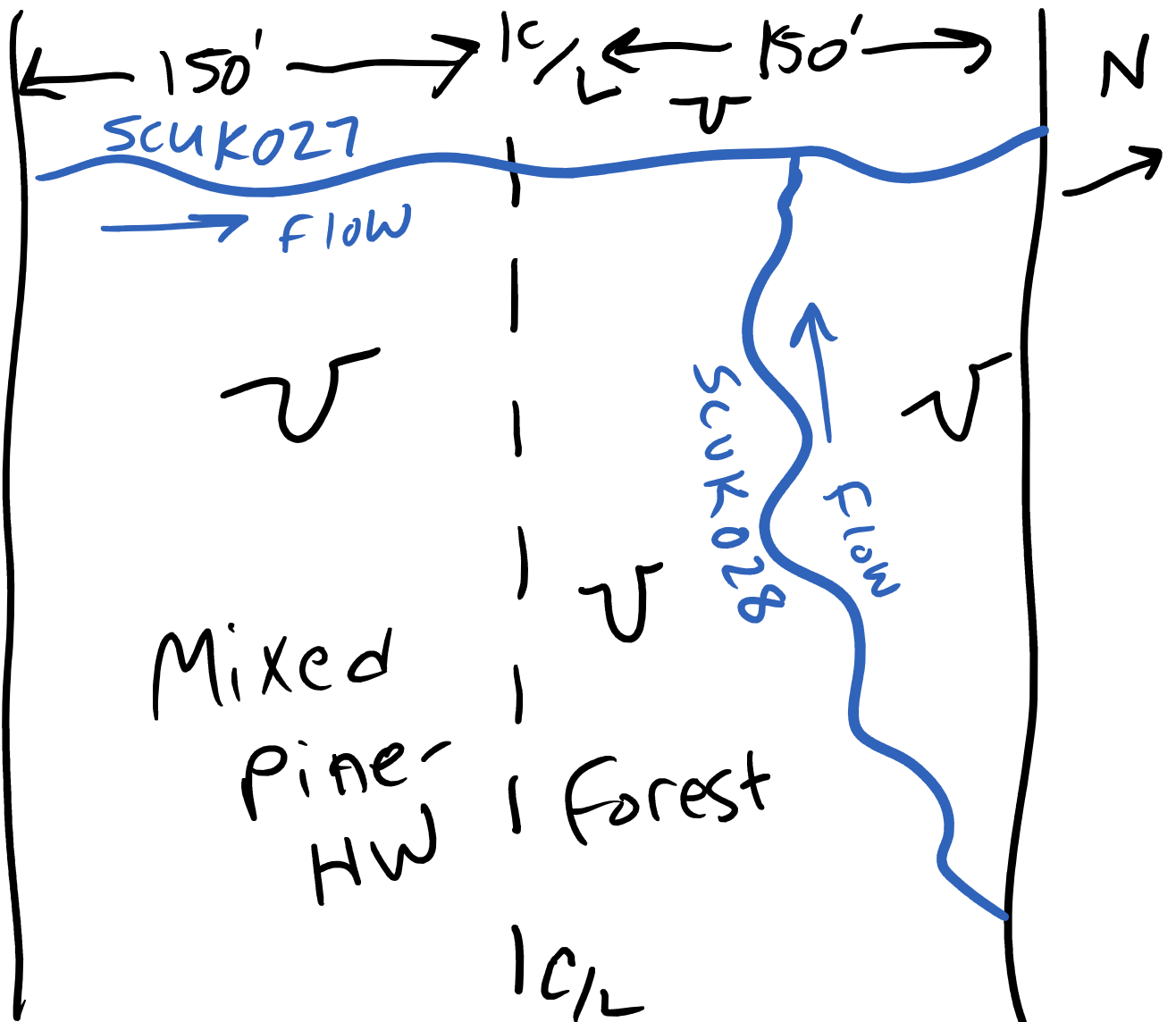
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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

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

Notes:

INTERMITTENT STREAM IN MIXED PINE-HW FOREST WITH NO FLOW, MINIMUM HUMAN DISTURBANCE.

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





Waterbody point scuk028 facing west and downstream



Waterbody point scuk028 facing east and upstream



Waterbody point scuk028 facing north and across

Linear Waterbody Data Sheet

Survey Description				
Project Name: Southeast Reliability		Waterbody Name: UNNAMED TRIB TO PERKINS CREEK		Waterbody ID: SCUK026
State: Virginia		County: CUMBERLAND	Company: W&C	Crew Member Initials: WM, JD
Photos: 100-0546 TO 0548				
Tract Number(s): 10-001		Nearest Milepost: 208	Associated Wetland ID(s): NA	
Survey Type: <i>(check one)</i> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: <i>(check one)</i> <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial				
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:				
OHWM Width: <u>4</u> ft. Height: <u>1.5</u> ft. N/A <input type="checkbox"/>		OHWM Indicator: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Clear line on bank <input checked="" type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input checked="" 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 checked="" type="checkbox"/> Soil characteristic change		
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>4</u> ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input checked="" type="checkbox"/> <u> </u> ft.	Depth of Water: <i>(Approx.)</i> <u> </u> ft. N/A <input checked="" type="checkbox"/>	
Sinuosity: <i>(check one)</i> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: <i>(Approx.)</i> <u> </u> fps N/A <input checked="" type="checkbox"/>	Bank height Right: <u>2.5</u> ft. Left: <u>2.5</u> ft.	Bank slope Right: <u>55</u> degrees Left: <u>55</u> degrees	
Qualitative Attributes				
Water Appearance: <i>(check one)</i> <input checked="" type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: <i>(check all that apply)</i> <input type="checkbox"/> Bedrock <input checked="" type="checkbox"/> Boulder <input checked="" 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>NA</u> % <u>5</u> % <u>25</u> % <u>40</u> % <u>5</u> % <u>25</u> % <u>NA</u> % <u> </u> %				
Width of Riparian Zone: <u>>100</u> ft. N/A <input type="checkbox"/>	Vegetative Layers: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs Avg. DBH of Dominants: <i>(approx.)</i> <u>12</u> in. <u>3</u> in.			
Dominant Bank Vegetation <i>(list)</i> : LOBLOLLY PINE, RED MAPLE, SWEETGUM, WHITE OAK, CEDAR, CHRISTMAS FERN, DOGWOOD, ELM				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): NA				
Aquatic Organisms Observed <i>(list)</i> : NA				
T&E Species Observed <i>(list)</i> : NA				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): NA				
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality ^a : <i>(check one)</i> <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low				

Waterbody ID:

SCUK026

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

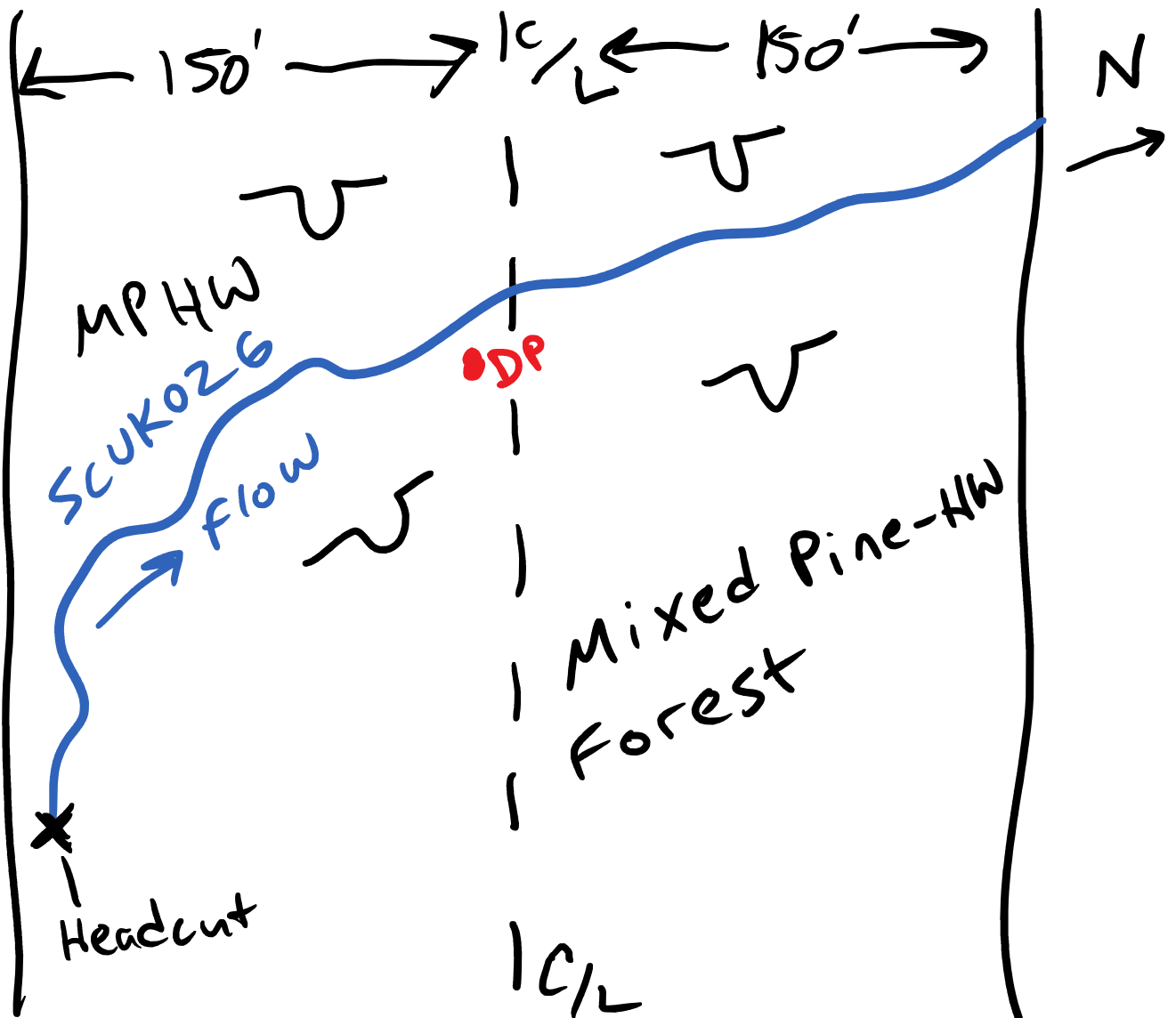
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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

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

Notes:

INTERMITTENT STREAM IN MIXED PINE-HW FOREST WITH NO FLOW, MINIMUM HUMAN DISTURBANCE.

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





Waterbody point scuk026 facing west and downstream



Waterbody point scuk026 facing east and upstream



Waterbody point scuk026 facing south and across

Linear Waterbody Data Sheet

Survey Description			
Project Name: Southeast Reliability		Waterbody Name: UNNAMED TRIB TO LITTLE WILLIS RIVER	
Waterbody ID: SCUK001		Date: 7/22/2014	
State: Virginia	County: Cumberland	Company: W&C	Crew Member Initials: JS, WM
Photos: 100-0131 TO 0133			
Tract Number(s): 10-009		Nearest Milepost: 209	Associated Wetland ID(s): NA
Survey Type: <i>(check one)</i> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <i>(check one)</i> <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial			
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input type="checkbox"/> Stream <input checked="" type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:			
OHWM Width: 4 ft.		OHWM Indicator: <i>(check all that apply)</i>	
OHWM Height: 1 ft.		<input 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 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	
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: 4 ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input checked="" type="checkbox"/> ___ ft.	Depth of Water: <i>(Approx.)</i> N/A <input checked="" type="checkbox"/> ___ ft.
Sinuosity: <i>(check one)</i> <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering	Water velocity: <i>(Approx.)</i> ___ fps N/A <input checked="" type="checkbox"/>	Bank height Right: 2 ft. Left: 2 ft.	Bank slope Right: 60 degrees Left: 60 degrees
Qualitative Attributes			
Water Appearance: <i>(check one)</i> <input checked="" type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: <i>(check all that apply)</i>			
<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: NA % NA % NA % NA % NA % 90 % 10 % NA %			
Width of Riparian Zone: N/A <input type="checkbox"/> >100 ft.		Vegetative Layers: <i>(check all that apply)</i>	
		<input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs Avg. DBH of Dominants: <i>(approx.)</i> 5 in. 2 in.	
Dominant Bank Vegetation <i>(list)</i> : ULMUS SPP., REDBUD, CHRISTMAS FERN, POACEA, BOEHMERIA			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): NA			
Aquatic Organisms Observed <i>(list)</i> : NA			
T&E Species Observed <i>(list)</i> : NA			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): CLEARING ADJACENT TO DITCH			
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Stream Quality ³ : <i>(check one)</i> <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low			

Waterbody ID:

SCUK001

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

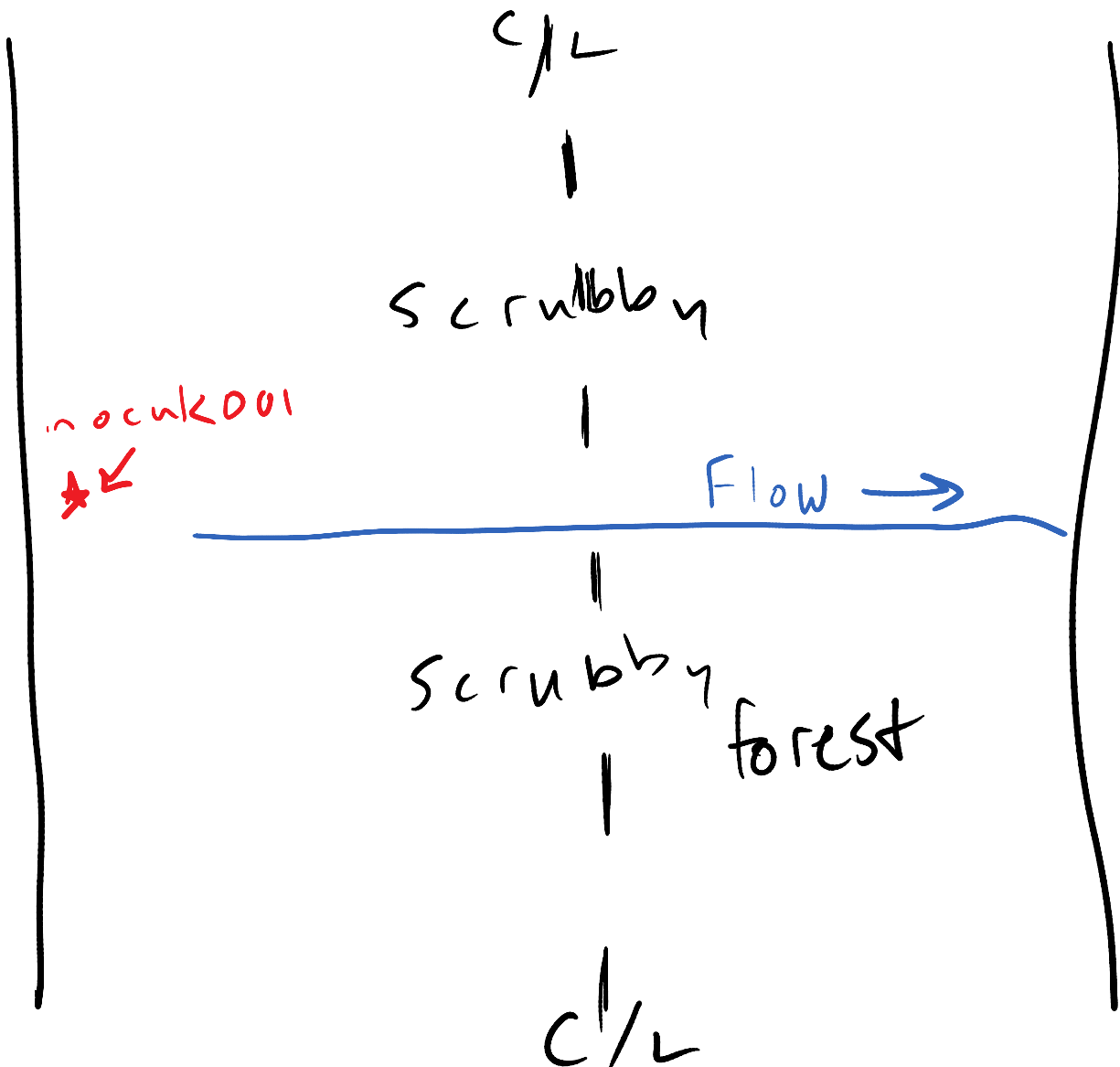
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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

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

Notes:

SMALL EPHEMERAL DITCH FEATURE IN SECONDARY SUCCESSIONAL AREA

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





Waterbody point scuk001 facing northeast and downstream



Waterbody point scuk001 facing southwest and upstream



Waterbody point scuk001 facing east and across

Linear Waterbody Data Sheet

Survey Description			
Project Name: Southeast Reliability		Waterbody Name: UNNAMED TRIB TO LITTLE WILLIS RIVER	
Waterbody ID: SCUK002		Date: 7/22/2014	
State: Virginia	County: Cumberland	Company: W&C	Crew Member Initials: JS, WM
Photos: 100-0137 TO 0139			
Tract Number(s): 10-009		Nearest Milepost: 209	Associated Wetland ID(s): NA
Survey Type: <i>(check one)</i> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <i>(check one)</i> <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial			
Waterbody Type: <i>(check one)</i> <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: <i>(check all that apply)</i>	
OHWM Height: <u> 2 </u> ft.		<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	
N/A <input type="checkbox"/>		<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> 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: N/A <input checked="" type="checkbox"/> ___ ft.	Depth of Water: <i>(Approx.)</i> N/A <input checked="" type="checkbox"/> ___ ft.
Sinuosity: <i>(check one)</i> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: <i>(Approx.)</i> ___ fps N/A <input checked="" type="checkbox"/>	Bank height Right: <u> 2 </u> ft. Left: <u> 2 </u> ft.	Bank slope Right: <u> 60 </u> degrees Left: <u> 60 </u> degrees
Qualitative Attributes			
Water Appearance: <i>(check one)</i> <input checked="" type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: <i>(check all that apply)</i>			
% of Substrate: <u> NA </u> % <u> NA </u> % <u> NA </u> % <u> NA </u> % <u> NA </u> % <u> 90 </u> % <u> 10 </u> % <u> NA </u> %			
Width of Riparian Zone: <u> >100 </u> ft.		Vegetative Layers: <i>(check all that apply)</i>	
N/A <input type="checkbox"/>		<input checked="" type="checkbox"/> Trees: <u> 7 </u> in. <input checked="" type="checkbox"/> Saplings/Shrubs: <u> 2 </u> in. <input checked="" type="checkbox"/> Herbs	
Dominant Bank Vegetation <i>(list)</i> : CHRISTMAS FERN, GREEN ASH, PRIVET, IRONWOOD, FRAGARIA, ULMUS SPP.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): NA			
Aquatic Organisms Observed <i>(list)</i> : NA			
T&E Species Observed <i>(list)</i> : NA			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): NA			
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Stream Quality ³ : <i>(check one)</i> <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low			

Waterbody ID:

SCUK002

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

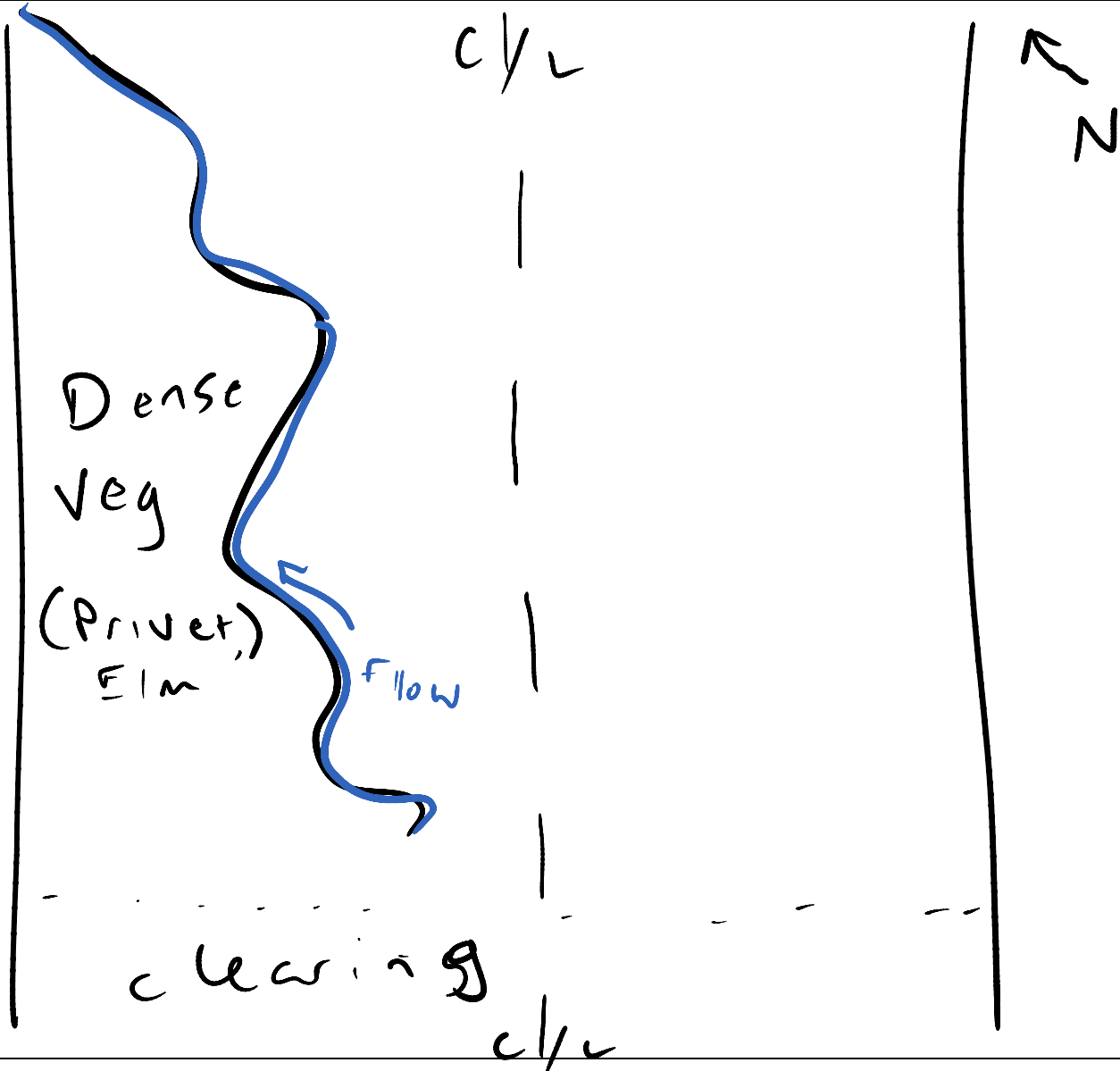
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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

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

Notes:

SMALL HEADWATER EPHEMERAL STREAM WITH CLAY BOTTOM AND DENSE UNDERSTORY VEG SURROUND CHANNEL

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





Waterbody point scuk002 facing northeast and downstream



Waterbody point scuk002 facing southwest and upstream



Waterbody point scuk002 facing east and across

Linear Waterbody Data Sheet

Survey Description			
Project Name: Southeast Reliability		Waterbody Name: UNNAMED TRIB TO LITTLE WILLIS RIVER	
Waterbody ID: SCUK003		Date: 7/22/2014	
State: Virginia	County: Cumberland	Company: W&C	Crew Member Initials: JS, WM
Photos: 100-0137 TO 0139			
Tract Number(s): 10-010 AND 10-009		Nearest Milepost: 209	Associated Wetland ID(s): NA
Survey Type: <i>(check one)</i> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <i>(check one)</i> <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial			
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:			
OHWM Width: 4 ft.		OHWM Indicator: <i>(check all that apply)</i>	
Height: 2 ft.		<input checked="" type="checkbox"/> Clear line on bank <input checked="" type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input checked="" type="checkbox"/> Water staining	
N/A <input type="checkbox"/>		<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 checked="" type="checkbox"/> Soil characteristic change	
Width of Waterbody - Top of Bank to Top of Bank: 10 ft.	Width of Waterbody - Toe of Slope to Toe of Slope: 4 ft.	Width of Waterbody - Water Edge to Water Edge: 3 ft.	Depth of Water: <i>(Approx.)</i> 0.3 ft.
Sinuosity: <i>(check one)</i> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: <i>(Approx.)</i> 0.1 fps	Bank height Right: 5 ft. Left: 5 ft.
N/A <input type="checkbox"/>		N/A <input type="checkbox"/>	Bank slope Right: 60 degrees Left: 60 degrees
Qualitative Attributes			
Water Appearance: <i>(check one)</i> <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: <i>(check all that apply)</i>			
% of Substrate: NA % NA % 10 % 25 % 45 % 15 % 5 % NA %			
Width of Riparian Zone: 100 ft.		Vegetative Layers: <i>(check all that apply)</i>	
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: <i>(approx.)</i> 12 in. 3 in.	
Dominant Bank Vegetation <i>(list)</i> : CHRISTMAS FERN, GREEN ASH, CEDAR, CHERRYBARK OAK, RED MAPLE, BOEHMERIA, ULMUS SPP.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): RIFFLES, POOLS, ROOTMATS, LEAF PACKS, UNDERCUT BANKS, LWD			
Aquatic Organisms Observed <i>(list)</i> : FISH, WATER STRIDERS, FROGS (GREEN AND CRICKET), CADDISFLIES			
T&E Species Observed <i>(list)</i> : NA			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): NA			
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Stream Quality ³ : <i>(check one)</i> <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low			

