

SUPPLY HEADER PROJECT ENVIRONMENTAL SURVEY

Wetland and Waterbody Delineation Report

APPENDIX B

Waterbody Datasheets and Photo Pages

SUPPLY HEADER PROJECT ENVIRONMENTAL SURVEY

Waterbody Datasheets and Photo Pages

TL-635

Doddridge County

West Virginia

Waterbody Data Sheet

Survey Description						
Project Name: <u>DTI Supply Header</u>		Waterbody Name: <u>Unnamed trib to Dry Fork</u>	Waterbody ID: <u>sdog002</u>	Date: <u>10/21/14</u> sdog002		
State: <u>WV</u>	County: <u>Doddridge</u>	Company: <u>D+D WEST</u>	Crew Member Initials: <u>CPP + DSB</u>	Photo ID(s):		
Tract Number(s): <u>31-001 + 003</u>		Milepost Entry: <u>29.225</u>	Milepost Exit: <u>29.225</u>	Associated Wetland ID(s): <u>wdog001</u>		
Survey Type: <small>(check one)</small>						
<input type="checkbox"/> Centerline		<input type="checkbox"/> Re-Route	<input type="checkbox"/> Access Road	<input checked="" type="checkbox"/> Other: <u>east OHWM</u>		
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 checked="" type="checkbox"/> Stream	<input type="checkbox"/> River	<input type="checkbox"/> Ditch	<input type="checkbox"/> Pond	<input type="checkbox"/> Lake	<input type="checkbox"/> Connecting swale ^a	<input type="checkbox"/> Other:
OHWM		OHWM Indicator: <small>(check all that apply)</small>				
Width: <u>2</u> ft.	<input type="checkbox"/> Clear line on bank	<input checked="" type="checkbox"/> Shelving	<input type="checkbox"/> Wrested vegetation	<input checked="" type="checkbox"/> Scouring	<input type="checkbox"/> Water staining	
Height: <u>0.5-1</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	
Width of Waterbody - Top of Bank to Top of Bank at Centerline: <u>4</u> ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: <u>2</u> ft.		Depth of Water at Centerline: <small>(Approx.)</small> <u>0.5</u> ft.		
Sinuosity: <small>(check one)</small>		Water velocity: <small>(Approx.)</small>	Bank height	Bank slope		
<input type="checkbox"/> Straight	<input checked="" type="checkbox"/> Meandering	<u>< 1</u> fps	Right: <u>1</u> ft.	Left: <u>1</u> ft.	Right: <u>25</u> degrees Left: <u>25</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 checked="" type="checkbox"/> Other: <u>Boulder</u>
Substrate: <small>(check all that apply)</small>						
<input type="checkbox"/> Bedrock	<input checked="" type="checkbox"/> Gravel	<input checked="" type="checkbox"/> Sand	<input type="checkbox"/> Silt/clay	<input type="checkbox"/> Organic	<input checked="" type="checkbox"/> Other: <u>Boulder</u>	
% of Substrate: _____ % <u>80</u> % <u>10</u> % _____ % _____ % <u>10</u> %						
Width of Riparian Zone: <u>> 100</u> ft.		Vegetative Layers: <small>(check all that apply)</small>				
<input checked="" type="checkbox"/> Trees: <u>6</u> in.	<input checked="" type="checkbox"/> Shrubs: <u>2</u> in.	<input type="checkbox"/> Herbs				
Avg. DBH of Dominants: <small>(approx.)</small>						
Dominant Bank Vegetation: <small>(list)</small> <u>Carpinus caroliniana, Carya tomentosa, Liriodendron tulipifera, acrostichum, Polystichum</u>						
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): <small>(list)</small> <u>Rock shelves</u>						
Aquatic Organisms Observed: <small>(list)</small> <u>None</u>						
Invasive and/or T&E Species Observed: <small>(list)</small> <u>None</u>						
Tributary is: <small>(check one)</small>						
<input checked="" type="checkbox"/> Natural		<input type="checkbox"/> Artificial, man-made		<input type="checkbox"/> Manipulated		
Disturbances: <small>(check all that apply)</small>						
<input type="checkbox"/> Livestock access	<input type="checkbox"/> Manure in waterbody	<input type="checkbox"/> Waste discharge pipes	<input checked="" type="checkbox"/> Other: <u>up stream logging road</u>			
Stream Quality ^b : <small>(check one)</small>						
<input type="checkbox"/> High		<input type="checkbox"/> Moderate		<input checked="" type="checkbox"/> Low		

sdog002

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **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.

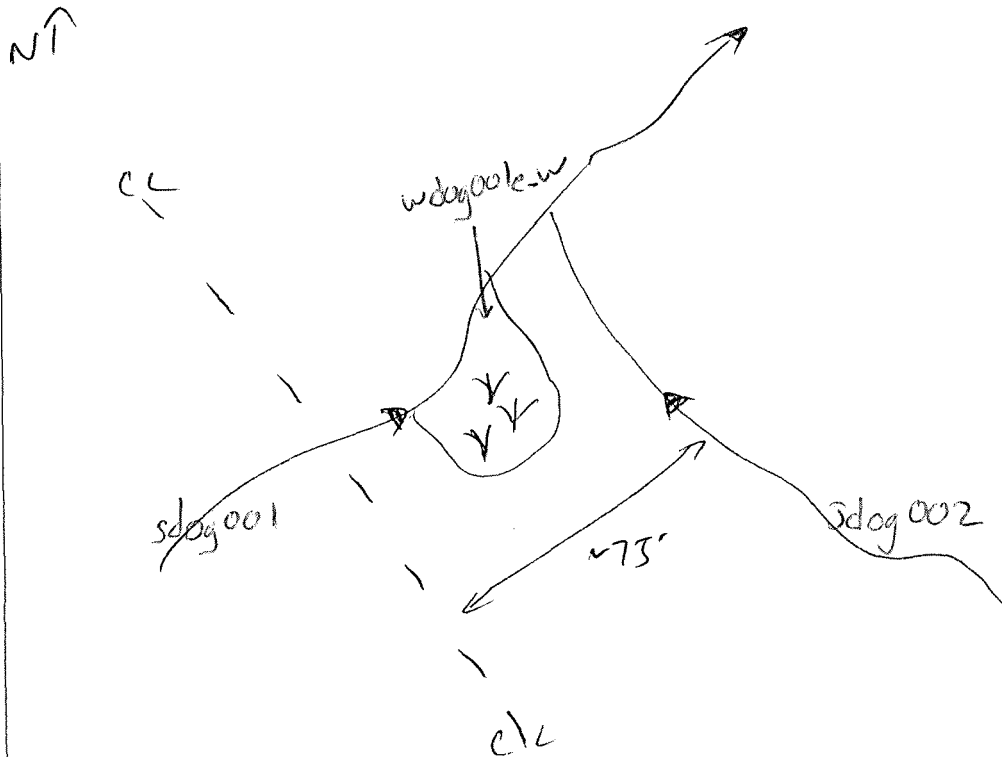
Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious 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 flows to sdog001

Waterbody Sketch

Include north arrow, centerline, distance from centerline, photo locations, survey boundary, and unique IDs of associated features.



sdog002



Waterbody sdog002 facing upstream



Waterbody sdog002 facing downstream

sdog002



Waterbody sdog002 facing east cross stream

Waterbody Data Sheet

Survey Description			
Project Name: DTI Supply Header		Waterbody Name: Unnamed Tris. to Dry Fork	Waterbody ID: sdog001 sdog004
State: WV		County: Doddridge Harrison	Date: 10/21/14
Company: D+D WEST		Crew Member Initials: CPP + DSB	Photo ID(s):
Tract Number(s): 31-003		Milepost Entry: 29.2	Milepost Exit: 29.2
Associated Wetland ID(s): wdog001			
Survey Type: (check one)			
<input type="checkbox"/> Centerline		<input type="checkbox"/> Re-Route	<input type="checkbox"/> Access Road
<input checked="" type="checkbox"/> Other: South ONWM			
Physical Attributes			
Stream Classification: (check one)			
<input type="checkbox"/> Ephemeral		<input type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Perennial
Waterbody Type: (check one)			
<input checked="" type="checkbox"/> Stream		<input type="checkbox"/> River	<input type="checkbox"/> Ditch
<input type="checkbox"/> Pond		<input type="checkbox"/> Lake	<input type="checkbox"/> Connecting swale ^a
<input type="checkbox"/> Other:			
OHWM		OHWM Indicator: (check all that apply)	
Width: 8 ft.	<input checked="" type="checkbox"/> Clear line on bank	<input checked="" type="checkbox"/> Shelving	<input type="checkbox"/> Wrested vegetation
Height: 4 ft.	<input checked="" type="checkbox"/> Bent, matted, or missing vegetation	<input checked="" type="checkbox"/> Wrack line	<input type="checkbox"/> Scouring
	<input type="checkbox"/> Litter and debris	<input type="checkbox"/> Abrupt plant community change	<input type="checkbox"/> Water staining
	<input type="checkbox"/> Soil characteristic change		
Width of Waterbody - Top of Bank to Top of Bank at Centerline: 14 =ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: 8 ft.	Depth of Water at Centerline: (Approx.) 0.5 to 0.75 ft
Sinuosity: (check one)		Water velocity: (Approx.)	Bank height
<input type="checkbox"/> Straight	<input checked="" type="checkbox"/> Meandering	2 fps	Right: 5 ft.
			Left: 2.5 ft.
			Right: 50 degrees
			Left: 75 degrees
Qualitative Attributes			
Water Appearance: (check one)			
<input type="checkbox"/> No water		<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Turbid
<input type="checkbox"/> Sheen on surface		<input type="checkbox"/> Surface scum	<input type="checkbox"/> Algal mats
<input type="checkbox"/> Other:			
Substrate: (check all that apply)			
<input type="checkbox"/> Bedrock	<input 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: _____ % 75 % 20 % 5 % _____ %			
Width of Riparian Zone: >100 ft.		Vegetative Layers: (check all that apply)	
	<input checked="" type="checkbox"/> Trees: 6 in.	<input checked="" type="checkbox"/> Shrubs: 2 in.	<input checked="" type="checkbox"/> Herbs
Avg. DBH of Dominants: (approx.)			
Dominant Bank Vegetation: (list) Rosa multiflora, Ostrya virginiana, Fagus grandiflora			
Aquatic Habitats (ex: submerged or emergent aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): (list) Rocks w/ riffles + pools			
Aquatic Organisms Observed: (list) None			
Invasive and/or T&E Species Observed: (list) Rosa multiflora			
Tributary is: (check one)			
<input checked="" type="checkbox"/> Natural		<input type="checkbox"/> Artificial, man-made	<input type="checkbox"/> Manipulated
Disturbances: (check all that apply)			
<input type="checkbox"/> Livestock access		<input type="checkbox"/> Manure in waterbody	<input type="checkbox"/> Waste discharge pipes
<input checked="" type="checkbox"/> Other: existing easement			
Stream Quality ^b : (check one)			
<input checked="" type="checkbox"/> High		<input type="checkbox"/> Moderate	<input type="checkbox"/> Low

sdog001

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

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

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

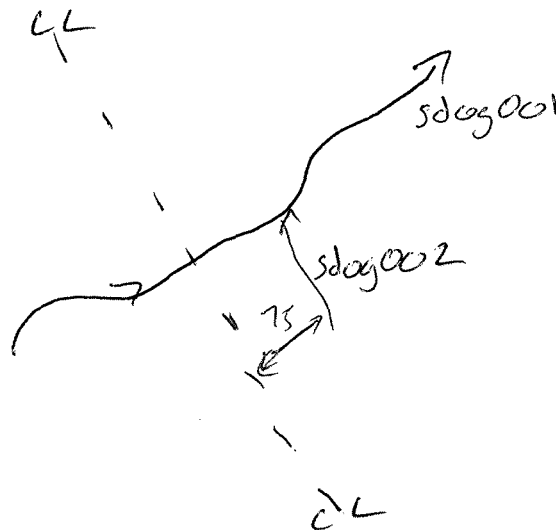
Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious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

Notes

Stream flows perpendicular to C.L.

Waterbody Sketch

Include north arrow, centerline, distance from centerline, photo locations, survey boundary, and unique IDs of associated features.



sdog001



Waterbody sdog001 facing upstream



Waterbody sdog001 facing downstream

sdog001



Waterbody sdog001 facing east cross stream

Waterbody Data Sheet

Survey Description			
Project Name: DTI Supply Warden		Waterbody Name: DTI DRY FORK W	
Waterbody ID: SD0J009		Date: 8-14-15	
State: WV	County: Doddridge	Company: DDWEST	Crew Member Initials: JD, DB
Tract Number(s): 31-003 31-003, AR		Milepost Entry: NA	Milepost Exit: NA
Associated Wetland ID(s): NONE			
Survey Type: (check one) <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial			
Waterbody Type: (check one) <input checked="" type="checkbox"/> Stream <input type="checkbox"/> River <input type="checkbox"/> Ditch <input type="checkbox"/> Pond <input type="checkbox"/> Lake <input type="checkbox"/> Connecting swale ^a <input type="checkbox"/> Other:			
OHWM Width: $\frac{1}{2}$ ft. Height: $\frac{1}{2}$ ft.		OHWM Indicator: (check all that apply) <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input checked="" type="checkbox"/> Water staining	
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation		<input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change	
Width of Waterbody - Top of Bank to Top of Bank at Centerline: 8 ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: 2 ft.	
Depth of Water at Centerline: (Approx.) 3 ft.			
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: (Approx.) < 1 fps	
Bank height Right: 2 ft. Left: 2 ft.		Bank slope Right: 40 degrees Left: 40 degrees	
Qualitative Attributes			
Water Appearance: (check one) <input type="checkbox"/> No water <input type="checkbox"/> Clear <input checked="" type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/clay <input type="checkbox"/> Organic <input type="checkbox"/> Other:			
% of Substrate: _____ % 70 % 10 % 20 % _____ %			
Width of Riparian Zone: 720 ft.		Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: _____ in. <input checked="" type="checkbox"/> Shrubs: _____ in. <input checked="" type="checkbox"/> Herbs	
Avg. DBH of Dominants: (approx.) _____ in.			
Dominant Bank Vegetation: (list) <i>Platanus occidentalis, Salix nigra, Vernonia gigantea, Verbesina occidentalis, Microstegium vimineum</i>			
Aquatic Habitats (ex: submerged or emergent aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): (list) riffles, pools			
Aquatic Organisms Observed: (list) small fish			
Invasive and/or T&E Species Observed: (list) <i>Microstegium vimineum</i>			
Tributary is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Disturbances: (check all that apply) <input type="checkbox"/> Livestock access <input type="checkbox"/> Manure in waterbody <input type="checkbox"/> Waste discharge pipes <input checked="" type="checkbox"/> Other: adjacent roads & culvert pipes			
Stream Quality: (check one) <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low			

Waterbody ID:

SD0J009

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^b 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.

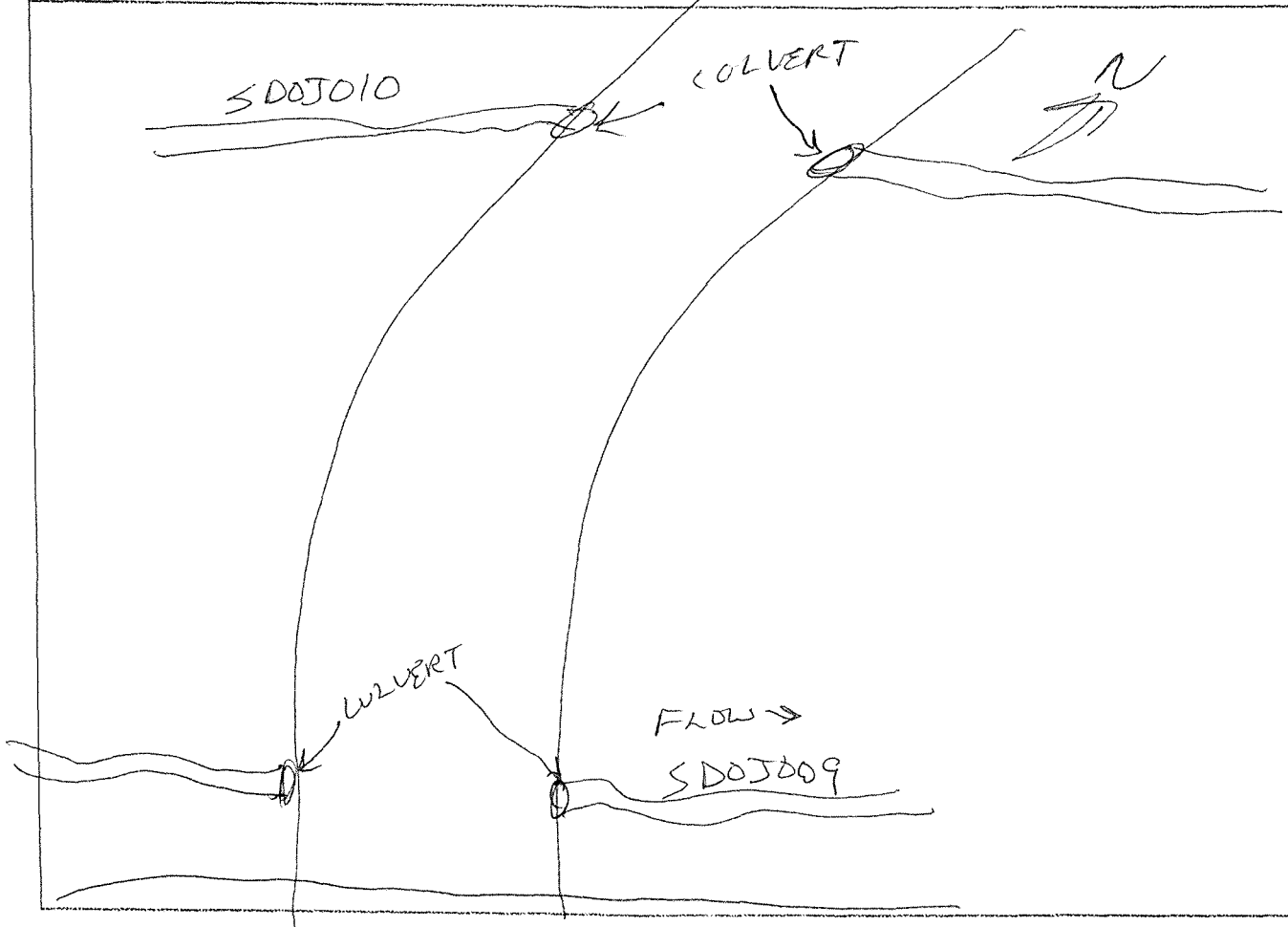
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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



SDOJ009



Waterbody *SDOJ009*
facing upstream



Waterbody *SDOJ009*
facing downstream

SDOJ009



Waterbody SDOJ002 facing upline cross stream

Waterbody Data Sheet

Survey Description			
Project Name: DTI Supply Hauler		Waterbody Name: UNTD DRY FORK REACH	
Waterbody ID: SD0J0010		Date: 8-14-15	
State: WV	County: Doddridge	Company: DDWEST	Crew Member Initials: JD, DB
Photo ID(s):			
Tract Number(s): 31-003 31-003.AB		Milepost Entry: NA	Milepost Exit: NA
Associated Wetland ID(s): NONE			
Survey Type: (check one) <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial			
Waterbody Type: (check one) <input checked="" type="checkbox"/> Stream <input type="checkbox"/> River <input type="checkbox"/> Ditch <input type="checkbox"/> Pond <input type="checkbox"/> Lake <input type="checkbox"/> Connecting swale <input type="checkbox"/> Other:			
OHWM Width: 5 ft. Height: 6 ft.		OHWM Indicator: (check all that apply) <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input checked="" type="checkbox"/> Water staining <input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change	
Width of Waterbody - Top of Bank to Top of Bank at Centerline: 10 ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: _____ ft.	
Depth of Water at Centerline: (Approx.) _____ ft.			
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: (Approx.) < 1 fps	
Bank height Right: 1 ft. Left: 2 ft.		Bank slope Right: 25 degrees Left: 35 degrees	
Qualitative Attributes			
Water Appearance: (check one) <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: (check all that apply) <input checked="" type="checkbox"/> Bedrock <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: 10% 70% 5% 15% _____%			
Width of Riparian Zone: > 20 ft.		Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: _____ in. <input checked="" type="checkbox"/> Shrubs: _____ in. <input checked="" type="checkbox"/> Herbs	
Avg. DBH of Dominants: (approx.) _____ in.			
Dominant Bank Vegetation: (list) Juglans nigra, Carpinus caroliniana, Eleagnus umbellata, Rosa multi-flora, Microstegium vimineum			
Aquatic Habitats (ex: submerged or emergent aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): (list) Pools, riffles			
Aquatic Organisms Observed: (list) fish NONE			
Invasive and/or T&E Species Observed: (list) Rosa multi-flora			
Tributary is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated			
Disturbances: (check all that apply) <input type="checkbox"/> Livestock access <input type="checkbox"/> Manure in waterbody <input type="checkbox"/> Waste discharge pipes <input checked="" type="checkbox"/> Other: Culvert pipes			
Stream Quality: (check one) <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low			

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^b **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.

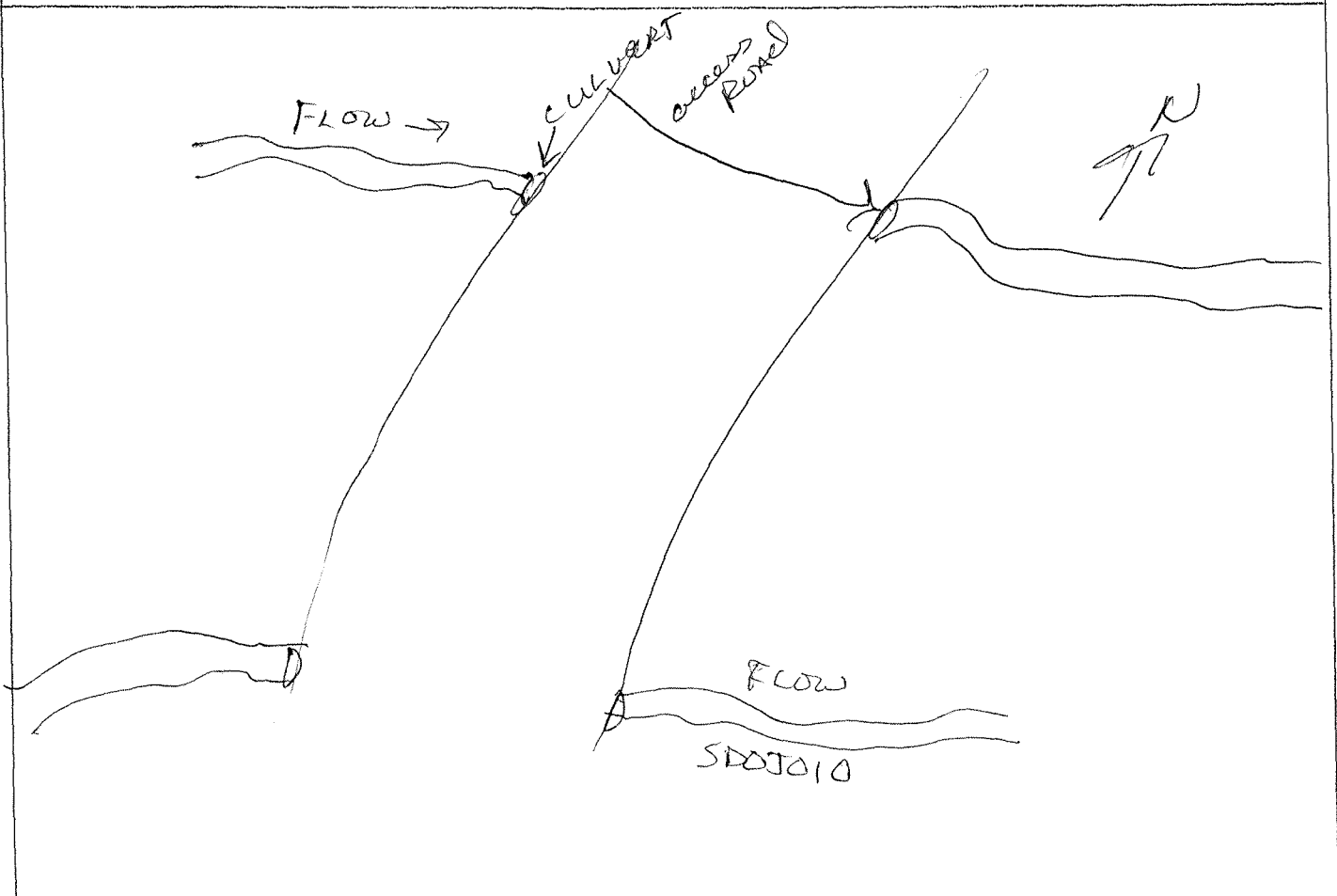
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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



SDOJ010



Waterbody *SDOJ010*
facing upstream



Waterbody *SDOJ010*
facing downstream

SDOJ010



Waterbody SDOJ010 facing upline cross stream

Waterbody Data Sheet

Survey Description			
Project Name: DTI Supply Header		Waterbody Name: DRY FORK	
Waterbody ID: SDOH004		Date: 10-21-14	
State: WV	County: Doddridge	Company: DDWEST	Crew Member Initials: JD, JG
Photo ID(s): 3			
Tract Number(s): 31-005		Milepost Entry: 29	Milepost Exit: 29
Associated Wetland ID(s): —			
Survey Type: (check one) <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial			
Waterbody Type: (check one) <input checked="" type="checkbox"/> Stream <input type="checkbox"/> River <input type="checkbox"/> Ditch <input type="checkbox"/> Pond <input type="checkbox"/> Lake <input type="checkbox"/> Connecting swale ^a <input type="checkbox"/> Other:			
OHWM Width: <u>8</u> ft. Height: <u>3</u> ft.		OHWM Indicator: (check all that apply) <input checked="" type="checkbox"/> Clear line on bank <input checked="" type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining	
		<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change	
Width of Waterbody - Top of Bank to Top of Bank at Centerline: <u>15</u> ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: <u>6</u> ft.	
Depth of Water at Centerline: (Approx.) <u>6</u> " ft.			
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: (Approx.) <u>75</u> fps	
		Bank height Right: <u>3</u> ft. Left: <u>4</u> ft.	
		Bank slope Right: <u>90</u> degrees Left: <u>70</u> degrees	
Qualitative Attributes			
Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: (check all that apply) <input checked="" type="checkbox"/> Bedrock <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>20</u> % <u>30</u> % <u>25</u> % <u>25</u> % _____ % _____ %			
Width of Riparian Zone: <u>15</u> ft.		Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: <u>10</u> in. <input checked="" type="checkbox"/> Shrubs: <u>1-3</u> in. <input checked="" type="checkbox"/> Herbs	
Avg. DBH of Dominants: (approx.)			
Dominant Bank Vegetation: (list) <u>Platanus occidentalis, Dactylis glomerata, Elaeagnus umbellata</u>			
Aquatic Habitats (ex: submerged or emergent aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): (list) <u>R. flk, pools, leaf mats</u>			
Aquatic Organisms Observed: (list) <u>small fish, tadpoles</u>			
Invasive and/or T&E Species Observed: (list) <u>Elaeagnus umbellata</u>			
Tributary is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Disturbances: (check all that apply) <input type="checkbox"/> Livestock access <input type="checkbox"/> Manure in waterbody <input type="checkbox"/> Waste discharge pipes <input checked="" type="checkbox"/> Other: <u>most woody veg clearing removed</u>			
Stream Quality ^b : (check one) <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low			

Waterbody ID:
SD0H004

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **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.

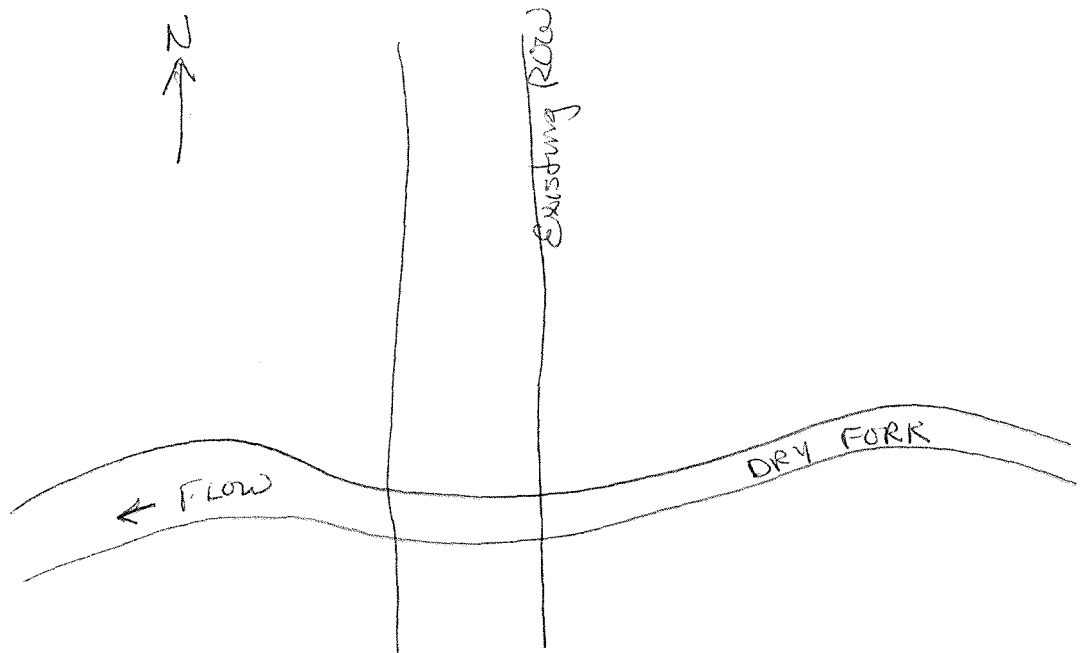
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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



sdoh004 ~



sdoh004 facing upstream



sdoh004 facing downstream

sdoh004 ~



sdoh004 cross stream

Waterbody Data Sheet

Survey Description

Project Name: <u>DTI Supply Header</u>		Waterbody Name: <u>UNT TO DRY FORK</u>		Waterbody ID: <u>S D04003</u>	Date: <u>10-21-14</u>
State: <u>WV</u>	County: <u>Doddridge</u>	Company: <u>DDWEST</u>	Crew Member Initials: <u>JD, JB</u>	Photo ID(s): <u>3</u>	
Tract Number(s): <u>31-0007</u>		Milepost Entry: <u>28</u>	Milepost Exit: <u>28</u>	Associated Wetland ID(s): <u>W00H002e</u> <u>W00H003e</u>	
Survey Type: (check one) <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other: _____					

Physical Attributes

Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial					
Waterbody Type: (check one) <input checked="" type="checkbox"/> Stream <input type="checkbox"/> River <input type="checkbox"/> Ditch <input type="checkbox"/> Pond <input type="checkbox"/> Lake <input type="checkbox"/> Connecting swale ^a <input type="checkbox"/> Other: _____					
OHWM Width: <u>4</u> ft. Height: <u>2</u> ft.		OHWM Indicator: (check all that apply) <input checked="" type="checkbox"/> Clear line on bank <input checked="" type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <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 at Centerline: <u>6</u> ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: <u>2</u> ft.		Depth of Water at Centerline: (Approx.) <u>4"</u> ft.	
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: (Approx.) <u><5</u> fps		Bank height Right: <u>3</u> ft. Left: <u>4</u> ft.	
Bank slope Right: <u>80</u> degrees Left: <u>90</u> degrees					

Qualitative Attributes

Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other: _____					
Substrate: (check all that apply) <input checked="" type="checkbox"/> Bedrock <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>50</u> % <u>30</u> % <u>10</u> % <u>10</u> % _____ % _____ %					
Width of Riparian Zone: <u>10</u> ft.		Vegetative Layers: (check all that apply) <input type="checkbox"/> Trees: _____ <input checked="" type="checkbox"/> Shrubs: <u>1-3</u> in. <input checked="" type="checkbox"/> Herbs			
Avg. DBH of Dominants: (approx.) _____ in.					
Dominant Bank Vegetation: (list) <u>Liriodendron tulipifera, microstegium viminea</u>					
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): (list) <u>riffle, pools, leaf mats</u>					
Aquatic Organisms Observed: (list) <u>tadpoles</u>					
Invasive and/or T&E Species Observed: (list) <u>Microstegium viminea</u>					
Tributary is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated					
Disturbances: (check all that apply) <input type="checkbox"/> Livestock access <input type="checkbox"/> Manure in waterbody <input type="checkbox"/> Waste discharge pipes <input checked="" type="checkbox"/> Other: <u>WITAIN MAINTAINED ROW</u>					
Stream Quality ^b : (check one) <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low					

S DOH003

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **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.

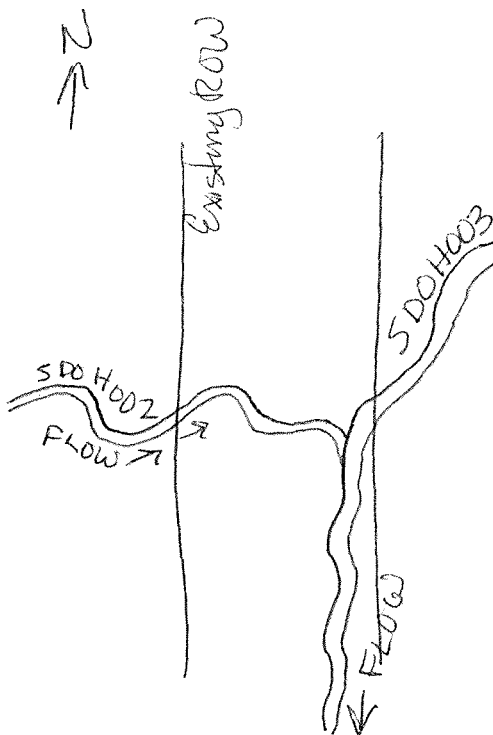
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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



sdoh003



sdoh003 facing upstream



sdoh003 facing downstream

sdoh003 ~



sdoh003 cross stream

Waterbody Data Sheet

Survey Description			
Project Name: <i>DTI Supply Hender</i>		Waterbody Name: <i>Meathouse Fork</i>	
Waterbody ID: <i>5006014</i>		Date: <i>4-14-15</i>	
State: <i>WV</i>	County: <i>Doddridge</i>	Company: <i>DYD WEST</i>	Crew Member Initials: <i>JD, DB</i>
Photo ID(s): <i>3</i>			
Tract Number(s): <i>31-010</i> <i>31-044-B042</i>		Milepost Entry: <i>2</i>	Milepost Exit: <i>2</i>
Associated Wetland ID(s): <i>NONE</i>			
Survey Type: <small>(check one)</small>			
<input type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other: _____			
Physical Attributes			
Stream Classification: <small>(check one)</small>			
<input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial			
Waterbody Type: <small>(check one)</small>			
<input checked="" type="checkbox"/> Stream <input type="checkbox"/> River <input type="checkbox"/> Ditch <input type="checkbox"/> Pond <input type="checkbox"/> Lake <input type="checkbox"/> Connecting swale ^a <input type="checkbox"/> Other: _____			
OHWM		OHWM Indicator: <small>(check all that apply)</small>	
Width: <i>25</i> ft.		<input checked="" type="checkbox"/> Clear line on bank <input checked="" type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining	
Height: <i>1</i> ft.		<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 at Centerline: <i>30</i> ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: <i>25</i> ft.	
Depth of Water at Centerline: <small>(Approx.)</small> <i>5-6</i> ft.			
Sinuosity: <small>(check one)</small>		Water velocity: <small>(Approx.)</small>	
<input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		<i>75</i> fps	
		Bank height	
		Right: <i>4</i> ft.	
		Left: <i>6</i> ft.	
		Bank slope	
		Right: <i>80</i> degrees	
		Left: <i>90</i> degrees	
Qualitative Attributes			
Water Appearance: <small>(check one)</small>			
<input type="checkbox"/> No water <input type="checkbox"/> Clear <input checked="" type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other: _____			
Substrate: <small>(check all that apply)</small>			
<input type="checkbox"/> Bedrock <input 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: _____ % <i>20</i> % <i>20</i> % <i>60</i> % _____ %			
Width of Riparian Zone: <i>10 ft. left</i> <i>30 ft. right</i>		Vegetative Layers: <small>(check all that apply)</small>	
		<input checked="" type="checkbox"/> Trees: <input type="checkbox"/> Shrubs: <input type="checkbox"/> Herbs	
Avg. DBH of Dominants: <small>(approx.)</small>		<i>10</i> in.	
Dominant Bank Vegetation: <small>(list)</small> <i>Acer negundo, Fescue grass, Allium vineale, microstegium vimineum</i>			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): <small>(list)</small> <i>Deep pools, submerged veg. overhanging roots</i>			
Aquatic Organisms Observed: <small>(list)</small> <i>small fish</i>			
Invasive and/or T&E Species Observed: <small>(list)</small> <i>microstegium vimineum</i>			
Tributary is: <small>(check one)</small>			
<input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Disturbances: <small>(check all that apply)</small>			
<input type="checkbox"/> Livestock access <input type="checkbox"/> Manure in waterbody <input type="checkbox"/> Waste discharge pipes <input checked="" type="checkbox"/> Other: <i>Roadside discharge</i>			
Stream Quality ^b : <small>(check one)</small>			
<input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low			

Waterbody ID:

SD060014

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **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.

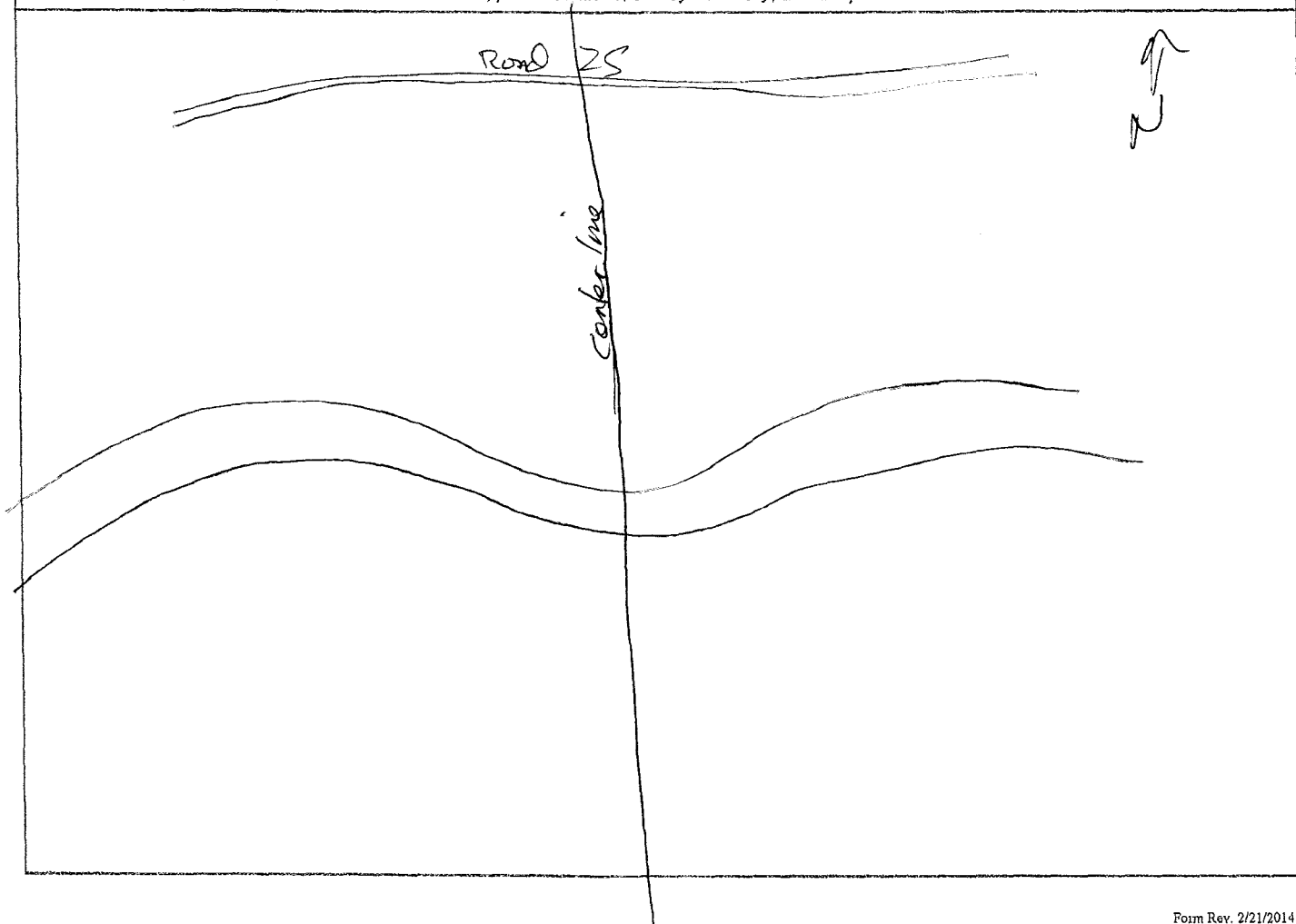
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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



sdog014



Waterbody sdog014 facing upstream



Waterbody sdog014 facing downstream

Sdog014



Waterbody sdog014 upline cross stream

Waterbody Data Sheet

Survey Description				
Project Name: DTI Supply Header	Waterbody Name: Johnson Fork	Waterbody ID: SD06015	Date: 4-15-15	
State: WV	County: Doddridge	Company: DDWEST	Crew Member Initials: JD, DB	Photo ID(s):
Tract Number(s): 31-044-B03T 31-019		Milepost Entry: 2.8	Milepost Exit: 2.8	Associated Wetland ID(s): WDOG006
Survey Type: (check one) <input checked="" type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other: PFO				
Physical Attributes				
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial				
Waterbody Type: (check one) <input checked="" type="checkbox"/> Stream <input type="checkbox"/> River <input type="checkbox"/> Ditch <input type="checkbox"/> Pond <input type="checkbox"/> Lake <input type="checkbox"/> Connecting swale ^a <input type="checkbox"/> Other:				
OHWM Width: <u>6</u> ft. Height: _____ ft.		OHWM Indicator: (check all that apply) <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change		
Width of Waterbody - Top of Bank to Top of Bank at Centerline: <u>20</u> ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: <u>5</u> ft.		Depth of Water at Centerline: (Approx.) <u>3"</u> ft.
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: (Approx.) <u>> 1</u> fps		Bank height Right: <u>8"</u> ft. Left: <u>8"</u> ft.
Bank slope Right: <u>6</u> degrees Left: <u>6</u> degrees				
Qualitative Attributes				
Water Appearance: (check one) <input type="checkbox"/> No water <input type="checkbox"/> Clear <input checked="" type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: (check all that apply) <input checked="" type="checkbox"/> Bedrock <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/clay <input type="checkbox"/> Organic <input type="checkbox"/> Other:				
% of Substrate: <u>10</u> % <u>60</u> % <u>10</u> % <u>20</u> % _____ % _____ %				
Width of Riparian Zone: <u>750</u> ft.		Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: <u>10</u> in. <input checked="" type="checkbox"/> Shrubs: <u>1/2</u> in. <input checked="" type="checkbox"/> Herbs		
Dominant Bank Vegetation: (list) <u>Ulmus americana, Acer rubrum, Fagus grandifolia, Microstegium vimineum</u>				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): (list) <u>riffles, pools, overhanging bank</u>				
Aquatic Organisms Observed: (list) <u>NONE</u>				
Invasive and/or T&E Species Observed: (list) <u>Microstegium vimineum,</u>				
Tributary is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Disturbances: (check all that apply) <input type="checkbox"/> Livestock access <input type="checkbox"/> Manure in waterbody <input type="checkbox"/> Waste discharge pipes <input checked="" type="checkbox"/> Other: <u>Pipeline easement</u>				
Stream Quality ^b : (check one) <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low				

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **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.

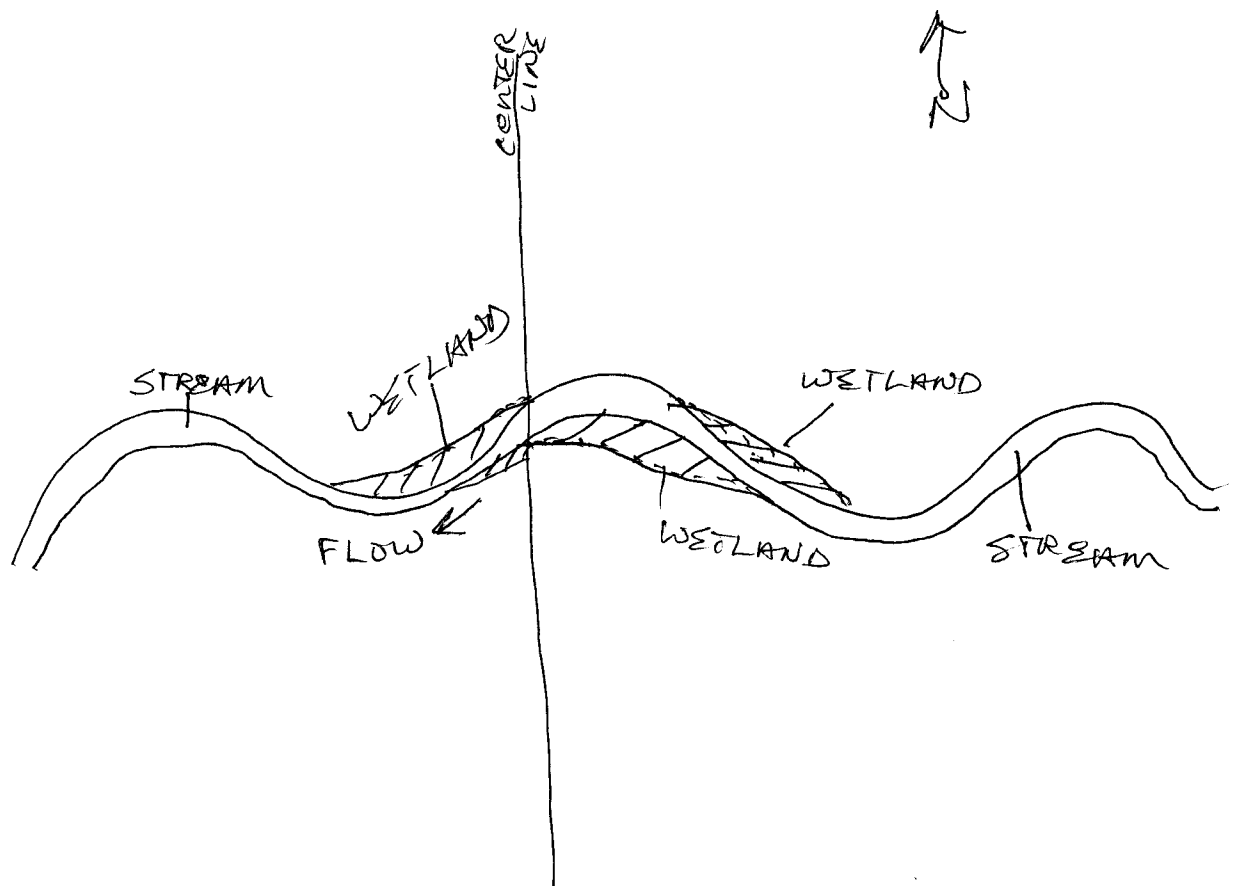
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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



sdog015



Waterbody sdog015 facing upstream



Waterbody sdog015 facing downstream

Sdog015



Waterbody sdog015 facing upline cross stream

Waterbody Data Sheet

Survey Description			
Project Name: <u>DTI Supply Hauler</u>		Waterbody Name: <u>UNT TO JOHNSON FORK</u>	
Waterbody ID: <u>SD06016</u>		Date: <u>4-15-15</u>	
State: <u>WV</u>	County: <u>Doddridge</u>	Company: <u>DDWEST</u>	Crew Member Initials: <u>JD, DB</u>
Photo ID(s):			
Tract Number(s): <u>31-044-B038</u> <u>31-044-B037</u>		Milepost Entry: <u>2.7</u>	Milepost Exit: <u>2.8</u>
Associated Wetland ID(s): <input checked="" type="checkbox"/> <u>NONE</u>			
Survey Type: (check one)			
<input checked="" type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other: _____			
Physical Attributes			
Stream Classification: (check one)			
<input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial			
Waterbody Type: (check one)			
<input checked="" type="checkbox"/> Stream <input type="checkbox"/> River <input type="checkbox"/> Ditch <input type="checkbox"/> Pond <input type="checkbox"/> Lake <input type="checkbox"/> Connecting swale * <input type="checkbox"/> Other: _____			
OHWM		OHWM Indicator: (check all that apply)	
Width: <u>4</u> ft.	Height: _____ ft.	<input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining	<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input checked="" type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change
Width of Waterbody - Top of Bank to Top of Bank at Centerline: <u>15</u> ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: <u>3</u> ft.	
Depth of Water at Centerline: (Approx.) <u>3ⁿ</u> ft.			
Sinuosity: (check one)		Water velocity: (Approx.)	
<input type="checkbox"/> Straight <input type="checkbox"/> Meandering		<u>21</u> fps	
		Bank height	
		Right: <u>2</u> ft.	
		Left: <u>2</u> ft.	
		Bank slope	
		Right: <u>25</u> degrees	
		Left: <u>15</u> degrees	
Qualitative Attributes			
Water Appearance: (check one)			
<input type="checkbox"/> No water <input type="checkbox"/> Clear <input checked="" type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other: _____			
Substrate: (check all that apply)			
<input checked="" type="checkbox"/> Bedrock <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>20</u> % <u>50</u> % <u>20</u> % <u>10</u> % _____ % _____ %			
Width of Riparian Zone: <u>25</u> ft.		Vegetative Layers: (check all that apply)	
		<input checked="" type="checkbox"/> Trees: _____ <input checked="" type="checkbox"/> Shrubs: _____ <input checked="" type="checkbox"/> Herbs	
Avg. DBH of Dominants: _____ in. _____ in.			
Dominant Bank Vegetation: (list) <u>Acer rubrum, Microstegium vimineum</u>			
Aquatic Habitats (ex: submerged or emergent aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): (list) <u>Riffles, pools</u>			
Aquatic Organisms Observed: (list) <u>NONE</u>			
Invasive and/or T&E Species Observed: (list) <u>Microstegium vimineum</u>			
Tributary is: (check one)			
<input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Disturbances: (check all that apply)			
<input type="checkbox"/> Livestock access <input type="checkbox"/> Manure in waterbody <input type="checkbox"/> Waste discharge pipes <input checked="" type="checkbox"/> Other: <u>Pipeline Easement</u>			
Stream Quality ^B : (check one)			
<input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low			

Waterbody ID:
SD06016

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **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.

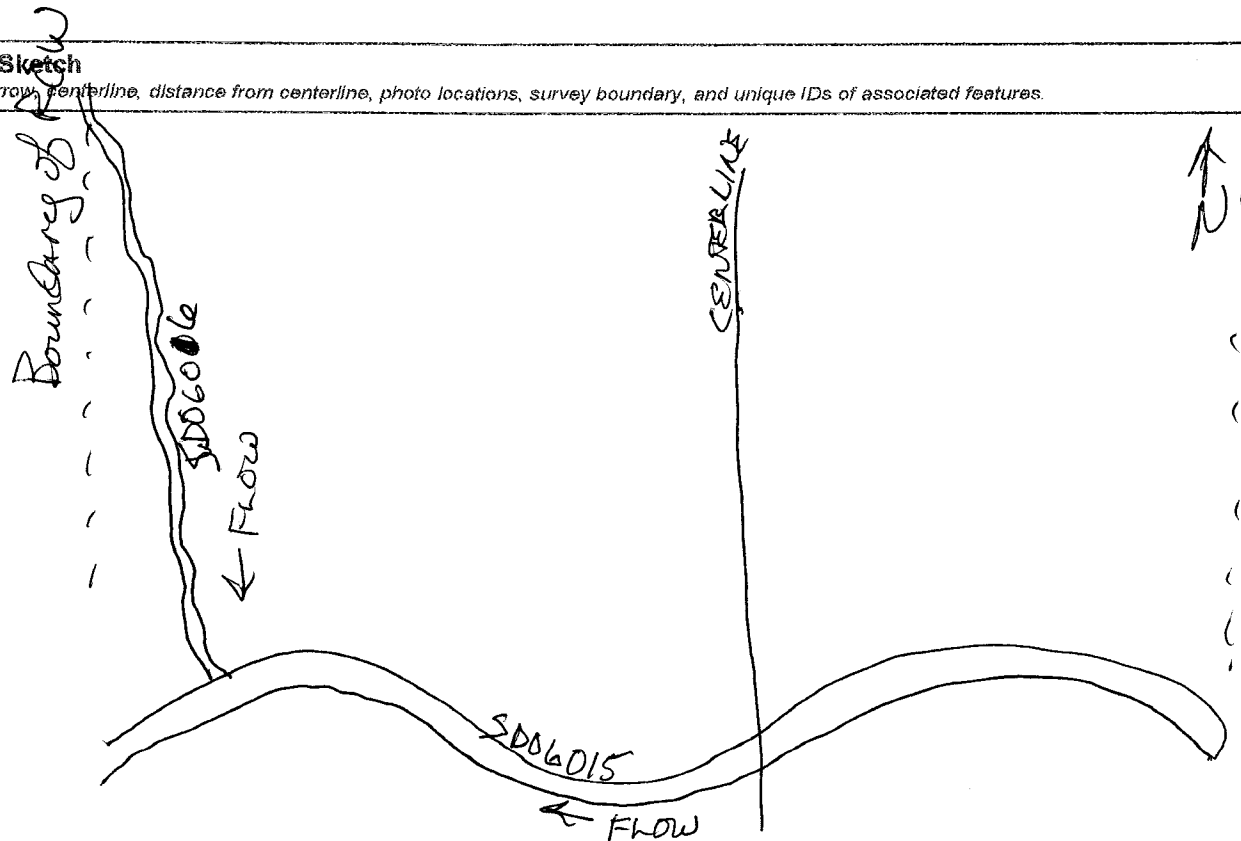
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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



sdog016



Waterbody sdog016 facing upstream



Waterbody sdog016 facing downstream

Sdog016



Waterbody sdog016 facing upline cross stream

Waterbody Data Sheet

Survey Description			
Project Name: DTI Supply Hendor		Waterbody Name: UNT TO INDIAN FORK	
Waterbody ID: SD06017		Date: 4-15-15	
State: WV	County: Doddridge	Company: DDWEST	Crew Member Initials: Photo ID(s): JD, DB
Tract Number(s): 31-022-A004 31-044-B031		Milepost Entry: 3.7	Milepost Exit: 3.8
Associated Wetland ID(s): NONE			
Survey Type: (check one) <input checked="" type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial			
Waterbody Type: (check one) <input checked="" type="checkbox"/> Stream <input type="checkbox"/> River <input type="checkbox"/> Ditch <input type="checkbox"/> Pond <input type="checkbox"/> Lake <input type="checkbox"/> Connecting swale ^a <input type="checkbox"/> Other:			
OHWM Width: <u>4</u> ft. Height: _____ ft.		OHWM Indicator: (check all that apply) <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input 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 type="checkbox"/> Soil characteristic change	
Width of Waterbody - Top of Bank to Top of Bank at Centerline: <u>10</u> ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: <u>1</u> ft.	
Depth of Water at Centerline: (Approx.) <u>2"</u> ft.			
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: (Approx.) <u>2.1</u> fps	
Bank height Right: _____ ft. Left: _____ ft.		Bank slope Right: _____ degrees Left: _____ degrees	
Qualitative Attributes			
Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: (check all that apply) <input checked="" type="checkbox"/> Bedrock <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Silt/clay <input type="checkbox"/> Organic <input type="checkbox"/> Other:			
% of Substrate: <u>50</u> % <u>40</u> % <u>10</u> % _____ % _____ % _____ %			
Width of Riparian Zone: _____ ft.		Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Shrubs: <input checked="" type="checkbox"/> Herbs Avg. DBH of Dominants: _____ in. _____ in.	
Dominant Bank Vegetation: (list) <u>Platanus occidentalis, Fagus grandifolia, Polystichum acrostoides</u>			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): (list) <u>Riffles, pool</u>			
Aquatic Organisms Observed: (list) <u>NONE</u>			
Invasive and/or T&E Species Observed: (list) <u>NONE</u>			
Tributary is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Disturbances: (check all that apply) <input type="checkbox"/> Livestock access <input type="checkbox"/> Manure in waterbody <input type="checkbox"/> Waste discharge pipes <input type="checkbox"/> Other: <u>NONE</u>			
Stream Quality ^b : (check one) <input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low			