Waterbody ID:

SCUK003

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

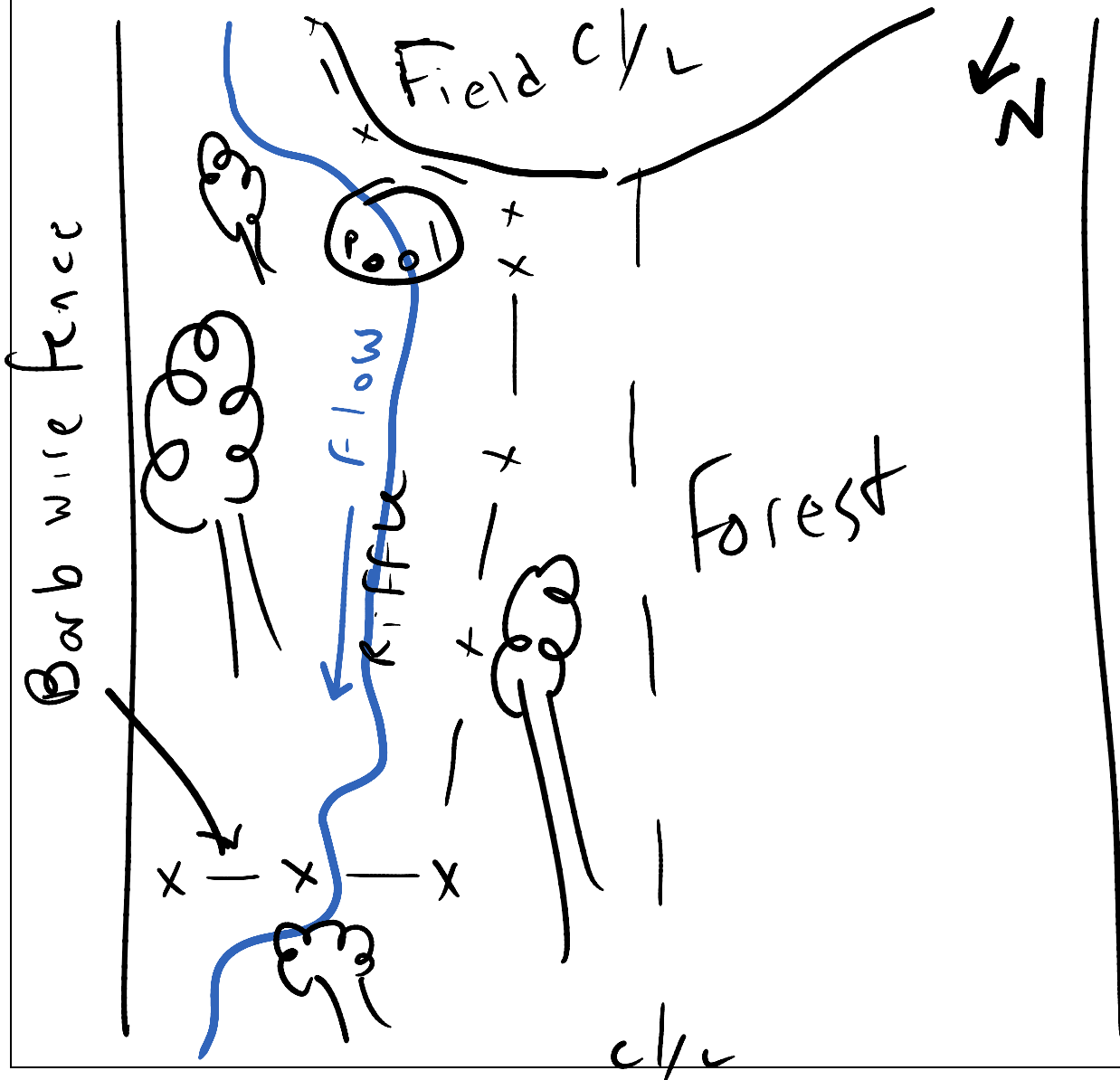
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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

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

Notes:

SMALL PERENNIAL STREAM WITH MODERATE ENTRENCHMENT AND SEEPING STREAMBANKS

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





Waterbody point scuk003 facing northwest and downstream



Waterbody point scuk003 facing southeast and upstream



Waterbody point scuk003 facing south and across

Open Waterbody Data Sheet

Survey Description			
Project Name: Southeast Reliability		Waterbody Name: NA	Waterbody ID: OCUK001
State: Virginia		County: Cumberland	Date: 7/22/2014
Company: W&C	Crew Member Initials: WM, JS	Photos: 100-0140 TO 0143	
Tract Number(s): 10-011		Nearest Milepost: 209	Associated Wetland ID(s): NA
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 type="checkbox"/> Reservoir <input type="checkbox"/> Impoundment <input type="checkbox"/> Oxbow <input checked="" type="checkbox"/> Other: EXCAVATED POND			
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>NA</u> ft.	OHWM Indicator: <small>(check all that apply)</small>		
	<input type="checkbox"/> Clear line on bank	<input type="checkbox"/> Shelving	<input type="checkbox"/> Wrested vegetation
	<input type="checkbox"/> Scouring	<input type="checkbox"/> Water staining	
	<input type="checkbox"/> Bent, matted, or missing vegetation	<input type="checkbox"/> Wrack line	<input type="checkbox"/> Litter and debris
	<input checked="" type="checkbox"/> Abrupt plant community change	<input type="checkbox"/> Soil characteristic change	
Depth of Water: <u>UNK</u> ft.		Bank height (average): <u>NA</u> ft.	Bank slope (average): <u>NA</u> degrees
N/A <input type="checkbox"/>			
Qualitative Attributes			
Water Appearance: <small>(check one)</small> <input type="checkbox"/> No water <input type="checkbox"/> Clear <input checked="" type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: <small>(check all that apply)</small> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <input type="checkbox"/> Other:			
% of Substrate: _____% _____% _____% _____% _____% <u>100</u> % _____% _____%			
Width of Riparian Zone: <u>>100</u> ft.	Vegetative Layers: <small>(check all that apply)</small>		
	<input checked="" type="checkbox"/> Trees:	<input checked="" type="checkbox"/> Saplings/Shrubs:	<input checked="" type="checkbox"/> Herbs
N/A <input type="checkbox"/>	Avg. DBH of Dominants: <small>(approx.)</small> <u>8</u> in.	<u>2</u> in.	
Dominant Bank Vegetation <small>(list)</small> : WOOLGRASS, SOFT RUSH, SPIKERUSH, VIRGINIA PINE, SYCAMORE, WILLOW			
Aquatic Habitats <small>(ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.)</small> : VEGETATED EDGES			
Aquatic Organisms Observed <small>(list)</small> : COEPTERANS, FROGS, ODNATES, WATER STRIDERS			
T&E Species Observed <small>(list)</small> : NA			
Disturbances <small>(ex: livestock access, manure in waterbody, waste discharge pipes)</small> : EXCAVATED AREA HOLDING MUDDY WATER			
Waterbody is: <small>(check one)</small> <input type="checkbox"/> Natural <input checked="" type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Waterbody Quality ^a : <small>(check one)</small> <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low			

Waterbody ID:

OCUK001

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

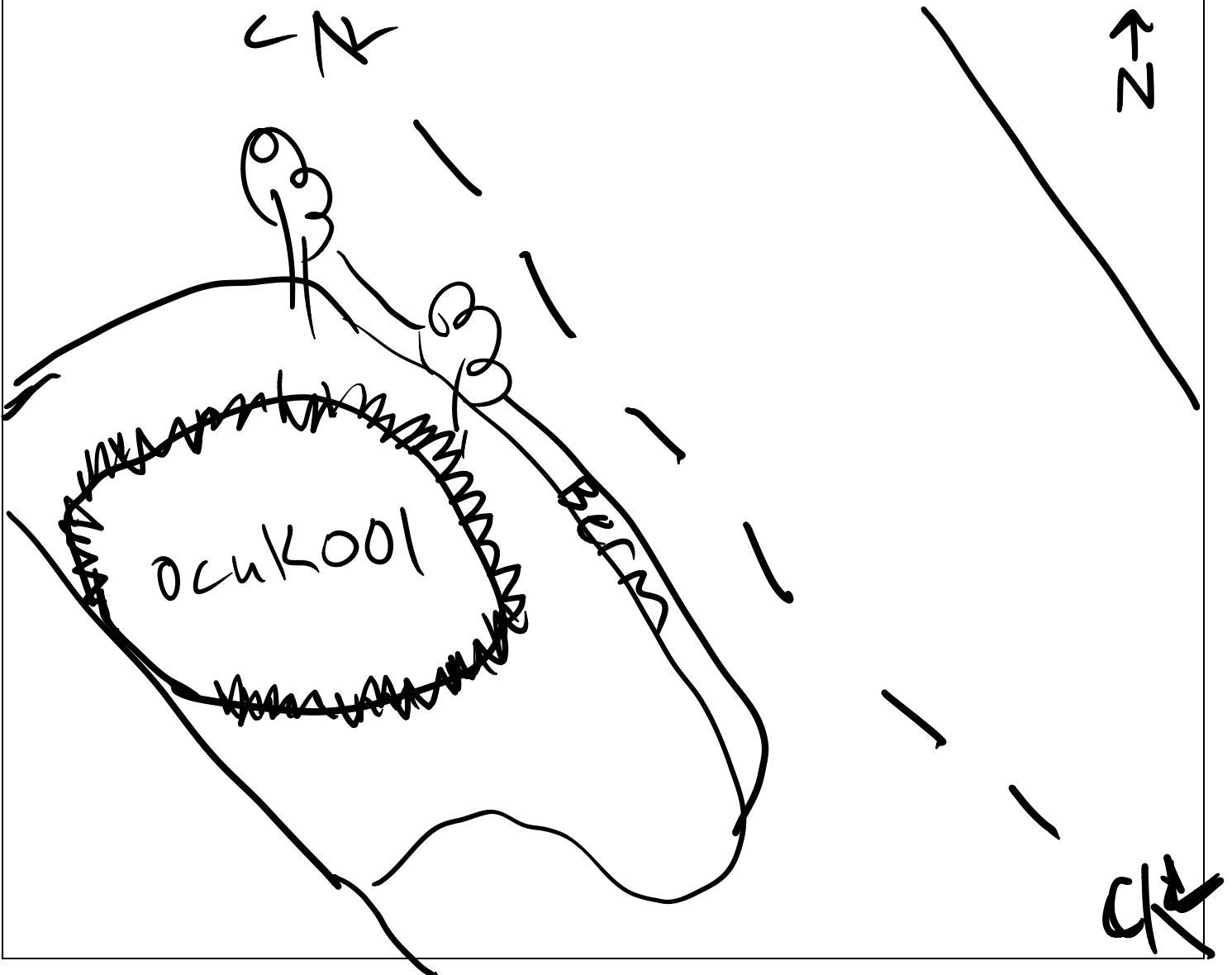
Moderate Quality: Altered by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or bank vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers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

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

Notes:

THIS FEATURE APPEARS TO BE A EXCAVATED POND

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





Open water ocuk001, view of south end of open water facing west



Open water ocuk001, view facing west



Open water ocuk001, view of north end of open water facing west

Linear Waterbody Data Sheet

Survey Description			
Project Name: Southeast Reliability		Waterbody Name: UNNAMED TRIB TO DRY CREEK	
Waterbody ID: SCUK004		Date: 7/22/2014	
State: Virginia	County: Cumberland	Company: W&C	Crew Member Initials: JS, WM
Photos: 100-0147 TO 0149			
Tract Number(s): 10-014		Nearest Milepost: 209	Associated Wetland ID(s): NA
Survey Type: <i>(check one)</i> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <i>(check one)</i> <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial			
Waterbody Type: <i>(check one)</i> <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: <i>(check all that apply)</i>	
OHWM Height: <u> 1 </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	
N/A <input type="checkbox"/>		<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> 3 </u> ft.	Width of Waterbody - Toe of Slope to Toe of Slope: <u> 2 </u> ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input checked="" type="checkbox"/> <u> </u> ft.	Depth of Water: <i>(Approx.)</i> N/A <input checked="" type="checkbox"/> <u> </u> ft.
Sinuosity: <i>(check one)</i> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: <i>(Approx.)</i> <u> </u> fps N/A <input checked="" type="checkbox"/>	Bank height Right: <u> 1 </u> ft. Left: <u> 1 </u> ft.	Bank slope Right: <u> 60 </u> degrees Left: <u> 60 </u> degrees
Qualitative Attributes			
Water Appearance: <i>(check one)</i> <input checked="" type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: <i>(check all that apply)</i>			
% of Substrate: <u> NA </u> % <u> NA </u> % <u> NA </u> % <u> NA </u> % <u> NA </u> % <u> 90 </u> % <u> 10 </u> % <u> NA </u> %			
Width of Riparian Zone: <u> >100 </u> ft.		Vegetative Layers: <i>(check all that apply)</i>	
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: <i>(approx.)</i>		<u> 7 </u> in. <u> 2 </u> in.	
Dominant Bank Vegetation <i>(list)</i> : RED MAPLE, NYSSA SYLVATICA, SYCAMORE, CEDAR, FRAGARIA, ULMUS AMERICANA			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): NA			
Aquatic Organisms Observed <i>(list)</i> : NA			
T&E Species Observed <i>(list)</i> : NA			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): NA			
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Stream Quality ³ : <i>(check one)</i> <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low			

Waterbody ID:

SCUK004

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

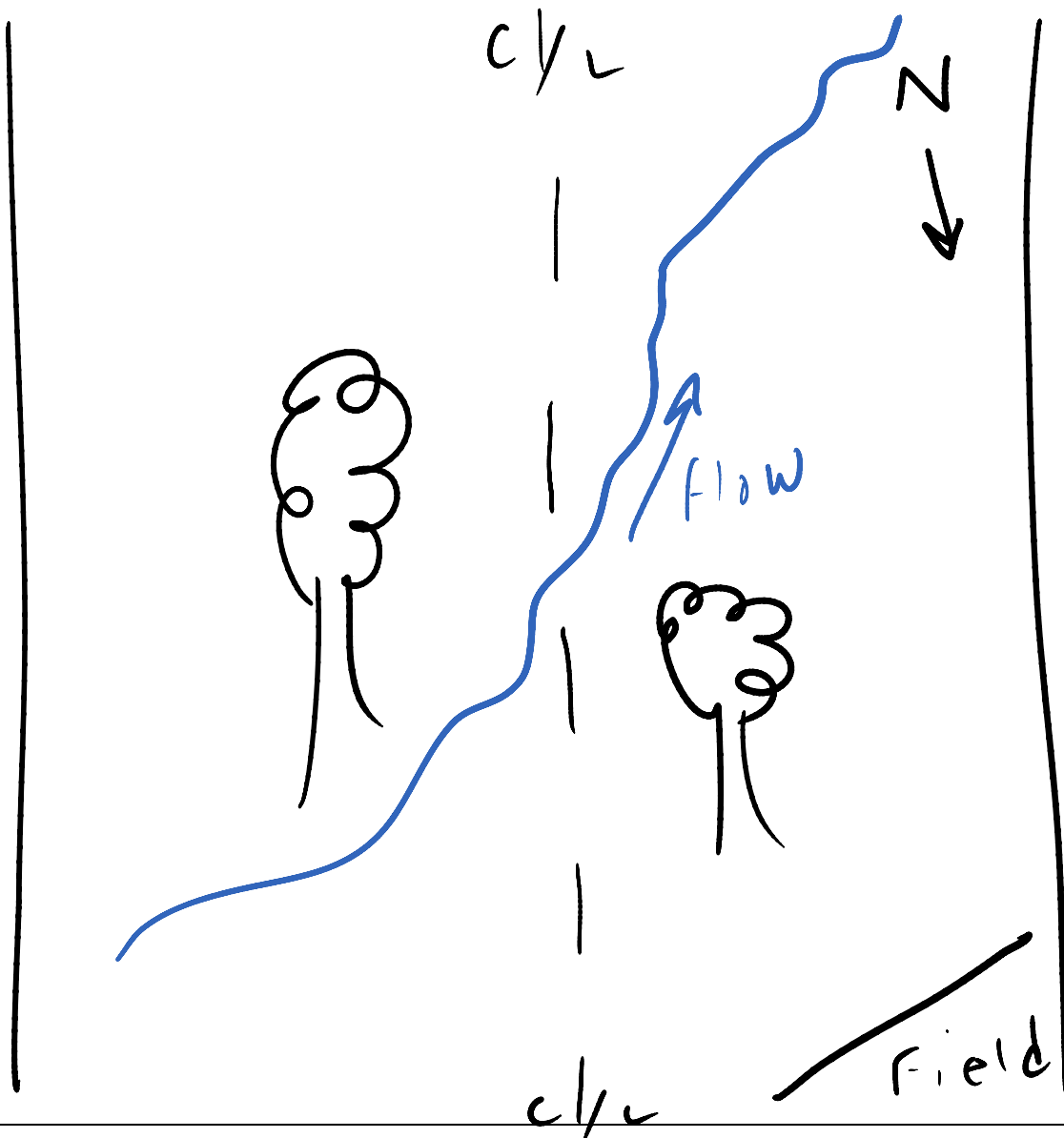
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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

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

Notes:

SMALL HEADWATER EPHEMERAL STREAM WITH CLAY BOTTOM AND BRAIDED CHANNELS IN A FORESTED AREA.

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





Waterbody point scuk004 facing southwest and downstream



Waterbody point scuk004 facing northeast and upstream



Waterbody point scuk004 facing south and across

Linear Waterbody Data Sheet

Survey Description			
Project Name: Southeast Reliability		Waterbody Name: UNNAMED TRIB TO DRY CREEK	
Waterbody ID: SCUK005		Date: 7/23/2014	
State: Virginia	County: Cumberland	Company: W&C	Crew Member Initials: JS, WM
Photos: 100-0175 TO 0177			
Tract Number(s): 10-014/015		Nearest Milepost: 210	Associated Wetland ID(s): WBUK002F
Survey Type: <small>(check one)</small>			
<input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <small>(check one)</small>			
<input type="checkbox"/> Ephemeral <input 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: 5 ft.		OHWM Indicator: <small>(check all that apply)</small>	
Height: 2 ft.		<input checked="" type="checkbox"/> Clear line on bank <input checked="" type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input checked="" type="checkbox"/> Water staining	
N/A <input type="checkbox"/>		<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 checked="" 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: N/A <input type="checkbox"/> 2 ft.	Depth of Water: <small>(Approx.)</small> N/A <input type="checkbox"/> 0.2 ft.
Sinuosity: <small>(check one)</small>	Water velocity: <small>(Approx.)</small>	Bank height	Bank slope
<input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Right: 0.1 fps Left: N/A <input type="checkbox"/>	Right: 4 ft. Left: 4 ft.	Right: 80 degrees Left: 80 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 checked="" 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: NA % NA % % 15 % 40 % 40 % 5 % NA %			
Width of Riparian Zone: N/A <input type="checkbox"/> >100 ft.		Vegetative Layers: <small>(check all that apply)</small>	
		<input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs	
		Avg. DBH of Dominants: <small>(approx.)</small> 12 in. 3 in.	
Dominant Bank Vegetation <small>(list):</small> CEDAR, SWEETGUM, SYCAMORE, SPICEBUSH, RED MAPLE, CHRISTMAS FERN, ULMUS SPP.			
Aquatic Habitats <small>(ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools):</small> POOLS, ROOTMATS, LEAF PACKS, UNDERCUT BANKS, LWD			
Aquatic Organisms Observed <small>(list):</small> FISH, WATER STRIDERS, FROGS (Eastern Cricket, Southern Leopard, Pickerel), CRAYFISH			
T&E Species Observed <small>(list):</small> NA			
Disturbances <small>(ex: livestock access, manure in waterbody, waste discharge pipes):</small> NA			
Tributary is: <small>(check one)</small>			
<input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Stream Quality ³ : <small>(check one)</small>			
<input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low			

Waterbody ID:

SCUK005

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

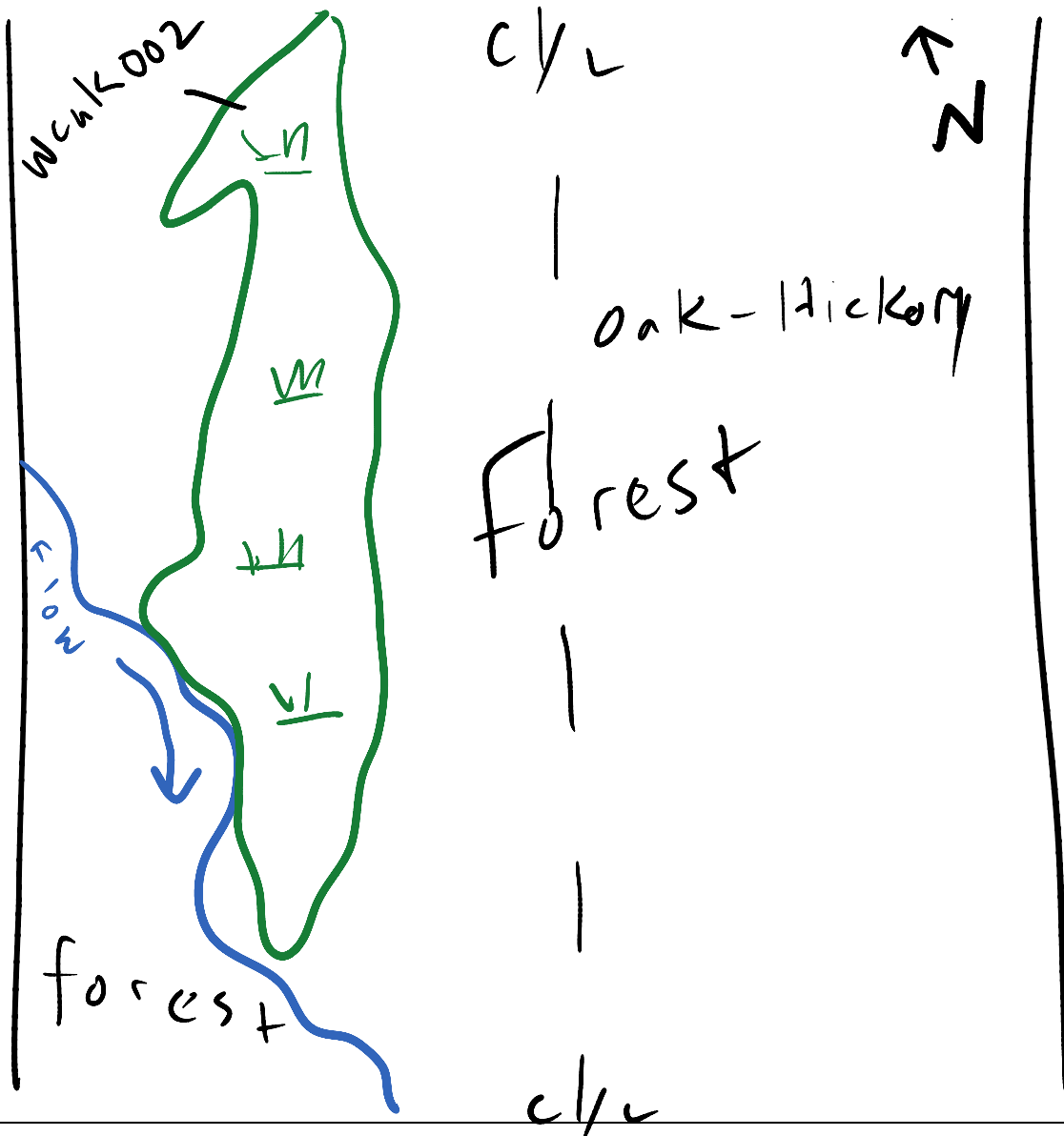
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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

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

Notes:

SMALL INTERMITTENT STREAM WITH MODERATE ENTRENCHMENT, LOTS OF WOODY DEBRIS AND LOW FLOW; 300 FT IN CORRIDOR

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





Waterbody point scuk005 facing southeast and downstream



Waterbody point scuk005 facing northwest and upstream



Waterbody point scuk005 facing west and across

Linear Waterbody Data Sheet

Survey Description			
Project Name: Southeast Reliability		Waterbody Name: UNNAMED TRIB TO DRY CREEK	
Waterbody ID: SCUK007		Date: 7/23/2014	
State: Virginia	County: Cumberland	Company: W&C	Crew Member Initials: JS, WM
Photos: 100-0182 TO 0185			
Tract Number(s): 10-015		Nearest Milepost: 210	Associated Wetland ID(s): WCUK003
Survey Type: <i>(check one)</i> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <i>(check one)</i> <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial			
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other: 34T			
OHWM Width: _ 2 _ ft.		OHWM Indicator: <i>(check all that apply)</i>	
OHWM Height: _ 1 _ ft.		<input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input checked="" type="checkbox"/> Water staining	
N/A <input type="checkbox"/>		<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: _ 3 _ ft.	Width of Waterbody - Toe of Slope to Toe of Slope: _ 2 _ ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input checked="" type="checkbox"/> _ _ ft.	Depth of Water: <i>(Approx.)</i> N/A <input checked="" type="checkbox"/> _ _ ft.
Sinuosity: <i>(check one)</i> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: <i>(Approx.)</i> _ _ fps N/A <input checked="" type="checkbox"/>	Bank height Right: _ 1 _ ft. Left: _ 1 _ ft.	Bank slope Right: _ 70 _ degrees Left: _ 70 _ degrees
Qualitative Attributes			
Water Appearance: <i>(check one)</i> <input checked="" type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other: 34T			
Substrate: <i>(check all that apply)</i>			
<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: 34T			
% of Substrate: _ NA _ % _ NA _ % _ NA _ % _ NA _ % _ 35 _ % _ 55 _ % _ 10 _ % _ NA _ %			
Width of Riparian Zone: _ >100 _ ft. N/A <input type="checkbox"/>		Vegetative Layers: <i>(check all that apply)</i>	
		<input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs	
		Avg. DBH of Dominants: <i>(approx.)</i> _ 12 _ in. _ 3 _ in.	
Dominant Bank Vegetation <i>(list)</i> : CEDAR, SWEETGUM, WHITE OAK, VACCINIUM SP., RED MAPLE, XMAS FERN, POST OAK, BLACK GUM			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): NA			
Aquatic Organisms Observed <i>(list)</i> : NA			
T&E Species Observed <i>(list)</i> : NA			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): NA			
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Stream Quality ³ : <i>(check one)</i> <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low			

Waterbody ID:

SCUK007

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

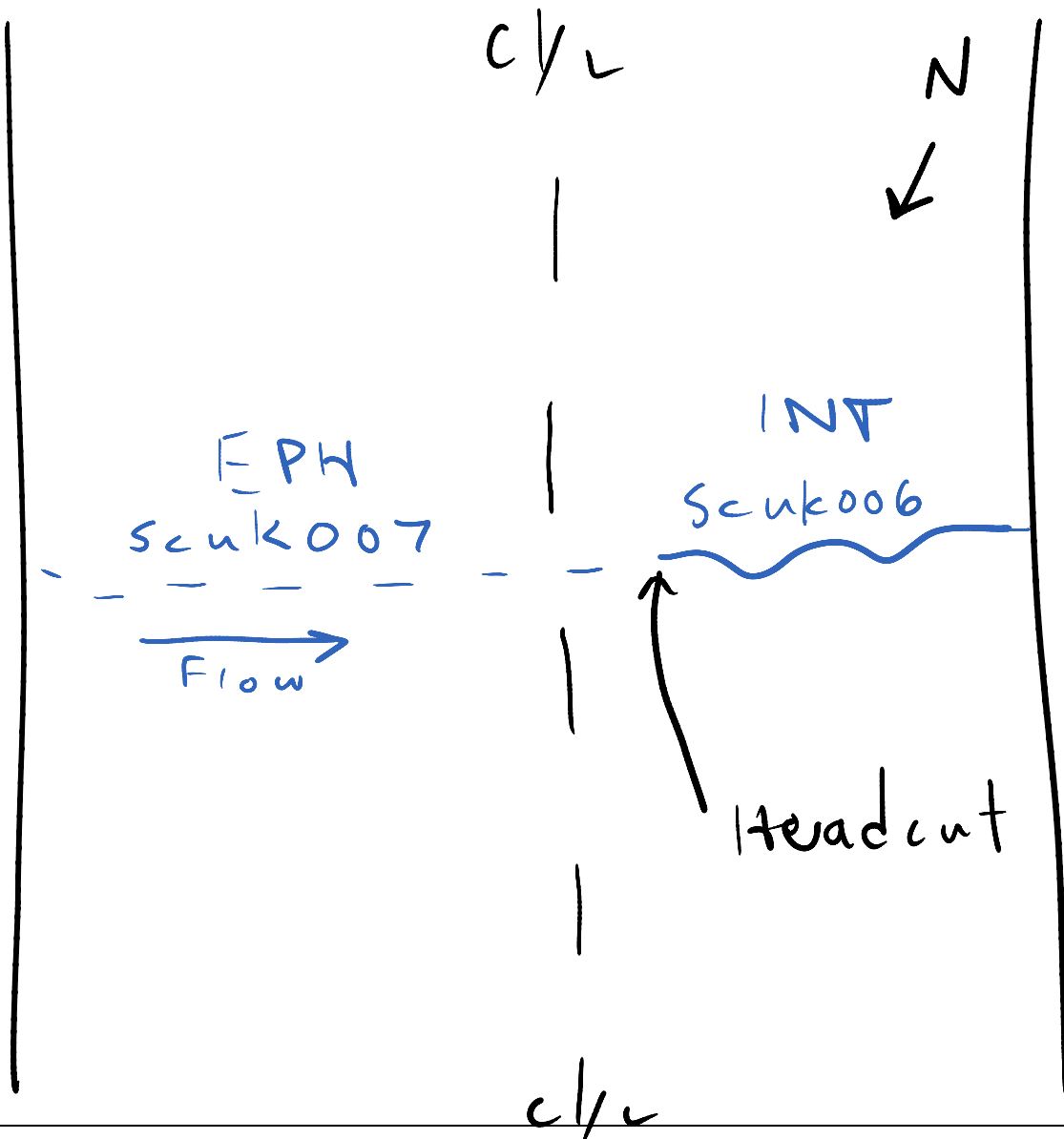
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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

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

Notes:

SMALL HEADWATER EPHEMERAL STREAM WITH CLAY BOTTOM AND BRAIDED CHANNELS IN A FORESTED AREA. LOWER PORTION OF REACH HAS INTERMITTENT FLOW REGIME AND WAS RECORDED AS STREAM SCUK006.

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





Waterbody point scuk007 facing southwest and downstream



Waterbody point scuk007 facing northeast and upstream



Waterbody point scuk007 facing east and across

Linear Waterbody Data Sheet

Survey Description			
Project Name: Southeast Reliability		Waterbody Name: UNNAMED TRIB TO DRY CREEK	
Waterbody ID: SCUK008		Date: 7/23/2014	
State: Virginia	County: Cumberland	Company: W&C	Crew Member Initials: JS, WM
Photos: 100-0197 TO 0199			
Tract Number(s): 10-015		Nearest Milepost: 210	Associated Wetland ID(s): WCUK003
Survey Type: <i>(check one)</i> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <i>(check one)</i> <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial			
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other: 34T			
OHWM Width: 2 ft.		OHWM Indicator: <i>(check all that apply)</i>	
OHWM Height: 0.5 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 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	
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: 2 ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input checked="" type="checkbox"/> ___ ft.	Depth of Water: <i>(Approx.)</i> N/A <input checked="" type="checkbox"/> ___ ft.
Sinuosity: <i>(check one)</i> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: <i>(Approx.)</i> ___ fps N/A <input checked="" type="checkbox"/>	Bank height Right: 0.5 ft. Left: 0.5 ft.	Bank slope Right: 60 degrees Left: 60 degrees
Qualitative Attributes			
Water Appearance: <i>(check one)</i> <input checked="" type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other: 34T			
Substrate: <i>(check all that apply)</i> <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: 34T			
% of Substrate: ___ % ___ % ___ % ___ % ___ % 90 % 10 % ___ %			
Width of Riparian Zone: N/A <input type="checkbox"/> >100 ft.		Vegetative Layers: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs Avg. DBH of Dominants: <i>(approx.)</i> 12 in. 3 in.	
Dominant Bank Vegetation <i>(list)</i> : CEDAR, SWEETGUM, WHITE OAK, VACCINIUM SP., RED MAPLE, XMAS FERN, POST OAK, BLACK GUM			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): NA			
Aquatic Organisms Observed <i>(list)</i> : NA			
T&E Species Observed <i>(list)</i> : NA			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): NA			
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Stream Quality ³ : <i>(check one)</i> <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low			

Waterbody ID:

SCUK008

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

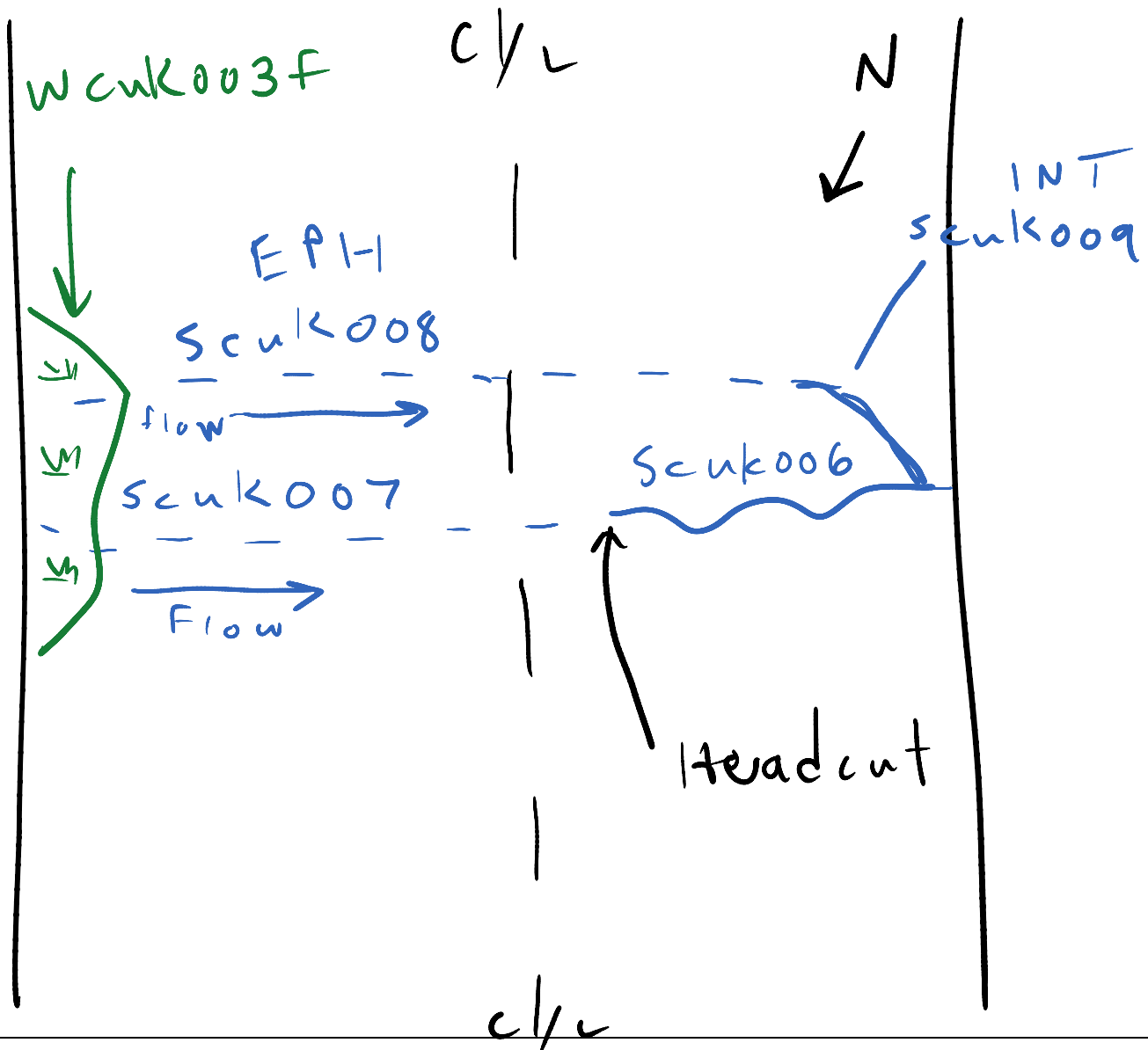
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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

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

Notes:

SMALL HEADWATER EPHEMERAL STREAM WITH CLAY BOTTOM AND BRAIDED CHANNELS IN A FORESTED AREA

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





Waterbody point scuk008 facing southwest and downstream



Waterbody point scuk008 facing northeast and upstream



Waterbody point scuk008 facing west and across

Linear Waterbody Data Sheet

Survey Description			
Project Name: Southeast Reliability		Waterbody Name: UNNAMED TRIB TO DRY CREEK	
Waterbody ID: scuk009		Date: 7/23/2014	
State: Virginia	County: Cumberland	Company: W&C	Crew Member Initials: JS, WM
Photos: 100-0200 TO 0202			
Tract Number(s): 10-015		Nearest Milepost: 210	Associated Wetland ID(s): WCUK003
Survey Type: <i>(check one)</i> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <i>(check one)</i> <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial			
Waterbody Type: <i>(check one)</i> <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: <i>(check all that apply)</i>	
OHWM Height: <u> 1 </u> ft.		<input type="checkbox"/> Clear line on bank	
N/A <input type="checkbox"/>		<input type="checkbox"/> Shelving	
		<input checked="" type="checkbox"/> Wrested vegetation	
		<input checked="" type="checkbox"/> Scouring	
		<input checked="" 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> 7 </u> ft.	Width of Waterbody - Toe of Slope to Toe of Slope: <u> 2 </u> ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input checked="" type="checkbox"/> <u> </u> ft.	Depth of Water: <i>(Approx.)</i> N/A <input checked="" type="checkbox"/> <u> </u> ft.
Sinuosity: <i>(check one)</i> <input type="checkbox"/> Straight	Water velocity: <i>(Approx.)</i> <u> </u> fps	Bank height Right: <u> 4 </u> ft. Left: <u> 4 </u> ft.	Bank slope Right: <u> 80 </u> degrees Left: <u> 80 </u> degrees
<input checked="" type="checkbox"/> Meandering	N/A <input checked="" type="checkbox"/>		
Qualitative Attributes			
Water Appearance: <i>(check one)</i> <input checked="" type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: <i>(check all that apply)</i>			
<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> 90 </u> % <u> 10 </u> % _____%			
Width of Riparian Zone: <u> >100 </u> ft.	Vegetative Layers: <i>(check all that apply)</i>		
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: <i>(approx.)</i> <u> 12 </u> in. <u> 3 </u> in.			
Dominant Bank Vegetation <i>(list)</i> : CEDAR, SWEETGUM, WHITE OAK, VACCINIUM SP., RED MAPLE, CHRISTMAS FERN, POST OAK, BLACK GUM			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): NA			
Aquatic Organisms Observed <i>(list)</i> : NA			
T&E Species Observed <i>(list)</i> : NA			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): NA			
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Stream Quality ³ : <i>(check one)</i> <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low			

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

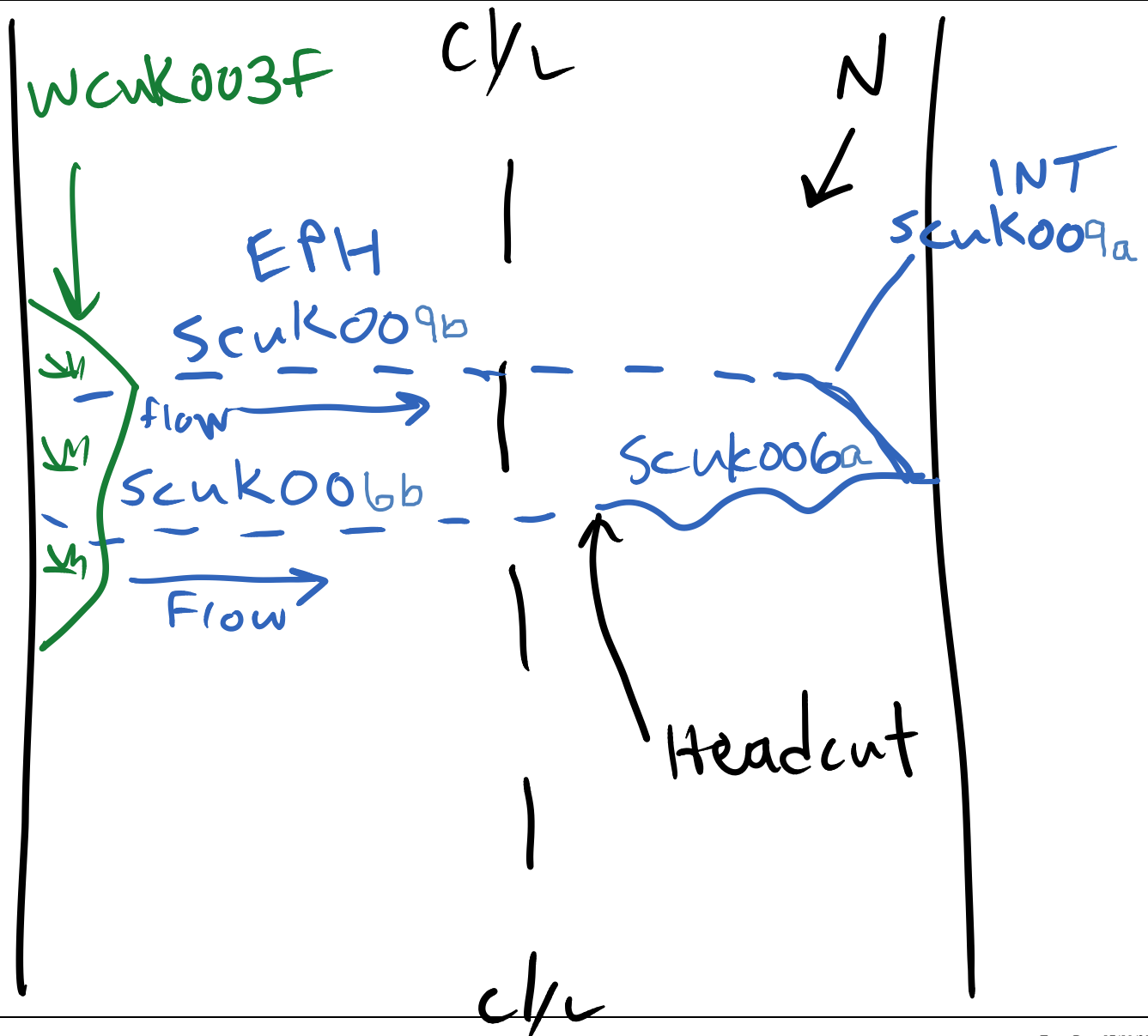
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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

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

Notes:

SMALL HEADWATER INTERMITTENT STREAM

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





Waterbody point scuk009a facing southwest and downstream



Waterbody point scuk009a facing northeast and upstream



Waterbody point scuk009a facing west and across

Linear Waterbody Data Sheet

Survey Description			
Project Name: Southeast Reliability		Waterbody Name: UNNAMED TRIB TO DRY CREEK	
Waterbody ID: SCUK006		Date: 7/23/2014	
State: Virginia	County: Cumberland	Company: W&C	Crew Member Initials: JS, WM
Photos: 100-0180 TO 0182			
Tract Number(s): 10-015		Nearest Milepost: 210	Associated Wetland ID(s): WCUK003F
Survey Type: <i>(check one)</i> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <i>(check one)</i> <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial			
Waterbody Type: <i>(check one)</i> <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: <i>(check all that apply)</i>	
Height: _ 1 _ ft.		<input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input checked="" type="checkbox"/> Water staining	
N/A <input type="checkbox"/>		<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 checked="" 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: _ 2 _ ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input checked="" type="checkbox"/> ___ ft.	Depth of Water: <i>(Approx.)</i> N/A <input checked="" type="checkbox"/> ___ ft.
Sinuosity: <i>(check one)</i> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: <i>(Approx.)</i> ___ fps N/A <input checked="" type="checkbox"/>	Bank height Right: _ 4 _ ft. Left: _ 4 _ ft.	Bank slope Right: _ 80 _ degrees Left: _ 80 _ degrees
Qualitative Attributes			
Water Appearance: <i>(check one)</i> <input checked="" type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: <i>(check all that apply)</i>			
% of Substrate: _____ % _____ % _____ % <u>15</u> % <u>40</u> % <u>40</u> % <u>5</u> % _____ %			
Width of Riparian Zone: N/A <input type="checkbox"/> >100 ft.		Vegetative Layers: <i>(check all that apply)</i>	
		<input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs	
		Avg. DBH of Dominants: <i>(approx.)</i> <u>12</u> in. <u>3</u> in.	
Dominant Bank Vegetation <i>(list)</i> : CEDAR, SWEETGUM, WHITE OAK, VACCINIUM SP., RED MAPLE, XMAS FERN, POST OAK, BLACK GUM			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): NA – NO FLOW			
Aquatic Organisms Observed <i>(list)</i> : NA			
T&E Species Observed <i>(list)</i> : NA			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): NA			
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Stream Quality ³ : <i>(check one)</i> <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low			

Waterbody ID:

SCUK006a

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

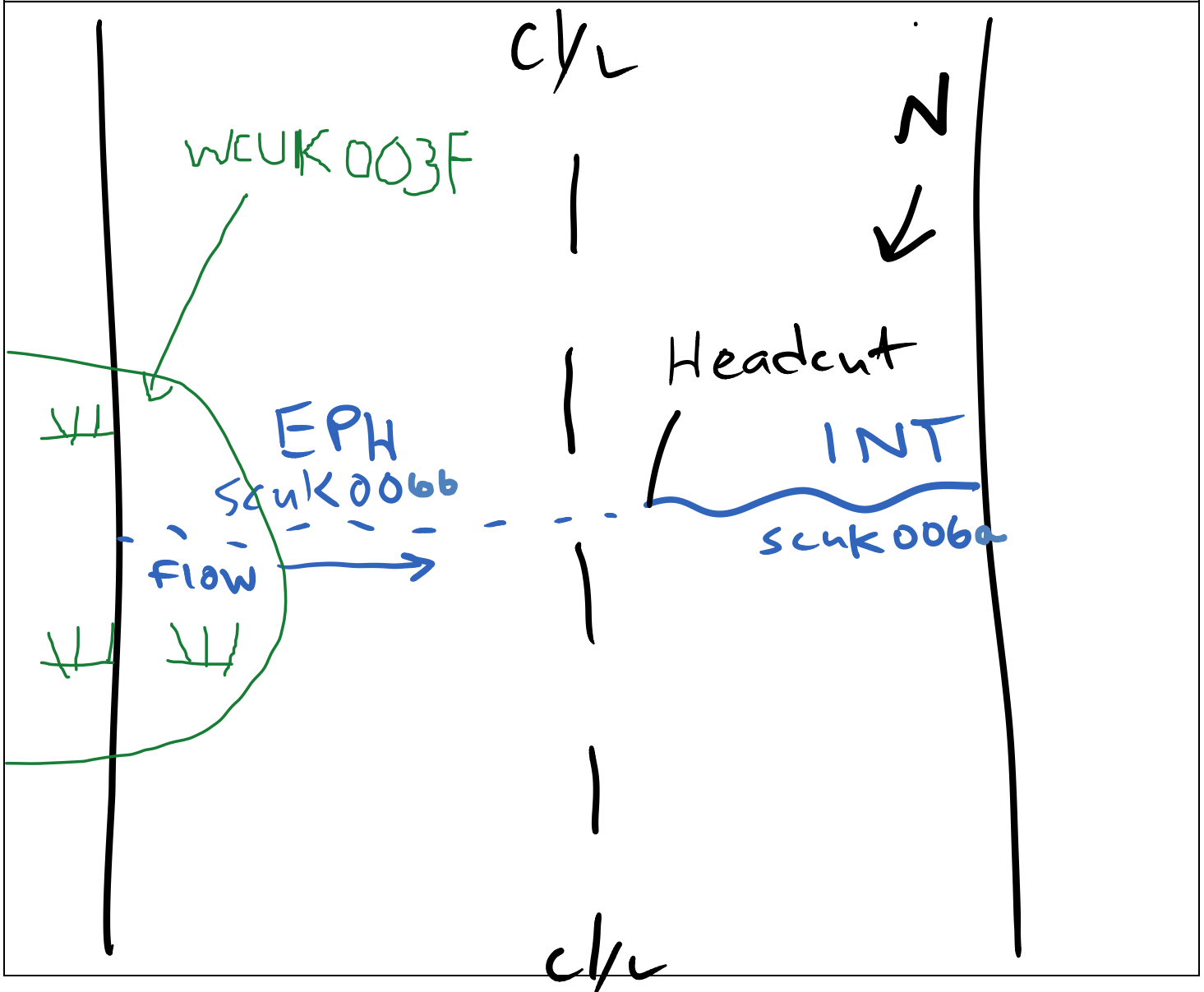
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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