SD06017

Waterbody ID:

4-15-15

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **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, photo locations, survey boundary, and unique IDs of associated features.



sdog017



Waterbody *sdog017* facing upstream



Waterbody *sdog017* facing downstream

Sdog017



Waterbody sdog017 facing upline cross stream

Waterbody Data Sheet

Survey Description			
Project Name: <i>DTI Supply Header</i>		Waterbody Name: <i>UNT TO INDIANFORK</i>	
Waterbody ID: <i>SDOG018</i>		Date: <i>4-15-15</i>	
State: <i>WV</i>	County: <i>Doddridge</i>	Company: <i>DD WEST</i>	Crew Member Initials: <i>JD, DB</i>
Photo ID(s):			
Tract Number(s): <i>31-044-3031</i> <i>31-044-3033</i>		Milepost Entry: <i>3.8</i>	Milepost Exit: <i>3.8</i>
Associated Wetland ID(s): <i>NONE</i>			
Survey Type: (check one)			
<input checked="" type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: (check one)			
<input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial			
Waterbody Type: (check one)			
<input checked="" type="checkbox"/> Stream <input type="checkbox"/> River <input type="checkbox"/> Ditch <input type="checkbox"/> Pond <input type="checkbox"/> Lake <input type="checkbox"/> Connecting swale ^a <input type="checkbox"/> Other:			
OHWM		OHWM Indicator: (check all that apply)	
Width: <i>12</i> 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 type="checkbox"/> Water staining	
Height: <i>1</i> ft.		<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 at Centerline: <i>18</i> ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: _____ ft.	
Depth of Water at Centerline: (Approx.) _____ ft.			
Sinuosity: (check one)		Water velocity: (Approx.)	
<input type="checkbox"/> Straight <input type="checkbox"/> Meandering		<i>72</i> fps	
Bank height		Bank slope	
Right: <i>1</i> ft.		Right: <i>10</i> degrees	
Left: <i>1</i> ft.		Left: <i>30</i> degrees	
Qualitative Attributes			
Water Appearance: (check one)			
<input type="checkbox"/> No water <input type="checkbox"/> Clear <input checked="" type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: (check all that apply)			
<input checked="" type="checkbox"/> Bedrock <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: <i>20</i> % <i>60</i> % <i>10</i> % <i>10</i> % _____ % _____ %			
Width of Riparian Zone: <i>10</i> ft.		Vegetative Layers: (check all that apply)	
		<input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Shrubs: <input checked="" type="checkbox"/> Herbs	
Avg. DBH of Dominants: _____ in. _____ in.			
Dominant Bank Vegetation: (list) <i>Carya ovata, Eleagnus umbellata, Rosa multiflora, Festuca pratense</i>			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): (list) <i>Riffle, pools, overhanging veg + banks</i>			
Aquatic Organisms Observed: (list) <i>NONE</i>			
Invasive and/or T&E Species Observed: (list) <i>Eleagnus umbellata + Rosa multiflora</i>			
Tributary is: (check one)			
<input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Disturbances: (check all that apply)			
<input checked="" type="checkbox"/> Livestock access <input type="checkbox"/> Manure in waterbody <input type="checkbox"/> Waste discharge pipes <input checked="" type="checkbox"/> Other:			
Stream Quality ^b : (check one)			
<input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low			

Waterbody ID:

5D06018

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **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.

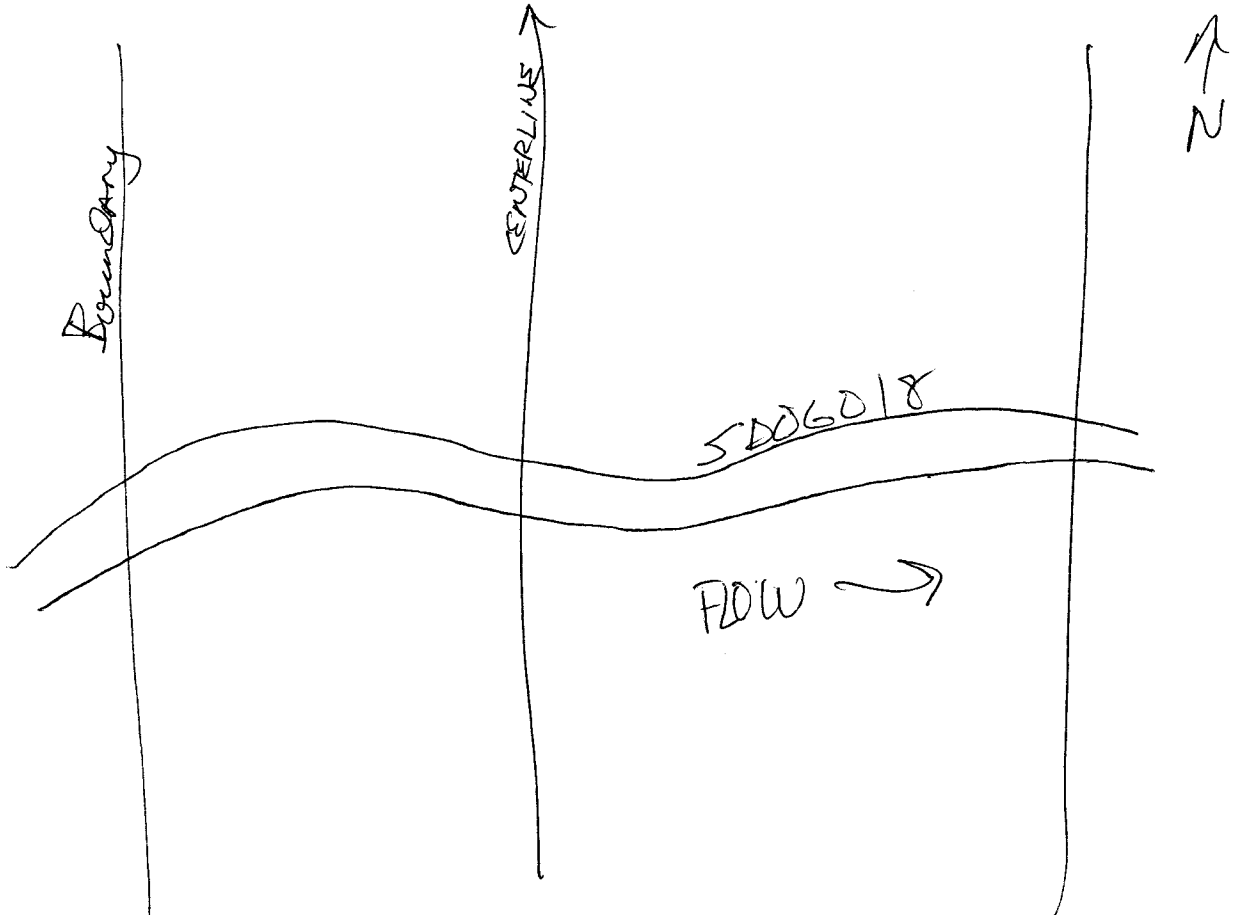
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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



sdog018



Waterbody sdog018 facing upstream



Waterbody sdog018 facing downstream

Sdog018



Waterbody sdog018 facing upline cross stream

Waterbody Data Sheet

Description			
Project Name: Supply Header Project		Date: 06/04/2016	Waterbody Survey ID: sdoa023
State: WV	County/Parish: Doddridge	USGS Waterbody Name: Unnamed tributary of Indian Fork	
Company: Dominion Transmission, Inc.	Crew Member Initials: KTC, LCE	Latitude:	Longitude:
Survey Type: <i>(check one)</i>	<input type="checkbox"/> Centerline	<input type="checkbox"/> Re-Route	<input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other
Waterbody Type: <i>(check one)</i>	<input type="checkbox"/> River	<input checked="" type="checkbox"/> Stream	<input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other
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
Feature Quality^a: <i>(check one)</i>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Moderate	<input type="checkbox"/> Low
Feature Description: <i>(check one)</i>	<input type="checkbox"/> Natural	<input type="checkbox"/> Artificial, man-made	<input checked="" type="checkbox"/> Manipulated
Flow Regime: <i>(check one)</i>	<input type="checkbox"/> Ephemeral	<input checked="" type="checkbox"/> Intermittent	<input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale
Sinuosity within Survey Corridor: <i>(check one)</i>	<input checked="" type="checkbox"/> Straight	<input type="checkbox"/> Meandering	
Description Notes: Ephemeral braid of the main intermittent channel that drains this valley.			
Measurements			
Depth of Water: <u>1</u> ft. N/A <input type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: <u>6</u> ft. N/A <input type="checkbox"/>	
OHWM Width: <u>8</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
	<input checked="" type="checkbox"/> Bent, matted, or missing vegetation	<input type="checkbox"/> Wrack line	<input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input checked="" type="checkbox"/> Soil characteristic change
Dominant Substrate: <i>(check all that apply)</i>	<input type="checkbox"/> Bedrock	<input type="checkbox"/> Boulder	<input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): grass, forbs; rose, willow; tuliptree, elm, maple			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): pools, beds, leaf packs, large woody debris			
Aquatic Organisms Observed (list): n/a			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): culvert			
Observation Notes: This manipulated stream lies adjacent to a habitations and oil/gas infrastructure and as a result is littered with anthropogenic fill and disturbances.			

sdoa023



Waterbody sdoa023 facing upstream



Waterbody sdoa023 facing downstream

sdoa023



Waterbody sdoa023 cross stream

Waterbody Data Sheet

Survey Description			
Project Name: DTI Supply Header		Waterbody Name: UNT TO Indian Fork	
Waterbody ID: SD06019		Date: 4-15-15	
State: WV	County: Doddridge	Company: DDWEST	Crew Member Initials: JD, OB
Photo ID(s):			
Tract Number(s): 31-044-B031		Milepost Entry: 3.8	Milepost Exit: 3.9
Associated Wetland ID(s): NONE			
Survey Type: <small>(check one)</small>			
<input checked="" type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <small>(check one)</small>			
<input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial			
Waterbody Type: <small>(check one)</small>			
<input checked="" type="checkbox"/> Stream <input type="checkbox"/> River <input type="checkbox"/> Ditch <input type="checkbox"/> Pond <input type="checkbox"/> Lake <input type="checkbox"/> Connecting swale ^a <input type="checkbox"/> Other:			
OHWM		OHWM Indicator: <small>(check all that apply)</small>	
Width: <u>4</u> ft.		<input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining	
Height: <u>4"</u> ft.		<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 at Centerline: <u>6</u> ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: <u>6"</u> ft.	
Depth of Water at Centerline: <small>(Approx.)</small> _____ ft.			
Sinuosity: <small>(check one)</small>		Water velocity: <small>(Approx.)</small>	
<input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		<u>< 1</u> fps	
Bank height		Bank slope	
Right: <u>1</u> ft.		Right: <u>26</u> degrees	
Left: <u>1</u> ft.		Left: <u>20</u> degrees	
Qualitative Attributes			
Water Appearance: <small>(check one)</small>			
<input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bedrock <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Silt/clay <input type="checkbox"/> Organic <input type="checkbox"/> Other:			
% of Substrate: <u>100</u> % _____ % _____ % _____ % _____ % _____ %			
Width of Riparian Zone: <u>> 100</u> ft.		Vegetative Layers: <small>(check all that apply)</small>	
		<input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Shrubs: <input checked="" type="checkbox"/> Herbs	
Avg. DBH of Dominants: <small>(approx.)</small> _____ in. _____ in.			
Dominant Bank Vegetation: <small>(list)</small> <u>Quercus velutina, Carpinus caroliniana, Rosa multiflora, Polystichum acrostoides</u>			
Aquatic Habitats (ex: submerged or emergent aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): <small>(list)</small> <u>Riffles</u>			
Aquatic Organisms Observed: <small>(list)</small> <u>NONE</u>			
Invasive and/or T&E Species Observed: <small>(list)</small> <u>Rosa multiflora</u>			
Tributary is: <small>(check one)</small>			
<input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Disturbances: <small>(check all that apply)</small>			
<input type="checkbox"/> Livestock access <input type="checkbox"/> Manure in waterbody <input type="checkbox"/> Waste discharge pipes <input type="checkbox"/> Other: <u>NONE</u>			
Stream Quality ^b : <small>(check one)</small>			
<input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low			

Waterbody ID:

SD06019

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **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.

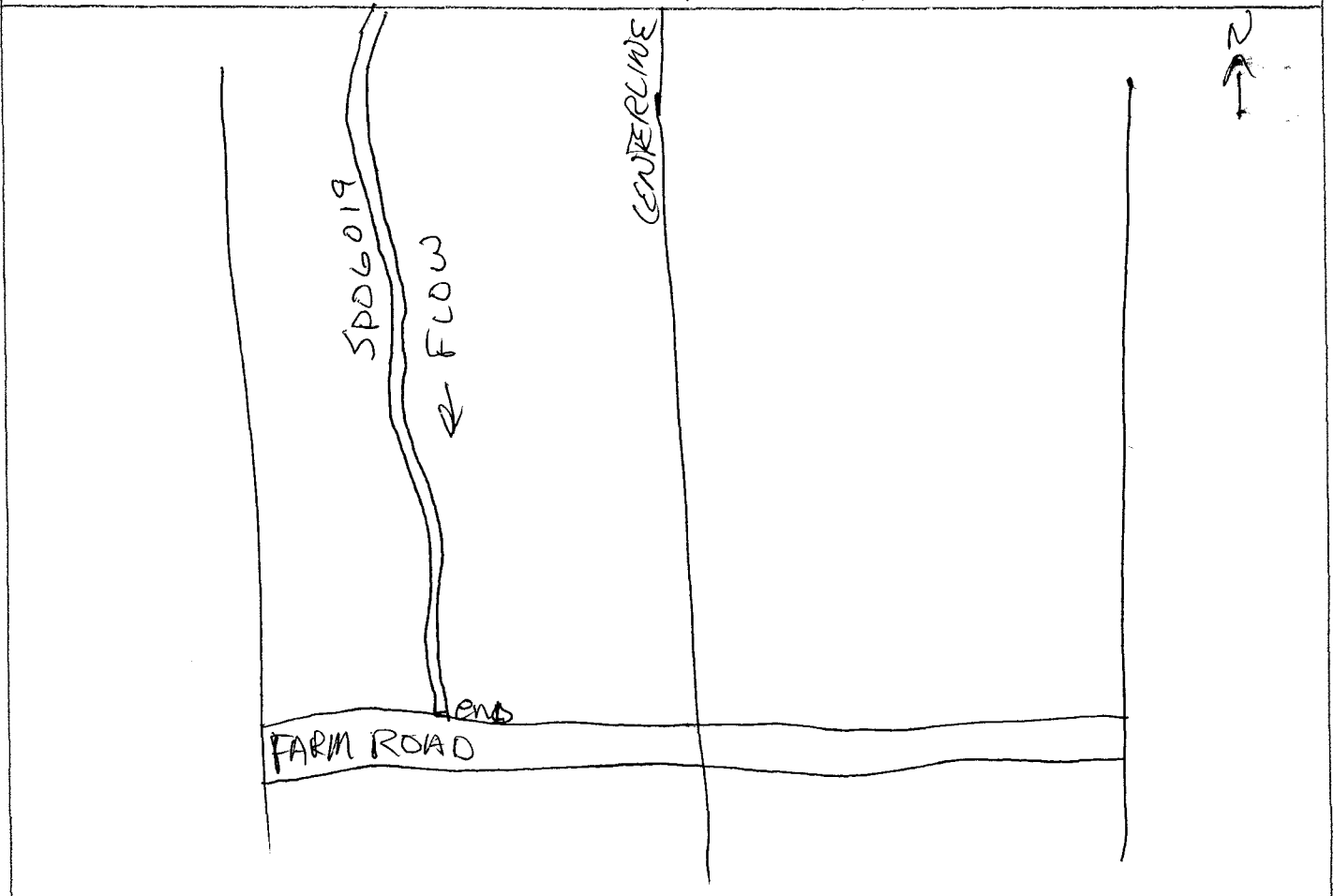
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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



sdog019



Waterbody sdog019 facing upstream



Waterbody sdog019 facing downstream

Sdog019



Waterbody sdog019 facing upline cross stream

Waterbody Data Sheet

Description			
Project Name: Supply Header Project		Date: 06/04/2016	Waterbody Survey ID: sdoa022
State: WV	County/Parish: Doddridge	USGS Waterbody Name: Unnamed tributary of Indian Fork	
Company: Dominion Transmission, Inc.	Crew Member Initials: KTC, LCE	Latitude:	Longitude:
Survey Type: <i>(check one)</i>	<input type="checkbox"/> Centerline	<input type="checkbox"/> Re-Route	<input type="checkbox"/> Access Road <input checked="" type="checkbox"/> Facility <input type="checkbox"/> Other
Waterbody Type: <i>(check one)</i>	<input type="checkbox"/> River	<input checked="" type="checkbox"/> Stream	<input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other
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
Feature Quality^a: <i>(check one)</i>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Moderate	<input type="checkbox"/> Low
Feature Description: <i>(check one)</i>	<input checked="" type="checkbox"/> Natural	<input type="checkbox"/> Artificial, man-made	<input type="checkbox"/> Manipulated
Flow Regime: <i>(check one)</i>	<input checked="" type="checkbox"/> Ephemeral	<input type="checkbox"/> Intermittent	<input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale
Sinuosity within Survey Corridor: <i>(check one)</i>	<input type="checkbox"/> Straight	<input checked="" type="checkbox"/> Meandering	
Description Notes: Ephemeral braid of the main intermittent channel that drains this valley.			
Measurements			
Depth of Water: _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: _____ ft. N/A <input checked="" type="checkbox"/>	
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
	<input checked="" type="checkbox"/> Bent, matted, or missing vegetation	<input type="checkbox"/> Wrack line	<input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change
Dominant 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
Observations			
Riparian Zone Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): grass, forbs, sedge; willow; willow, sycamore			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): n/a			
Aquatic Organisms Observed (list): n/a			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): near homes and maintained landscapes			
Observation Notes: This stream lies adjacent to a yard that is maintained up to the stream bank.			

sdoa022



Waterbody sdoa022 facing upstream



Waterbody sdoa022 facing downstream

sdoa022



Waterbody sdoa022 cross stream

Waterbody Data Sheet

Survey Description					
Project Name: <i>D11-Supply Header</i>		Waterbody Name: <i>Indian Fork</i>		Waterbody ID: <i>Sdog 020</i>	Date: <i>4.15.15</i>
State: <i>WV</i>	County: <i>Dodder</i>	Company: <i>DA West</i>	Crew Member Initials: <i>DBS/SD</i>	Photo ID(s):	
Tract Number(s): <i>31-044 B024</i> <i>31-044 B025</i>		Milepost Entry: <i>4.4</i>	Milepost Exit: <i>4.4</i>	Associated Wetland ID(s): <i>WDOG007 e w</i>	
Survey Type: (check one) <input checked="" type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:					
Physical Attributes					
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial					
Waterbody Type: (check one) <input checked="" type="checkbox"/> Stream <input type="checkbox"/> River <input type="checkbox"/> Ditch <input type="checkbox"/> Pond <input type="checkbox"/> Lake <input type="checkbox"/> Connecting swale ^a <input type="checkbox"/> Other:					
OHWM Width: <i>8</i> ft. Height: <i>2</i> ft.		OHWM Indicator: (check all that apply) <input checked="" type="checkbox"/> Clear line on bank <input checked="" type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Width of Waterbody - Top of Bank to Top of Bank at Centerline: <i>2</i> ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: <i>8</i> ft.		Depth of Water at Centerline: (Approx.) <i>1/2</i> ft.	
Sinuosity: (check one) <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering		Water velocity: (Approx.) <i>1</i> fps	Bank height Right: <i>2</i> ft. Left: <i>2</i> ft.		Bank slope Right: <i>45</i> degrees Left: <i>45</i> degrees
Qualitative Attributes					
Water Appearance: (check one) <input type="checkbox"/> No water <input type="checkbox"/> Clear <input checked="" type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:					
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input 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: _____ % <i>45</i> % <i>30</i> % <i>20</i> % <i>5</i> % _____ %					
Width of Riparian Zone: <i>0</i> ft.		Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Shrubs: <input type="checkbox"/> Herbs Avg. DBH of Dominants: (approx.) <i>12</i> in. <i>1</i> in.			
Dominant Bank Vegetation: (list) <i>Festuca sp., Multiflora, Elymus, Microstegium</i>					
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): (list) <i>Bottom / pool sequences</i>					
Aquatic Organisms Observed: (list) <i>None</i>					
Invasive and/or T&E Species Observed: (list) <i>Microstegium, Res. multiflora</i>					
Tributary is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated					
Disturbances: (check all that apply) <input type="checkbox"/> Livestock access <input type="checkbox"/> Manure in waterbody <input type="checkbox"/> Waste discharge pipes <input checked="" type="checkbox"/> Other: <i>Streightened through yard</i>					
Stream Quality ^b : (check one) <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low					

Waterbody ID:
sdcog 020

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **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.

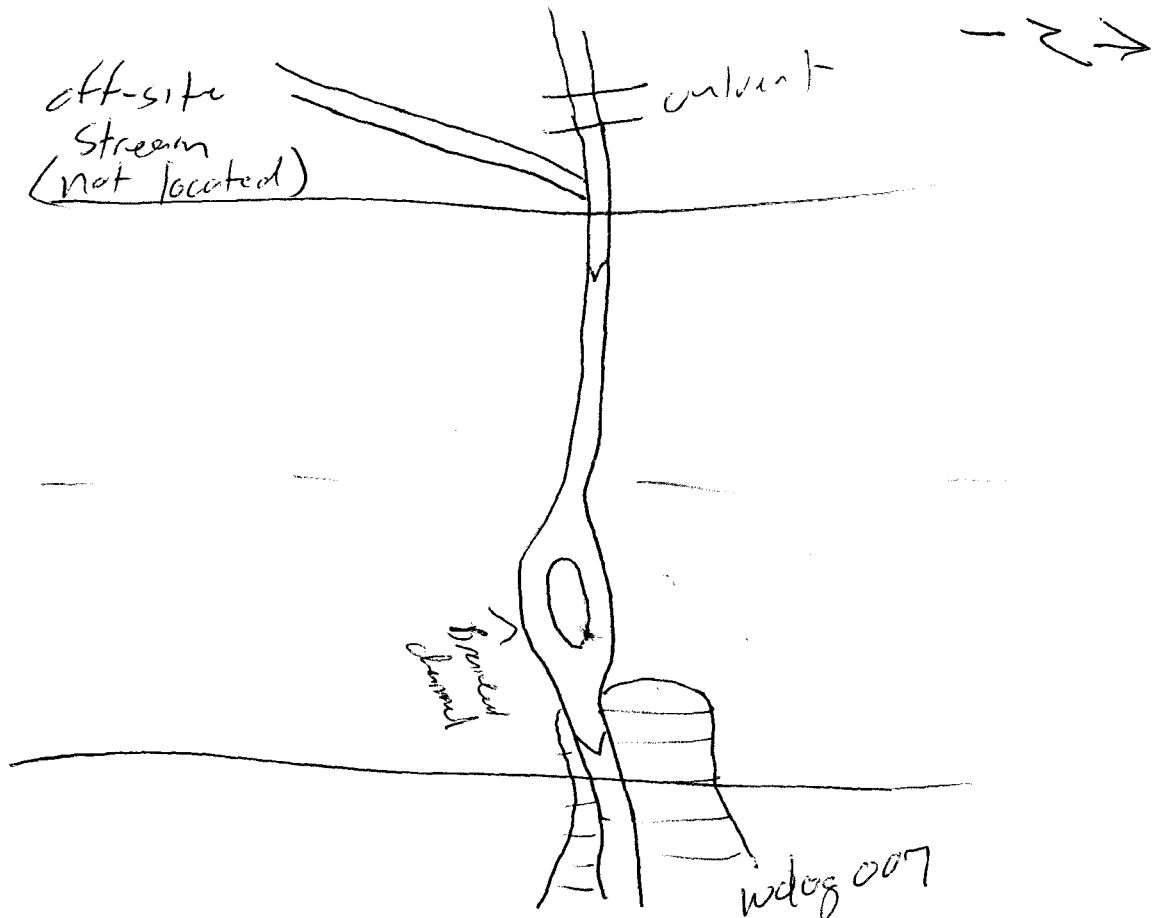
Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious 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

located in yard (moved to edge)

Waterbody Sketch

Include north arrow, centerline, distance from centerline, photo locations, survey boundary, and unique IDs of associated features.



sdog020



Waterbody sdog020 facing upstream



Waterbody sdog020 facing downstream

Sdog020



Waterbody sdog020 facing upline cross stream

Waterbody Data Sheet

Survey Description			
Project Name: DTI Supply Header		Waterbody Name: Indian Fork	
Waterbody ID: SD0J008		Date: 8-14-15	
State: WV	County: Doddridge	Company: DWEST	Crew Member Initials: JD, DB
Photo ID(s):			
Tract Number(s): 31-005-A024		Milepost Entry: NA	Milepost Exit: NA
Associated Wetland ID(s): NONE			
Survey Type: (check one) <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial			
Waterbody Type: (check one) <input type="checkbox"/> Stream <input type="checkbox"/> River <input type="checkbox"/> Ditch <input type="checkbox"/> Pond <input type="checkbox"/> Lake <input type="checkbox"/> Connecting swale ^a <input type="checkbox"/> Other:			
OHWM Width: 15 ft. Height: _____ ft.		OHWM Indicator: (check all that apply) <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested Vegetation <input type="checkbox"/> Scouring <input checked="" type="checkbox"/> Water staining <input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change	
Width of Waterbody - Top of Bank to Top of Bank at Centerline: 20 ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: _____ ft.	
Depth of Water at Centerline: (Approx.) _____ ft.			
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: (Approx.) < 2 fps	
Bank height Right: 2 ft. Left: 18" ft.		Bank slope Right: 60 degrees Left: 15 degrees	
Qualitative Attributes			
Water Appearance: (check one) <input type="checkbox"/> No water <input type="checkbox"/> Clear <input checked="" type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/clay <input type="checkbox"/> Organic <input type="checkbox"/> Other:			
% of Substrate: _____ % 70 10 % 20 % _____ %			
Width of Riparian Zone: 750 ft.		Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: 8 in. <input checked="" type="checkbox"/> Shrubs: _____ in. <input checked="" type="checkbox"/> Herbs	
Avg. DBH of Dominants: (approx.) _____ in.			
Dominant Bank Vegetation: (list) <i>Platanus occidentalis, Carpinus caroliniana, Microstegium vimineum</i>			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): (list) pools, riffles			
Aquatic Organisms Observed: (list) small fish			
Invasive and/or T&E Species Observed: (list) <i>Microstegium vimineum, Rosa multiflora, Elaeagnus umbellata</i>			
Tributary is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Disturbances: (check all that apply) <input type="checkbox"/> Livestock access <input type="checkbox"/> Manure in waterbody <input type="checkbox"/> Waste discharge pipes <input checked="" type="checkbox"/> Other: ADJACENT ROAD W/			
Stream Quality ^b : (check one) <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low CULVERT PIPES			

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **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.