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

Notes:

SMALL INTERMITTENT STREAM WITH MODERATE ENTRENCHMENT, LOTS OF WOODY DEBRIS

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





Waterbody point scuk006a facing southwest and downstream



Waterbody point scuk006a facing northeast and upstream



Waterbody point scuk006a facing east and across

Linear Waterbody Data Sheet

Survey Description			
Project Name: Southeast Reliability		Waterbody Name: UNNAMED TRIB TO DRY CREEK	
Waterbody ID: SCUK010		Date: 7/23/2014	
State: Virginia	County: Cumberland	Company: W&C	Crew Member Initials: JS, WM
Photos: 100-0208 TO 0210			
Tract Number(s): 10-017		Nearest Milepost: 210	Associated Wetland ID(s): NA
Survey Type: <i>(check one)</i> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <i>(check one)</i> <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial			
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:			
OHWM Width: 4 ft.		OHWM Indicator: <i>(check all that apply)</i>	
Height: 2 ft.		<input checked="" type="checkbox"/> Clear line on bank <input checked="" type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input checked="" type="checkbox"/> Water staining	
N/A <input type="checkbox"/>		<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 checked="" type="checkbox"/> Soil characteristic change	
Width of Waterbody - Top of Bank to Top of Bank: 10 ft.	Width of Waterbody - Toe of Slope to Toe of Slope: 4 ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input checked="" type="checkbox"/> ___ ft.	Depth of Water: <i>(Approx.)</i> N/A <input checked="" type="checkbox"/> ___ ft.
Sinuosity: <i>(check one)</i> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: <i>(Approx.)</i> ___ fps N/A <input checked="" type="checkbox"/>	Bank height Right: 6 ft. Left: 6 ft.	Bank slope Right: 80 degrees Left: 80 degrees
Qualitative Attributes			
Water Appearance: <i>(check one)</i> <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: <i>(check all that apply)</i>			
<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: NA % NA % NA % NA % 95 % 5 % NA % NA %			
Width of Riparian Zone: N/A <input type="checkbox"/> >100 ft.		Vegetative Layers: <i>(check all that apply)</i>	
		<input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs	
		Avg. DBH of Dominants: <i>(approx.)</i> 12 in. 3 in.	
Dominant Bank Vegetation <i>(list)</i> : RIVER BIRCH, BEECH, SYCAMORE, POPLAR, RED MAPLE, CHRISTMAS FERN, QUERCUS SPP.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): POOLS, LWD			
Aquatic Organisms Observed <i>(list)</i> : ODONATES, WATER STRIDERS, FROGS, CRAYFISH			
T&E Species Observed <i>(list)</i> : NA			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): NA			
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Stream Quality ³ : <i>(check one)</i> <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low			

Waterbody ID:
SCUK010

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

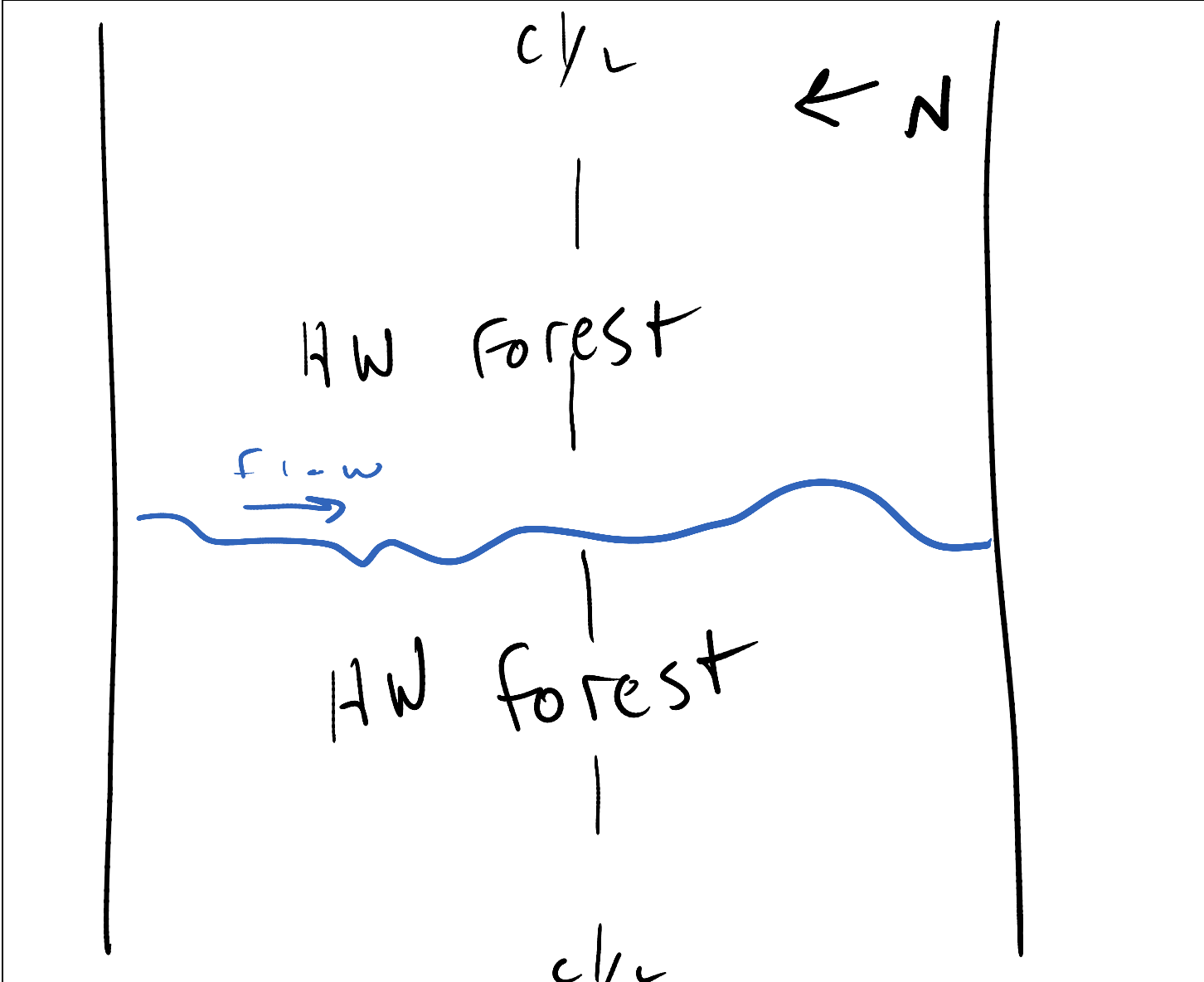
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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

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

Notes:

SMALL INTERMITTENT STREAM WITH MODERATE ENTRENCHMENT, NO FLOW, POOLS PRESENT

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





Waterbody point scuk010 facing southwest and downstream



Waterbody point scuk010 facing northeast and upstream



Waterbody point scuk010 facing east and across

Linear Waterbody Data Sheet

Survey Description				
Project Name: Atlantic Coast Pipeline		Waterbody Name: UNT to Dry Creek		Waterbody ID: SCUC001
Date: 1/7/2015				
State: Virginia	County: Cumberland	Company: NRG	Crew Member Initials: CR, AS	Photos: SCUC001_001-003
Tract Number(s): 10-019		Nearest Milepost: 211.4	Associated Wetland ID(s): None	
Survey Type: <i>(check one)</i> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: <i>(check one)</i> <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial				
Waterbody Type: <i>(check one)</i> <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: <i>(check all that apply)</i> <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		
OHWM Height: <u> 1 </u> 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 checked="" type="checkbox"/> Soil characteristic change		
N/A <input type="checkbox"/>				
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> 1.5 </u> ft.	Width of Waterbody - Water Edge to Water Edge: <u> 2 </u> ft.	Depth of Water: <i>(Approx.)</i> <u> 0.25 </u> ft.	
N/A <input type="checkbox"/>		N/A <input type="checkbox"/>		
Sinuosity: <i>(check one)</i> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: <i>(Approx.)</i> <u> 0.5 </u> fps	Bank height Right: <u> 4 </u> ft. Left: <u> 2 </u> ft.	Bank slope Right: <u> 80 </u> degrees Left: <u> 50 </u> degrees	
N/A <input type="checkbox"/>		N/A <input type="checkbox"/>		
Qualitative Attributes				
Water Appearance: <i>(check one)</i> <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: <i>(check all that apply)</i> <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> 80 </u> % <u> 20 </u> % _____% _____%				
Width of Riparian Zone: <u> 10 </u> ft.	Vegetative Layers: <i>(check all that apply)</i> <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: <i>(approx.)</i> <u> 8 </u> in. <u> 2 </u> in.			
Dominant Bank Vegetation <i>(list)</i> : Loblolly Pine, White Oak, American Beech, Christmas fern				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Leaf packs, riffles and pools, over hanging roots				
Aquatic Organisms Observed <i>(list)</i> : None				
T&E Species Observed <i>(list)</i> : None				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): None				
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality ^a : <i>(check one)</i> <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low				

Waterbody ID:

SCUC001

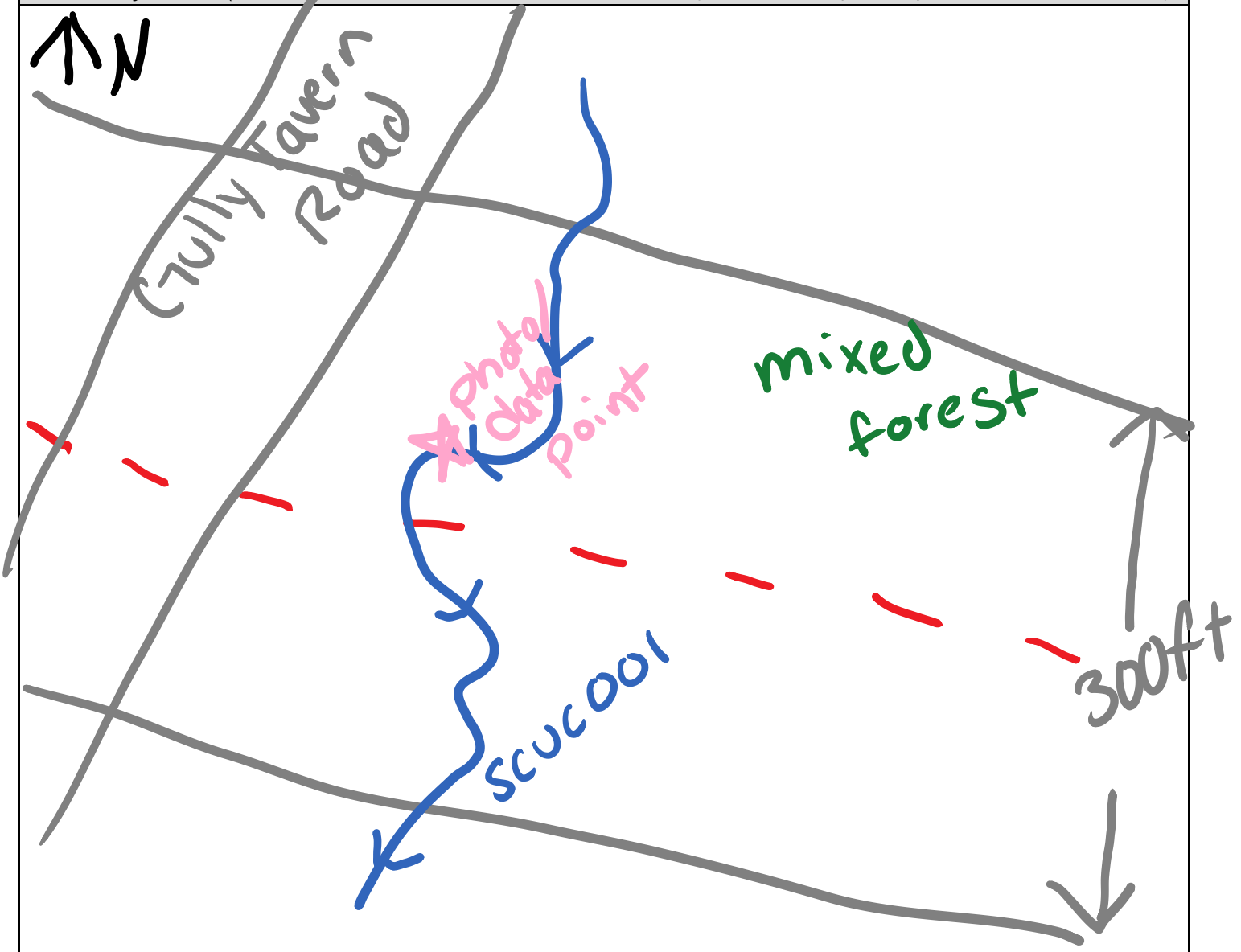
^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

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

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

Notes:

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





Waterbody SCUC001 facing upstream



Waterbody SCUC001 facing downstream



Waterbody SCUC001 facing across

Linear Waterbody Data Sheet

Survey Description				
Project Name: Atlantic Coast Pipeline		Waterbody Name: UNT to Dry Creek		Waterbody ID: SCUC002
Date: 1/7/2015				
State: Virginia	County: Cumberland	Company: NRG	Crew Member Initials: CR, AS	Photos: SCUC002_001-003
Tract Number(s): 10-019		Nearest Milepost: 211.5	Associated Wetland ID(s): WCUC001	
Survey Type: <i>(check one)</i> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: <i>(check one)</i> <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial				
Waterbody Type: <i>(check one)</i> <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: <i>(check all that apply)</i> <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		
OHWM Height: <u> 0.5 </u> 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: <u> 4 </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: <i>(Approx.)</i> <u> 0.2 </u> ft.	
N/A <input type="checkbox"/>		N/A <input type="checkbox"/>		
Sinuosity: <i>(check one)</i> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: <i>(Approx.)</i> <u> 0.2 </u> fps		Bank slope Right: <u> 90 </u> degrees Left: <u> 90 </u> degrees
N/A <input type="checkbox"/>		N/A <input type="checkbox"/>		
Qualitative Attributes				
Water Appearance: <i>(check one)</i> <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: <i>(check all that apply)</i> <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> 10 </u> ft.		Vegetative Layers: <i>(check all that apply)</i> <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: <i>(approx.)</i> <u> 10 </u> in. <u> 2 </u> in.		
Dominant Bank Vegetation <i>(list)</i> : White oak, sedges, Christmas, red maple, southern red cedar, Japanese honeysuckle				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Leaf packs				
Aquatic Organisms Observed <i>(list)</i> : None				
T&E Species Observed <i>(list)</i> : None				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): None				
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality ^a : <i>(check one)</i> <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low				

Waterbody ID:

SCUC002

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

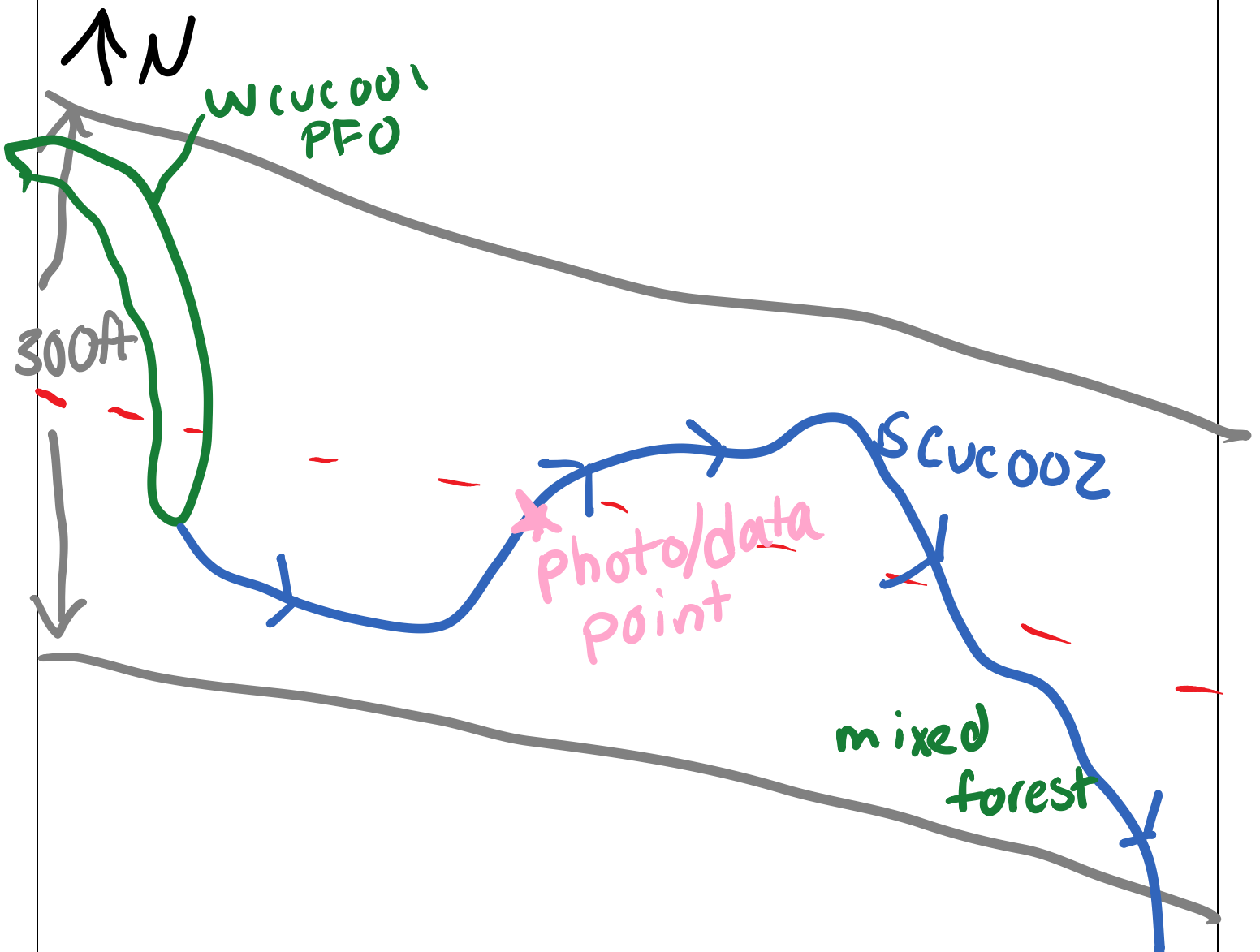
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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

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

Notes:

Stream loses its bed and banks at a few points throughout its extent, headwater is in corridor (WCUC001)

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





Waterbody SCUC002 facing upstream



Waterbody SCUC002 facing downstream



Waterbody SCUC002 facing across

Linear Waterbody Data Sheet

Survey Description				
Project Name: Atlantic Coast Pipeline		Waterbody Name: UNT to Dry Creek		Waterbody ID: SCUC003
Date: 1/7/2015				
State: Virginia	County: Cumberland	Company: NRG	Crew Member Initials: CR, AS	Photos: SCUC003_001-003
Tract Number(s): 10-019		Nearest Milepost: 211.5	Associated Wetland ID(s): None	
Survey Type: <i>(check one)</i> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: <i>(check one)</i> <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial				
Waterbody Type: <i>(check one)</i> <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: <i>(check all that apply)</i> <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		
OHWM Height: _ 1.5 _ 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: _ 15 _ ft.	Width of Waterbody - Toe of Slope to Toe of Slope: _ 2 _ ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input type="checkbox"/> _ 4 _ ft.	Depth of Water: <i>(Approx.)</i> N/A <input type="checkbox"/> _ 0.5 _ ft.	
Sinuosity: <i>(check one)</i> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: <i>(Approx.)</i> _ 1 _ fps N/A <input type="checkbox"/>	Bank height Right: _ 7 _ ft. Left: _ 7 _ ft.	Bank slope Right: _ 75 _ degrees Left: _ 75 _ degrees	
Qualitative Attributes				
Water Appearance: <i>(check one)</i> <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: <i>(check all that apply)</i> % of Substrate: _____ % _____ % <u>10</u> % <u>50</u> % <u>40</u> % _____ % _____ %				
Width of Riparian Zone: _ 30 _ ft. N/A <input type="checkbox"/>	Vegetative Layers: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs Avg. DBH of Dominants: <i>(approx.)</i> _ 10 _ in. _ 2 _ in.			
Dominant Bank Vegetation <i>(list)</i> : Sweet-gum, Christmas fern, red maple, southern red cedar, Loblolly pine, American holly				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Leaf packs, overhanging roots, riffles and deep pools				
Aquatic Organisms Observed <i>(list)</i> : None				
T&E Species Observed <i>(list)</i> : None				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): None				
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality ^a : <i>(check one)</i> <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low				

Waterbody ID:

SCUC003

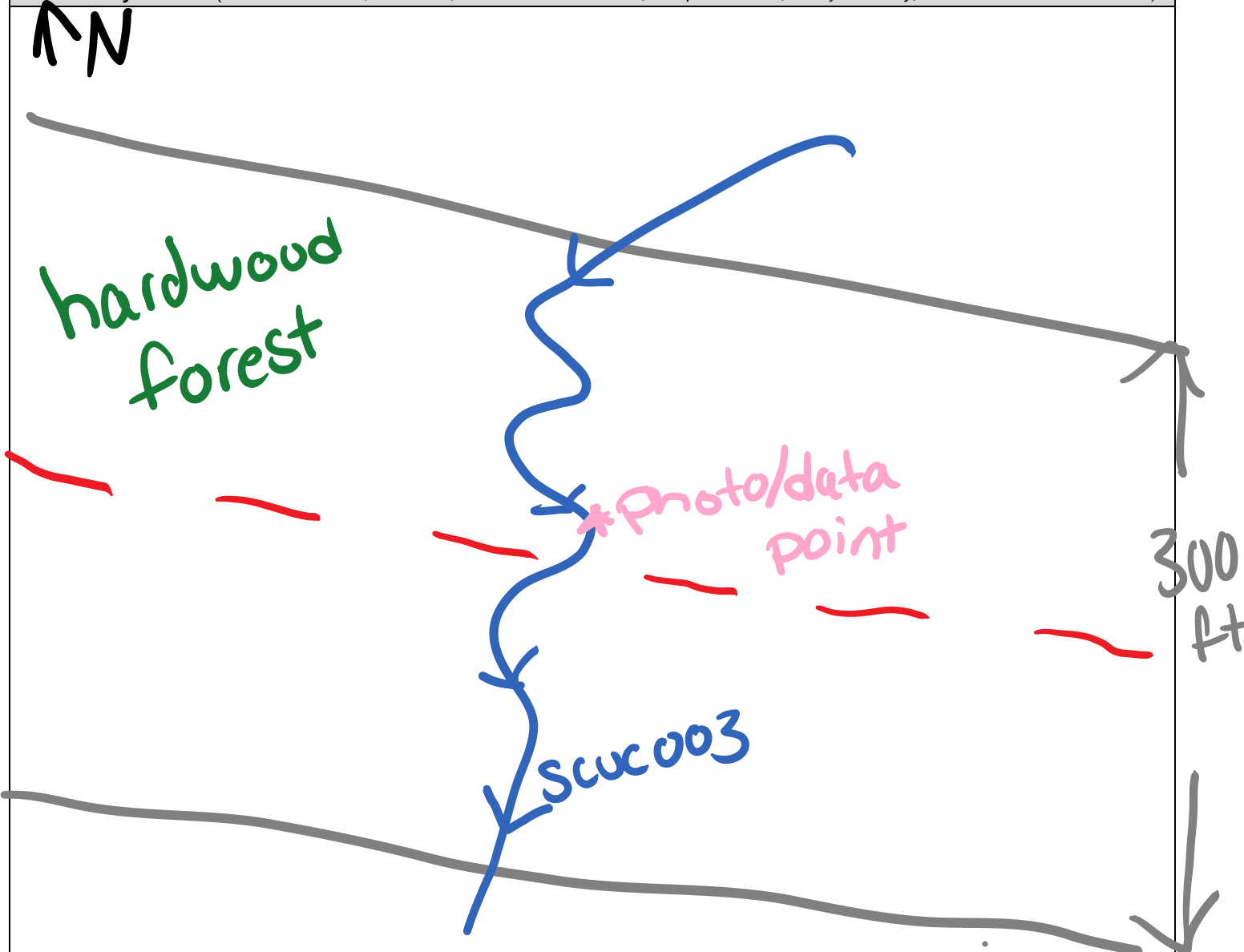
^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance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

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

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

Notes:

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





Waterbody SCUC003 facing upstream



Waterbody SCUC003 facing downstream



Waterbody SCUC003 facing across

Linear Waterbody Data Sheet

Survey Description			
Project Name: Atlantic Coast Pipeline		Waterbody Name: Dry Creek	
Waterbody ID: scua400		Date: 6/28/2016	
State: Virginia	County: Cumberland	Company: NRG - ERM	Crew Member Initials: GB, KO
Photos: 3 photos			
Tract Number(s): 10-021		Nearest Milepost: 214.8	Associated Wetland ID(s): wcua400
Survey Type: <i>(check one)</i> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes <input checked="" type="checkbox"/>			
Stream Classification: <i>(check one)</i> <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial			
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:			
OHWM Width: _____ ft. Height: _____ ft. N/A <input type="checkbox"/>		OHWM Indicator: <i>(check all that apply)</i> <input checked="" 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 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	
Width of Waterbody - Top of Bank to Top of Bank: _____ ft.	Width of Waterbody - Toe of Slope to Toe of Slope: _____ ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input type="checkbox"/> _____ ft.	Depth of Water: <i>(Approx.)</i> N/A <input type="checkbox"/> _____ ft.
Sinuosity: <i>(check one)</i> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: <i>(Approx.)</i> _____ fps N/A <input type="checkbox"/>	Bank height Right: _____ ft. Left: _____ ft.	Bank slope Right: _____ degrees Left: _____ degrees
Qualitative Attributes			
Water Appearance: <i>(check one)</i> <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: <i>(check all that apply)</i> % of Substrate: _____% _____% _____% _____% <u>15</u> % <u>75</u> % <u>10</u> % _____%			
Width of Riparian Zone: N/A <input type="checkbox"/> _____ ft.	Vegetative Layers: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs Avg. DBH of Dominants: <i>(approx.)</i> _____ in. _____ in.		
Dominant Bank Vegetation <i>(list)</i> : Loblolly pine, red maple, sweetgum, green ash, willow oak, yellow poplar, winged elm, blackberry, greenbrier, soft rush, hop sedge, wool grass, wood oats			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Pools, coarse woody debris, wrack piles, leaf packs, emergent vegetation			
Aquatic Organisms Observed <i>(list)</i> : Water striders, beaver, salamanders, frogs			
T&E Species Observed <i>(list)</i> : none			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Area was recently clear cut			
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Stream Quality ³ : <i>(check one)</i> <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low			

Waterbody ID:

scua400

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

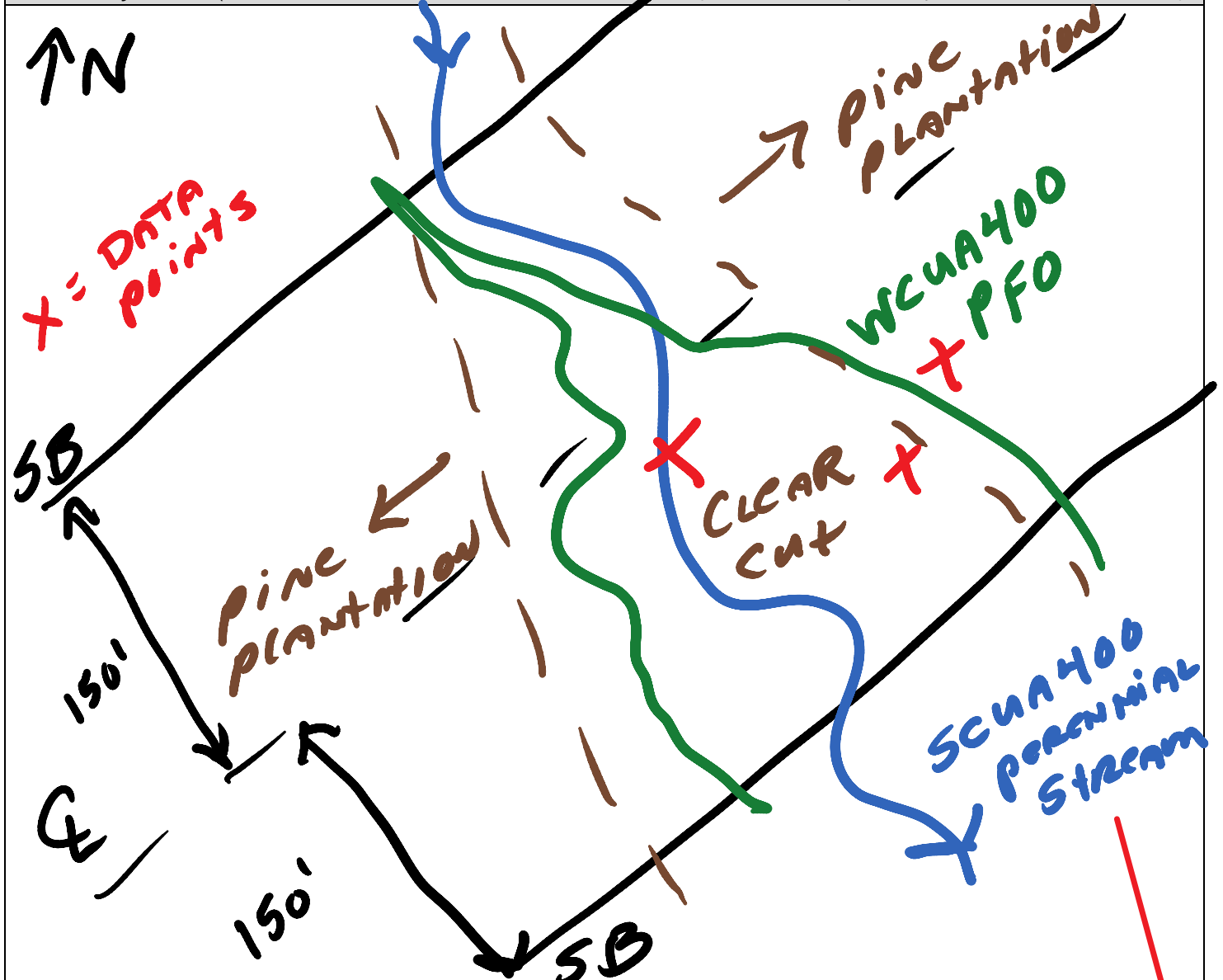
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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

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

Notes:

Stream continues out of corridor in both directions, numerous beaver dams along stream course; flows through wetland wcu400. Area is a recent clear cut with young planted pines on either side of wetland.

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





Waterbody SCUA400 facing northeast upstream



Waterbody SCUA400 facing southwest downstream



Waterbody SCUA400 facing southeast across

Linear Waterbody Data Sheet

Survey Description					
Project Name: Southeast Reliability		Waterbody Name: UNT TO DRY CREEK		Waterbody ID: SCUK030	Date: 8/25/2014
State: Virginia	County: Cumberland	Company: W&C	Crew Member Initials: JS, BG	Photos: 100-0138 TO 0140 U D X	
Tract Number(s): 10-022 & 10-023		Nearest Milepost: 211		Associated Wetland ID(s): NA	
Survey Type: <i>(check one)</i> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:					
Physical Attributes					
Stream Classification: <i>(check one)</i> <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial					
Waterbody Type: <i>(check one)</i> <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. Height: <u>.5</u> ft. N/A <input type="checkbox"/>		OHWM Indicator: <i>(check all that apply)</i> <input checked="" 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 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: <u>3</u> ft.		Width of Waterbody - Toe of Slope to Toe of Slope: <u>2</u> ft.		Width of Waterbody - Water Edge to Water Edge: N/A <input checked="" type="checkbox"/> <u> </u> ft.	
Depth of Water: <i>(Approx.)</i> N/A <input checked="" type="checkbox"/> <u> </u> ft.		Sinuosity: <i>(check one)</i> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: <i>(Approx.)</i> <u> </u> fps N/A <input checked="" type="checkbox"/>	
Bank height Right: <u>1</u> ft. Left: <u>1</u> ft.		Bank slope Right: <u>50</u> degrees Left: <u>50</u> degrees			
Qualitative Attributes					
Water Appearance: <i>(check one)</i> <input checked="" type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:					
Substrate: <i>(check all that apply)</i> % of Substrate: <u>NA</u> % <u>NA</u> % <u>NA</u> % <u>NA</u> % <u>10</u> % <u>20</u> % <u>70</u> % <u>NA</u> %					
Width of Riparian Zone: <u>>100</u> ft. N/A <input type="checkbox"/>		Vegetative Layers: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Trees: <u>12</u> in. <input checked="" type="checkbox"/> Saplings/Shrubs: <u>2</u> in. <input checked="" type="checkbox"/> Herbs			
Dominant Bank Vegetation <i>(list)</i> : SWEETGUM, RED MAPLE, IRON WOOD, RIVER BIRCH, GRASSES, MOSS					
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): NA					
Aquatic Organisms Observed <i>(list)</i> : NA					
T&E Species Observed <i>(list)</i> : NA					
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): NA					
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated					
Stream Quality ^a : <i>(check one)</i> <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low					

Waterbody ID:

SCUK030

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

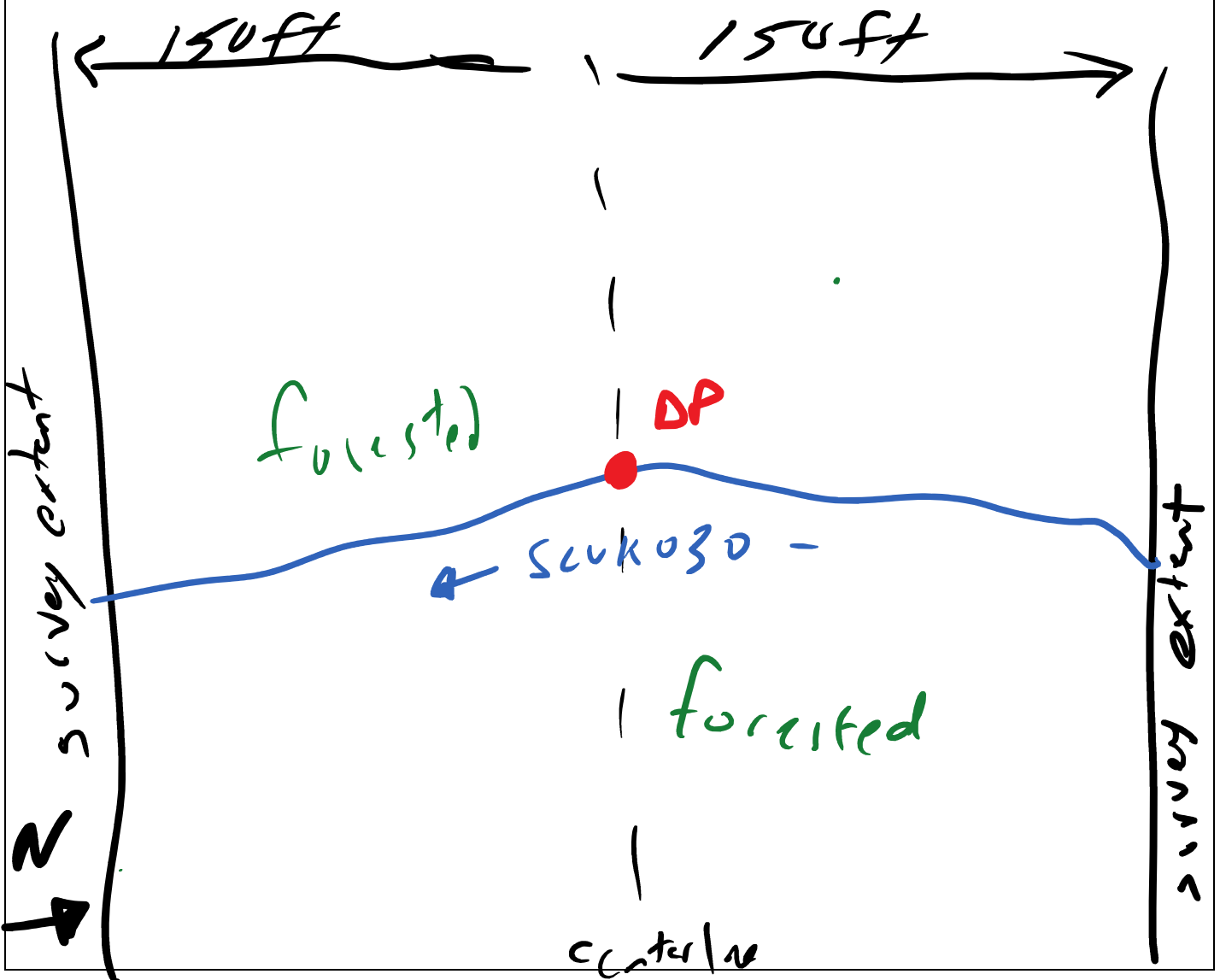
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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

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

Notes:

EPHEMERAL STREAM WITH BRAIDED CHANNEL THROUGH A PORTION OF ROW. AREA DETERMINED TO NOT BE WETLAND THOUGH IT DOES MEET 2 OF 3 CRITERIA (HYROLOGY AND VEGETATION).

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





Waterbody point scuk030 facing North and upstream



Waterbody point scuk030 facing South and downstream



Waterbody point scuk030 facing West and across

Linear Waterbody Data Sheet

Survey Description					
Project Name: Southeast Reliability		Waterbody Name: UNT TO DRY CREEK		Waterbody ID: SCUK032a	Date: 8/25/2014
State: Virginia	County: Cumberland	Company: W&C	Crew Member Initials: JS, BG	Photos: 100-0145 TO 0147 U D X	
Tract Number(s): 10-023		Nearest Milepost: 211		Associated Wetland ID(s): NA	
Survey Type: <i>(check one)</i> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:					
Physical Attributes					
Stream Classification: <i>(check one)</i> <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial					
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:					
OHWM Width: <u>4</u> ft. Height: <u>0.5</u> ft. N/A <input type="checkbox"/>		OHWM Indicator: <i>(check all that apply)</i> <input checked="" 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 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: <u>8</u> ft.		Width of Waterbody - Toe of Slope to Toe of Slope: <u>4</u> ft.		Width of Waterbody - Water Edge to Water Edge: N/A <input checked="" type="checkbox"/> <u> </u> ft.	
Depth of Water: <i>(Approx.)</i> N/A <input checked="" type="checkbox"/> <u> </u> ft.		Sinuosity: <i>(check one)</i> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: <i>(Approx.)</i> <u> </u> fps N/A <input checked="" type="checkbox"/>	
Bank height Right: <u>4</u> ft. Left: <u>4</u> ft.		Bank slope Right: <u>70</u> degrees Left: <u>70</u> degrees			
Qualitative Attributes					
Water Appearance: <i>(check one)</i> <input checked="" type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:					
Substrate: <i>(check all that apply)</i> % of Substrate: <u>NA</u> % <u>NA</u> % <u>NA</u> % <u>NA</u> % <u>50</u> % <u>30</u> % <u>20</u> % <u>NA</u> %					
Width of Riparian Zone: <u>>100</u> ft. N/A <input type="checkbox"/>		Vegetative Layers: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Trees: <u>12</u> in. <input checked="" type="checkbox"/> Saplings/Shrubs: <u>2</u> in. <input checked="" type="checkbox"/> Herbs			
Dominant Bank Vegetation <i>(list)</i> : IRON WOOD, WINGED ELM, CHRISTMAS FERN, VIOLET, MOSS					
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): NA					
Aquatic Organisms Observed <i>(list)</i> : NA					
T&E Species Observed <i>(list)</i> : NA					
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): NA					
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated					
Stream Quality ^a : <i>(check one)</i> <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low					

Waterbody ID:

SCUK032a

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

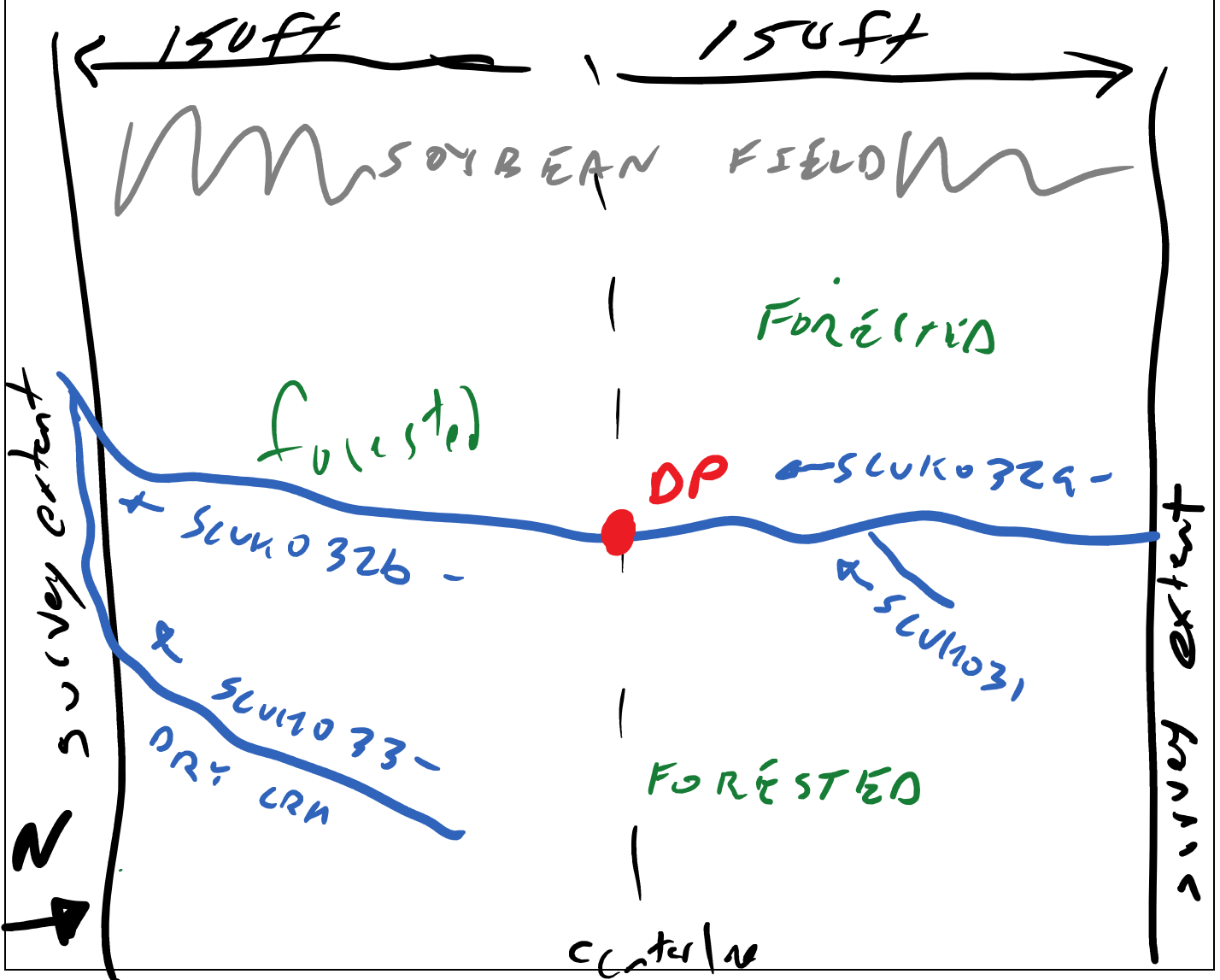
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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

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

Notes:

EPIHEMERAL STREAM PORTION. MAY RECEIVE FLOW FROM POND LOCATED UP GRADIENT DURING HEAVY RAIN EVENTS.

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





Waterbody point scuk032a facing North and
upstream



Waterbody point scuk032a facing South and
downstream



Waterbody point scuk032a facing West and across

Linear Waterbody Data Sheet

Survey Description				
Project Name: Southeast Reliability		Waterbody Name: UNT TO DRY CREEK		Waterbody ID: SCUK032b
State: Virginia		County: Cumberland	Company: W&C	Crew Member Initials: JS, BG
Tract Number(s): 10-023		Nearest Milepost: 211		Photos: 100-0148 TO 0150 U D X
Associated Wetland ID(s): NA				
Survey Type: <i>(check one)</i> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: <i>(check one)</i> <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial				
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:				
OHWM Width: <u>3</u> ft. Height: <u>0.5</u> ft. N/A <input type="checkbox"/>		OHWM Indicator: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Clear line on bank <input checked="" 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 checked="" type="checkbox"/> Abrupt plant community change <input checked="" type="checkbox"/> Soil characteristic change		
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>4</u> ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input checked="" type="checkbox"/> <u> </u> ft.	Depth of Water: <i>(Approx.)</i> <u> </u> ft.	
Sinuosity: <i>(check one)</i> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: <i>(Approx.)</i> <u> </u> fps N/A <input checked="" type="checkbox"/>	Bank height Right: <u>4</u> ft. Left: <u>4</u> ft.	Bank slope Right: <u>70</u> degrees Left: <u>70</u> degrees	
Qualitative Attributes				
Water Appearance: <i>(check one)</i> <input checked="" type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: <i>(check all that apply)</i> <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 checked="" type="checkbox"/> Organic <input type="checkbox"/> Other: % of Substrate: <u>NA</u> % <u>NA</u> % <u>NA</u> % <u>10</u> % <u>70</u> % <u>10</u> % <u>10</u> % <u>NA</u> %				
Width of Riparian Zone: <u>>100</u> ft. N/A <input type="checkbox"/>	Vegetative Layers: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Trees: <u>12</u> in. <input checked="" type="checkbox"/> Saplings/Shrubs: <u>2</u> in. <input checked="" type="checkbox"/> Herbs			
Dominant Bank Vegetation <i>(list)</i> : IRON WOOD, WINGED ELM, CHRISTMAS FERN, VIOLET, MOSS				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): NA				
Aquatic Organisms Observed <i>(list)</i> : NA				
T&E Species Observed <i>(list)</i> : NA				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): NA				
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality ^a : <i>(check one)</i> <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low				

Waterbody ID:

SCUK032b

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

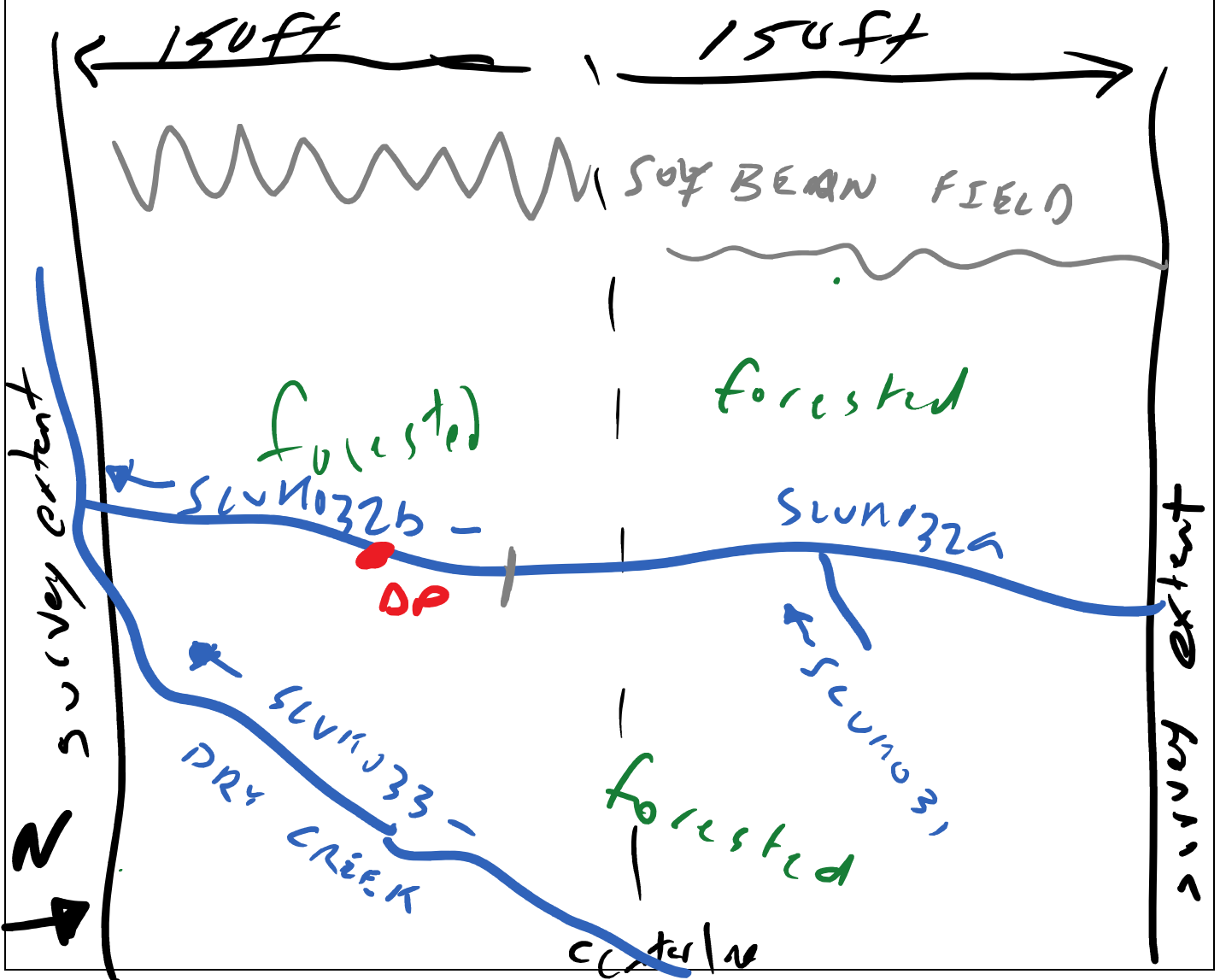
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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

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

Notes:

INTERMITTENT STREAM PORTION, STARTS AT HEADCUT. MAY RECEIVE FLOW FROM POND LOCATED UP GRADIENT DURING HEAVY RAIN EVENTS AND LIKELY RECEIVES GROUNDWATER INPUT DURING WETTER MONTHS.