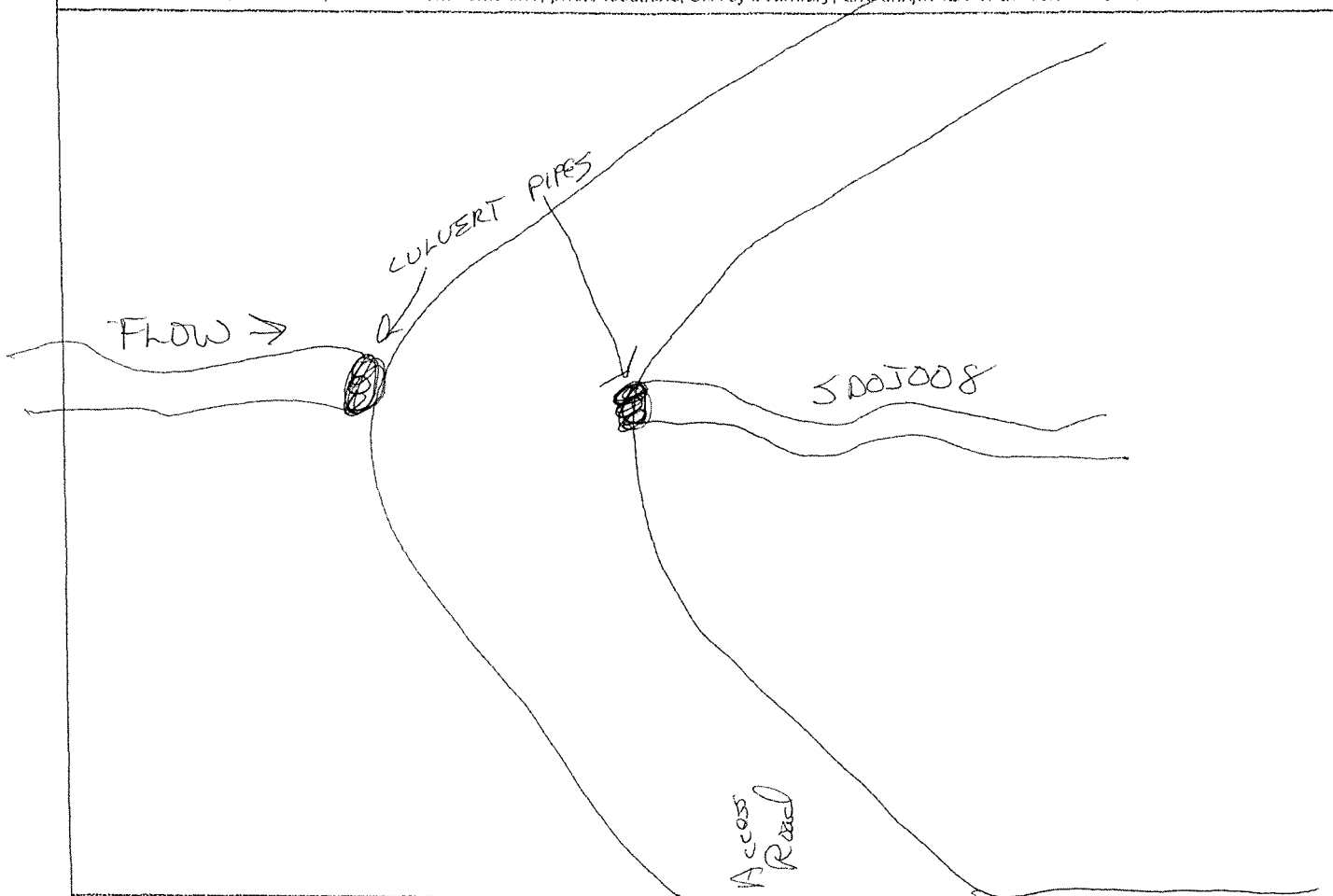
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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



SDOJ008



Waterbody *SDOJ008*
facing upstream



Waterbody *SDOJ008*
facing downstream

SDOJ008



Waterbody SDOJ008 facing upline cross stream

Waterbody Data Sheet

Survey Description			
Project Name: <u>DTI Supply Header</u>		Waterbody Name: <u>UNT TO Indian Fork</u>	
Waterbody ID: <u>SDOG 021</u>		Date: <u>4-16-15</u>	
State: <u>WV</u>	County: <u>Doddridge</u>	Company: <u>DDWEST</u>	Crew Member Initials: Photo ID(s): <u>JD, DB</u>
Tract Number(s): <u>31-044-B021</u> 3000450000		Milepost Entry: <u>4.9</u>	Milepost Exit: <u>4.9</u>
Associated Wetland ID(s): <u>WDOG008</u>			
Survey Type: (check one) <input checked="" type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial			
Waterbody Type: (check one) <input checked="" type="checkbox"/> Stream <input type="checkbox"/> River <input type="checkbox"/> Ditch <input type="checkbox"/> Pond <input type="checkbox"/> Lake <input type="checkbox"/> Connecting swale ^a <input type="checkbox"/> Other:			
OHWM Width: <u>3</u> ft. Height: <u>3'</u> ft.		OHWM Indicator: (check all that apply) <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input 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 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 at Centerline: <u>5</u> ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: <u>1</u> ft.	
Depth of Water at Centerline: (Approx.) <u>1"</u> ft.			
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: (Approx.) <u><1</u> fps	
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: (check one) <input type="checkbox"/> No water <input type="checkbox"/> Clear <input checked="" type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: (check all that apply) <input checked="" type="checkbox"/> Bedrock <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>50</u> % <u>30</u> % <u>10</u> % <u>10</u> % _____ % _____ %			
Width of Riparian Zone: <u>7100</u> ft.		Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Shrubs: <input checked="" type="checkbox"/> Herbs: Avg. DBH of Dominants: <u>10</u> in. _____ in.	
Dominant Bank Vegetation: (list) <u>Carya ovata, Quercus alba, Elaeagnus umbellata, Polytrichum acrostoides</u>			
Aquatic Habitats (ex: submerged or emergent aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): (list) <u>riffles, pools</u>			
Aquatic Organisms Observed: (list) <u>NONE</u>			
Invasive and/or T&E Species Observed: (list) <u>Elaeagnus umbellata</u>			
Tributary is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Disturbances: (check all that apply) <input type="checkbox"/> Livestock access <input type="checkbox"/> Manure in waterbody <input type="checkbox"/> Waste discharge pipes <input type="checkbox"/> Other: <u>NONE</u>			
Stream Quality ^b : (check one) <input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low			

Waterbody ID:
SD06021

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **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.

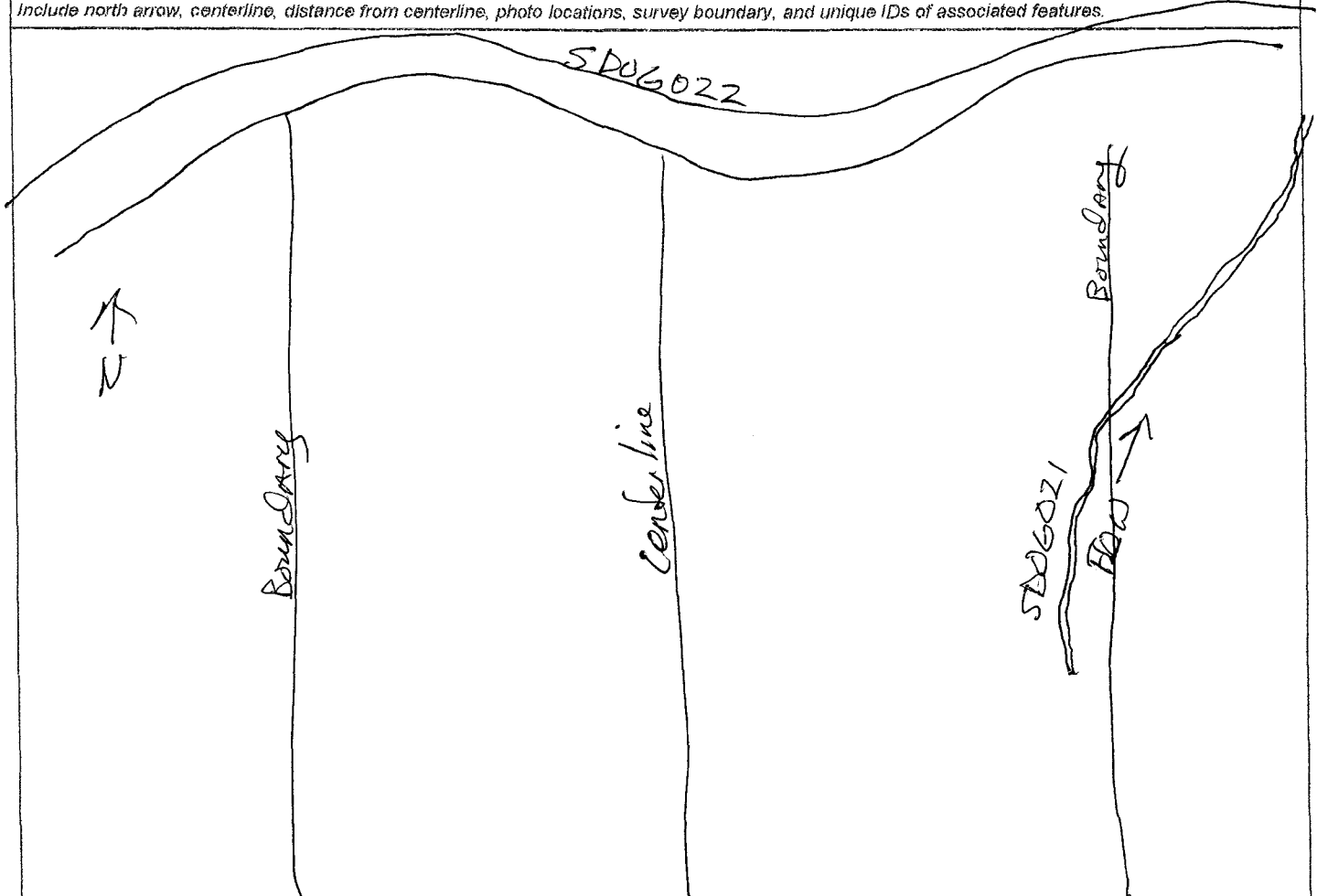
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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



sdog021



Waterbody sdog021 facing upstream



Waterbody sdog021 facing downstream

Sdog021



Waterbody sdog021 facing upline cross stream

Waterbody Data Sheet

Survey Description			
Project Name: <i>DTI Supply Hendor</i>	Waterbody Name: <i>UNT TO INDIAN FORK</i>	Waterbody ID: <i>SD060022</i>	Date: <i>4-16-15</i>
State: <i>WV</i>	County: <i>Dodderidge</i>	Company: <i>DDWEST</i>	Crew Member Initials: Photo ID(s): <i>JD, DB</i>
Tract Number(s): <i>31-044-B021</i>	Milepost Entry: <i>4.9</i>	Milepost Exit: <i>4.9</i>	Associated Wetland ID(s): <i>SD06008f w</i>
Survey Type: (check one) <input checked="" type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial			
Waterbody Type: (check one) <input checked="" type="checkbox"/> Stream <input type="checkbox"/> River <input type="checkbox"/> Ditch <input type="checkbox"/> Pond <input type="checkbox"/> Lake <input type="checkbox"/> Connecting swale ^a <input type="checkbox"/> Other:			
OHWM Width: <i>8</i> ft. Height: <i>5"</i> ft.	OHWM Indicator: (check all that apply) <input checked="" type="checkbox"/> Clear line on bank <input checked="" type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <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 type="checkbox"/> Soil characteristic change		
Width of Waterbody - Top of Bank to Top of Bank at Centerline: <i>12</i> ft.	Width of Waterbody - Water Edge to Water Edge at Centerline: <i>6</i> ft.	Depth of Water at Centerline: (Approx.) <i>3"</i> ft.	
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: (Approx.) <i>22</i> fps	Bank height Right: <i>6"</i> ft. Left: <i>6"</i> ft.	Bank slope Right: <i>10</i> degrees Left: <i>10</i> degrees
Qualitative Attributes			
Water Appearance: (check one) <input checked="" type="checkbox"/> No water <input type="checkbox"/> Clear <input checked="" type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: (check all that apply) <input checked="" type="checkbox"/> Bedrock <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: <i>10</i> % <i>60</i> % <i>20</i> % <i>10</i> % _____ % _____ %			
Width of Riparian Zone: <i>>100</i> ft.	Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: _____ in. <input checked="" type="checkbox"/> Shrubs: _____ in. <input checked="" type="checkbox"/> Herbs		
Dominant Bank Vegetation: (list) <i>Acer rubrum, Fraxinus pensy, varizem, Carpinus caroliniana</i>			
Aquatic Habitats (ex: submerged or emergent aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): (list) <i>riffle, pools, overhanging bank</i>			
Aquatic Organisms Observed: (list) <i>NONE</i>			
Invasive and/or T&E Species Observed: (list) <i>NONE</i>			
Tributary is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Disturbances: (check all that apply) <input type="checkbox"/> Livestock access <input type="checkbox"/> Manure in waterbody <input type="checkbox"/> Waste discharge pipes <input type="checkbox"/> Other: <i>NONE</i>			
Stream Quality ^b : (check one) <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low			

Waterbody ID:

SD06022

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **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.

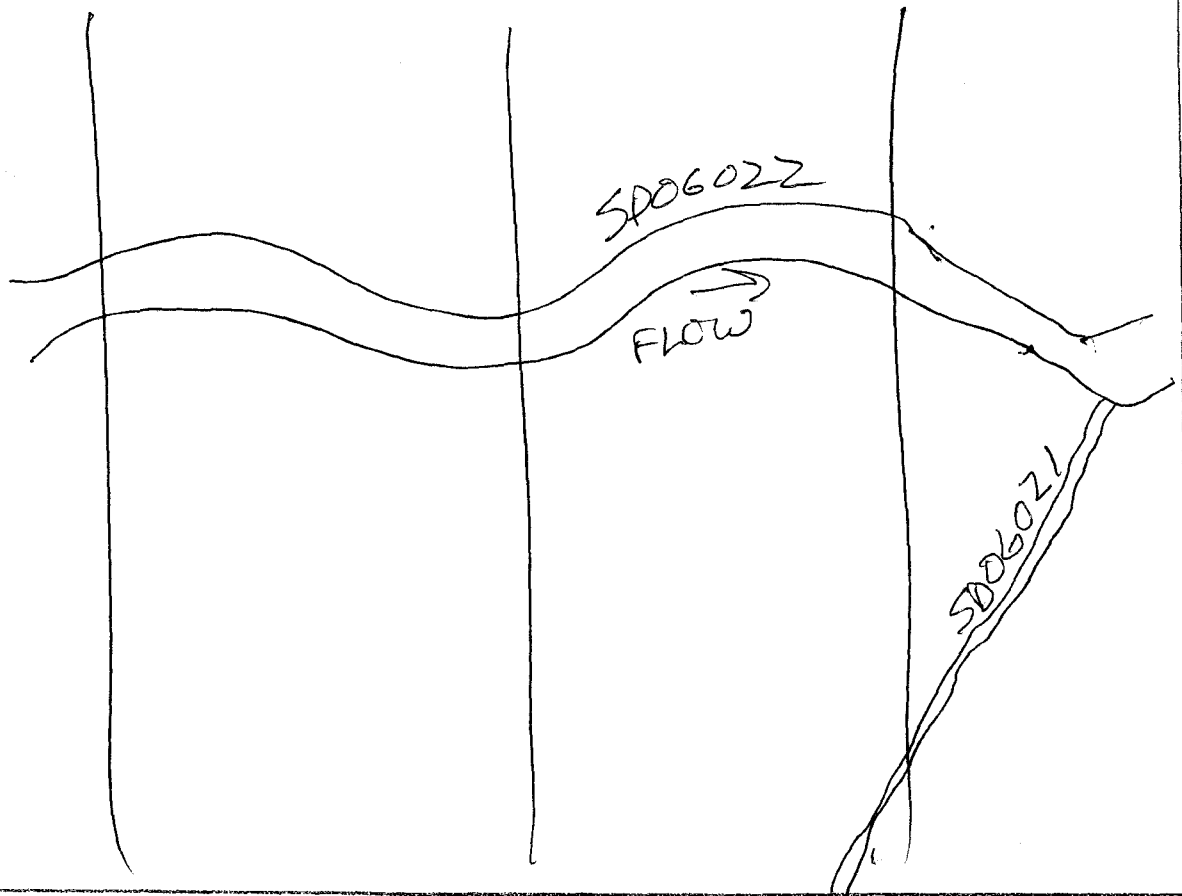
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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



sdog022



Waterbody sdog022 facing upstream



Waterbody sdog022 facing downstream

Sdog022



Waterbody sdog022 facing upline cross stream

Waterbody Data Sheet

Survey Description					
Project Name: <u>DTI Supply Header</u>		Waterbody Name: <u>Indian Fork</u>		Waterbody ID: <u>SD03007</u>	Date: <u>8-14-15</u>
State: <u>WV</u>	County: <u>Doddridge</u>	Company: <u>DWEST</u>	Crew Member Initials: <u>JD, DB</u>	Photo ID(s):	
Tract Number(s): <u>31-005-A025</u> <u>31-005-A025-AR</u>		Milepost Entry: <u>NA</u>	Milepost Exit: <u>NA</u>	Associated Wetland ID(s): <u>NONE</u>	
Survey Type: (check one) <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:					
Physical Attributes					
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial					
Waterbody Type: (check one) <input checked="" type="checkbox"/> Stream <input type="checkbox"/> River <input type="checkbox"/> Ditch <input type="checkbox"/> Pond <input type="checkbox"/> Lake <input type="checkbox"/> Connecting swale ^a <input type="checkbox"/> Other:					
OHWM Width: <u>6</u> ft.	OHWM Height: <u>6"</u> ft.	OHWM Indicator: (check all that apply) <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input checked="" type="checkbox"/> Water staining	<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change		
Width of Waterbody - Top of Bank to Top of Bank at Centerline: <u>15</u> ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: <u>4</u> ft.		Depth of Water at Centerline: (Approx.) <u>2"</u> ft.	
Sinuosity: (check one) <input type="checkbox"/> Straight <input type="checkbox"/> Meandering	Water velocity: (Approx.) <u>< 2</u> fps	Bank height Right: <u>1</u> ft. Left: <u>2</u> ft.	Bank slope Right: <u>15</u> degrees Left: <u>35</u> degrees		
Qualitative Attributes					
Water Appearance: (check one) <input type="checkbox"/> No water <input type="checkbox"/> Clear <input checked="" type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:					
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input 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>80</u> % <u>5</u> % <u>15</u> % _____ % _____ %					
Width of Riparian Zone: <u>0</u> ft.	Vegetative Layers: (check all that apply) <input type="checkbox"/> Trees: <input type="checkbox"/> <input checked="" type="checkbox"/> Shrubs: <input checked="" type="checkbox"/> Herbs	Avg. DBH of Dominants: _____ in. _____ in.			
Dominant Bank Vegetation: (list) <u>Dactylis glomerata, Trifolium pratense</u>					
Aquatic Habitats (ex: submerged or emergent aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): (list) <u>Pools, riffles</u>					
Aquatic Organisms Observed: (list) <u>small fish</u>					
Invasive and/or T&E Species Observed: (list) <u>None</u>					
Tributary is: (check one) <input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated					
Disturbances: (check all that apply) <input type="checkbox"/> Livestock access <input type="checkbox"/> Manure in waterbody <input type="checkbox"/> Waste discharge pipes <input checked="" type="checkbox"/> Other: <u>edge of road w/ culverts</u>					
Stream Quality ^b : (check one) <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low					

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **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.

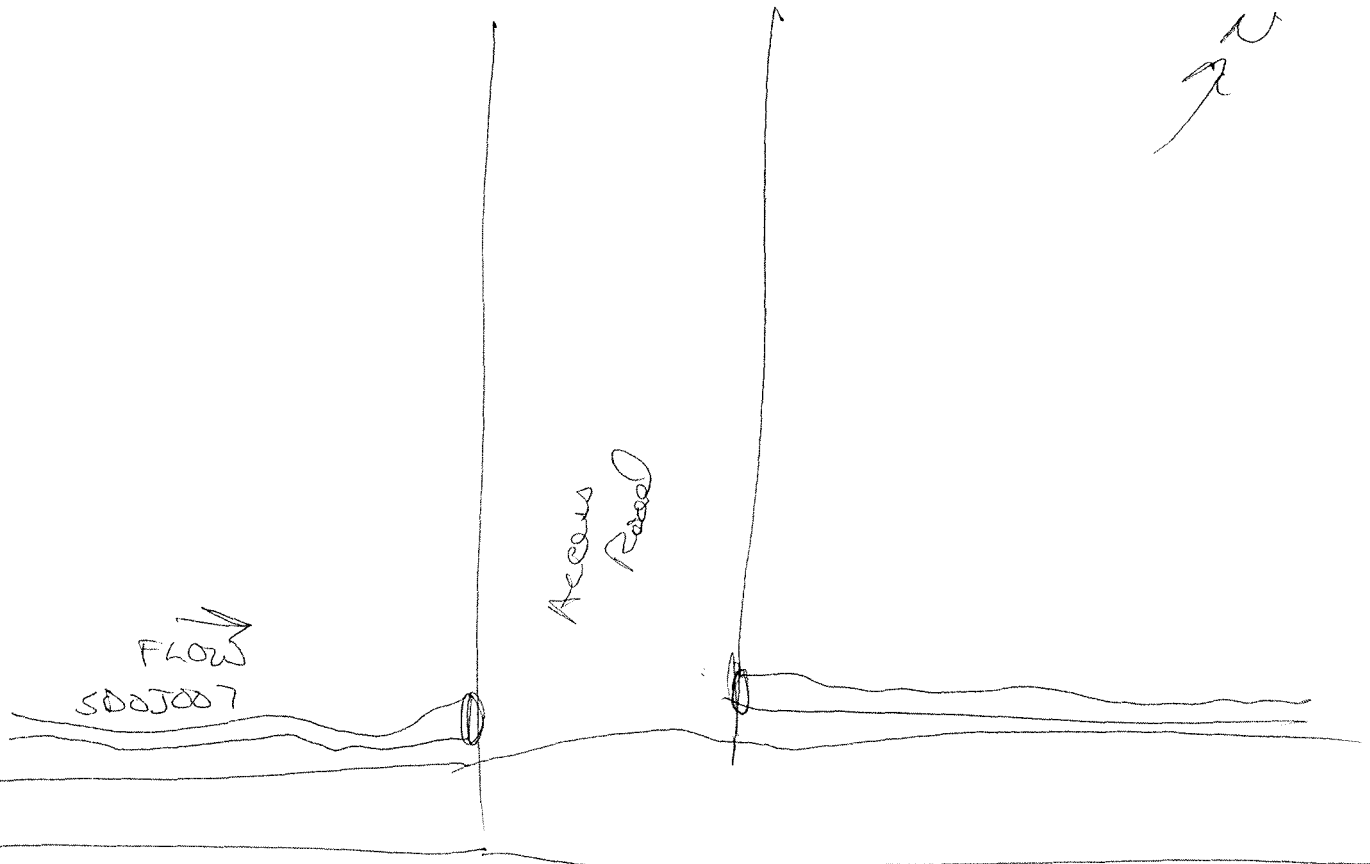
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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



SDOJ007



Waterbody *SDOJ007*
facing upstream



Waterbody *SDOJ007*
facing downstream

SDOJ007



Waterbody SDOJ007 facing upline cross stream

Waterbody Data Sheet

Description			
Project Name: Supply Header Project		Date: 06/04/2016	Waterbody Survey ID: sdoa021
State: WV	County/Parish: Doddridge	USGS Waterbody Name: Buckeye Creek	
Company: Dominion Transmission, Inc.	Crew Member Initials: KTC, LCE	Latitude:	Longitude:
Survey Type: <i>(check one)</i>	<input type="checkbox"/> Centerline	<input type="checkbox"/> Re-Route	<input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other
Waterbody Type: <i>(check one)</i>	<input type="checkbox"/> River	<input checked="" type="checkbox"/> Stream	<input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other
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
Feature Quality^a: <i>(check one)</i>	<input type="checkbox"/> High	<input type="checkbox"/> Moderate	<input checked="" type="checkbox"/> Low
Feature Description: <i>(check one)</i>	<input type="checkbox"/> Natural	<input type="checkbox"/> Artificial, man-made	<input checked="" type="checkbox"/> Manipulated
Flow Regime: <i>(check one)</i>	<input type="checkbox"/> Ephemeral	<input type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale
Sinuosity within Survey Corridor: <i>(check one)</i>	<input type="checkbox"/> Straight	<input checked="" type="checkbox"/> Meandering	
Description Notes: Large perennial creek running through a large valley.			
Measurements			
Depth of Water: <u>1</u> ft. N/A <input type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: <u>18</u> ft. N/A <input type="checkbox"/>	
OHWM Width: <u>20</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
	<input checked="" type="checkbox"/> Bent, matted, or missing vegetation	<input type="checkbox"/> Wrack line	<input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input checked="" type="checkbox"/> Soil characteristic change
Dominant Substrate: <i>(check all that apply)</i>	<input type="checkbox"/> Bedrock	<input type="checkbox"/> Boulder	<input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): grass, forbs; willow, honeysuckle; sycamore			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): overhanging roots/banks, pools, riffles, runs, bars			
Aquatic Organisms Observed (list): fish, insects			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): culvert, anthropogenic fill			
Observation Notes: Waterway manipulated by culverts and disturbed with anthropogenic fill from adjacent roads.			

sdoa021



Waterbody sdoa021 facing upstream



Waterbody sdoa021 facing downstream

sdoa021



Waterbody sdoa021 cross stream

Waterbody Data Sheet

Description			
Project Name: Supply Header Project		Date: 06/04/2016	Waterbody Survey ID: sdoa004
State: WV	County/Parish: Doddridge	USGS Waterbody Name: Unnamed upland drainage	
Company: Dominion Transmission, Inc.	Crew Member Initials: KTC, LCE	Latitude:	Longitude:
Survey Type: <i>(check one)</i>	<input type="checkbox"/> Centerline	<input type="checkbox"/> Re-Route	<input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other
Waterbody Type: <i>(check one)</i>	<input type="checkbox"/> River	<input checked="" type="checkbox"/> Stream	<input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other
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
Feature Quality^a: <i>(check one)</i>	<input type="checkbox"/> High	<input type="checkbox"/> Moderate	<input checked="" type="checkbox"/> Low
Feature Description: <i>(check one)</i>	<input checked="" type="checkbox"/> Natural	<input type="checkbox"/> Artificial, man-made	<input type="checkbox"/> Manipulated
Flow Regime: <i>(check one)</i>	<input checked="" type="checkbox"/> Ephemeral	<input type="checkbox"/> Intermittent	<input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale
Sinuosity within Survey Corridor: <i>(check one)</i>	<input checked="" type="checkbox"/> Straight	<input type="checkbox"/> Meandering	
Description Notes: Ephemeral stream naturally caused within dirt road ruts; substantial ephemeral flows.			
Measurements			
Depth of Water: <u>.1</u> ft. N/A <input type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: <u>.5</u> ft. N/A <input type="checkbox"/>	
OHWM Width: <u>1</u> ft.			
OHWM Indicator: <i>(check all that apply)</i>	<input checked="" type="checkbox"/> Clear line on bank	<input checked="" type="checkbox"/> Shelving	<input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining
	<input checked="" type="checkbox"/> Bent, matted, or missing vegetation	<input type="checkbox"/> Wrack line	<input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change
Dominant Substrate: <i>(check all that apply)</i>	<input type="checkbox"/> Bedrock	<input 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
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input type="checkbox"/> Trees <input type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): forbs, grass			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): riffles, step-pools			
Aquatic Organisms Observed (list): n/a			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): n/a			
Observation Notes: Ephemeral drainage; caused by dirt road.			

sdoa004



Waterbody sdoa004 facing upstream



Waterbody sdoa004 facing downstream

sdoa004



Waterbody sdoa004 cross stream

Waterbody Data Sheet

Description			
Project Name: Supply Header Project		Date: 06/04/2016	Waterbody Survey ID: sdoa016
State: WV	County/Parish: Doddridge	USGS Waterbody Name: Ditch	
Company: Dominion Transmission, Inc.	Crew Member Initials: KTC, LCE	Latitude:	Longitude:
Survey Type: <i>(check one)</i>	<input type="checkbox"/> Centerline	<input type="checkbox"/> Re-Route	<input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other
Waterbody Type: <i>(check one)</i>	<input type="checkbox"/> River	<input type="checkbox"/> Stream	<input checked="" type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other
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
Feature Quality^a: <i>(check one)</i>	<input type="checkbox"/> High	<input type="checkbox"/> Moderate	<input checked="" type="checkbox"/> Low
Feature Description: <i>(check one)</i>	<input type="checkbox"/> Natural	<input checked="" type="checkbox"/> Artificial, man-made	<input type="checkbox"/> Manipulated
Flow Regime: <i>(check one)</i>	<input checked="" type="checkbox"/> Ephemeral	<input type="checkbox"/> Intermittent	<input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale
Sinuosity within Survey Corridor: <i>(check one)</i>	<input checked="" type="checkbox"/> Straight	<input type="checkbox"/> Meandering	
Description Notes: Roadside ditch that confluent with natural drainage.			
Measurements			
Depth of Water: _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: _____ ft. N/A <input checked="" type="checkbox"/>	
OHWM Width: <u> 1 </u> ft.			
OHWM Indicator: <i>(check all that apply)</i>	<input checked="" type="checkbox"/> Clear line on bank	<input checked="" type="checkbox"/> Shelving	<input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining
	<input checked="" type="checkbox"/> Bent, matted, or missing vegetation	<input type="checkbox"/> Wrack line	<input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change
Dominant 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
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input type="checkbox"/> Trees <input type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): forbs, grass			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): n/a			
Aquatic Organisms Observed (list): n/a			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Culvert			
Observation Notes: Roadside ditch.			

sdoa016



Waterbody sdoa016 facing upstream



Waterbody sdoa016 facing downstream

sdoa016



Waterbody sdoa016 cross stream

Waterbody Data Sheet

Description			
Project Name: Supply Header Project		Date: 06/04/2016	Waterbody Survey ID: sdoa018
State: WV	County/Parish: Doddridge	USGS Waterbody Name: Unnamed tributary of Buckeye Creek	
Company: Dominion Transmission, Inc.	Crew Member Initials: KTC, LCE	Latitude:	Longitude:
Survey Type: <i>(check one)</i>	<input checked="" type="checkbox"/> Centerline	<input type="checkbox"/> Re-Route	<input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other
Waterbody Type: <i>(check one)</i>	<input type="checkbox"/> River	<input checked="" type="checkbox"/> Stream	<input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other
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
Feature Quality^a: <i>(check one)</i>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Moderate	<input type="checkbox"/> Low
Feature Description: <i>(check one)</i>	<input checked="" type="checkbox"/> Natural	<input type="checkbox"/> Artificial, man-made	<input type="checkbox"/> Manipulated
Flow Regime: <i>(check one)</i>	<input type="checkbox"/> Ephemeral	<input checked="" type="checkbox"/> Intermittent	<input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale
Sinuosity within Survey Corridor: <i>(check one)</i>	<input type="checkbox"/> Straight	<input checked="" type="checkbox"/> Meandering	
Description Notes: Intermittent meandering stream.			
Measurements			
Depth of Water: <u>.2</u> ft. N/A <input type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: <u>5</u> ft. N/A <input type="checkbox"/>	
OHWM Width: <u>6</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
	<input checked="" type="checkbox"/> Bent, matted, or missing vegetation	<input type="checkbox"/> Wrack line	<input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input checked="" type="checkbox"/> Soil characteristic change
Dominant 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 type="checkbox"/> Organic
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): sedge, forbs, grass; hop hornbeam, maple; tuliptree, maple, hickory, walnut			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): overhanging roots/banks, riffles, leaf packs, pools			
Aquatic Organisms Observed (list): insects			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): directly adjacent to road and oil and gas infrastructure			
Observation Notes: Otherwise nice intermittent stream flowing through a highly disturbed area.			

sdoa018



Waterbody sdoa018 facing upstream



Waterbody sdoa018 facing downstream

sdoa018



Waterbody sdoa018 cross stream

Waterbody Data Sheet

Description						
Project Name: Supply Header Project			Date: 06/04/2016		Waterbody Survey ID: sdoa019	
State: WV		County/Parish: Doddridge		USGS Waterbody Name: Unnamed tributary		
Company: Dominion Transmission, Inc.		Crew Member Initials: KTC, LCE		Latitude:		Longitude:
Survey Type: <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <i>(check one)</i>						
Waterbody Type: <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <i>(check one)</i>						
Water Appearance: <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 <i>(check one)</i>						
Feature Quality^a: <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low <i>(check one)</i>						
Feature Description: <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <i>(check one)</i>						
Flow Regime: <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <i>(check one)</i>						
Sinuosity within Survey Corridor: <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering <i>(check one)</i>						
Description Notes: Upland ephemeral drainage.						
Measurements						
Depth of Water: _____ ft. <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>			Water Edge to Water Edge: _____ ft. <input type="checkbox"/> N/A <input checked="" type="checkbox"/>		OHWM Width: <u>1</u> ft.	
OHWM Indicator: <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 <i>(check all that apply)</i>						
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input checked="" type="checkbox"/> Soil characteristic change						
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input checked="" type="checkbox"/> Organic <i>(check all that apply)</i>						
Observations						
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(check one)</i>						
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>						
Dominant Bank Vegetation (list): forbs, ferns, moss; buckeye, beech; hickory, buckeye						
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): n/a						
Aquatic Organisms Observed (list): n/a						
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): apparent recent logging/clearing adjacent to drainage.						
Observation Notes: Drainage is well defined on a steep slope but choked with litter and debris from land clearing.						

sdoa019



Waterbody sdoa019 facing upstream



Waterbody sdoa019 facing downstream

sdoa019



Waterbody sdoa019 cross stream

Waterbody Data Sheet

Description						
Project Name: Supply Header Project			Date: 06/04/2016		Waterbody Survey ID: sdoa020	
State: WV		County/Parish: Doddridge		USGS Waterbody Name: Unnamed tributary		
Company: Dominion Transmission, Inc.		Crew Member Initials: KTC, LCE		Latitude:		Longitude:
Survey Type: <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <i>(check one)</i>						
Waterbody Type: <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <i>(check one)</i>						
Water Appearance: <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 <i>(check one)</i>						
Feature Quality^a: <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low <i>(check one)</i>						
Feature Description: <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <i>(check one)</i>						
Flow Regime: <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <i>(check one)</i>						
Sinuosity within Survey Corridor: <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering <i>(check one)</i>						
Description Notes: Upland ephemeral drainage.						
Measurements						
Depth of Water: _____ ft. <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>			Water Edge to Water Edge: _____ ft. <input type="checkbox"/> N/A <input checked="" type="checkbox"/>		OHWM Width: <u> 1 </u> ft.	
OHWM Indicator: <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 <i>(check all that apply)</i>						
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input checked="" type="checkbox"/> Soil characteristic change						
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input checked="" type="checkbox"/> Organic <i>(check all that apply)</i>						
Observations						
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(check one)</i>						
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>						
Dominant Bank Vegetation (list): forbs, ferns, moss; buckeye, beech; hickory, buckeye						
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): n/a						
Aquatic Organisms Observed (list): n/a						
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): apparent recent logging/clearing adjacent to drainage.						
Observation Notes: Drainage is well defined on a steep slope but choked with litter and debris from land clearing.						

sdoa020



Waterbody sdoa020 facing upstream



Waterbody sdoa020 facing downstream

sdoa020



Waterbody sdoa020 cross stream

Waterbody Data Sheet

Description			
Project Name: Supply Header Project		Date: 06/04/2016	Waterbody Survey ID: sdoa005
State: WV	County/Parish: Doddridge	USGS Waterbody Name: Unnamed upland drainage	
Company: Dominion Transmission, Inc.	Crew Member Initials: KTC, LCE	Latitude:	Longitude:
Survey Type: <i>(check one)</i>	<input type="checkbox"/> Centerline	<input type="checkbox"/> Re-Route	<input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other
Waterbody Type: <i>(check one)</i>	<input type="checkbox"/> River	<input checked="" type="checkbox"/> Stream	<input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other
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
Feature Quality^a: <i>(check one)</i>	<input type="checkbox"/> High	<input type="checkbox"/> Moderate	<input checked="" type="checkbox"/> Low
Feature Description: <i>(check one)</i>	<input type="checkbox"/> Natural	<input type="checkbox"/> Artificial, man-made	<input checked="" type="checkbox"/> Manipulated
Flow Regime: <i>(check one)</i>	<input checked="" type="checkbox"/> Ephemeral	<input type="checkbox"/> Intermittent	<input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale
Sinuosity within Survey Corridor: <i>(check one)</i>	<input checked="" type="checkbox"/> Straight	<input type="checkbox"/> Meandering	
Description Notes: Ephemeral stream naturally caused by oil pad/dirt road.			
Measurements			
Depth of Water: _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: _____ ft. N/A <input checked="" type="checkbox"/>	
OHWM Width: <u> 1 </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
	<input checked="" type="checkbox"/> Bent, matted, or missing vegetation	<input type="checkbox"/> Wrack line	<input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change
Dominant 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
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): forbs, grass; willow			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): n/a			
Aquatic Organisms Observed (list): n/a			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): anthropogenic fill			
Observation Notes: Ephemeral drainage cuts across surveyed access road.			

sdoa005



Waterbody sdoa005 facing upstream



Waterbody sdoa005 facing downstream

sdoa005



Waterbody sdoa005 cross stream

Waterbody Data Sheet

Description			
Project Name: Supply Header Project		Date: 06/04/2016	Waterbody Survey ID: sdoa017
State: WV	County/Parish: Doddridge	USGS Waterbody Name: Ditch	
Company: Dominion Transmission, Inc.	Crew Member Initials: KTC, LCE	Latitude:	Longitude:
Survey Type: <i>(check one)</i>	<input type="checkbox"/> Centerline	<input type="checkbox"/> Re-Route	<input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other
Waterbody Type: <i>(check one)</i>	<input type="checkbox"/> River	<input type="checkbox"/> Stream	<input checked="" type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other
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
Feature Quality^a: <i>(check one)</i>	<input type="checkbox"/> High	<input type="checkbox"/> Moderate	<input checked="" type="checkbox"/> Low
Feature Description: <i>(check one)</i>	<input type="checkbox"/> Natural	<input checked="" type="checkbox"/> Artificial, man-made	<input type="checkbox"/> Manipulated
Flow Regime: <i>(check one)</i>	<input checked="" type="checkbox"/> Ephemeral	<input type="checkbox"/> Intermittent	<input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale
Sinuosity within Survey Corridor: <i>(check one)</i>	<input checked="" type="checkbox"/> Straight	<input type="checkbox"/> Meandering	
Description Notes: Roadside ditch that conflues with natural drainage.			
Measurements			
Depth of Water: _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: _____ ft. N/A <input checked="" type="checkbox"/>	
OHWM Width: <u> 1 </u> ft.			
OHWM Indicator: <i>(check all that apply)</i>	<input checked="" type="checkbox"/> Clear line on bank	<input checked="" type="checkbox"/> Shelving	<input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining
	<input checked="" type="checkbox"/> Bent, matted, or missing vegetation	<input type="checkbox"/> Wrack line	<input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change
Dominant 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
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): sedge, forbs, grass; rose			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): n/a			
Aquatic Organisms Observed (list): n/a			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Culvert			
Observation Notes: Roadside ditch.			

sdoa017



Waterbody sdoa017 facing upstream



Waterbody sdoa017 facing downstream

sdoa017



Waterbody sdoa017 cross stream

Waterbody Data Sheet

Description			
Project Name: Supply Header Project		Date: 06/04/2016	Waterbody Survey ID: sdoa014
State: WV	County/Parish: Doddridge	USGS Waterbody Name: Unnamed tributary	
Company: Dominion Transmission, Inc.	Crew Member Initials: KTC, LCE	Latitude:	Longitude:
Survey Type: <i>(check one)</i>	<input checked="" type="checkbox"/> Centerline	<input type="checkbox"/> Re-Route	<input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other
Waterbody Type: <i>(check one)</i>	<input type="checkbox"/> River	<input checked="" type="checkbox"/> Stream	<input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other
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
Feature Quality^a: <i>(check one)</i>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Moderate	<input type="checkbox"/> Low
Feature Description: <i>(check one)</i>	<input checked="" type="checkbox"/> Natural	<input type="checkbox"/> Artificial, man-made	<input type="checkbox"/> Manipulated
Flow Regime: <i>(check one)</i>	<input checked="" type="checkbox"/> Ephemeral	<input type="checkbox"/> Intermittent	<input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale
Sinuosity within Survey Corridor: <i>(check one)</i>	<input checked="" type="checkbox"/> Straight	<input type="checkbox"/> Meandering	
Description Notes: Upland ephemeral drainage.			
Measurements			
Depth of Water: _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: _____ ft. N/A <input checked="" type="checkbox"/>	
OHWM Width: <u> 1 </u> ft.			
OHWM Indicator: <i>(check all that apply)</i>	<input type="checkbox"/> Clear line on bank	<input type="checkbox"/> Shelving	<input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining
	<input checked="" type="checkbox"/> Bent, matted, or missing vegetation	<input type="checkbox"/> Wrack line	<input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change
Dominant Substrate: <i>(check all that apply)</i>	<input type="checkbox"/> Bedrock	<input type="checkbox"/> Boulder	<input checked="" type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input checked="" type="checkbox"/> Organic
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): forbs, grass; maple; maple			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): n/a			
Aquatic Organisms Observed (list): n/a			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): n/a			
Observation Notes: Upland ephemeral stream drainage			

sdoa014



Waterbody sdoa014 facing upstream



Waterbody sdoa014 facing downstream

sdoa014



Waterbody sdoa014 cross stream

Waterbody Data Sheet

Description						
Project Name: Supply Header Project		Date: 06/04/2016		Waterbody Survey ID: sdoa015		
State: WV	County/Parish: Doddridge	USGS Waterbody Name: Unnamed tributary				
Company: Dominion Transmission, Inc.	Crew Member Initials: KTC, LCE	Latitude:		Longitude:		
Survey Type: <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <i>(check one)</i>						
Waterbody Type: <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <i>(check one)</i>						
Water Appearance: <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 <i>(check one)</i>						
Feature Quality^a: <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low <i>(check one)</i>						
Feature Description: <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <i>(check one)</i>						
Flow Regime: <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <i>(check one)</i>						
Sinuosity within Survey Corridor: <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering <i>(check one)</i>						
Description Notes: Upland ephemeral drainage.						
Measurements						
Depth of Water: _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: _____ ft. N/A <input checked="" type="checkbox"/>		OHWM Width: <u>1</u> ft.		
OHWM Indicator: <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 <i>(check all that apply)</i> <input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change						
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input checked="" type="checkbox"/> Organic <i>(check all that apply)</i>						
Observations						
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(check one)</i>						
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>						
Dominant Bank Vegetation (list): forbs, grass; maple; maple						
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): n/a						
Aquatic Organisms Observed (list): n/a						
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): n/a						
Observation Notes: Upland ephemeral stream drainage						

sdoa015



Waterbody sdoa015 facing upstream



Waterbody sdoa015 facing downstream

sdoa015



Waterbody sdoa015 cross stream

Waterbody Data Sheet

Description						
Project Name: Supply Header Project		Date: 06/04/2016		Waterbody Survey ID: sdoa006		
State: WV	County/Parish: Doddridge	USGS Waterbody Name: Unnamed upland drainage				
Company: Dominion Transmission, Inc.	Crew Member Initials: KTC, LCE	Latitude:		Longitude:		
Survey Type: <i>(check one)</i>	<input checked="" type="checkbox"/> Centerline	<input type="checkbox"/> Re-Route	<input type="checkbox"/> Access Road	<input type="checkbox"/> Facility	<input type="checkbox"/> Other	
Waterbody Type: <i>(check one)</i>	<input type="checkbox"/> River	<input checked="" type="checkbox"/> Stream	<input type="checkbox"/> Ditch	<input type="checkbox"/> Swale	<input type="checkbox"/> Canal	<input type="checkbox"/> Other
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
Feature Quality^a: <i>(check one)</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Moderate	<input type="checkbox"/> Low			
Feature Description: <i>(check one)</i>	<input checked="" type="checkbox"/> Natural	<input type="checkbox"/> Artificial, man-made	<input type="checkbox"/> Manipulated			
Flow Regime: <i>(check one)</i>	<input checked="" type="checkbox"/> Ephemeral	<input type="checkbox"/> Intermittent	<input type="checkbox"/> Perennial	<input type="checkbox"/> Connecting Swale		
Sinuosity within Survey Corridor: <i>(check one)</i>	<input checked="" type="checkbox"/> Straight	<input type="checkbox"/> Meandering				
Description Notes: Ephemeral stream in higher quality upland forest.						
Measurements						
Depth of Water: _____ ft.	N/A <input checked="" type="checkbox"/>	Unknown <input type="checkbox"/>	Water Edge to Water Edge: _____ ft.	N/A <input checked="" type="checkbox"/>	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	
	<input checked="" type="checkbox"/> Bent, matted, or missing vegetation	<input type="checkbox"/> Wrack line	<input checked="" type="checkbox"/> Litter and debris	<input type="checkbox"/> Abrupt plant community change	<input checked="" type="checkbox"/> Soil characteristic change	
Dominant Substrate: <i>(check all that apply)</i>	<input type="checkbox"/> Bedrock	<input 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 checked="" type="checkbox"/> Organic		
Observations						
Riparian Zone Present: <i>(check one)</i>	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No				
Vegetation Layers: <i>(check all that apply)</i>	<input checked="" type="checkbox"/> Trees	<input checked="" type="checkbox"/> Saplings/Shrubs	<input checked="" type="checkbox"/> Herbs			
Dominant Bank Vegetation (list): forbs, fern, moss; beech, ash; maple, beech, oak						
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): n/a						
Aquatic Organisms Observed (list): n/a						
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): n/a						
Observation Notes: Hillside ephemeral drainage; continues out of corridor.						

sdoa006



Waterbody sdoa006 facing upstream



Waterbody sdoa006 facing downstream

sdoa006



Waterbody sdoa006 cross stream

Waterbody Data Sheet

Description						
Project Name: Supply Header Project		Date: 06/04/2016		Waterbody Survey ID: sdoa007		
State: WV	County/Parish: Doddridge	USGS Waterbody Name: Unnamed upland drainage				
Company: Dominion Transmission, Inc.	Crew Member Initials: KTC, LCE	Latitude:		Longitude:		
Survey Type: <i>(check one)</i>	<input checked="" type="checkbox"/> Centerline	<input type="checkbox"/> Re-Route	<input type="checkbox"/> Access Road	<input type="checkbox"/> Facility	<input type="checkbox"/> Other	
Waterbody Type: <i>(check one)</i>	<input type="checkbox"/> River	<input checked="" type="checkbox"/> Stream	<input type="checkbox"/> Ditch	<input type="checkbox"/> Swale	<input type="checkbox"/> Canal	<input type="checkbox"/> Other
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
Feature Quality^a: <i>(check one)</i>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Moderate	<input type="checkbox"/> Low			
Feature Description: <i>(check one)</i>	<input checked="" type="checkbox"/> Natural	<input type="checkbox"/> Artificial, man-made	<input type="checkbox"/> Manipulated			
Flow Regime: <i>(check one)</i>	<input checked="" type="checkbox"/> Ephemeral	<input type="checkbox"/> Intermittent	<input type="checkbox"/> Perennial	<input type="checkbox"/> Connecting Swale		
Sinuosity within Survey Corridor: <i>(check one)</i>	<input checked="" type="checkbox"/> Straight	<input type="checkbox"/> Meandering				
Description Notes: Ephemeral stream in higher quality upland forest. Stream not terribly well developed.						
Measurements						
Depth of Water: _____ ft.	N/A <input checked="" type="checkbox"/>	Unknown <input type="checkbox"/>	Water Edge to Water Edge: _____ ft.	N/A <input checked="" type="checkbox"/>	OHWM Width: <u> 1 </u> ft.	
OHWM Indicator: <i>(check all that apply)</i>	<input type="checkbox"/> Clear line on bank	<input type="checkbox"/> Shelving	<input type="checkbox"/> Wrested vegetation	<input type="checkbox"/> Scouring	<input type="checkbox"/> Water staining	
	<input checked="" type="checkbox"/> Bent, matted, or missing vegetation	<input type="checkbox"/> Wrack line	<input checked="" type="checkbox"/> Litter and debris	<input type="checkbox"/> Abrupt plant community change	<input type="checkbox"/> Soil characteristic change	
Dominant 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
Observations						
Riparian Zone Present: <i>(check one)</i>	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No				
Vegetation Layers: <i>(check all that apply)</i>	<input checked="" type="checkbox"/> Trees	<input checked="" type="checkbox"/> Saplings/Shrubs	<input checked="" type="checkbox"/> Herbs			
Dominant Bank Vegetation (list): forbs, fern; hop hornbeam, buckeye, maple; maple, beech, oak						
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): n/a						
Aquatic Organisms Observed (list): n/a						
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): n/a						
Observation Notes: Hillside ephemeral drainage; continues out of corridor.						

sdoa007



Waterbody sdoa007 facing upstream



Waterbody sdoa007 facing downstream

sdoa007



Waterbody sdoa007 cross stream

Waterbody Data Sheet

Description						
Project Name: Supply Header Project			Date: 06/04/2016		Waterbody Survey ID: sdoa009	
State: WV		County/Parish: Doddridge		USGS Waterbody Name: Unnamed upland drainage		
Company: Dominion Transmission, Inc.		Crew Member Initials: KTC, LCE		Latitude:		Longitude:
Survey Type: <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>						
Waterbody Type: <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>						
Water Appearance: <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 <small>(check one)</small>						
Feature Quality^a: <input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low <small>(check one)</small>						
Feature Description: <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>						
Flow Regime: <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>						
Sinuosity within Survey Corridor: <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering <small>(check one)</small>						
Description Notes: High quality ephemeral stream in higher quality upland forest.						
Measurements						
Depth of Water: _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>			Water Edge to Water Edge: _____ ft. N/A <input checked="" type="checkbox"/>		OHWM Width: <u>4</u> ft.	
OHWM Indicator: <input checked="" type="checkbox"/> Clear line on bank <input checked="" type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>						
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input checked="" type="checkbox"/> Soil characteristic change						
Dominant Substrate: <input checked="" type="checkbox"/> Bedrock <input checked="" type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>						
Observations						
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <small>(check one)</small>						
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>						
Dominant Bank Vegetation (list): forbs, grass, fern; beech; maple, beech, maple, buckeye						
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): n/a						
Aquatic Organisms Observed (list): n/a						
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): n/a						
Observation Notes: Hillside ephemeral drainage.						

sdoa009



Waterbody sdoa009 facing upstream



Waterbody sdoa009 facing downstream

sdoa009



Waterbody sdoa009 cross stream

Waterbody Data Sheet

Description			
Project Name: Supply Header Project		Date: 06/04/2016	Waterbody Survey ID: sdoa008
State: WV	County/Parish: Doddridge	USGS Waterbody Name: Unnamed upland drainage	
Company: Dominion Transmission, Inc.	Crew Member Initials: KTC, LCE	Latitude:	Longitude:
Survey Type: <i>(check one)</i>	<input checked="" type="checkbox"/> Centerline	<input type="checkbox"/> Re-Route	<input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other
Waterbody Type: <i>(check one)</i>	<input type="checkbox"/> River	<input checked="" type="checkbox"/> Stream	<input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other
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
Feature Quality^a: <i>(check one)</i>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Moderate	<input type="checkbox"/> Low
Feature Description: <i>(check one)</i>	<input checked="" type="checkbox"/> Natural	<input type="checkbox"/> Artificial, man-made	<input type="checkbox"/> Manipulated
Flow Regime: <i>(check one)</i>	<input checked="" type="checkbox"/> Ephemeral	<input type="checkbox"/> Intermittent	<input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale
Sinuosity within Survey Corridor: <i>(check one)</i>	<input checked="" type="checkbox"/> Straight	<input type="checkbox"/> Meandering	
Description Notes: Ephemeral stream in higher quality upland forest.			
Measurements			
Depth of Water: _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: _____ ft. N/A <input checked="" type="checkbox"/>	
OHWM Width: <u> 1 </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
	<input checked="" type="checkbox"/> Bent, matted, or missing vegetation	<input type="checkbox"/> Wrack line	<input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input checked="" type="checkbox"/> Soil characteristic change
Dominant Substrate: <i>(check all that apply)</i>	<input type="checkbox"/> Bedrock	<input type="checkbox"/> Boulder	<input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input checked="" type="checkbox"/> Organic
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): forbs, fern; beech; maple, beech, oak, sycamore, tuliptree			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): n/a			
Aquatic Organisms Observed (list): n/a			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): n/a			
Observation Notes: Hillside ephemeral drainage.			

sdoa008



Waterbody sdoa008 facing upstream



Waterbody sdoa008 facing downstream

sdoa008



Waterbody sdoa008 cross stream

Waterbody Data Sheet

Description			
Project Name: Supply Header Project		Date: 06/04/2016	Waterbody Survey ID: sdoa011
State: WV	County/Parish: Doddridge	USGS Waterbody Name: Greenbriar Creek	
Company: Dominion Transmission, Inc.	Crew Member Initials: KTC, LCE	Latitude:	Longitude:
Survey Type: <i>(check one)</i>	<input checked="" type="checkbox"/> Centerline	<input type="checkbox"/> Re-Route	<input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other
Waterbody Type: <i>(check one)</i>	<input type="checkbox"/> River	<input checked="" type="checkbox"/> Stream	<input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other
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
Feature Quality^a: <i>(check one)</i>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Moderate	<input type="checkbox"/> Low
Feature Description: <i>(check one)</i>	<input checked="" type="checkbox"/> Natural	<input type="checkbox"/> Artificial, man-made	<input type="checkbox"/> Manipulated
Flow Regime: <i>(check one)</i>	<input type="checkbox"/> Ephemeral	<input type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale
Sinuosity within Survey Corridor: <i>(check one)</i>	<input type="checkbox"/> Straight	<input checked="" type="checkbox"/> Meandering	
Description Notes: Perennial stream with areas of fringe wetland and partial riparian corridor present.			
Measurements			
Depth of Water: <u>1</u> ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: <u>14</u> ft. N/A <input checked="" type="checkbox"/>	
OHWM Width: <u>18</u> ft.			
OHWM Indicator: <i>(check all that apply)</i>	<input checked="" type="checkbox"/> Clear line on bank	<input checked="" type="checkbox"/> Shelving	<input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining
	<input checked="" type="checkbox"/> Bent, matted, or missing vegetation	<input type="checkbox"/> Wrack line	<input checked="" type="checkbox"/> Litter and debris <input checked="" type="checkbox"/> Abrupt plant community change <input checked="" type="checkbox"/> Soil characteristic change
Dominant Substrate: <i>(check all that apply)</i>	<input type="checkbox"/> Bedrock	<input 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
Observations			
Riparian Zone Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): sedge, forbs, grass; beech, buckeye, willow, sycamore; maple, buckeye, oak, sycamore, walnut			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): emergent vegetation, overhanging bank/roots, pools, bars, runs, large woody debris			
Aquatic Organisms Observed (list): snapping turtle, fish, insects			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): adjacent to pasture/disturbed floodplain			
Observation Notes: Moderate size snapping turtle observed foraging. Several different species of damselfly and drangonfly observed.			