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





Waterbody point scuk032b facing North and upstream



Waterbody point scuk032b facing South and downstream



Waterbody point scuk032b facing West and across

Linear Waterbody Data Sheet

Survey Description				
Project Name: Southeast Reliability		Waterbody Name: UNT TO DRY CREEK		Waterbody ID: SCUK032a
State: Virginia		County: Cumberland	Company: W&C	Crew Member Initials: JS, BG
Date: 8/25/2014		Photos: 100-0145 TO 0147 U D X		
Tract Number(s): 10-023		Nearest Milepost: 211		Associated Wetland ID(s): NA
Survey Type: <i>(check one)</i> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: <i>(check one)</i> <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial				
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:				
OHWM Width: <u>4</u> ft. Height: <u>0.5</u> ft. N/A <input type="checkbox"/>		OHWM Indicator: <i>(check all that apply)</i> <input checked="" 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 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: <u>8</u> ft.	Width of Waterbody - Toe of Slope to Toe of Slope: <u>4</u> ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input checked="" type="checkbox"/> <u> </u> ft.	Depth of Water: <i>(Approx.)</i> <u> </u> ft. N/A <input checked="" type="checkbox"/>	
Sinuosity: <i>(check one)</i> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: <i>(Approx.)</i> <u> </u> fps N/A <input checked="" type="checkbox"/>	Bank height Right: <u>4</u> ft. Left: <u>4</u> ft.	Bank slope Right: <u>70</u> degrees Left: <u>70</u> degrees	
Qualitative Attributes				
Water Appearance: <i>(check one)</i> <input checked="" type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: <i>(check all that apply)</i> <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>NA</u> % <u>NA</u> % <u>NA</u> % <u>NA</u> % <u>50</u> % <u>30</u> % <u>20</u> % <u>NA</u> %				
Width of Riparian Zone: <u>>100</u> ft. N/A <input type="checkbox"/>	Vegetative Layers: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Trees: <u>12</u> in. <input checked="" type="checkbox"/> Saplings/Shrubs: <u>2</u> in. <input checked="" type="checkbox"/> Herbs Avg. DBH of Dominants: <i>(approx.)</i>			
Dominant Bank Vegetation <i>(list)</i> : IRON WOOD, WINGED ELM, CHRISTMAS FERN, VIOLET, MOSS				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): NA				
Aquatic Organisms Observed <i>(list)</i> : NA				
T&E Species Observed <i>(list)</i> : NA				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): NA				
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality ^a : <i>(check one)</i> <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low				

Waterbody ID:

SCUK032a

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

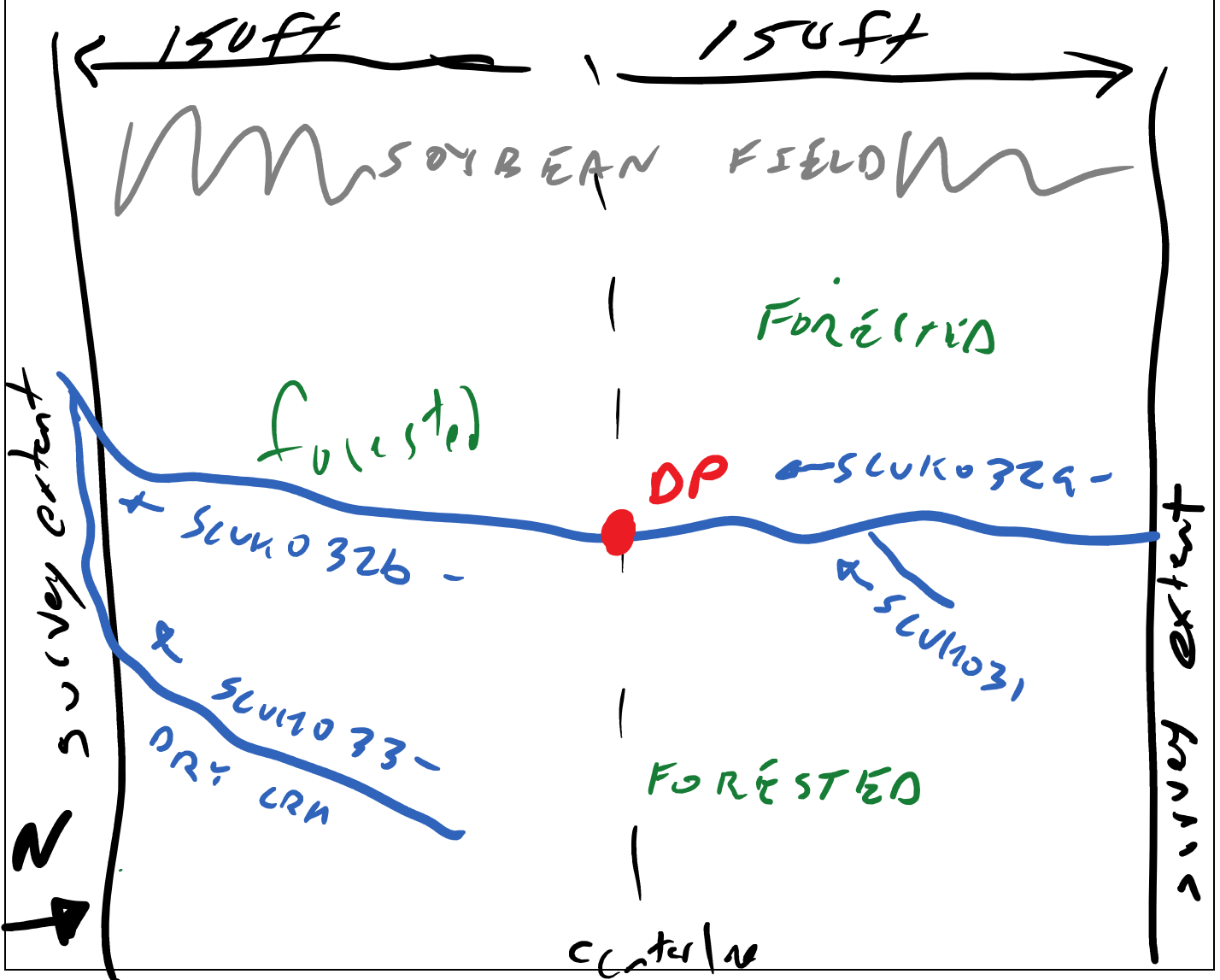
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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

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

Notes:

EPIHEMERAL STREAM PORTION. MAY RECEIVE FLOW FROM POND LOCATED UP GRADIENT DURING HEAVY RAIN EVENTS.

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





Waterbody point scuk032a facing North and
upstream



Waterbody point scuk032a facing South and
downstream



Waterbody point scuk032a facing West and across

Linear Waterbody Data Sheet

Survey Description					
Project Name: Southeast Reliability		Waterbody Name: UNT TO DRY CREEK		Waterbody ID: SCUK032b	Date: 8/25/2014
State: Virginia	County: Cumberland	Company: W&C	Crew Member Initials: JS, BG	Photos: 100-0148 TO 0150 U D X	
Tract Number(s): 10-023		Nearest Milepost: 211		Associated Wetland ID(s): NA	
Survey Type: <i>(check one)</i> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:					
Physical Attributes					
Stream Classification: <i>(check one)</i> <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial					
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:					
OHWM Width: <u>3</u> ft. Height: <u>0.5</u> ft. N/A <input type="checkbox"/>		OHWM Indicator: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Clear line on bank <input checked="" 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 checked="" type="checkbox"/> Abrupt plant community change <input checked="" type="checkbox"/> Soil characteristic change			
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>4</u> ft.		Width of Waterbody - Water Edge to Water Edge: N/A <input checked="" type="checkbox"/> <u> </u> ft.	
Depth of Water: <i>(Approx.)</i> N/A <input checked="" type="checkbox"/> <u> </u> ft.		Sinuosity: <i>(check one)</i> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: <i>(Approx.)</i> <u> </u> fps N/A <input checked="" type="checkbox"/>	
Bank height Right: <u>4</u> ft. Left: <u>4</u> ft.		Bank slope Right: <u>70</u> degrees Left: <u>70</u> degrees			
Qualitative Attributes					
Water Appearance: <i>(check one)</i> <input checked="" type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:					
Substrate: <i>(check all that apply)</i> % of Substrate: <u>NA</u> % <u>NA</u> % <u>NA</u> % <u>10</u> % <u>70</u> % <u>10</u> % <u>10</u> % <u>NA</u> %					
Width of Riparian Zone: <u>>100</u> ft. N/A <input type="checkbox"/>		Vegetative Layers: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Trees: <u>12</u> in. <input checked="" type="checkbox"/> Saplings/Shrubs: <u>2</u> in. <input checked="" type="checkbox"/> Herbs			
Dominant Bank Vegetation <i>(list)</i> : IRON WOOD, WINGED ELM, CHRISTMAS FERN, VIOLET, MOSS					
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): NA					
Aquatic Organisms Observed <i>(list)</i> : NA					
T&E Species Observed <i>(list)</i> : NA					
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): NA					
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated					
Stream Quality ^a : <i>(check one)</i> <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low					

Waterbody ID:

SCUK032b

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

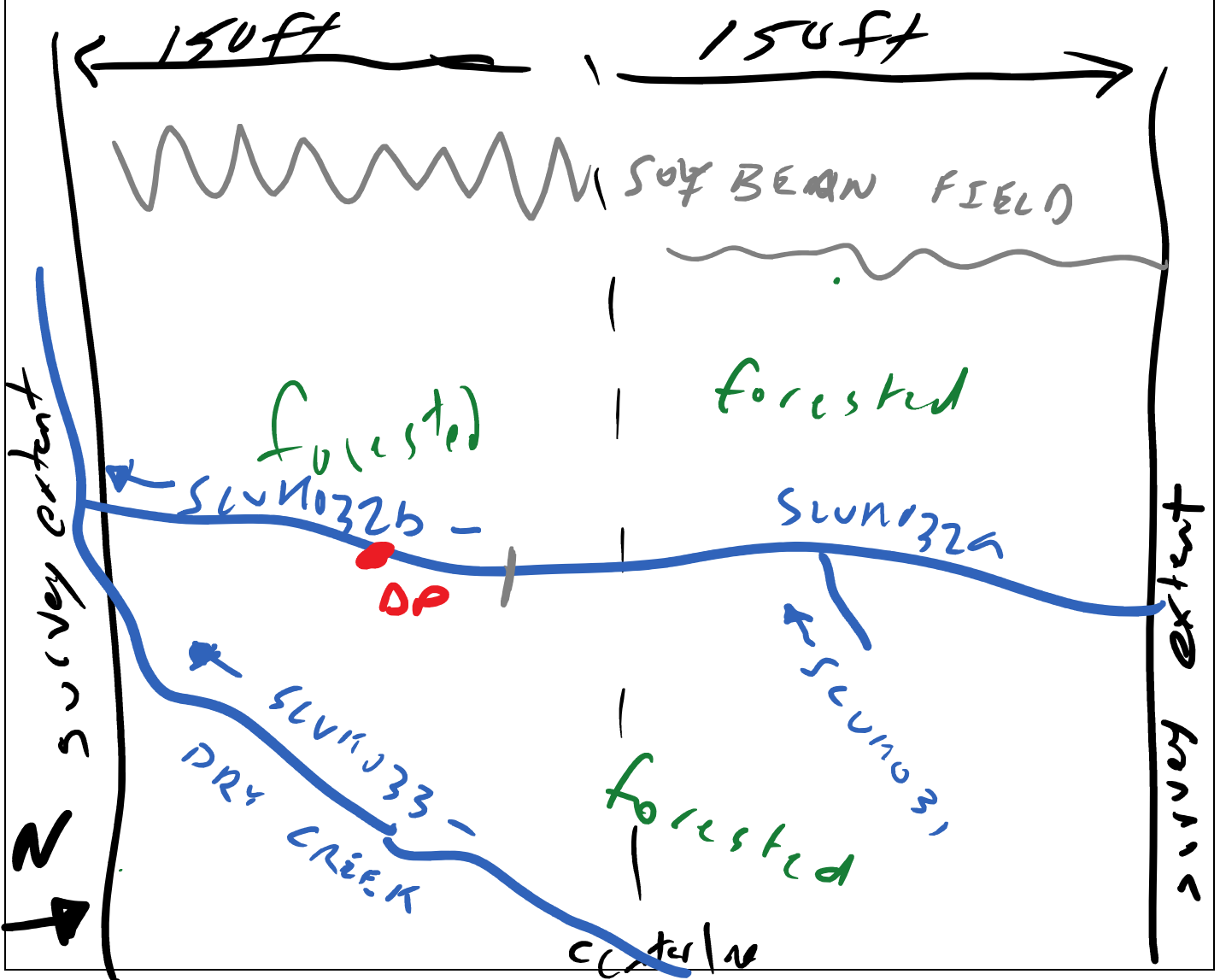
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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

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

Notes:

INTERMITTENT STREAM PORTION, STARTS AT HEADCUT. MAY RECEIVE FLOW FROM POND LOCATED UP GRADIENT DURING HEAVY RAIN EVENTS AND LIKELY RECEIVES GROUNDWATER INPUT DURING WETTER MONTHS.

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





Waterbody point scuk032b facing North and upstream



Waterbody point scuk032b facing South and downstream



Waterbody point scuk032b facing West and across

Linear Waterbody Data Sheet

Survey Description				
Project Name: Southeast Reliability		Waterbody Name: UNT TO DRY CREEK		Waterbody ID: SCUK032a
State: Virginia		County: Cumberland	Company: W&C	Crew Member Initials: JS, BG
Date: 8/25/2014		Photos: 100-0145 TO 0147 U D X		
Tract Number(s): 10-023		Nearest Milepost: 211		Associated Wetland ID(s): NA
Survey Type: <i>(check one)</i> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: <i>(check one)</i> <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial				
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:				
OHWM Width: <u>4</u> ft. Height: <u>0.5</u> ft. N/A <input type="checkbox"/>		OHWM Indicator: <i>(check all that apply)</i> <input checked="" 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 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: <u>8</u> ft.	Width of Waterbody - Toe of Slope to Toe of Slope: <u>4</u> ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input checked="" type="checkbox"/> <u> </u> ft.	Depth of Water: <i>(Approx.)</i> N/A <input checked="" type="checkbox"/> <u> </u> ft.	
Sinuosity: <i>(check one)</i> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: <i>(Approx.)</i> <u> </u> fps N/A <input checked="" type="checkbox"/>	Bank height Right: <u>4</u> ft. Left: <u>4</u> ft.	Bank slope Right: <u>70</u> degrees Left: <u>70</u> degrees	
Qualitative Attributes				
Water Appearance: <i>(check one)</i> <input checked="" type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: <i>(check all that apply)</i> <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>NA</u> % <u>NA</u> % <u>NA</u> % <u>NA</u> % <u>50</u> % <u>30</u> % <u>20</u> % <u>NA</u> %				
Width of Riparian Zone: N/A <input type="checkbox"/> <u>>100</u> ft.	Vegetative Layers: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Trees: <u>12</u> in. <input checked="" type="checkbox"/> Saplings/Shrubs: <u>2</u> in. <input checked="" type="checkbox"/> Herbs Avg. DBH of Dominants: <i>(approx.)</i>			
Dominant Bank Vegetation <i>(list)</i> : IRON WOOD, WINGED ELM, CHRISTMAS FERN, VIOLET, MOSS				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): NA				
Aquatic Organisms Observed <i>(list)</i> : NA				
T&E Species Observed <i>(list)</i> : NA				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): NA				
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality ^a : <i>(check one)</i> <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low				

Waterbody ID:

SCUK032a

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

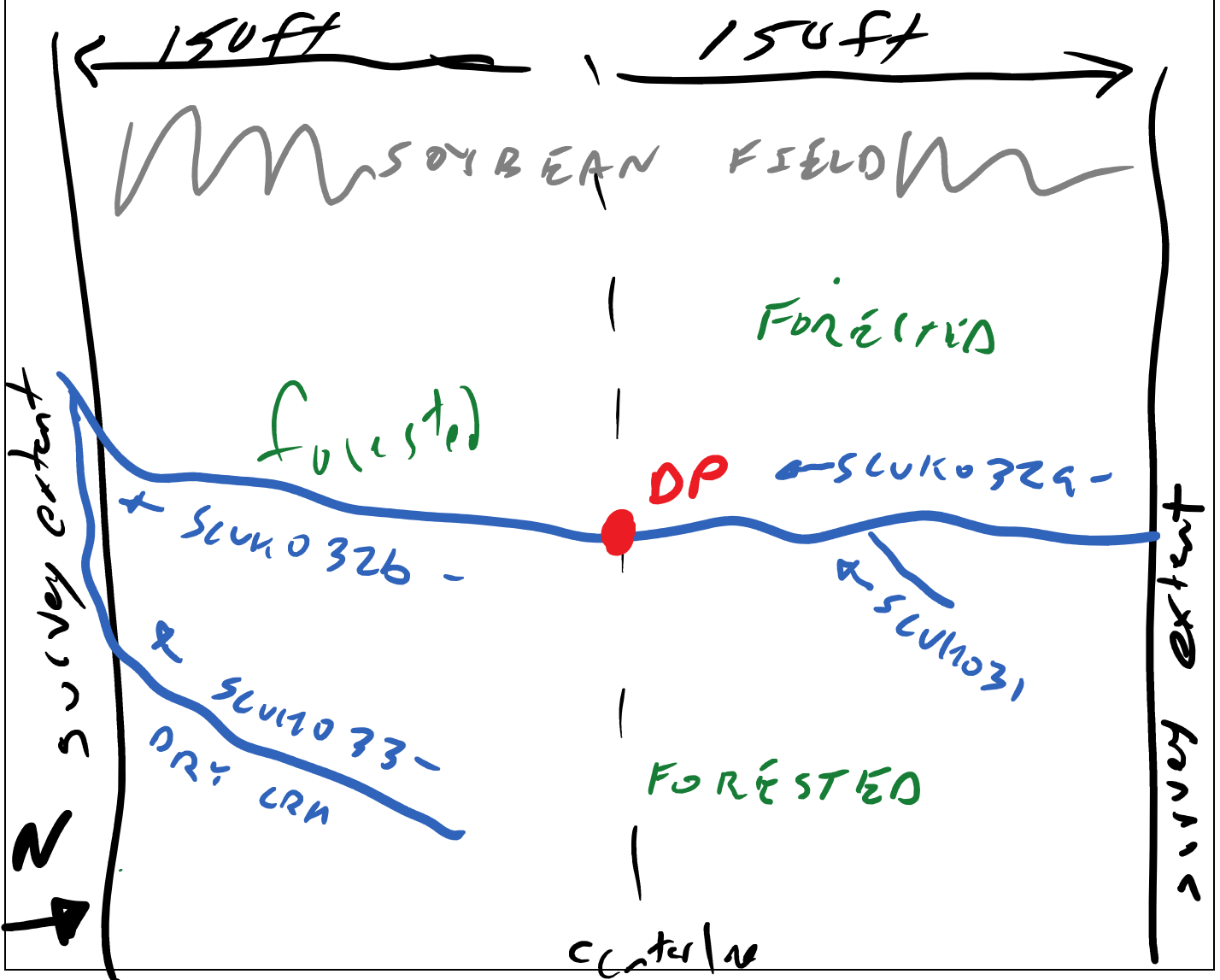
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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

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

Notes:

EPHEMERAL STREAM PORTION. MAY RECEIVE FLOW FROM POND LOCATED UP GRADIENT DURING HEAVY RAIN EVENTS.