sdoa011



Waterbody sdoa011 facing upstream



Waterbody sdoa011 facing downstream

sdoa011



Waterbody sdoa011 cross stream

Waterbody Data Sheet

Description			
Project Name: Supply Header Project		Date: 06/04/2016	Waterbody Survey ID: sdoa010
State: WV	County/Parish: Doddridge	USGS Waterbody Name: Unnamed upland drainage	
Company: Dominion Transmission, Inc.	Crew Member Initials: KTC, LCE	Latitude:	Longitude:
Survey Type: <i>(check one)</i>	<input checked="" type="checkbox"/> Centerline	<input type="checkbox"/> Re-Route	<input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other
Waterbody Type: <i>(check one)</i>	<input type="checkbox"/> River	<input checked="" type="checkbox"/> Stream	<input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other
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
Feature Quality^a: <i>(check one)</i>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Moderate	<input type="checkbox"/> Low
Feature Description: <i>(check one)</i>	<input checked="" type="checkbox"/> Natural	<input type="checkbox"/> Artificial, man-made	<input type="checkbox"/> Manipulated
Flow Regime: <i>(check one)</i>	<input checked="" type="checkbox"/> Ephemeral	<input type="checkbox"/> Intermittent	<input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale
Sinuosity within Survey Corridor: <i>(check one)</i>	<input checked="" type="checkbox"/> Straight	<input type="checkbox"/> Meandering	
Description Notes: Ephemeral stream in higher quality upland forest.			
Measurements			
Depth of Water: _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: _____ ft. N/A <input checked="" type="checkbox"/>	
OHWM Width: <u> 1 </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
	<input checked="" type="checkbox"/> Bent, matted, or missing vegetation	<input type="checkbox"/> Wrack line	<input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input checked="" type="checkbox"/> Soil characteristic change
Dominant Substrate: <i>(check all that apply)</i>	<input type="checkbox"/> Bedrock	<input 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 checked="" type="checkbox"/> Organic
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): forbs, grass, moss, fern; beech; maple, hickory, sycamore, beech			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): n/a			
Aquatic Organisms Observed (list): n/a			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): n/a			
Observation Notes: Hillside ephemeral drainage.			

sdoa010



Waterbody sdoa010 facing upstream



Waterbody sdoa010 facing downstream

sdoa010



Waterbody sdoa010 cross stream

Waterbody Data Sheet

Description			
Project Name: Supply Header Project		Date: 06/04/2016	Waterbody Survey ID: sdoa013
State: WV	County/Parish: Doddridge	USGS Waterbody Name: Unnamed upland drainage	
Company: Dominion Transmission, Inc.	Crew Member Initials: KTC, LCE	Latitude:	Longitude:
Survey Type: <i>(check one)</i>	<input checked="" type="checkbox"/> Centerline	<input type="checkbox"/> Re-Route	<input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other
Waterbody Type: <i>(check one)</i>	<input type="checkbox"/> River	<input checked="" type="checkbox"/> Stream	<input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other
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
Feature Quality^a: <i>(check one)</i>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Moderate	<input type="checkbox"/> Low
Feature Description: <i>(check one)</i>	<input checked="" type="checkbox"/> Natural	<input type="checkbox"/> Artificial, man-made	<input type="checkbox"/> Manipulated
Flow Regime: <i>(check one)</i>	<input checked="" type="checkbox"/> Ephemeral	<input type="checkbox"/> Intermittent	<input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale
Sinuosity within Survey Corridor: <i>(check one)</i>	<input checked="" type="checkbox"/> Straight	<input type="checkbox"/> Meandering	
Description Notes: Upland ephemeral drainage.			
Measurements			
Depth of Water: _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: _____ ft. N/A <input checked="" type="checkbox"/>	
OHWM Width: <u> 1 </u> ft.			
OHWM Indicator: <i>(check all that apply)</i>	<input type="checkbox"/> Clear line on bank	<input type="checkbox"/> Shelving	<input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining
	<input checked="" type="checkbox"/> Bent, matted, or missing vegetation	<input type="checkbox"/> Wrack line	<input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change
Dominant Substrate: <i>(check all that apply)</i>	<input type="checkbox"/> Bedrock	<input type="checkbox"/> Boulder	<input checked="" type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input checked="" type="checkbox"/> Organic
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): forbs, grass; honeysuckle, pawpaw; maple oak			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): n/a			
Aquatic Organisms Observed (list): n/a			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): n/a			
Observation Notes: Upland ephemeral stream drainage			

sdoa013



Waterbody sdoa013 facing upstream



Waterbody sdoa013 facing downstream

sdoa013



Waterbody sdoa013 cross stream

Waterbody Data Sheet

Description			
Project Name: Supply Header Project		Date: 06/04/2016	Waterbody Survey ID: sdoa012
State: WV	County/Parish: Doddridge	USGS Waterbody Name: unnamed upland drainage	
Company: Dominion Transmission, Inc.	Crew Member Initials: KTC, LCE	Latitude:	Longitude:
Survey Type: <i>(check one)</i>	<input checked="" type="checkbox"/> Centerline	<input type="checkbox"/> Re-Route	<input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other
Waterbody Type: <i>(check one)</i>	<input type="checkbox"/> River	<input checked="" type="checkbox"/> Stream	<input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other
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
Feature Quality^a: <i>(check one)</i>	<input type="checkbox"/> High	<input type="checkbox"/> Moderate	<input checked="" type="checkbox"/> Low
Feature Description: <i>(check one)</i>	<input checked="" type="checkbox"/> Natural	<input type="checkbox"/> Artificial, man-made	<input type="checkbox"/> Manipulated
Flow Regime: <i>(check one)</i>	<input checked="" type="checkbox"/> Ephemeral	<input type="checkbox"/> Intermittent	<input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale
Sinuosity within Survey Corridor: <i>(check one)</i>	<input checked="" type="checkbox"/> Straight	<input type="checkbox"/> Meandering	
Description Notes: Low quality upland ephemeral drainage.			
Measurements			
Depth of Water: _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: _____ ft. N/A <input checked="" type="checkbox"/>	
OHWM Width: <u> 1 </u> ft.			
OHWM Indicator: <i>(check all that apply)</i>	<input type="checkbox"/> Clear line on bank	<input type="checkbox"/> Shelving	<input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining
	<input checked="" type="checkbox"/> Bent, matted, or missing vegetation	<input type="checkbox"/> Wrack line	<input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change
Dominant 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
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): forbs; rose, honeysuckle; buckeye, hickories			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): n/a			
Aquatic Organisms Observed (list): n/a			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): livestock access			
Observation Notes: Cattle and horse access to ephemeral stream that is overgrown with invasive plants.			

sdoa012



Waterbody sdoa012 facing upstream



Waterbody sdoa012 facing downstream

sdoa012



Waterbody sdoa012 cross stream

Waterbody Data Sheet

Survey Description

Project Name: <u>DTI Supply Header</u>		Waterbody Name: <u>Buffalo Calf Fork River</u>		Waterbody ID: <u>5205005</u>	Date: <u>8-14-15</u>
State: <u>WV</u>	County: <u>Doddridge</u>	Company: <u>ADWEST</u>	Crew Member Initials: <u>JD, DB</u>	Photo ID(s):	
Tract Number(s): <u>NO NUMBER</u>		Milepost Entry: <u>NA</u>	Milepost Exit: <u>NA</u>	Associated Wetland ID(s): <u>NONE</u>	
Survey Type: <small>(check one)</small>					
<input type="checkbox"/> Centerline		<input type="checkbox"/> Re-Route		<input checked="" type="checkbox"/> Access Road	
<input type="checkbox"/> Other:					

Physical Attributes

Stream Classification: <small>(check one)</small>					
<input type="checkbox"/> Ephemeral		<input type="checkbox"/> Intermittent		<input checked="" type="checkbox"/> Perennial	
Waterbody Type: <small>(check one)</small>					
<input checked="" type="checkbox"/> Stream		<input type="checkbox"/> River		<input type="checkbox"/> Ditch	
<input type="checkbox"/> Pond		<input type="checkbox"/> Lake		<input type="checkbox"/> Connecting swale ^a	
<input type="checkbox"/> Other:					
OHWM		OHWM Indicator: <small>(check all that apply)</small>			
Width: <u>10</u> ft.		<input checked="" type="checkbox"/> Clear line on bank		<input checked="" type="checkbox"/> Shelving	
Height: _____ ft.		<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 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 at Centerline: <u>18</u> ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: <u>6</u> ft.		Depth of Water at Centerline: <small>(Approx.)</small> <u>4</u> ft.	
Sinuosity: <small>(check one)</small>		Water velocity: <small>(Approx.)</small>		Bank height	
<input type="checkbox"/> Straight		<u><3</u> fps		Right: <u>1</u> ft.	
<input checked="" type="checkbox"/> Meandering				Left: <u>2</u> ft.	
				Right: <u>15</u> degrees	
				Left: <u>30</u> degrees	

Qualitative Attributes

Water Appearance: <small>(check one)</small>					
<input type="checkbox"/> No water		<input checked="" type="checkbox"/> Clear		<input type="checkbox"/> Turbid	
<input type="checkbox"/> Sheen on surface		<input type="checkbox"/> Surface scum		<input type="checkbox"/> Algal mats	
<input type="checkbox"/> Other:					
Substrate: <small>(check all that apply)</small>					
<input checked="" type="checkbox"/> Bedrock		<input checked="" type="checkbox"/> Gravel		<input checked="" type="checkbox"/> Sand	
<input checked="" type="checkbox"/> Silt/clay		<input type="checkbox"/> Organic		<input type="checkbox"/> Other:	
% of Substrate: <u>10</u> % <u>70</u> % <u>5</u> % <u>15</u> % _____ % _____ %					
Width of Riparian Zone: <u>0</u> ft.		Vegetative Layers: <small>(check all that apply)</small>			
		<input type="checkbox"/> Trees:		<input checked="" type="checkbox"/> Shrubs:	
		<input type="checkbox"/> Herbs:		<input checked="" type="checkbox"/> _____ in.	
Avg. DBH of Dominants: <small>(approx.)</small>					
Dominant Bank Vegetation: <small>(list)</small> <u>Salix nigra, Dactylis glomerata</u>					
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): <small>(list)</small> <u>Pools, riffles overhanging banks + veg.</u>					
Aquatic Organisms Observed: <small>(list)</small> <u>Small fish</u>					
Invasive and/or T&E Species Observed: <small>(list)</small> <u>Microstegium vimineum</u>					
Tributary is: <small>(check one)</small>					
<input type="checkbox"/> Natural		<input type="checkbox"/> Artificial, man-made		<input checked="" type="checkbox"/> Manipulated	
Disturbances: <small>(check all that apply)</small>					
<input checked="" type="checkbox"/> Livestock access		<input type="checkbox"/> Manure in waterbody		<input type="checkbox"/> Waste discharge pipes	
<input checked="" type="checkbox"/> Other:		<u>road w/ culvert pipes</u>			
Stream Quality ^b : <small>(check one)</small>					
<input type="checkbox"/> High		<input checked="" type="checkbox"/> Moderate		<input type="checkbox"/> Low	

^a Connecting swales are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b 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.

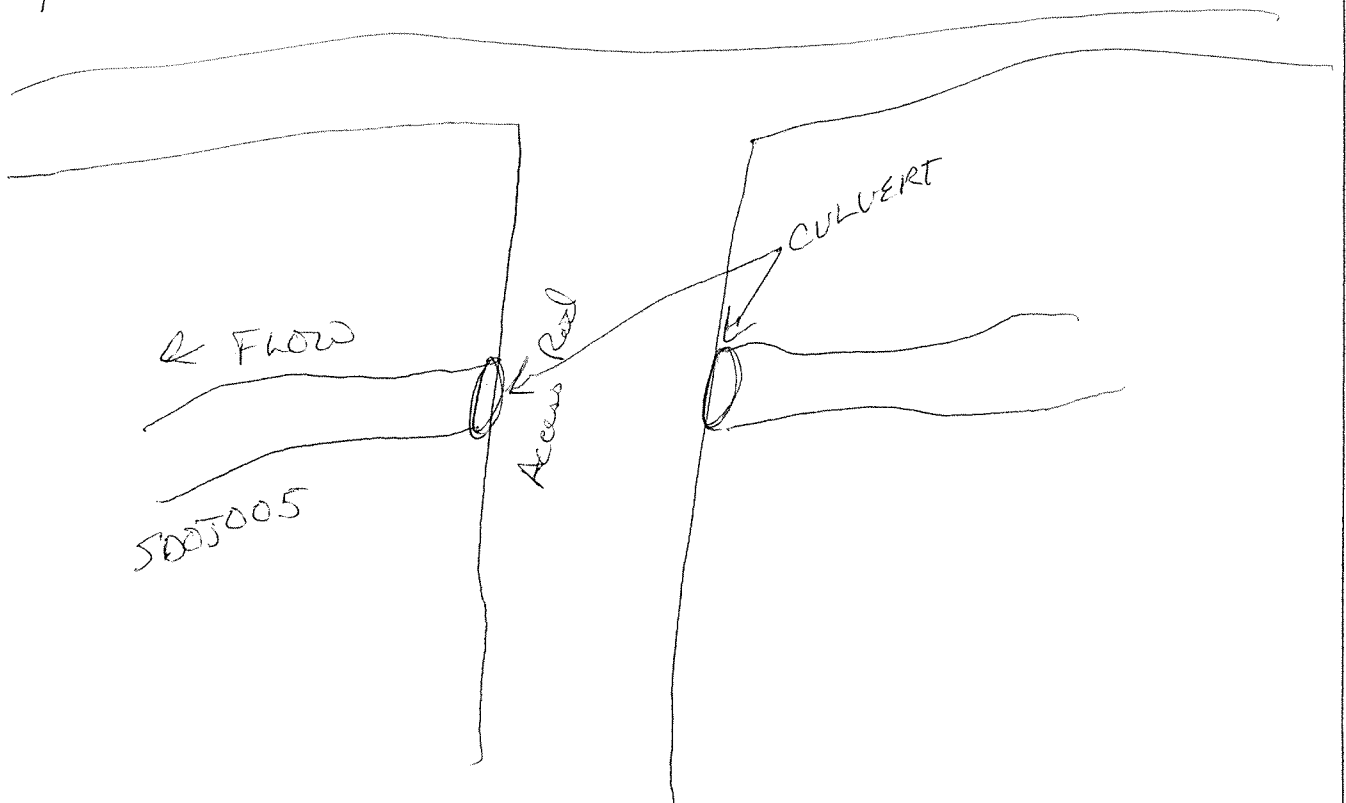
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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



SDOJ005



Waterbody *SDOJ005*
facing upstream



Waterbody *SDOJ005*
facing downstream

SDOJ005



Waterbody SDOJ005 facing upline cross stream

Waterbody Data Sheet

Survey Description			
Project Name: <i>DTI Supply Warehouse</i>		Waterbody Name: <i>Buffalo Fork</i>	Waterbody ID: <i>SD06033</i>
Date: <i>5-15-15</i>			
State: <i>WV</i>	County: <i>Dodderidge</i>	Company: <i>DEWEST</i>	Crew Member Initials: <i>JD, JG</i>
Photo ID(s):			
Tract Number(s): <i>31-042</i>		Milepost Entry: <i>7.6</i>	Milepost Exit: <i>7.6</i>
Associated Wetland ID(s): <i>NONE</i>			
Survey Type: (check one)			
<input checked="" type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other: _____			
Physical Attributes			
Stream Classification: (check one)			
<input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial			
Waterbody Type: (check one)			
<input checked="" type="checkbox"/> Stream <input type="checkbox"/> River <input type="checkbox"/> Ditch <input type="checkbox"/> Pond <input type="checkbox"/> Lake <input type="checkbox"/> Connecting swale ^a <input type="checkbox"/> Other: _____			
OHWM		OHWM Indicator: (check all that apply)	
Width: <i>10</i> ft.		<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	
Height: <i>9"</i> ft.		<input checked="" 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 at Centerline: <i>15</i> ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: <i>7</i> ft.	Depth of Water at Centerline: (Approx.) <i>3"</i> ft.
Sinuosity: (check one)		Water velocity: (Approx.)	Bank height
<input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		<i>7.2</i> fps	Right: <i>2</i> ft. Left: <i>1</i> ft.
			Bank slope Right: <i>30</i> degrees Left: <i>20</i> degrees
Qualitative Attributes			
Water Appearance: (check one)			
<input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other: _____			
Substrate: (check all that apply)			
<input checked="" type="checkbox"/> Bedrock <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: <i>10</i> % <i>60</i> % <i>10</i> % <i>20</i> % _____ % _____ %			
Width of Riparian Zone: <i>10</i> ft.		Vegetative Layers: (check all that apply)	
		<input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Shrubs: <input checked="" type="checkbox"/> Herbs	
		Avg. DBH of Dominants: (approx.) <i>6</i> in. _____ in.	
Dominant Bank Vegetation: (list) <i>Acer negundo, Platanus occidentalis, Salix nigra, Rosa multiflora, Rubus argutus</i>			
Aquatic Habitats (ex: submerged or emergent aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): (list) <i>Pools, riffles, over hanging veg + banks</i>			
Aquatic Organisms Observed: (list) <i>Small fish</i>			
Invasive and/or T&E Species Observed: (list) <i>Rosa multiflora</i>			
Tributary is: (check one)			
<input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Disturbances: (check all that apply)			
<input checked="" type="checkbox"/> Livestock access <input type="checkbox"/> Manure in waterbody <input type="checkbox"/> Waste discharge pipes <input type="checkbox"/> Other: _____			
Stream Quality ^b : (check one)			
<input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low			

Waterbody ID:

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **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.

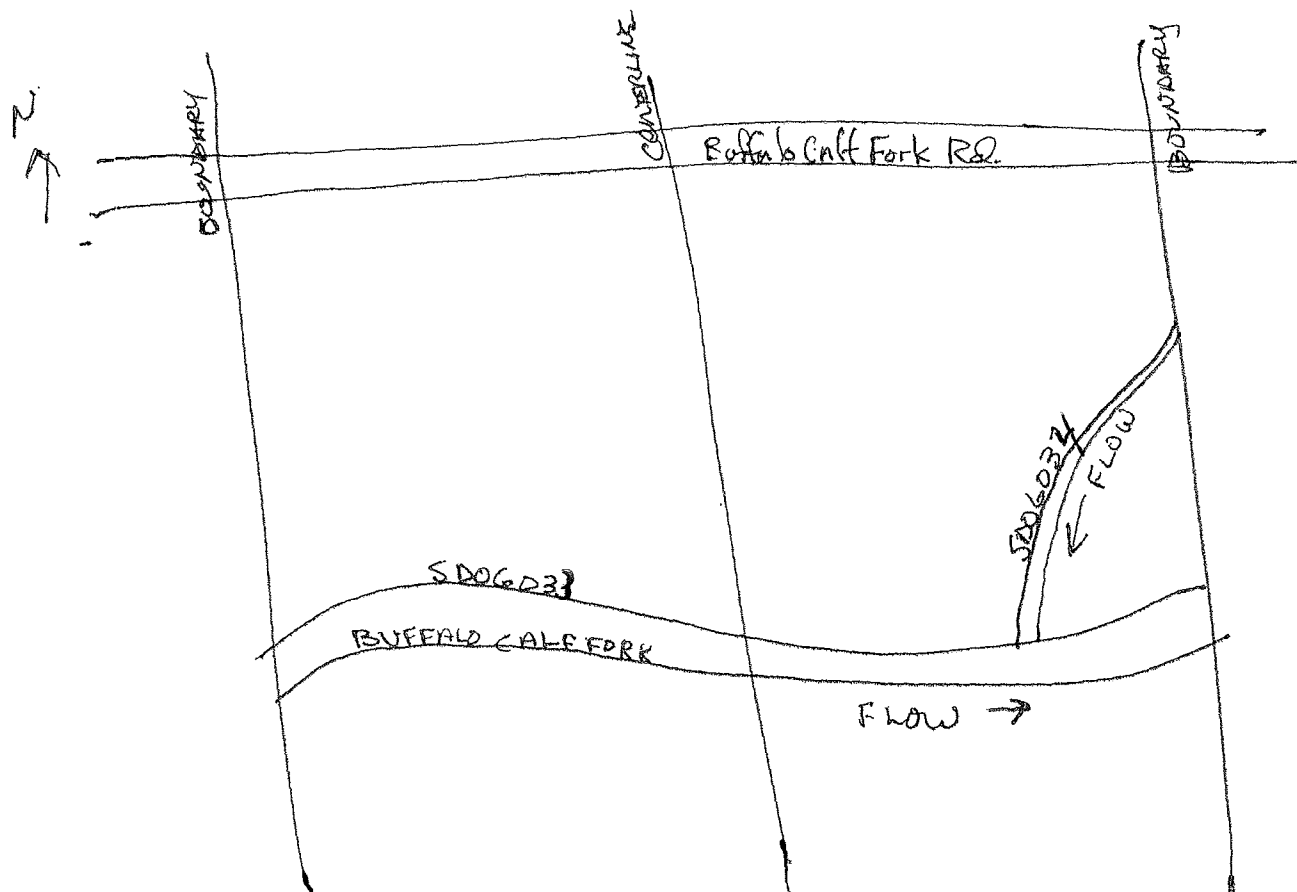
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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



sdog033



Waterbody sdog033 facing upstream



Waterbody sdog033 facing downstream

sdog033



Waterbody sdog033 facing upline cross stream

Waterbody Data Sheet

Survey Description					
Project Name: <i>D/I Supply Hender</i>		Waterbody Name: <i>UNT TO Buffalo Calf Fork</i>		Waterbody ID: <i>SD06034</i>	Date: <i>5-15-15</i>
State: <i>WV</i>	County: <i>Doddridge</i>	Company: <i>DPWEST</i>	Crew Member Initials: <i>JD, JG</i>	Photo ID(s):	
Tract Number(s): <i>31-04Z 31-044-Boob</i>		Milepost Entry: <i>7.6</i>	Milepost Exit: <i>7.6</i>	Associated Wetland ID(s): <i>NONE</i>	
Survey Type: (check one) <input checked="" type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:					
Physical Attributes					
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial					
Waterbody Type: (check one) <input checked="" type="checkbox"/> Stream <input type="checkbox"/> River <input type="checkbox"/> Ditch <input type="checkbox"/> Pond <input type="checkbox"/> Lake <input type="checkbox"/> Connecting swale ^a <input type="checkbox"/> Other:					
OHWM Width: <i>6</i> ft. Height: _____ ft.		OHWM Indicator: (check all that apply) <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input checked="" 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 at Centerline: <i>10</i> ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: <i>3</i> ft.		Depth of Water at Centerline: (Approx.) <i>2</i> " ft.	
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: (Approx.) <i>1</i> fps		Bank height Right: <i>2</i> ft. Left: <i>3</i> ft.	
Bank slope Right: <i>40</i> degrees Left: <i>60</i> degrees					
Qualitative Attributes					
Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:					
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input 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: _____% <i>60</i> % <i>10</i> % <i>30</i> % _____%					
Width of Riparian Zone: <i>0</i> ft.		Vegetative Layers: (check all that apply) <input type="checkbox"/> Trees: <input checked="" type="checkbox"/> Shrubs: <input checked="" type="checkbox"/> Herbs Avg. DBH of Dominants: _____ in. _____ in.			
Dominant Bank Vegetation: (list) <i>Salix nigra, Rosa multiflora, Dactylis glomerata, Trifolium repens</i>					
Aquatic Habitats (ex: submerged or emergent aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): (list) <i>Pools, riffles</i>					
Aquatic Organisms Observed: (list) <i>small frogs</i>					
Invasive and/or T&E Species Observed: (list) <i>Rosa multiflora</i>					
Tributary is: (check one) <input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated					
Disturbances: (check all that apply) <input checked="" type="checkbox"/> Livestock access <input type="checkbox"/> Manure in waterbody <input type="checkbox"/> Waste discharge pipes <input type="checkbox"/> Other:					
Stream Quality ^b : (check one) <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low					

SDOG034

Connecting swales are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

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.

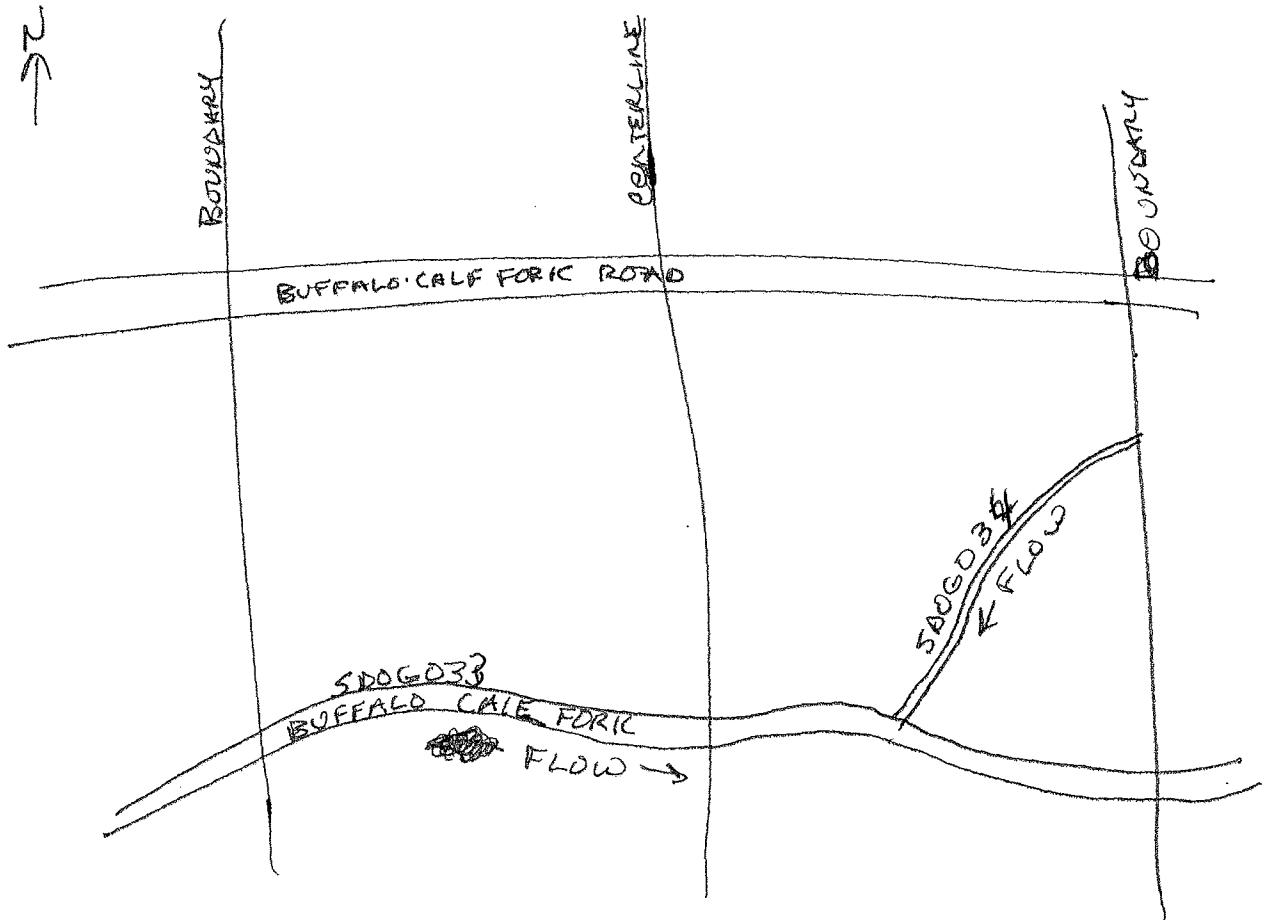
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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



sdog034



Waterbody sdog034 facing upstream



Waterbody sdog034 facing downstream

sdog034



Waterbody sdog034 facing upline cross stream

Waterbody Data Sheet

Survey Description					
Project Name: <i>DTI Supply Header</i>		Waterbody Name: <i>UNIT TO Buffalo Calf Fork River</i>		Waterbody ID: <i>SD050041</i>	Date: <i>8-14-15</i>
State: <i>WV</i>	County: <i>Doddridge</i>	Company: <i>DPWEST</i>	Crew Member Initials: <i>JD, DB</i>	Photo ID(s):	
Tract Number(s): <i>31-042-A002</i> <i>31-042-A002-AR</i>		Milepost Entry: <i>NA</i>	Milepost Exit: <i>NA</i>	Associated Wetland ID(s): <i>NONE</i>	
Survey Type: <small>(check one)</small> <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:					
Physical Attributes					
Stream Classification: <small>(check one)</small> <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial					
Waterbody Type: <small>(check one)</small> <input checked="" type="checkbox"/> Stream <input type="checkbox"/> River <input type="checkbox"/> Ditch <input type="checkbox"/> Pond <input type="checkbox"/> Lake <input type="checkbox"/> Connecting swale ^a <input type="checkbox"/> Other:					
OHWM Width: <u>4</u> ft. Height: _____ ft.		OHWM Indicator: <small>(check all that apply)</small> <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 <input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Width of Waterbody - Top of Bank to Top of Bank at Centerline: <u>12</u> ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: <u>NA</u> ft.		Depth of Water at Centerline: <small>(Approx.)</small> <u>0</u> ft.	
Sinuosity: <small>(check one)</small> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: <small>(Approx.)</small> <u><1</u> fps	Bank height Right: _____ ft. Left: _____ ft.	Bank slope Right: _____ degrees Left: _____ degrees	
Qualitative Attributes					
Water Appearance: <small>(check one)</small> <input checked="" type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:					
Substrate: <small>(check all that apply)</small> <input type="checkbox"/> Bedrock <input 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>80</u> % <u>5</u> % <u>15</u> % _____ % _____ %					
Width of Riparian Zone: <u><10</u> ft.		Vegetative Layers: <small>(check all that apply)</small> <input type="checkbox"/> Trees: <input checked="" type="checkbox"/> Shrubs: <input checked="" type="checkbox"/> Herbs Avg. DBH of Dominants: _____ in. _____ in.			
Dominant Bank Vegetation: <small>(list)</small> <i>Rosa multiflora, Verbena occidentalis, Vernonia gigantea, Prunus serotina</i>					
Aquatic Habitats <small>(ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools):</small> <small>(list)</small> <i>Pools</i>					
Aquatic Organisms Observed: <small>(list)</small> <i>NONE</i>					
Invasive and/or T&E Species Observed: <small>(list)</small> <i>Rosa multiflora, microstegium vimineum, Eragrostis cymbellata</i>					
Tributary is: <small>(check one)</small> <input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated					
Disturbances: <small>(check all that apply)</small> <input checked="" type="checkbox"/> Livestock access <input type="checkbox"/> Manure in waterbody <input type="checkbox"/> Waste discharge pipes <input checked="" type="checkbox"/> Other: <i>edge of gravel</i>					
Stream Quality ^b : <small>(check one)</small> <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low <i>with culverts</i>					

5005004

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **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.

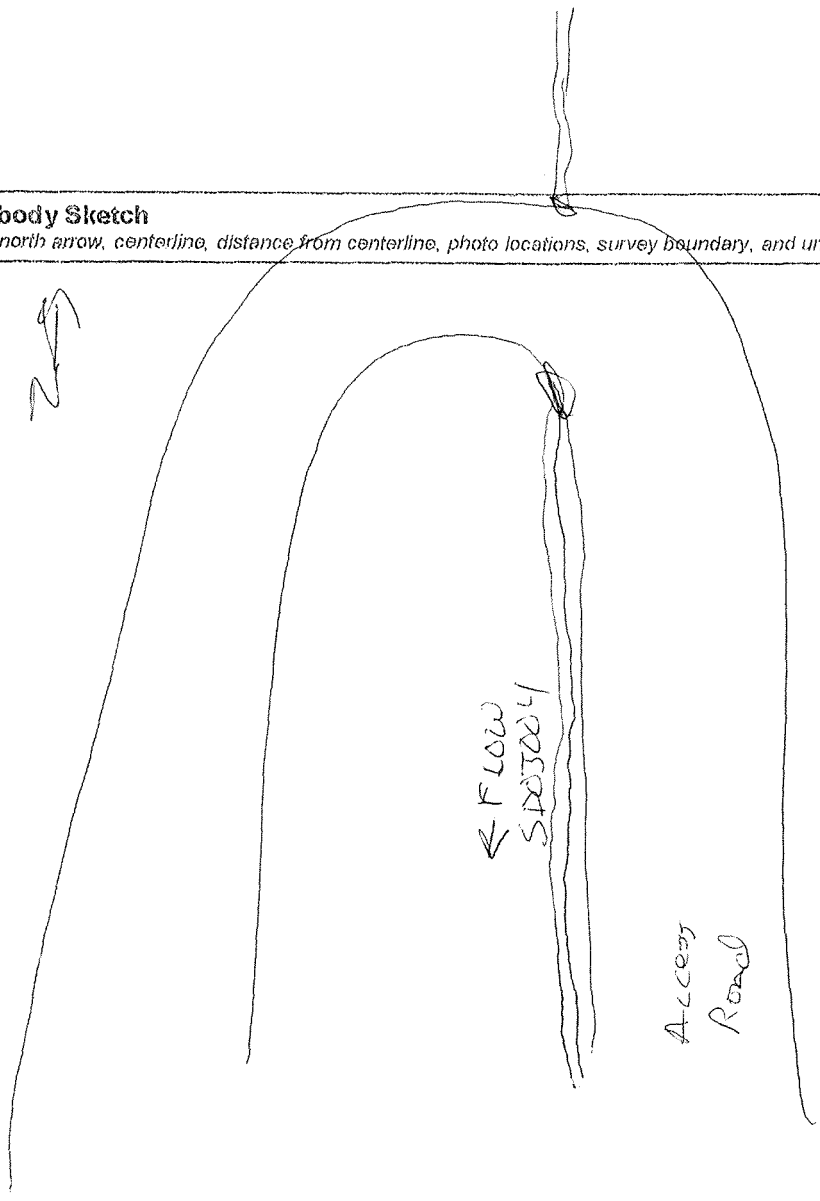
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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



SDOJ004



Waterbody *SDOJ004*
facing upstream



Waterbody *SDOJ004*
facing downstream

SDOJ004



Waterbody SDOJ004 facing upline cross stream

Waterbody Data Sheet

Survey Description				
Project Name: <i>DTI Supply Header</i>	Waterbody Name: <i>UNT TO BUFFALO Calf Fork</i>	Waterbody ID: <i>SD06023</i>	Date: <i>4-16-15</i>	
State: <i>WV</i>	County: <i>Doddridge</i>	Company: <i>DDWEST</i>	Crew Member Initials: <i>JD, DB</i>	Photo ID(s):
Tract Number(s): <i>31-044-A005</i>		Milepost Entry: <i>8.6</i>	Milepost Exit: <i>8.6</i>	Associated Wetland ID(s): <i>NONE</i>
Survey Type: (check one) <input checked="" type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial				
Waterbody Type: (check one) <input checked="" type="checkbox"/> Stream <input type="checkbox"/> River <input type="checkbox"/> Ditch <input type="checkbox"/> Pond <input type="checkbox"/> Lake <input type="checkbox"/> Connecting swale ^a <input type="checkbox"/> Other:				
OHWM Width: <i>8</i> ft. Height: <i>5'</i> ft.	OHWM Indicator: (check all that apply) <input checked="" type="checkbox"/> Clear line on bank <input checked="" type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <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 type="checkbox"/> Soil characteristic change			
Width of Waterbody - Top of Bank to Top of Bank at Centerline: <i>12</i> ft.	Width of Waterbody - Water Edge to Water Edge at Centerline: <i>6</i> ft.	Depth of Water at Centerline: (Approx.) <i>2'</i> ft.		
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: (Approx.) <i>< 3</i> fps	Bank height Right: <i>1</i> ft. Left: <i>1</i> ft.	Bank slope Right: <i>25</i> degrees Left: <i>75</i> degrees	
Qualitative Attributes				
Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: (check all that apply) <input checked="" type="checkbox"/> Bedrock <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: <i>10</i> % <i>60</i> % <i>15</i> % <i>15</i> % _____ % _____ %				
Width of Riparian Zone: <i>2100</i> ft.	Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Shrubs: <input checked="" type="checkbox"/> Herbs: Avg. DBH of Dominants: _____ in. _____ in.			
Dominant Bank Vegetation: (list) <i>Quercus velutina, Fagus grand. folia, Urtica, , Blystrichum acrostokes</i>				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): (list) <i>rifle pools, low overhanging banks</i>				
Aquatic Organisms Observed: (list) <i>NONE</i>				
Invasive and/or T&E Species Observed: (list) <i>NONE</i>				
Tributary is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Disturbances: (check all that apply) <input type="checkbox"/> Livestock access <input type="checkbox"/> Manure in waterbody <input checked="" type="checkbox"/> Waste discharge pipes <input type="checkbox"/> Other: <i>NONE</i>				
Stream Quality ^b : (check one) <input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low				

Waterbody ID:
SD06023

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **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, photo locations, survey boundary, and unique IDs of associated features.



sdog023



Waterbody *sdog023* facing upstream



Waterbody *sdog023* facing downstream

Sdog023



Waterbody sdog023 facing upline cross stream

Waterbody Data Sheet

Survey Description			
Project Name: <i>BTI Supply Hender</i>		Waterbody Name: <i>LONG RUN</i>	
Waterbody ID: <i>S006024</i>		Date: <i>4-16-15</i>	
State: <i>WV</i>	County: <i>Doddridge</i>	Company: <i>DDWEST</i>	Crew Member Initials: <i>JD, DB</i>
Photo ID(s):			
Tract Number(s): <i>31-044-A009</i>		Milepost Entry: <i>9.1</i>	Milepost Exit: <i>9.1</i>
Associated Wetland ID(s): <i>NONE</i>			
Survey Type: <small>(check one)</small>			
<input checked="" type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <small>(check one)</small>			
<input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial			
Waterbody Type: <small>(check one)</small>			
<input checked="" type="checkbox"/> Stream <input type="checkbox"/> River <input type="checkbox"/> Ditch <input type="checkbox"/> Pond <input type="checkbox"/> Lake <input type="checkbox"/> Connecting swale ^a <input type="checkbox"/> Other:			
OHWM		OHWM Indicator: <small>(check all that apply)</small>	
Width: <i>25</i> 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 type="checkbox"/> Water staining	
Height: _____ ft.		<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 at Centerline: <i>30</i> ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: <i>8</i> ft.	
Depth of Water at Centerline: <small>(Approx.)</small> <i>2</i> ft.			
Sinuosity: <small>(check one)</small>		Water velocity: <small>(Approx.)</small>	
<input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		<i>25</i> fps	
Bank height		Bank slope	
Right: <i>4</i> ft.		Right: <i>90</i> degrees	
Left: <i>1</i> ft.		Left: <i>10</i> degrees	
Qualitative Attributes			
Water Appearance: <small>(check one)</small>			
<input type="checkbox"/> No water <input type="checkbox"/> Clear <input checked="" type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: <small>(check all that apply)</small>			
<input type="checkbox"/> Bedrock <input 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: _____ % <i>70</i> % <i>15</i> % <i>15</i> % _____ %			
Width of Riparian Zone: <i>20</i> ft.		Vegetative Layers: <small>(check all that apply)</small>	
		<input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Shrubs: <input checked="" type="checkbox"/> Herbs	
Avg. DBH of Dominants: _____ in.			
Dominant Bank Vegetation: <small>(list)</small> <i>SALIX nigra, Platanus occidentalis, ROSA multiflora, Festuca prairie</i>			
Aquatic Habitat: <small>(list) (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools);</small> <i>Riffle, pools, overhanging veg + banks</i>			
Aquatic Organisms Observed: <small>(list)</small> <i>NONE</i>			
Invasive and/or T&E Species Observed: <small>(list)</small> <i>ROSA multiflora</i>			
Tributary is: <small>(check one)</small>			
<input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated			
Disturbances: <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Livestock access <input checked="" type="checkbox"/> Manure in waterbody <input type="checkbox"/> Waste discharge pipes <input type="checkbox"/> Other:			
Stream Quality ^b : <small>(check one)</small>			
<input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low			

Waterbody ID:
SD06024

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **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.

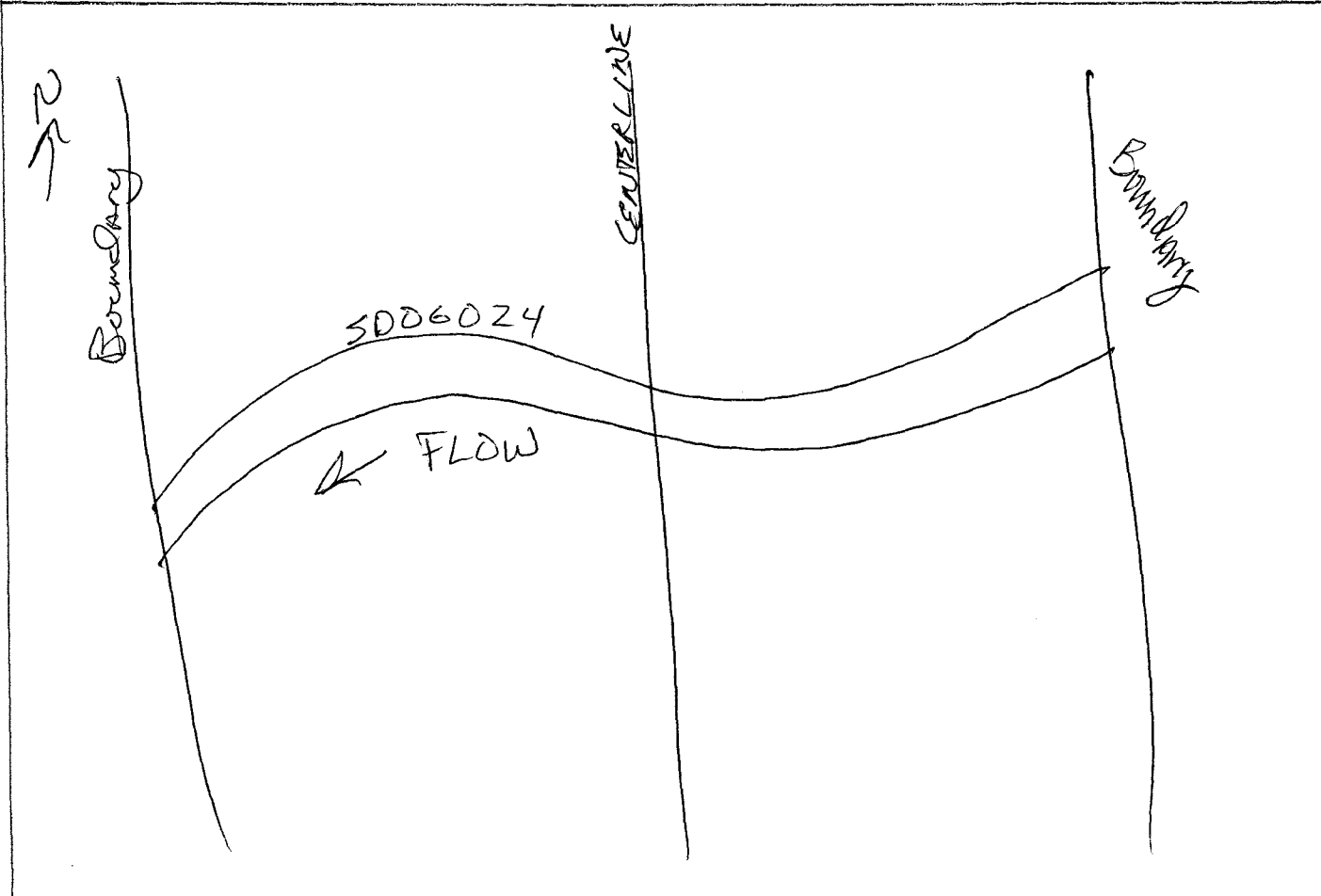
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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



sdog024



Waterbody sdog024 facing upstream



Waterbody sdog024 facing downstream

Sdog024



Waterbody sdog024 facing upline cross stream

Waterbody Data Sheet

Survey Description

Project Name: DTI Supply Header		Waterbody Name: UNT TO LONG RUN		Waterbody ID: SD0J003	Date: 8-14-15
State: WV	County: Doddridge	Company: DOWEST	Crew Member Initials: JD, DB	Photo ID(s):	
Tract Number(s): 31-044-011, AR 31-044-012 AR		Milepost Entry: NA	Milepost Exit: NA	Associated Wetland ID(s): NONE	
Survey Type: (check one) <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:					

Physical Attributes

Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial					
Waterbody Type: (check one) <input checked="" type="checkbox"/> Stream <input type="checkbox"/> River <input type="checkbox"/> Ditch <input type="checkbox"/> Pond <input type="checkbox"/> Lake <input type="checkbox"/> Connecting swale ^a <input type="checkbox"/> Other:					
OHWM Width: <u>4</u> ft. Height: _____ ft.		OHWM Indicator: (check all that apply) <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input checked="" type="checkbox"/> Water staining <input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Width of Waterbody - Top of Bank to Top of Bank at Centerline: <u>8</u> ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: <u>2</u> ft.		Depth of Water at Centerline: (Approx.) <u>2</u> '' ft.	
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: (Approx.) <u><1</u> fps		Bank height Right: _____ ft. Left: _____ ft.	
Bank slope Right: _____ degrees Left: _____ degrees					

Qualitative Attributes

Water Appearance: (check one) <input type="checkbox"/> No water <input type="checkbox"/> Clear <input checked="" type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:					
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input 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>80</u> % <u>5</u> % <u>15</u> % _____ % _____ %					
Width of Riparian Zone: <u><10</u> ft.		Vegetative Layers: (check all that apply) <input type="checkbox"/> Trees: _____ <input checked="" type="checkbox"/> Shrubs: _____ <input checked="" type="checkbox"/> Herbs: _____ Avg. DBH of Dominants: (approx.) _____ in. _____ in.			
Dominant Bank Vegetation: (list) <u>Rosa multiflora, Elaeagnus umbellata, Microstegium vimineum</u>					
Aquatic Habitats (ex: submerged or emergent aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): (list) <u>Pools, riffles</u>					
Aquatic Organisms Observed: (list) <u>small invertebrates</u>					
Invasive and/or T&E Species Observed: (list) <u>Rosa multiflora, Elaeagnus umbellata, Microstegium vimineum</u>					
Tributary is: (check one) <input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated					
Disturbances: (check all that apply) <input type="checkbox"/> Livestock access <input type="checkbox"/> Manure in waterbody <input type="checkbox"/> Waste discharge pipes <input checked="" type="checkbox"/> Other: <u>edge of gravel road</u>					
Stream Quality ^b : (check one) <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low					

Waterbody ID:
SD05003

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **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.

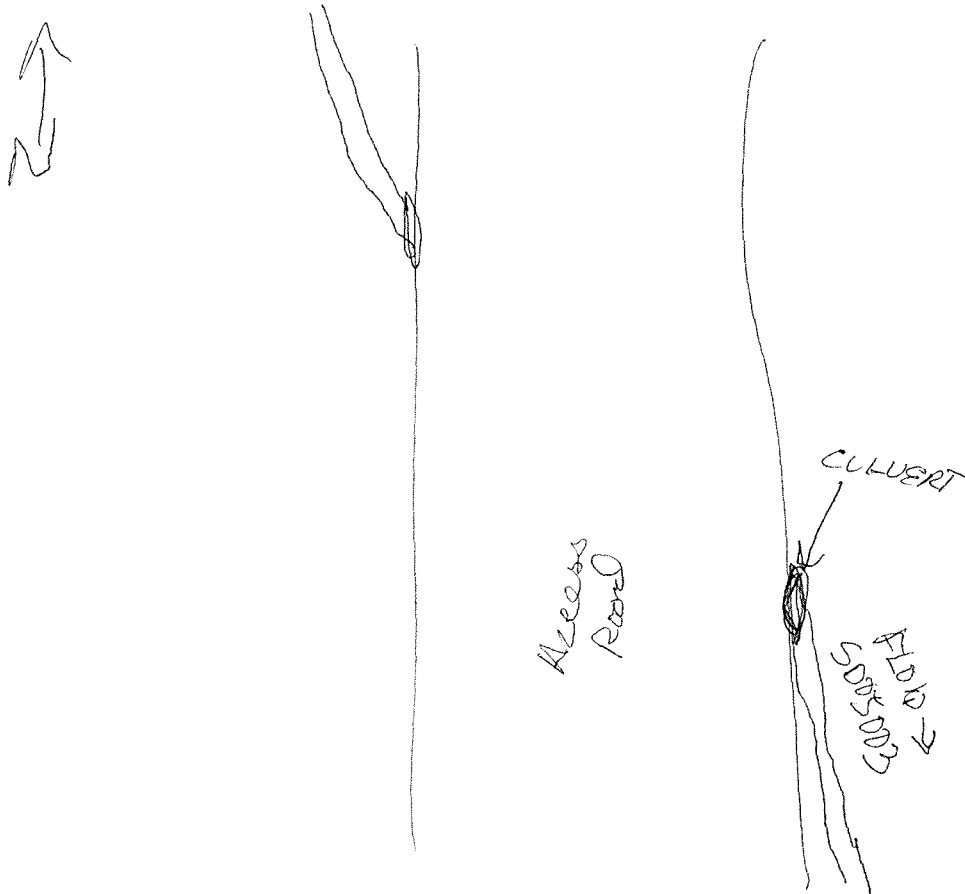
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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



SDOJ003



Waterbody *SDOJ003*
facing upstream



Waterbody *SDOJ003*
facing downstream

SDOJ003



Waterbody SDOJ003 facing upline cross stream

Waterbody Data Sheet

Survey Description			
Project Name: <i>DTI Supply Header</i>		Waterbody Name: <i>Buckeye Run</i>	
Waterbody ID: <i>SD06025</i>		Date: <i>4-17-15</i>	
State: <i>WV</i>	County: <i>Doddridge</i>	Company: <i>DDWEST</i>	Crew Member Initials: <i>JD, DB</i>
Photo ID(s):			
Tract Number(s): <i>31-056</i>		Milepost Entry: <i>10.2</i>	Milepost Exit: <i>10.2</i>
Associated Wetland ID(s): <i>W006009e w</i>			
Survey Type: <small>(check one)</small>			
<input checked="" type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <small>(check one)</small>			
<input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial			
Waterbody Type: <small>(check one)</small>			
<input checked="" type="checkbox"/> Stream <input type="checkbox"/> River <input type="checkbox"/> Ditch <input type="checkbox"/> Pond <input type="checkbox"/> Lake <input type="checkbox"/> Connecting swale ^a <input type="checkbox"/> Other:			
OHWM		OHWM Indicator: <small>(check all that apply)</small>	
Width: <i>16</i> 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 type="checkbox"/> Water staining	
Height: _____ ft.		<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 at Centerline: <i>18</i> ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: <i>15</i> ft.	
Depth of Water at Centerline: <small>(Approx.)</small> <i>1.5</i> ft.			
Sinuosity: <small>(check one)</small>		Water velocity: <small>(Approx.)</small>	
<input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering		<i>25</i> fps	
		Bank height	
		Right: _____ ft.	
		Left: _____ ft.	
		Bank slope	
		Right: _____ degrees	
		Left: _____ degrees	
Qualitative Attributes			
Water Appearance: <small>(check one)</small>			
<input type="checkbox"/> No water <input type="checkbox"/> Clear <input checked="" type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: <small>(check all that apply)</small>			
<input type="checkbox"/> Bedrock <input 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: _____ % <i>50</i> % <i>30</i> % <i>20</i> % _____ % _____ %			
Width of Riparian Zone: <i>20</i> ft.		Vegetative Layers: <small>(check all that apply)</small>	
		<input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Shrubs: <input checked="" type="checkbox"/> Herbs	
		Avg. DBH of Dominants: <small>(approx.)</small> <i>8</i> in. _____ in.	
Dominant Bank Vegetation: <small>(list)</small>			
<i>Platanus occidentalis, Prunus serotina, Rosa multiflora, Dactylis glomerata</i>			
Aquatic Habitats (ex: submerged or emergent aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): <small>(list)</small>			
<i>rifle, pools, overhanging banks</i>			
Aquatic Organisms Observed: <small>(list)</small>			
<i>small fish</i>			
Invasive and/or T&E Species Observed: <small>(list)</small>			
<i>Rosa multiflora</i>			
Tributary is: <small>(check one)</small>			
<input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated			
Disturbances: <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Livestock access <input type="checkbox"/> Manure in waterbody <input checked="" type="checkbox"/> Waste discharge pipes <input type="checkbox"/> Other:			
Stream Quality ^b : <small>(check one)</small>			
<input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low			

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **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.