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





Waterbody point scuk032a facing North and upstream



Waterbody point scuk032a facing South and downstream



Waterbody point scuk032a facing West and across

Linear Waterbody Data Sheet

Survey Description				
Project Name: Southeast Reliability		Waterbody Name: UNT TO DRY CREEK		Waterbody ID: SCUK032b
State: Virginia		County: Cumberland	Company: W&C	Crew Member Initials: JS, BG
Tract Number(s): 10-023		Nearest Milepost: 211		Photos: 100-0148 TO 0150 U D X
Associated Wetland ID(s): NA				
Survey Type: <i>(check one)</i> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: <i>(check one)</i> <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial				
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:				
OHWM Width: <u>3</u> ft. Height: <u>0.5</u> ft. N/A <input type="checkbox"/>		OHWM Indicator: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Clear line on bank <input checked="" 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 checked="" type="checkbox"/> Abrupt plant community change <input checked="" type="checkbox"/> Soil characteristic change		
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>4</u> ft.		Depth of Water: <i>(Approx.)</i> N/A <input checked="" type="checkbox"/> ___ft.
Sinuosity: <i>(check one)</i> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: <i>(Approx.)</i> ___fps N/A <input checked="" type="checkbox"/>		Bank height Right: <u>4</u> ft. Left: <u>4</u> ft.
Bank slope Right: <u>70</u> degrees Left: <u>70</u> degrees				
Qualitative Attributes				
Water Appearance: <i>(check one)</i> <input checked="" type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: <i>(check all that apply)</i> <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 checked="" type="checkbox"/> Organic <input type="checkbox"/> Other: % of Substrate: <u>NA</u> % <u>NA</u> % <u>NA</u> % <u>10</u> % <u>70</u> % <u>10</u> % <u>10</u> % <u>NA</u> %				
Width of Riparian Zone: <u>>100</u> ft. N/A <input type="checkbox"/>		Vegetative Layers: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs Avg. DBH of Dominants: <i>(approx.)</i> <u>12</u> in. <u>2</u> in.		
Dominant Bank Vegetation <i>(list)</i> : IRON WOOD, WINGED ELM, CHRISTMAS FERN, VIOLET, MOSS				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): NA				
Aquatic Organisms Observed <i>(list)</i> : NA				
T&E Species Observed <i>(list)</i> : NA				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): NA				
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality ^a : <i>(check one)</i> <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low				

Waterbody ID:

SCUK032b

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

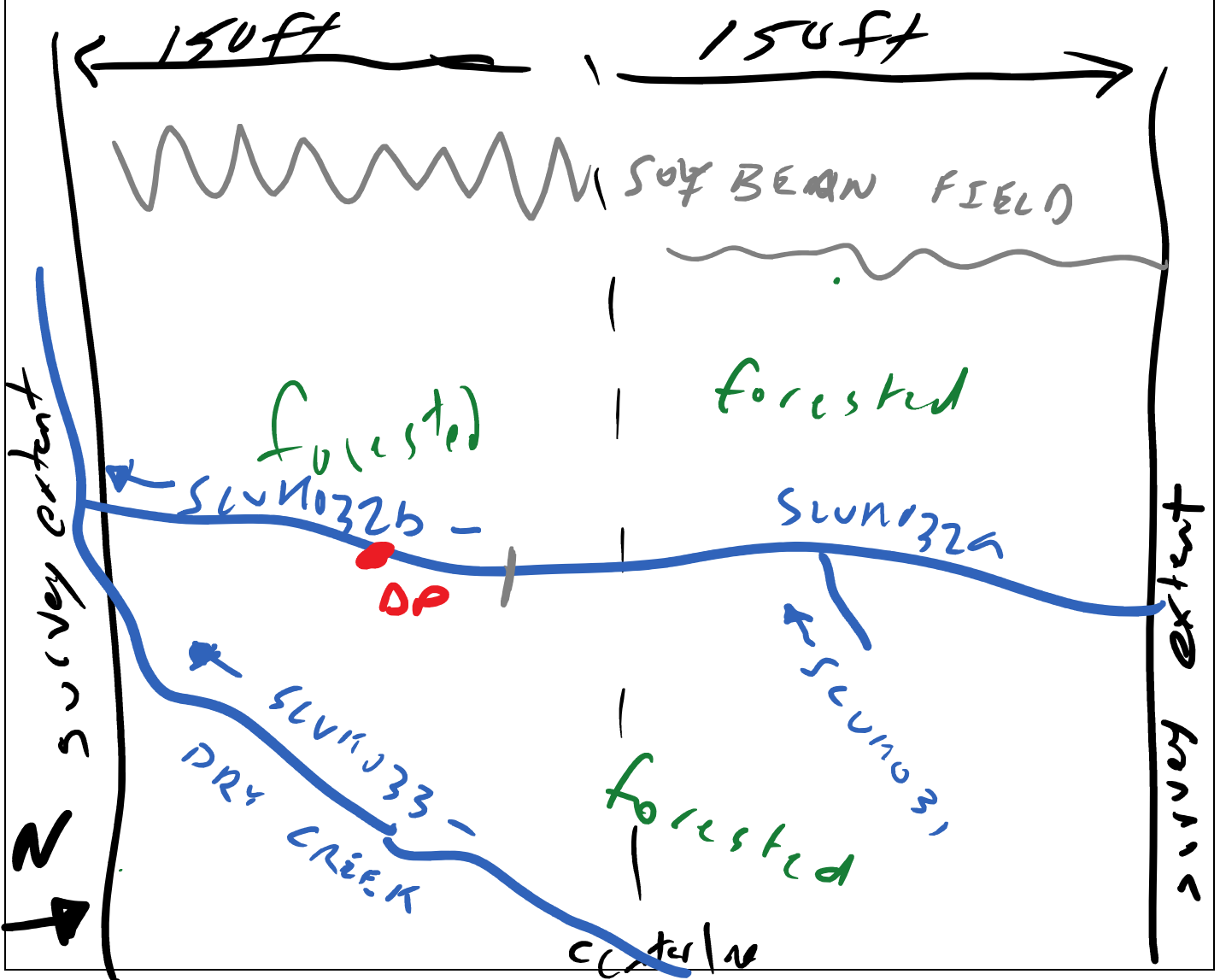
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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

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

Notes:

INTERMITTENT STREAM PORTION, STARTS AT HEADCUT. MAY RECEIVE FLOW FROM POND LOCATED UP GRADIENT DURING HEAVY RAIN EVENTS AND LIKELY RECEIVES GROUNDWATER INPUT DURING WETTER MONTHS.

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





Waterbody point scuk032b facing North and upstream



Waterbody point scuk032b facing South and downstream



Waterbody point scuk032b facing West and across

Linear Waterbody Data Sheet

Survey Description				
Project Name: Southeast Reliability		Waterbody Name: UNT TO DRY CREEK		Waterbody ID: SCUK032a
State: Virginia		County: Cumberland	Company: W&C	Crew Member Initials: JS, BG
Date: 8/25/2014		Photos: 100-0145 TO 0147 U D X		
Tract Number(s): 10-023		Nearest Milepost: 211		Associated Wetland ID(s): NA
Survey Type: <i>(check one)</i> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: <i>(check one)</i> <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial				
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:				
OHWM Width: <u>4</u> ft. Height: <u>0.5</u> ft. N/A <input type="checkbox"/>		OHWM Indicator: <i>(check all that apply)</i> <input checked="" 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 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: <u>8</u> ft.	Width of Waterbody - Toe of Slope to Toe of Slope: <u>4</u> ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input checked="" type="checkbox"/> <u> </u> ft.	Depth of Water: <i>(Approx.)</i> <u> </u> ft. N/A <input checked="" type="checkbox"/>	
Sinuosity: <i>(check one)</i> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: <i>(Approx.)</i> <u> </u> fps N/A <input checked="" type="checkbox"/>	Bank height Right: <u>4</u> ft. Left: <u>4</u> ft.	Bank slope Right: <u>70</u> degrees Left: <u>70</u> degrees	
Qualitative Attributes				
Water Appearance: <i>(check one)</i> <input checked="" type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: <i>(check all that apply)</i> <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>NA</u> % <u>NA</u> % <u>NA</u> % <u>NA</u> % <u>50</u> % <u>30</u> % <u>20</u> % <u>NA</u> %				
Width of Riparian Zone: <u>>100</u> ft. N/A <input type="checkbox"/>	Vegetative Layers: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Trees: <u>12</u> in. <input checked="" type="checkbox"/> Saplings/Shrubs: <u>2</u> in. <input checked="" type="checkbox"/> Herbs Avg. DBH of Dominants: <i>(approx.)</i>			
Dominant Bank Vegetation <i>(list)</i> : IRON WOOD, WINGED ELM, CHRISTMAS FERN, VIOLET, MOSS				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): NA				
Aquatic Organisms Observed <i>(list)</i> : NA				
T&E Species Observed <i>(list)</i> : NA				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): NA				
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality ^a : <i>(check one)</i> <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low				

Waterbody ID:

SCUK032a

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

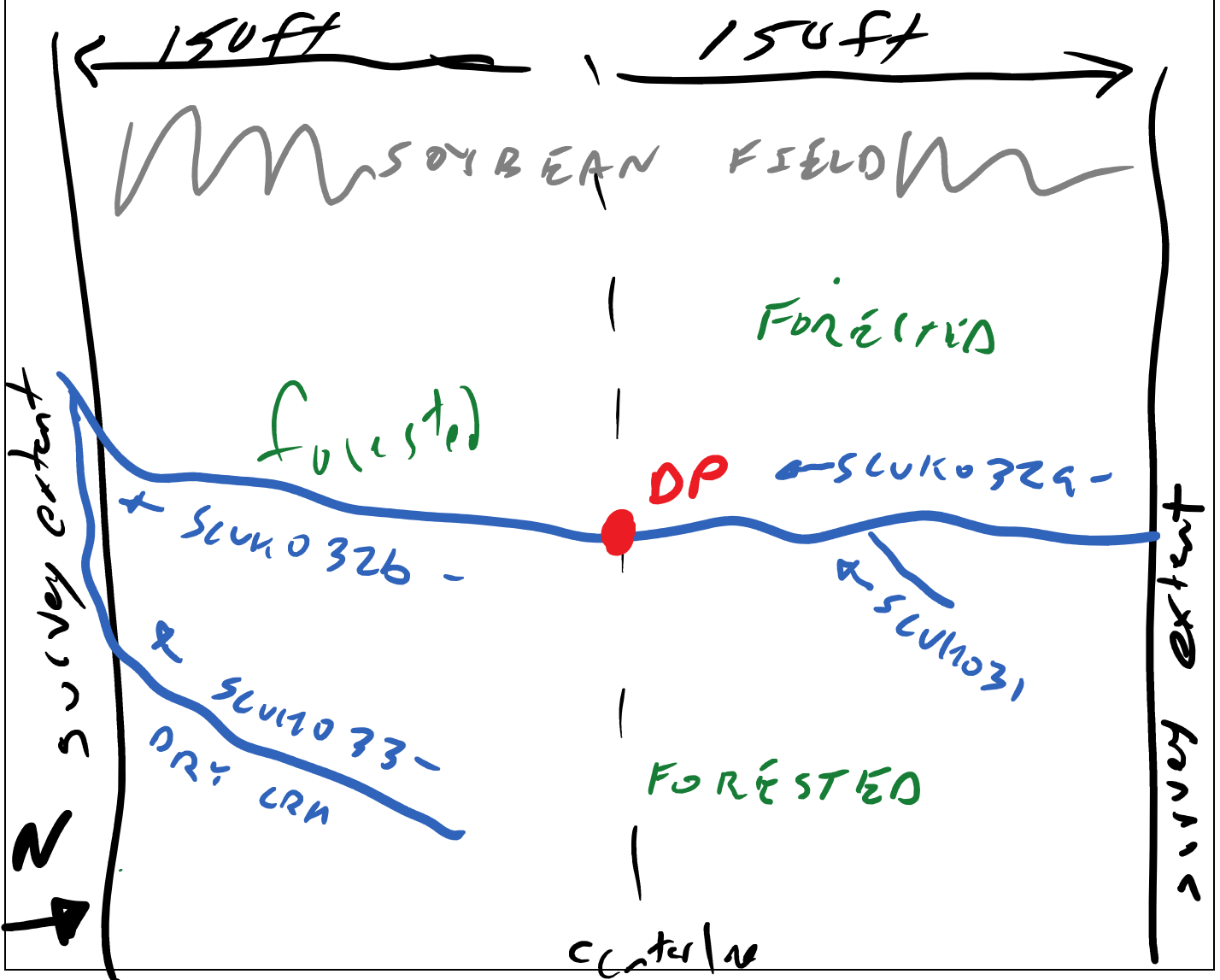
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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

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

Notes:

EPHEMERAL STREAM PORTION. MAY RECEIVE FLOW FROM POND LOCATED UP GRADIENT DURING HEAVY RAIN EVENTS.

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





Waterbody point scuk032a facing North and
upstream



Waterbody point scuk032a facing South and
downstream



Waterbody point scuk032a facing West and across

Linear Waterbody Data Sheet

Survey Description				
Project Name: Southeast Reliability		Waterbody Name: UNT TO DRY CREEK		Waterbody ID: SCUK032b
State: Virginia		County: Cumberland	Company: W&C	Crew Member Initials: JS, BG
Tract Number(s): 10-023		Nearest Milepost: 211		Associated Wetland ID(s): NA
Survey Type: <i>(check one)</i> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: <i>(check one)</i> <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial				
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:				
OHWM Width: <u>3</u> ft. Height: <u>0.5</u> ft. N/A <input type="checkbox"/>		OHWM Indicator: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Clear line on bank <input checked="" 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 checked="" type="checkbox"/> Abrupt plant community change <input checked="" type="checkbox"/> Soil characteristic change		
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>4</u> ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input checked="" type="checkbox"/> <u> </u> ft.	Depth of Water: <i>(Approx.)</i> <u> </u> ft. N/A <input checked="" type="checkbox"/>	
Sinuosity: <i>(check one)</i> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: <i>(Approx.)</i> <u> </u> fps N/A <input checked="" type="checkbox"/>	Bank height Right: <u>4</u> ft. Left: <u>4</u> ft.	Bank slope Right: <u>70</u> degrees Left: <u>70</u> degrees	
Qualitative Attributes				
Water Appearance: <i>(check one)</i> <input checked="" type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: <i>(check all that apply)</i> <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 checked="" type="checkbox"/> Organic <input type="checkbox"/> Other: % of Substrate: <u>NA</u> % <u>NA</u> % <u>NA</u> % <u>10</u> % <u>70</u> % <u>10</u> % <u>10</u> % <u>NA</u> %				
Width of Riparian Zone: <u>>100</u> ft. N/A <input type="checkbox"/>	Vegetative Layers: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs Avg. DBH of Dominants: <i>(approx.)</i> <u>12</u> in. <u>2</u> in.			
Dominant Bank Vegetation <i>(list)</i> : IRON WOOD, WINGED ELM, CHRISTMAS FERN, VIOLET, MOSS				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): NA				
Aquatic Organisms Observed <i>(list)</i> : NA				
T&E Species Observed <i>(list)</i> : NA				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): NA				
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality ^a : <i>(check one)</i> <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low				

Waterbody ID:

SCUK032b

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

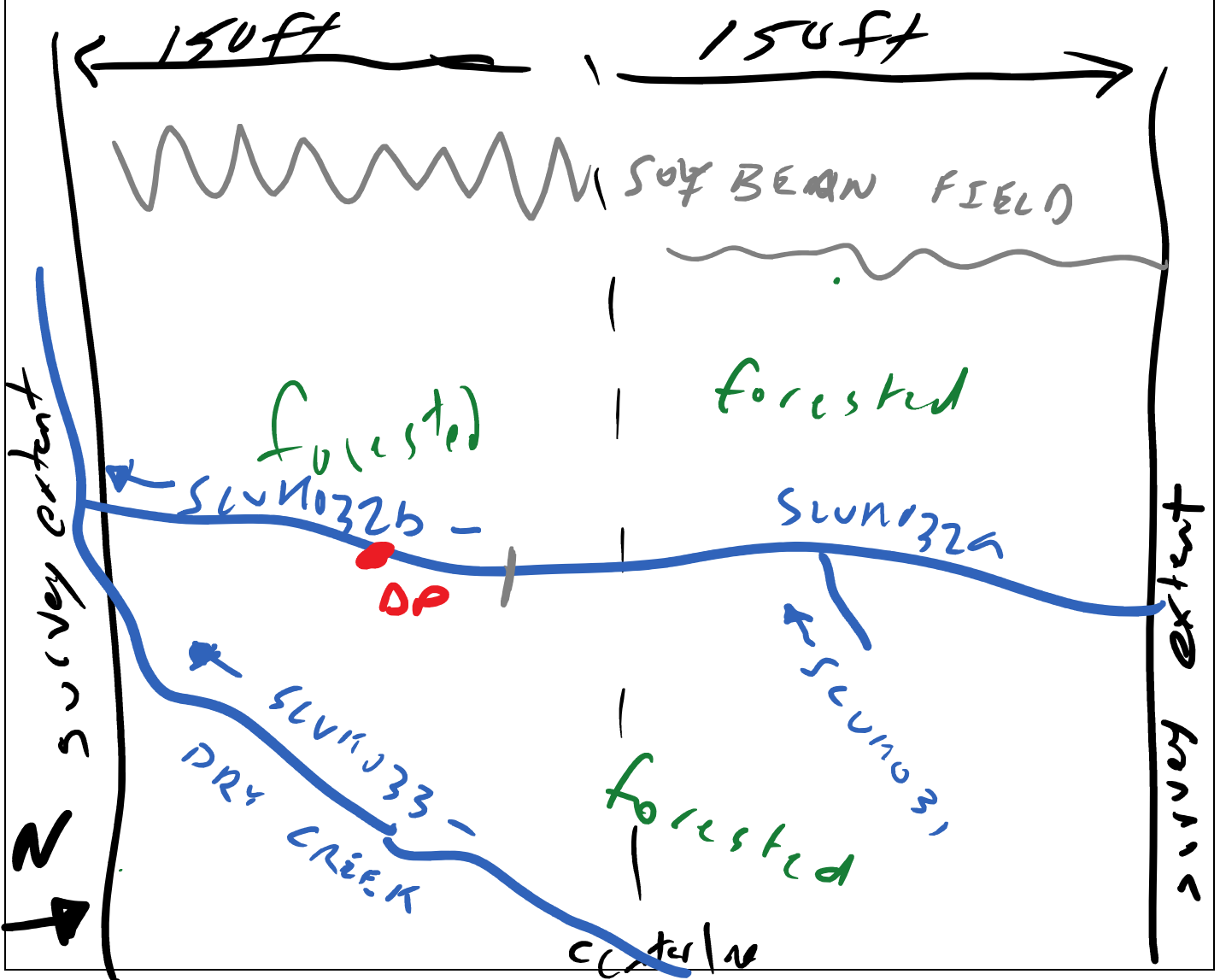
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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

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

Notes:

INTERMITTENT STREAM PORTION, STARTS AT HEADCUT. MAY RECEIVE FLOW FROM POND LOCATED UP GRADIENT DURING HEAVY RAIN EVENTS AND LIKELY RECEIVES GROUNDWATER INPUT DURING WETTER MONTHS.

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





Waterbody point scuk032b facing North and upstream



Waterbody point scuk032b facing South and downstream



Waterbody point scuk032b facing West and across

Linear Waterbody Data Sheet

Survey Description				
Project Name: Southeast Reliability		Waterbody Name: UNT TO DRY CREEK		Waterbody ID: SCUK031
Date: 8/25/2014				
State: Virginia	County: Cumberland	Company: W&C	Crew Member Initials: JS, BG	Photos: 100-0141 TO 0144 U D X
Tract Number(s): 10-023		Nearest Milepost: 211	Associated Wetland ID(s): NA	
Survey Type: <i>(check one)</i> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: <i>(check one)</i> <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial				
Waterbody Type: <i>(check one)</i> <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. Height: <u> .5 </u> ft. N/A <input type="checkbox"/>		OHWM Indicator: <i>(check all that apply)</i> <input checked="" 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 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> 6 </u> ft.	Width of Waterbody - Toe of Slope to Toe of Slope: <u> 2 </u> ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input checked="" type="checkbox"/> <u> </u> ft.	Depth of Water: <i>(Approx.)</i> <u> </u> ft.	
Sinuosity: <i>(check one)</i> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: <i>(Approx.)</i> <u> </u> fps N/A <input checked="" type="checkbox"/>	Bank height Right: <u> 3 </u> ft. Left: <u> 3 </u> ft.	Bank slope Right: <u> 70 </u> degrees Left: <u> 70 </u> degrees	
Qualitative Attributes				
Water Appearance: <i>(check one)</i> <input checked="" type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: <i>(check all that apply)</i> <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> NA </u> % <u> NA </u> % <u> NA </u> % <u> NA </u> % <u> 50 </u> % <u> 20 </u> % <u> 30 </u> % <u> NA </u> %				
Width of Riparian Zone: <u> >100 </u> ft. N/A <input type="checkbox"/>	Vegetative Layers: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Trees: <u> 12 </u> in. <input checked="" type="checkbox"/> Saplings/Shrubs: <u> 2 </u> in. <input checked="" type="checkbox"/> Herbs			
Dominant Bank Vegetation <i>(list)</i> : IRON WOOD, CHRISTMAS FERN, MOSS				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): NA				
Aquatic Organisms Observed <i>(list)</i> : NA				
T&E Species Observed <i>(list)</i> : NA				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): NA				
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality ^a : <i>(check one)</i> <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low				

Waterbody ID:

SCUK031

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

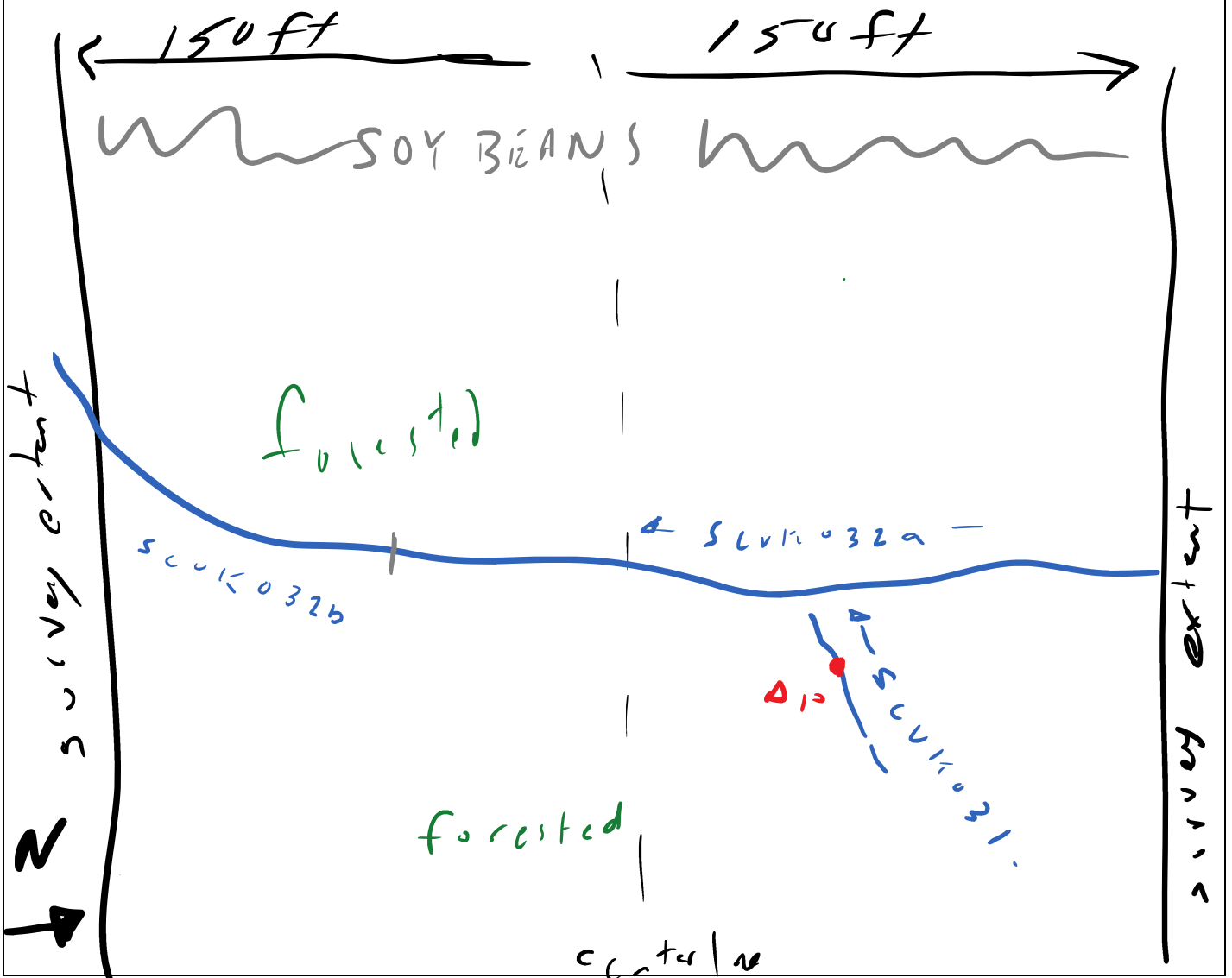
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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

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

Notes:

EPHEMERAL STREAM THAT FLOWS INTO SCUK032. STARTS AT PROPERTY LINE WITH NO PARCEL INFO.

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





Waterbody point scuk031 facing East and upstream



Waterbody point scuk031 facing West and downstream



Waterbody point scuk031 facing North and across

Linear Waterbody Data Sheet

Survey Description				
Project Name: Southeast Reliability		Waterbody Name: UNT to DRY CREEK		Waterbody ID: SCUK034
State: Virginia		County: Cumberland	Company: W&C	Crew Member Initials: JS, BG
Tract Number(s): 10-023		Nearest Milepost: 211		Associated Wetland ID(s): NA
Survey Type: <i>(check one)</i> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: <i>(check one)</i> <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial				
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:				
OHWM Width: <u>3</u> ft. Height: <u>1</u> ft. N/A <input type="checkbox"/>		OHWM Indicator: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Clear line on bank <input checked="" type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input 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>8</u> ft.	Width of Waterbody - Toe of Slope to Toe of Slope: <u>4</u> ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input checked="" type="checkbox"/> <u> </u> ft.	Depth of Water: <i>(Approx.)</i> N/A <input checked="" type="checkbox"/> <u> </u> ft.	
Sinuosity: <i>(check one)</i> <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering	Water velocity: <i>(Approx.)</i> <u> </u> fps N/A <input checked="" type="checkbox"/>	Bank height Right: <u>5</u> ft. Left: <u>4</u> ft.	Bank slope Right: <u>70</u> degrees Left: <u>70</u> degrees	
Qualitative Attributes				
Water Appearance: <i>(check one)</i> <input checked="" type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: <i>(check all that apply)</i> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Other: % of Substrate: <u>NA</u> % <u>NA</u> % <u>NA</u> % <u>30</u> % <u>50</u> % <u>NA</u> % <u>20</u> % <u>NA</u> %				
Width of Riparian Zone: <u>>100</u> ft. N/A <input type="checkbox"/>	Vegetative Layers: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs Avg. DBH of Dominants: <i>(approx.)</i> <u>14</u> in. <u>2</u> in.			
Dominant Bank Vegetation <i>(list)</i> : HICKORY, TULIP POPLAR, WHITE OAK, CHRISTMAS FERN, MOSS				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): NA				
Aquatic Organisms Observed <i>(list)</i> : NA				
T&E Species Observed <i>(list)</i> : NA				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): NA				
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality ^a : <i>(check one)</i> <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low				

Waterbody ID:
SCUK034

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

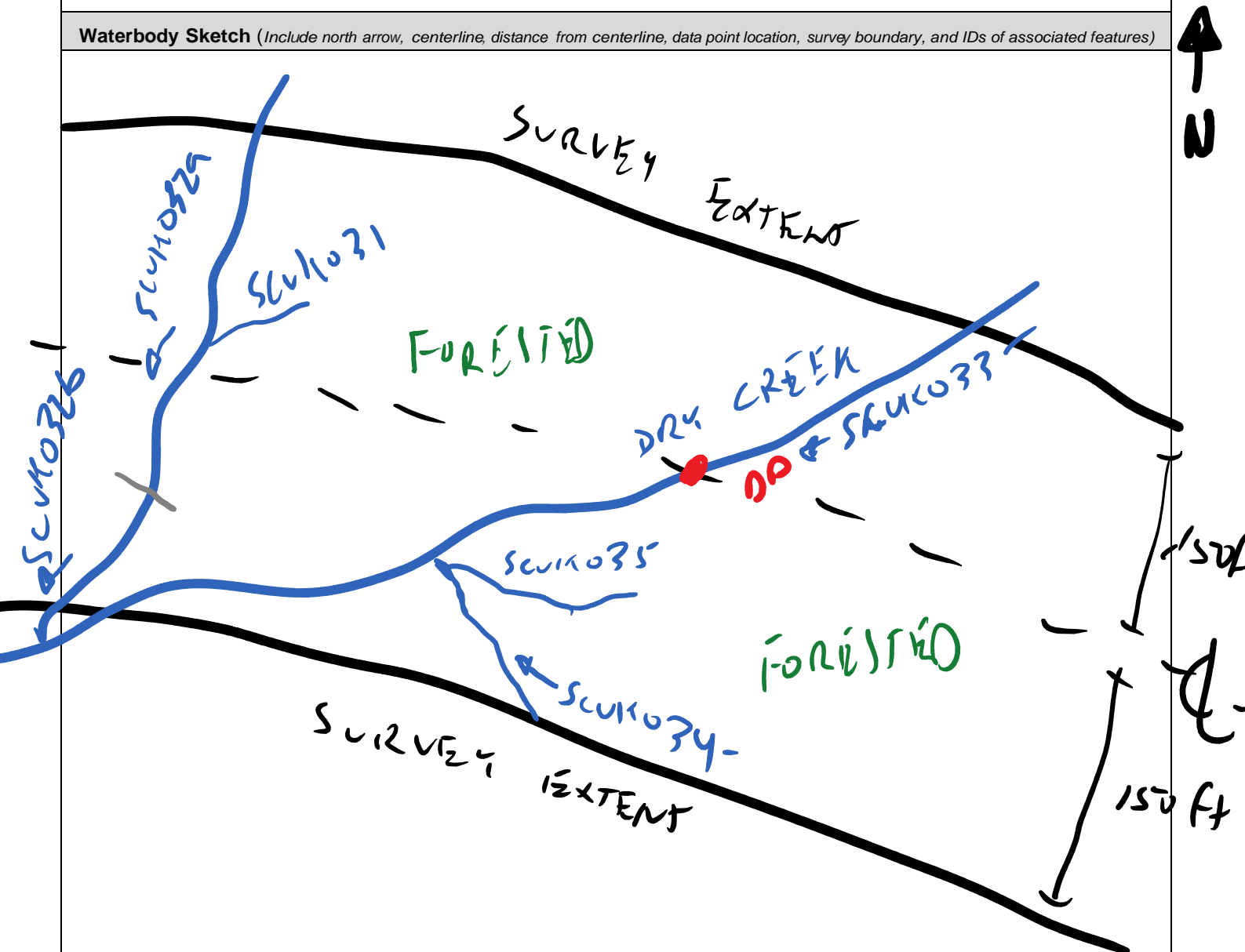
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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

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

Notes:

EPHEMERAL STREAM THAT FLOWS FROM OFF ROW TO DRY CREEK.

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





Waterbody point scuk034 facing East and upstream



Waterbody point scuk034 facing West and downstream



Waterbody point scuk034 facing North and across

Linear Waterbody Data Sheet

Survey Description				
Project Name: Southeast Reliability		Waterbody Name: DRY CREEK		Waterbody ID: SCUK033
State: Virginia		County: Cumberland	Company: W&C	Crew Member Initials: JS, BG
Tract Number(s): 10-023		Nearest Milepost: 211		Associated Wetland ID(s): NA
Survey Type: <i>(check one)</i> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: <i>(check one)</i> <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial				
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:				
OHWM Width: <u>9</u> ft. Height: <u>2</u> ft. N/A <input type="checkbox"/>		OHWM Indicator: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Clear line on bank <input checked="" type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change		
Width of Waterbody - Top of Bank to Top of Bank: <u>16</u> ft.	Width of Waterbody - Toe of Slope to Toe of Slope: <u>9</u> ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input type="checkbox"/> <u>4</u> ft.	Depth of Water: <i>(Approx.)</i> N/A <input type="checkbox"/> <u>1</u> ft.	
Sinuosity: <i>(check one)</i> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: <i>(Approx.)</i> <u>0.1</u> fps N/A <input type="checkbox"/>	Bank height Right: <u>5</u> ft. Left: <u>5</u> ft.	Bank slope Right: <u>45</u> degrees Left: <u>70</u> degrees	
Qualitative Attributes				
Water Appearance: <i>(check one)</i> <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: <i>(check all that apply)</i> % of Substrate: <u>10</u> % <u>5</u> % <u>10</u> % <u>30</u> % <u>45</u> % <u>NA</u> % <u>NA</u> % <u>NA</u> %				
Width of Riparian Zone: <u>>100</u> ft. N/A <input type="checkbox"/>	Vegetative Layers: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Trees: <u>14</u> in. <input checked="" type="checkbox"/> Saplings/Shrubs: <u>2</u> in. <input checked="" type="checkbox"/> Herbs			
Dominant Bank Vegetation <i>(list)</i> : ALDER, GRASSES, IRON WOOD, OAKS, PERSICARIA				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): RIFFLES, POOLS, SOFT SEDIMENT, UNDERCUT BANKS, OVERHANGING ROOTS, OVERHANGING VEGETATION, LEAF PACK				
Aquatic Organisms Observed <i>(list)</i> : WATER STRIDERS, FROGS, FISH,				
T&E Species Observed <i>(list)</i> : NA				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): NA				
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality ^a : <i>(check one)</i> <input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low				

Waterbody ID:

SCUK033

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

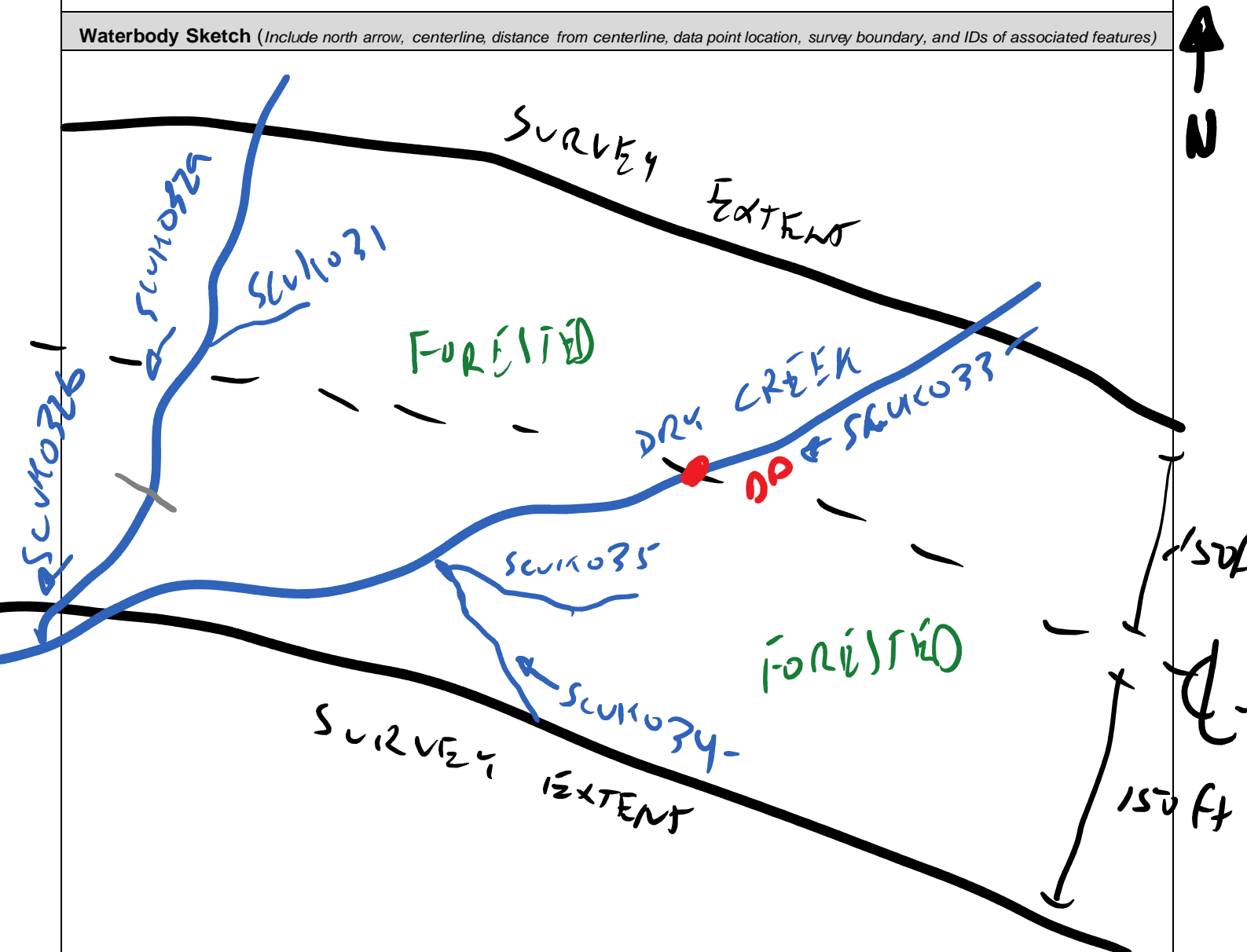
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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

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

Notes:

PERENNIAL STREAM WITH LOW FLOW. SOME EROSION ON BANKS. BIRDS OBSERVED FORAGING AROUND STREAM.

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





Waterbody point scuk033 facing Northeast and upstream



Waterbody point scuk033 facing Southwest and downstream



Waterbody point scuk033 facing Southeast and
across

Linear Waterbody Data Sheet

Survey Description				
Project Name: Southeast Reliability		Waterbody Name: UNT to DRY CREEK		Waterbody ID: SCUK035
Date: 8/25/2014				
State: Virginia	County: Cumberland	Company: W&C	Crew Member Initials: JS, BG	Photos: 100-0157 TO 0159 U D X
Tract Number(s): 10-023		Nearest Milepost: 211	Associated Wetland ID(s): NA	
Survey Type: <i>(check one)</i> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: <i>(check one)</i> <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial				
Waterbody Type: <i>(check one)</i> <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. Height: <u>0.5</u> ft. N/A <input type="checkbox"/>		OHWM Indicator: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Clear line on bank <input checked="" type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input checked="" type="checkbox"/> Water staining <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		
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>1</u> ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input checked="" type="checkbox"/> <u> </u> ft.	Depth of Water: <i>(Approx.)</i> N/A <input checked="" type="checkbox"/> <u> </u> ft.	
Sinuosity: <i>(check one)</i> <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering	Water velocity: <i>(Approx.)</i> <u> </u> fps N/A <input checked="" type="checkbox"/>	Bank height Right: <u>4</u> ft. Left: <u>4</u> ft.	Bank slope Right: <u>80</u> degrees Left: <u>80</u> degrees	
Qualitative Attributes				
Water Appearance: <i>(check one)</i> <input checked="" type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: <i>(check all that apply)</i> % of Substrate: <u>NA</u> % <u>NA</u> % <u>NA</u> % <u>NA</u> % <u>50</u> % <u>NA</u> % <u>50</u> % <u>NA</u> %				
Width of Riparian Zone: <u>>100</u> ft. N/A <input type="checkbox"/>	Vegetative Layers: <i>(check all that apply)</i> Avg. DBH of Dominants: <i>(approx.)</i> <u>14</u> in. <u>2</u> in.			
Dominant Bank Vegetation <i>(list)</i> : HICKORY, TULIP POPLAR, WHITE OAK, IRON WOOD, CHRISTMAS FERN, MOSS				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): NA				
Aquatic Organisms Observed <i>(list)</i> : NA				
T&E Species Observed <i>(list)</i> : NA				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): NA				
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality ^a : <i>(check one)</i> <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low				

Waterbody ID:

SCUK035

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

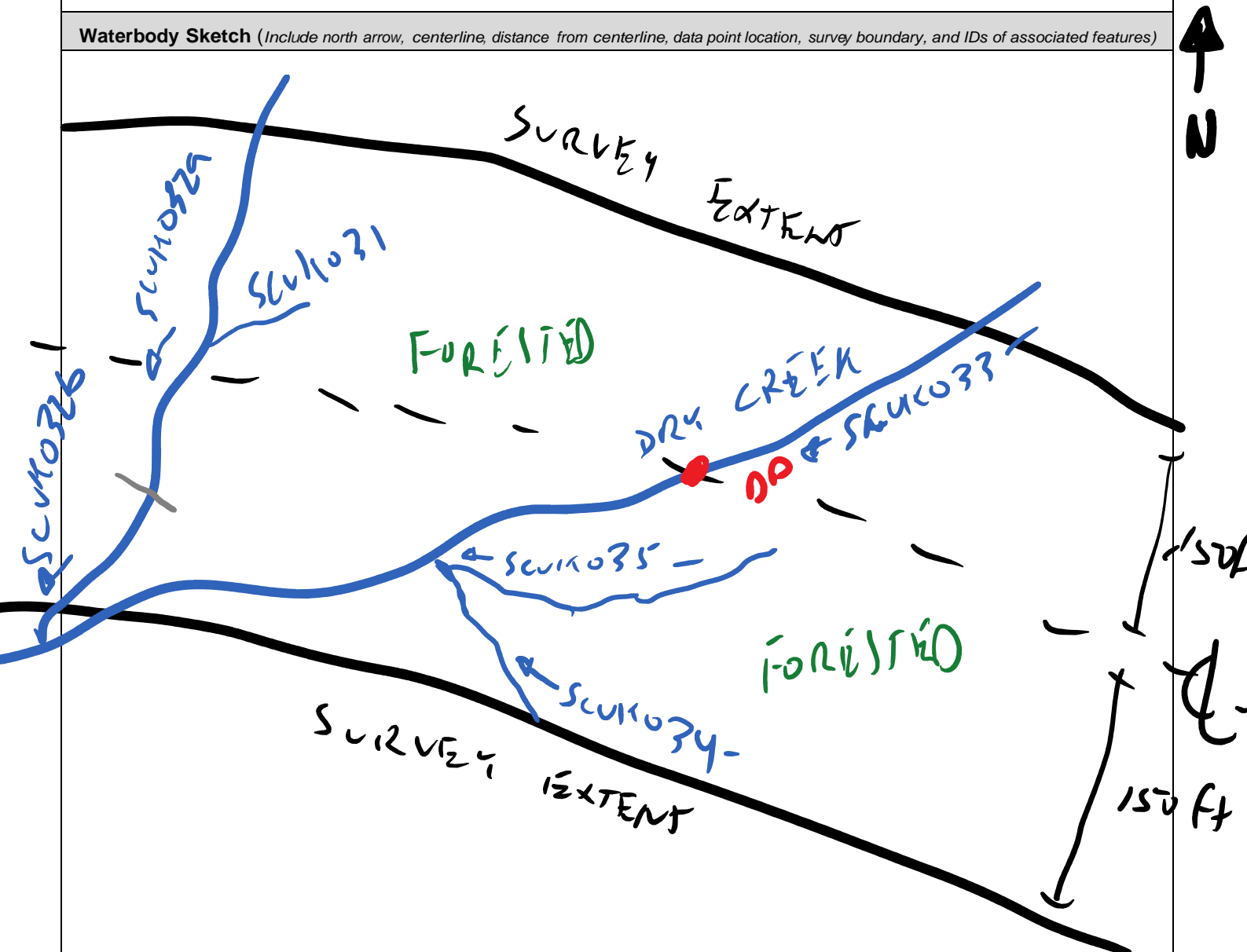
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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

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

Notes:

EPHEMERAL STREAM THAT FLOWS INTO SCUK034. HEADCUTS AND SUBSTRATE SORTING PRESENT.

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





Waterbody point scuk035 facing Southeast and upstream



Waterbody point scuk035 facing Northwest and downstream



Waterbody point scuk035 facing Northeast and across

Linear Waterbody Data Sheet

Survey Description				
Project Name: Southeast Reliability		Waterbody Name: DRY CREEK		Waterbody ID: SCUK036
State: Virginia		County: Cumberland	Company: W&C	Crew Member Initials: JS, BG
Tract Number(s): 10-023		Nearest Milepost: 211		Associated Wetland ID(s): NA
Survey Type: <small>(check one)</small> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: <small>(check one)</small> <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial				
Waterbody Type: <small>(check one)</small> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:				
OHWM Width: <u>8</u> ft. Height: <u>2</u> ft. N/A <input type="checkbox"/>		OHWM Indicator: <small>(check all that apply)</small> <input checked="" type="checkbox"/> Clear line on bank <input checked="" type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change		
Width of Waterbody - Top of Bank to Top of Bank: <u>12</u> ft.		Width of Waterbody - Toe of Slope to Toe of Slope: <u>8</u> ft.		Width of Waterbody - Water Edge to Water Edge: N/A <input type="checkbox"/> <u>3</u> ft.
Depth of Water: <small>(Approx.)</small> N/A <input type="checkbox"/> <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>0.1</u> fps N/A <input type="checkbox"/>
Bank height Right: <u>4</u> ft. Left: <u>4</u> ft.		Bank slope Right: <u>45</u> degrees 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> % of Substrate: <u>NA</u> % <u>NA</u> % <u>NA</u> % <u>30</u> % <u>70</u> % <u>NA</u> % <u>NA</u> % <u>NA</u> %				
Width of Riparian Zone: <u>>100</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 checked="" type="checkbox"/> Herbs Avg. DBH of Dominants: <small>(approx.)</small> <u>12</u> in. <u>2</u> in.		
Dominant Bank Vegetation <small>(list)</small> : IRON WOOD, Highbush Blueberry, Christmas Fern, Moss				
Aquatic Habitats <small>(ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools)</small> : Riffles, Pools, Soft Sediment, Undercut Banks, Overhanging Roots				
Aquatic Organisms Observed <small>(list)</small> : Water Striders				
T&E Species Observed <small>(list)</small> : NA				
Disturbances <small>(ex: livestock access, manure in waterbody, waste discharge pipes)</small> : NA				
Tributary is: <small>(check one)</small> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality ^a : <small>(check one)</small> <input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low				

Waterbody ID:

SCUK036

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

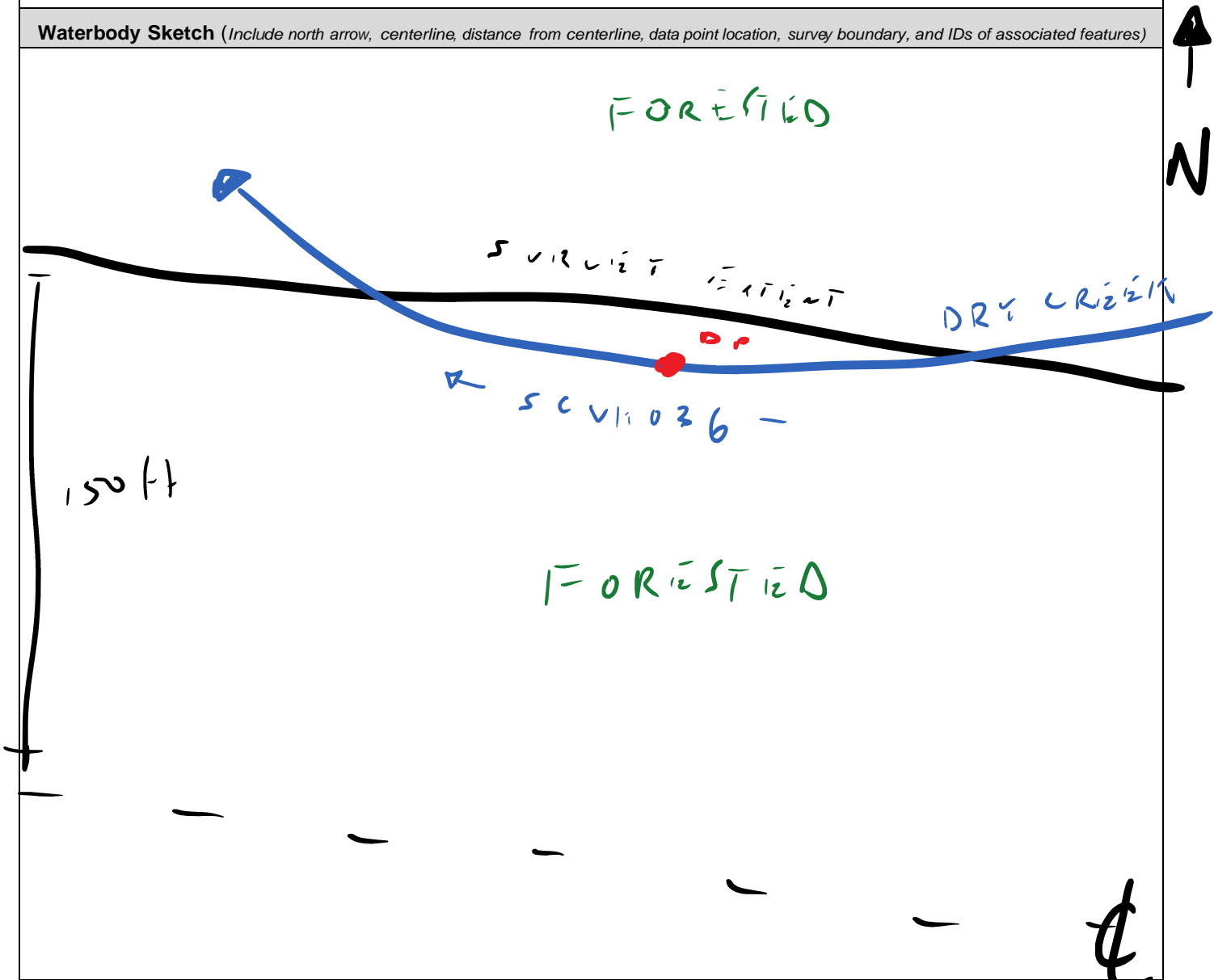
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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

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

Notes:

PERENNIAL STREAM WITH LOW FLOW. SOME EROSION ON BANKS. SMALL SECTION OF STREAM COMES ON ROW. UPSTREAM PORTION OF DRY CREEK.

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





Waterbody point scuk036 facing East and upstream



Waterbody point scuk036 facing West and downstream



Waterbody point scuk036 facing South and across