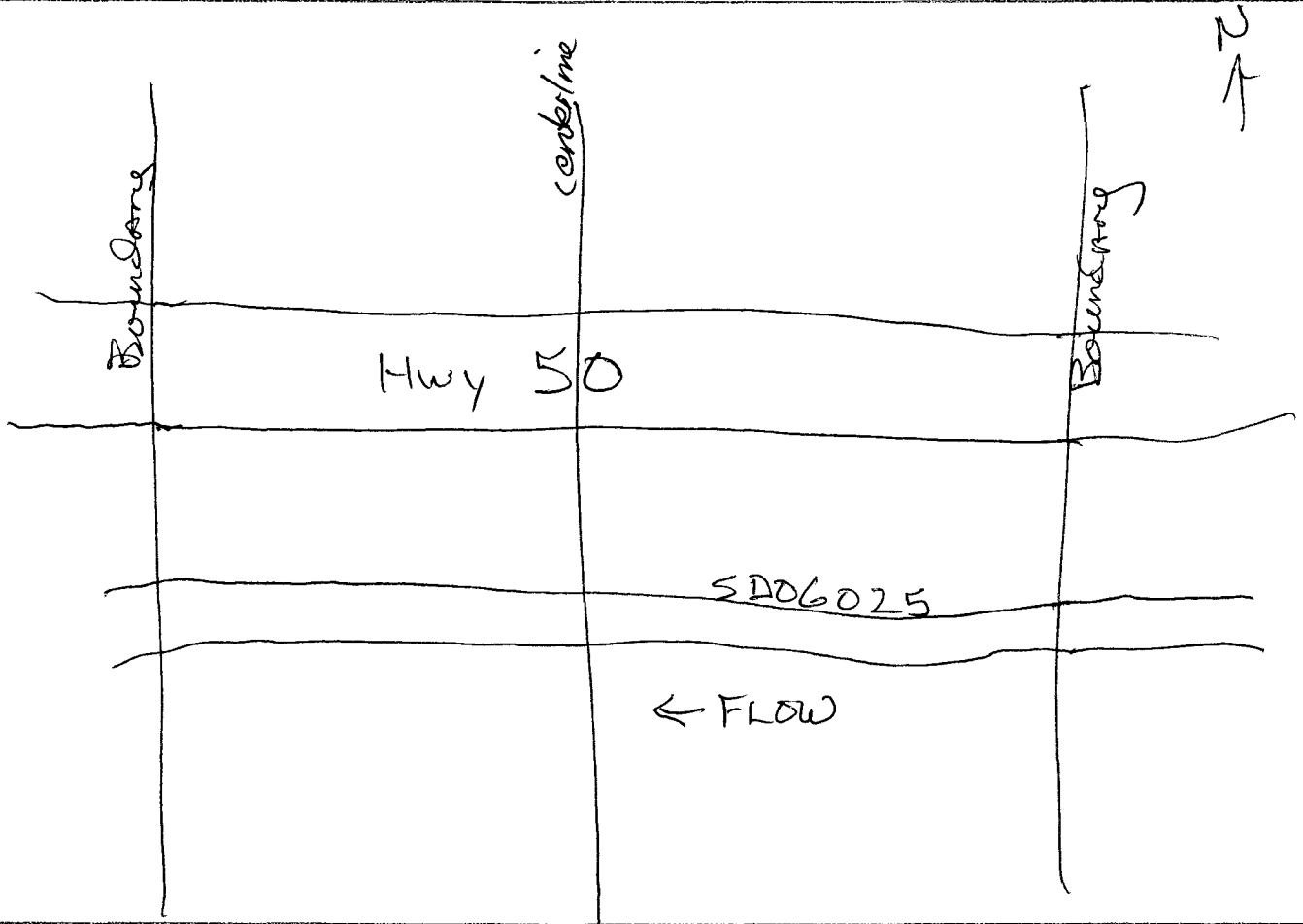
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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



sdog025



Waterbody sdog025 facing upstream



Waterbody sdog025 facing downstream

Sdog025



Waterbody sdog025 facing upline cross stream

Waterbody Data Sheet

Survey Description

Project Name: DTI Supply Header		Waterbody Name: UNT TO Buckeye Run		Waterbody ID: SD06026	Date: 4-17-15
State: WV	County: Doddridge	Company: DDWEST	Crew Member Initials: JD, DB	Photo ID(s):	
Tract Number(s): 31-056		Milepost Entry: 10.3	Milepost Exit: 10.3	Associated Wetland ID(s): W00E	

Survey Type: (check one) Centerline Re-Route Access Road Other:

Physical Attributes

Stream Classification: (check one) Ephemeral Intermittent Perennial

Waterbody Type: (check one) Stream River Ditch Pond Lake Connecting swale^a Other:

OHWM Width: <u>10</u> ft. Height: _____ ft.	OHWM Indicator: (check all that apply)	<input type="checkbox"/> Clear line on bank	<input type="checkbox"/> Shelving	<input type="checkbox"/> Wrested vegetation	<input type="checkbox"/> Scouring	<input type="checkbox"/> Water staining
	<input type="checkbox"/> 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 at Centerline: <u>15</u> ft.	Width of Waterbody - Water Edge to Water Edge at Centerline: <u>8</u> ft.	Depth of Water at Centerline: (Approx.) <u>4"</u> ft.
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Sinuosity: (check one) <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering	Water velocity: (Approx.) <u>< 2</u> fps	Bank height Right: <u>2</u> ft. Left: <u>2</u> ft.	Bank slope Right: <u>15</u> degrees Left: <u>25</u> degrees
---	--	--	---

Qualitative Attributes

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

Substrate: (check all that apply) Bedrock Gravel Sand Silt/clay Organic Other:

% of Substrate: _____ % _____ % 25 % 75 % _____ % _____ %

Width of Riparian Zone: <u>0</u> ft.	Vegetative Layers: (check all that apply)	<input type="checkbox"/> Trees:	<input checked="" type="checkbox"/> Shrubs:	<input checked="" type="checkbox"/> Herbs:
Avg. DBH of Dominants: _____ in. _____ in.				

Dominant Bank Vegetation: (list)
Eleoagnus umbellata, Rosa multiflora, Salix nigra, Festuca pratensis

Aquatic Habitats (ex: submerged or emergent aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): (list)
emergent vegetation, pools

Aquatic Organisms Observed: (list)
small frogs

Invasive and/or T&E Species Observed: (list)
Rosa multiflora, Eleoagnus umbellata

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

Disturbances: (check all that apply) Livestock access Manure in waterbody Waste discharge pipes Other:

Stream Quality^b: (check one) High Moderate Low

Waterbody ID:
SD06026

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **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.

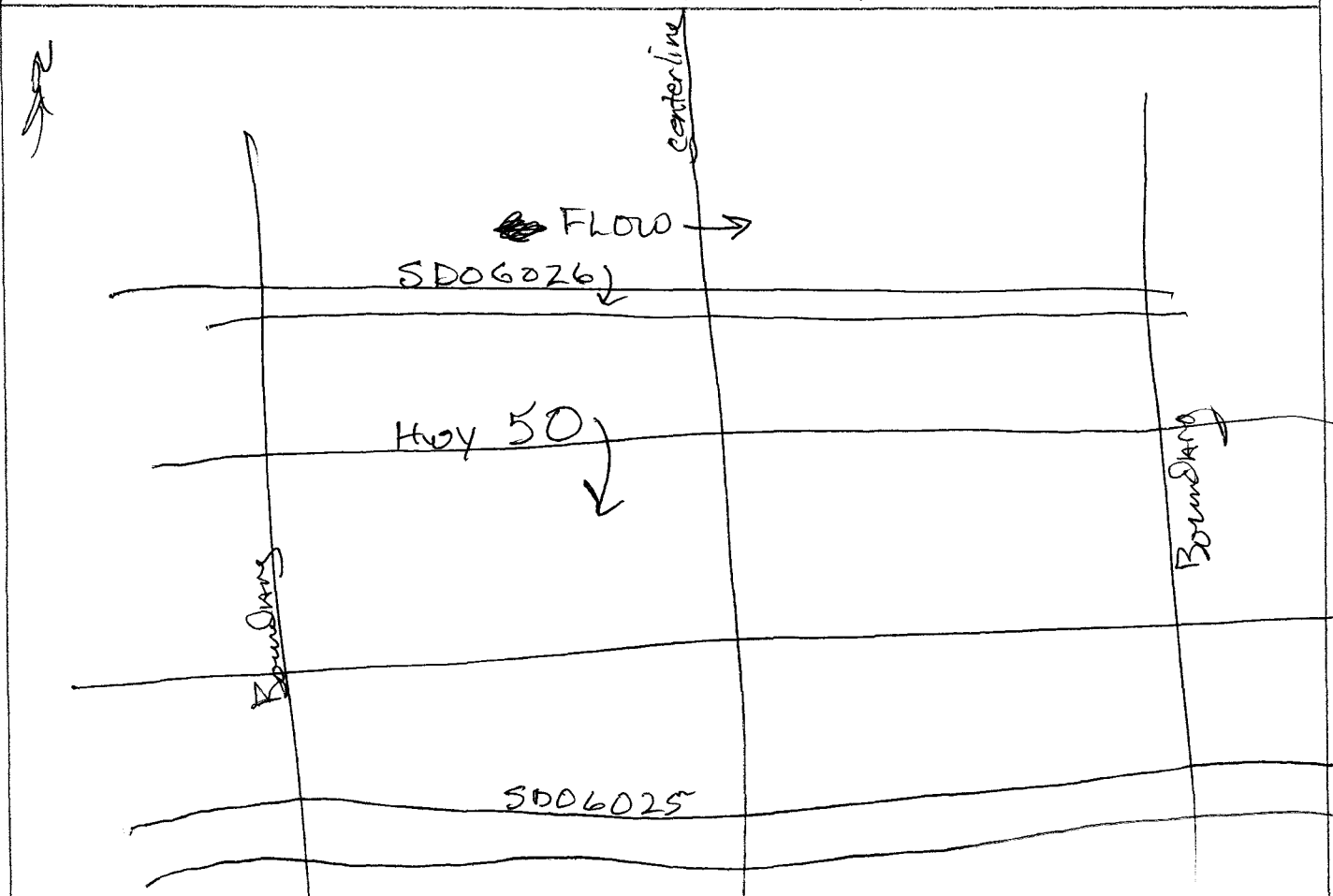
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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



sdog026



Waterbody sdog026 facing upstream



Waterbody sdog026 facing downstream

Sdog026



Waterbody sdog026 facing upline cross stream

Waterbody Data Sheet

Survey Description

Project Name: DTI Supply Header		Waterbody Name: <i>Burkeye</i> UNTD Disaster Run		Waterbody ID: SD03002	Date: 8-14-15
State: WV	County: Doddridge	Company: DWEST	Crew Member Initials: JD, DB	Photo ID(s):	
Tract Number(s): 31-059, AR 31-056		Milepost Entry: N/A	Milepost Exit: N/A	Associated Wetland ID(s): NONE	
Survey Type: (check one) <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:					

Physical Attributes

Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial					
Waterbody Type: (check one) <input checked="" type="checkbox"/> Stream <input type="checkbox"/> River <input type="checkbox"/> Ditch <input type="checkbox"/> Pond <input type="checkbox"/> Lake <input type="checkbox"/> Connecting swale ^a <input type="checkbox"/> Other:					
OHWM Width: <u>6</u> ft. Height: <u>6"</u> ft.		OHWM Indicator: (check all that apply) <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input checked="" type="checkbox"/> Water staining <input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Width of Waterbody - Top of Bank to Top of Bank at Centerline: <u>12</u> ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: <u>3</u> ft.		Depth of Water at Centerline: (Approx.) <u>2</u> ft.	
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: (Approx.) <u>< 1</u> fps		Bank height Right: <u>18"</u> ft. Left: <u>2</u> ft.	
Bank slope Right: <u>25</u> degrees Left: <u>25</u> degrees					

Qualitative Attributes

Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:					
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input 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>80</u> % <u>5</u> % <u>15</u> % _____ % _____ %					
Width of Riparian Zone: <u>0</u> ft.		Vegetative Layers: (check all that apply) <input type="checkbox"/> Trees: _____ <input checked="" type="checkbox"/> Shrubs: _____ <input checked="" type="checkbox"/> Herbs: _____ Avg. DBH of Dominants: (approx.) _____ in. _____ in.			

Dominant Bank Vegetation:
(list) *Elaeagnus umbellata*, *Microstegia viminea*, *Desy lis glomerata*, *occidentalis* ^{Verbasina}

Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools):

(list) *Pools, riffles*

Aquatic Organisms Observed:

(list) *small fish*

Invasive and/or T&E Species Observed:

(list) *Microstegia viminea*, *Elaeagnus umbellata*

Tributary is:

(check one) Natural Artificial, man-made Manipulated

Disturbances:

(check all that apply) Livestock access Manure in waterbody Waste discharge pipes Other: *Next to residential*

Stream Quality^b:

(check one) High Moderate Low

Road with culverts

Waterbody ID:
5D05002

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **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.

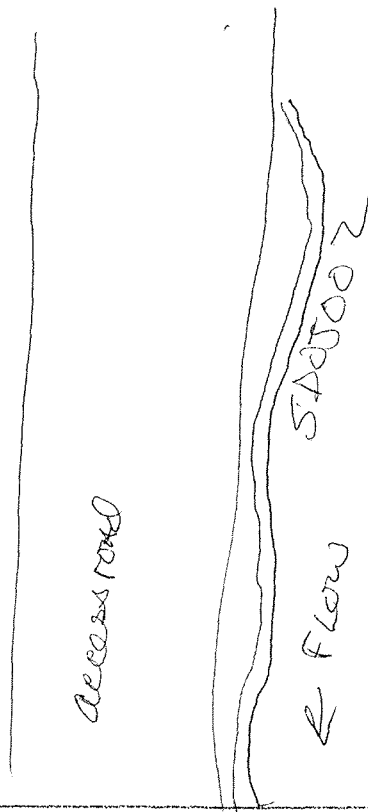
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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



SDOJ002



Waterbody *SDOJ002*
facing upstream



Waterbody *SDOJ002*
facing downstream

SDOJ002



Waterbody SDOJ002 facing upline cross stream

Waterbody Data Sheet

Survey Description			
Project Name: <u>DTI Supply Header</u>		Waterbody Name: <u>Buckeye</u> <u>UNIT TO Reservoir Reservoir</u>	
Waterbody ID: <u>5A05001</u>		Date: <u>8-14-15</u>	
State: <u>WV</u>	County: <u>Doddridge</u>	Company: <u>DDWEST</u>	Crew Member Initials: <u>JD, DB</u>
Photo ID(s):			
Tract Number(s): <u>31-056-A010</u> <u>31-056-A010.AR</u>		Milepost Entry: <u>N/A</u>	Milepost Exit: <u>N/A</u>
Associated Wetland ID(s): <u>NONE</u>			
Survey Type: (check one)			
<input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: (check one)			
<input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial			
Waterbody Type: (check one)			
<input checked="" type="checkbox"/> Stream <input type="checkbox"/> River <input type="checkbox"/> Ditch <input type="checkbox"/> Pond <input type="checkbox"/> Lake <input type="checkbox"/> Connecting swale * <input type="checkbox"/> Other:			
OHWM		OHWM Indicator: (check all that apply)	
Width: <u>11</u> 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	
Height: <u>4"</u> ft.		<input checked="" 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 at Centerline: <u>8</u> ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: _____ ft.	
Depth of Water at Centerline: (Approx.) _____ ft.			
Sinuosity: (check one)		Water velocity: (Approx.)	
<input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		<u>< 1</u> fps	
Bank height		Bank slope	
Right: <u>2</u> ft.		Right: <u>50</u> degrees	
Left: <u>2</u> ft.		Left: <u>50</u> degrees	
Qualitative Attributes			
Water Appearance: (check one)			
<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: (check all that apply)			
<input checked="" type="checkbox"/> Bedrock <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/clay <input type="checkbox"/> Organic <input type="checkbox"/> Other:			
% of Substrate: <u>10</u> % <u>60</u> % <u>10</u> % <u>20</u> % _____ % _____ %			
Width of Riparian Zone: <u>> 50ft</u>		Vegetative Layers: (check all that apply)	
		<input checked="" type="checkbox"/> Trees: <u>8"</u> <input checked="" type="checkbox"/> Shrubs: <input checked="" type="checkbox"/> Herbs	
Avg. DBH of Dominants: (approx.) _____ in.			
Dominant Bank Vegetation: (list)			
<u>Liriodendron tulipifera, Fagus grandifolia, Multiflora rose, Lindera, Polystichum acrostoides, Microstegium, benzoin</u>			
Aquatic Habitats (list) (ex: submerged or emergent aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools):			
<u>Riffles</u>			
Aquatic Organisms Observed: (list)			
<u>NONE</u>			
Invasive and/or T&E Species Observed: (list)			
<u>Rosa multiflora, Microstegium vimineum</u>			
Tributary is: (check one)			
<input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Disturbances: (check all that apply)			
<input type="checkbox"/> Livestock access <input type="checkbox"/> Manure in waterbody <input type="checkbox"/> Waste discharge pipes <input checked="" type="checkbox"/> Other: <u>Adjacent forest road w/ culverts</u>			
Stream Quality ^b : (check one)			
<input type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low			

Waterbody ID:

5D05001

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **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.

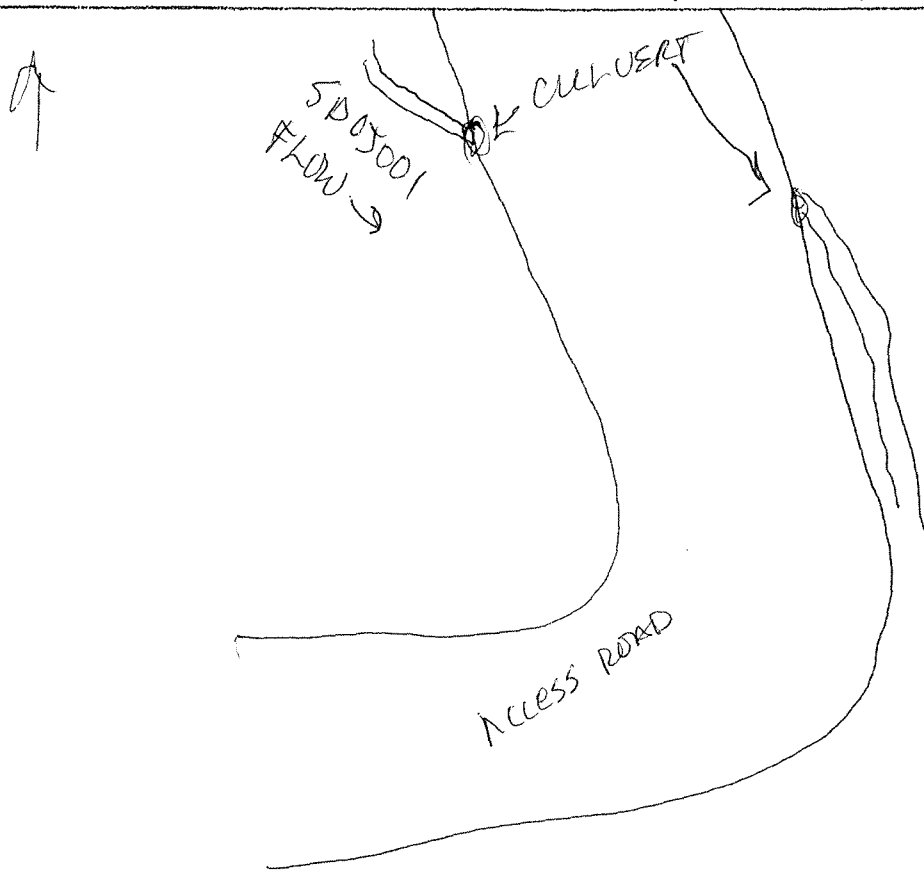
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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



SDOJ001



Waterbody *SDOJ001*
facing upstream



Waterbody *SDOJ001*
facing downstream

SDOJ001



Waterbody SDOJ001 facing upline cross stream

Waterbody Data Sheet

Survey Description			
Project Name: <i>DTI Supply Header</i>		Waterbody Name: <i>UNT TO FLINT RUN</i>	
Waterbody ID: <i>S006027</i>		Date: <i>4-21-15</i>	
State: <i>WV</i>	County: <i>Doddridge</i>	Company: <i>DDWEST</i>	Crew Member Initials: <i>JD, DB</i>
Photo ID(s):			
Tract Number(s): <i>31-056-A022</i>		Milepost Entry: <i>12.5</i>	Milepost Exit: <i>12.5</i>
Associated Wetland ID(s): <i>NONE</i>			
Survey Type: (check one)			
<input checked="" type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: (check one)			
<input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial			
Waterbody Type: (check one)			
<input checked="" type="checkbox"/> Stream <input type="checkbox"/> River <input type="checkbox"/> Ditch <input type="checkbox"/> Pond <input type="checkbox"/> Lake <input type="checkbox"/> Connecting swale ^a <input type="checkbox"/> Other:			
OHWM		OHWM Indicator: (check all that apply)	
Width: <i>6</i> 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 type="checkbox"/> Water staining	
Height: <i>3"</i> ft.		<input checked="" 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 at Centerline: <i>12</i> ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: <i>5</i> ft.	
Depth of Water at Centerline: (Approx.) <i>2"</i> ft.			
Sinuosity: (check one)		Water velocity: (Approx.)	
<input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		<i>< 3</i> fps	
Bank height		Bank slope	
Right: <i>1/2</i> ft.		Right: 30 <i>30</i> degrees	
Left: <i>1/2</i> ft.		Left: <i>30</i> degrees	
Qualitative Attributes			
Water Appearance: (check one)			
<input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: (check all that apply)			
<input checked="" type="checkbox"/> Bedrock <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: <i>40</i> % <i>40</i> % <i>10</i> % <i>10</i> % _____ % _____ %			
Width of Riparian Zone: <i>> 50</i> ft.		Vegetative Layers: (check all that apply)	
		<input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Shrubs: <input checked="" type="checkbox"/> Herbs	
Avg. DBH of Dominants: _____ in. _____ in.			
Dominant Bank Vegetation: (list) <i>Quercus alba, Rosa multiflora, Elaeagnus umbellata, Dactyloctenium aegyptium</i>			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): (list) <i>Riffle, pools</i>			
Aquatic Organisms Observed: (list) <i>NONE</i>			
Invasive and/or T&E Species Observed: (list) <i>Rosa multiflora, Elaeagnus umbellata</i>			
Tributary is: (check one)			
<input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Disturbances: (check all that apply)			
<input type="checkbox"/> Livestock access <input type="checkbox"/> Manure in waterbody <input type="checkbox"/> Waste discharge pipes <input type="checkbox"/> Other: <i>NONE</i>			
Stream Quality ^b : (check one)			
<input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low			

Waterbody ID:
SD06027

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **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.

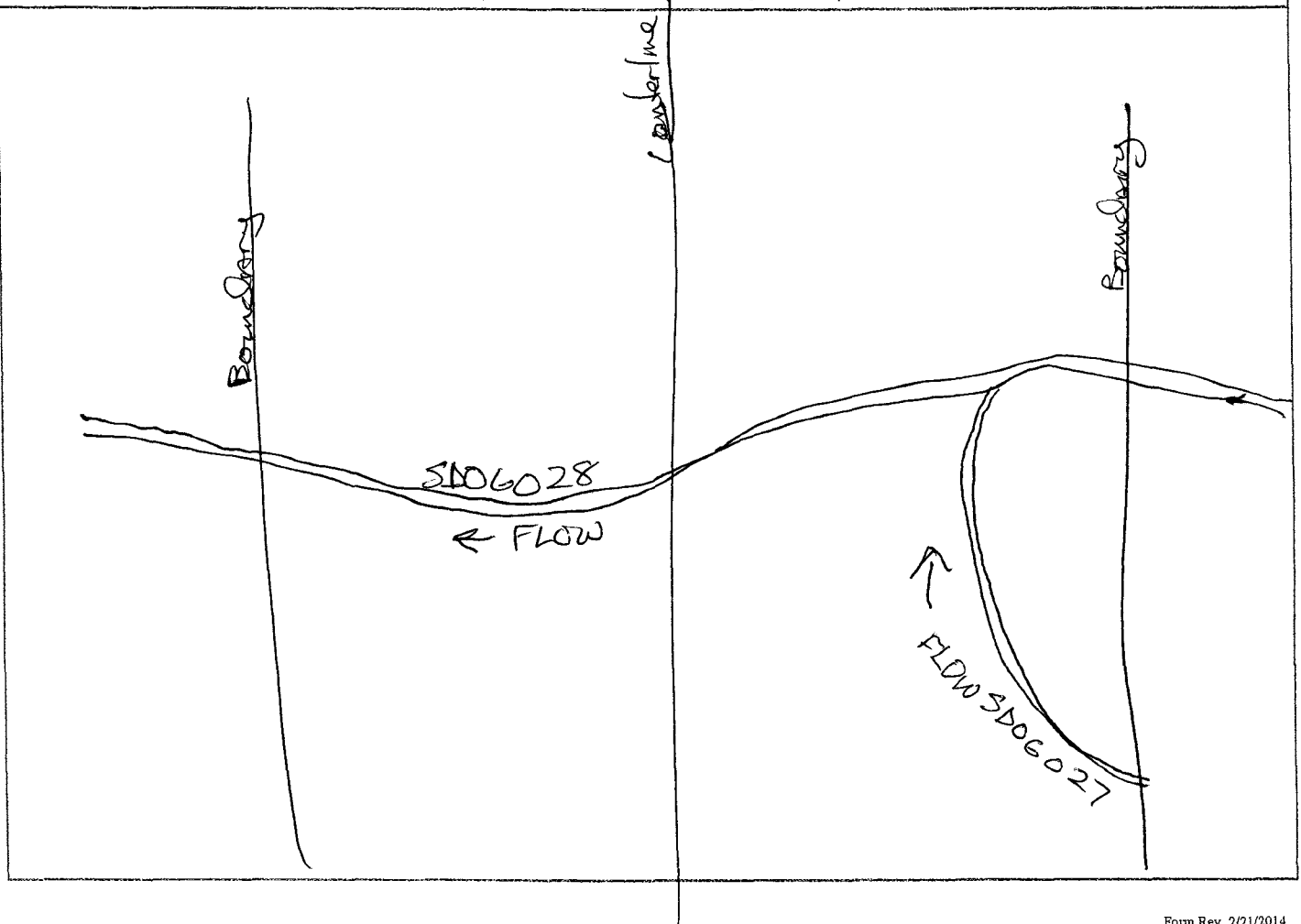
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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



sdog027



Waterbody *sdog027* facing upstream



Waterbody *sdog027* facing downstream

Sdog027



Waterbody sdog027 facing upline cross stream

Waterbody Data Sheet

Survey Description

Project Name: <i>DPI Supply Hender</i>		Waterbody Name: <i>FLINT RUN</i>		Waterbody ID: <i>SD06028</i>	Date: <i>4-21-15</i>
State: <i>WV</i>	County: <i>Doddridge</i>	Company: <i>DWEST</i>	Crew Member Initials: <i>JD,OB</i>	Photo ID(s):	
Tract Number(s): <i>31-056-A022</i>		Milepost Entry: <i>12.5</i>	Milepost Exit: <i>12.5</i>	Associated Wetland ID(s): <i>NONE</i>	
Survey Type: (check one) <input checked="" type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:					

Physical Attributes

Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial					
Waterbody Type: (check one) <input checked="" type="checkbox"/> Stream <input type="checkbox"/> River <input type="checkbox"/> Ditch <input type="checkbox"/> Pond <input type="checkbox"/> Lake <input type="checkbox"/> Connecting swale ^a <input type="checkbox"/> Other:					
OHWM Width: <i>10</i> ft. Height: <i>5</i> " ft.		OHWM Indicator: (check all that apply) <input checked="" type="checkbox"/> Clear line on bank <input checked="" type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <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 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 at Centerline: <i>18</i> ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: <i>9</i> ft.		Depth of Water at Centerline: (Approx.) <i>4</i> " ft.	
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: (Approx.) <i>25</i> fps		Bank height Right: <i>2</i> ft. Left: <i>3</i> ft.	
Bank slope Right: <i>75</i> degrees Left: <i>75</i> degrees					

Qualitative Attributes

Water Appearance: (check one) <input type="checkbox"/> No water <input type="checkbox"/> Clear <input checked="" type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:					
Substrate: (check all that apply) <input checked="" type="checkbox"/> Bedrock <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: <i>20</i> % <i>60</i> % <i>10</i> % <i>10</i> % _____ % _____ %					
Width of Riparian Zone: <i>0</i> ft.		Vegetative Layers: (check all that apply) <input type="checkbox"/> Trees: _____ in. <input checked="" type="checkbox"/> Shrubs: _____ in. <input checked="" type="checkbox"/> Herbs			
Avg. DBH of Dominants: (approx.) _____ in. _____ in.					

Dominant Bank Vegetation:
(list) *Rosa multiflora, Elaeagnus umbellata, Dactylis glomerata*

Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools):
(list) *Pools, overhanging banks*

Aquatic Organisms Observed:
(list) *NONE*

Invasive and/or T&E Species Observed:
(list) *Rosa multiflora, Elaeagnus umbellata*

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

Disturbances:
(check all that apply) Livestock access Manure in waterbody Waste discharge pipes Other:

Stream Quality^b:
(check one) High Moderate Low

Waterbody ID:

SD06028

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **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.

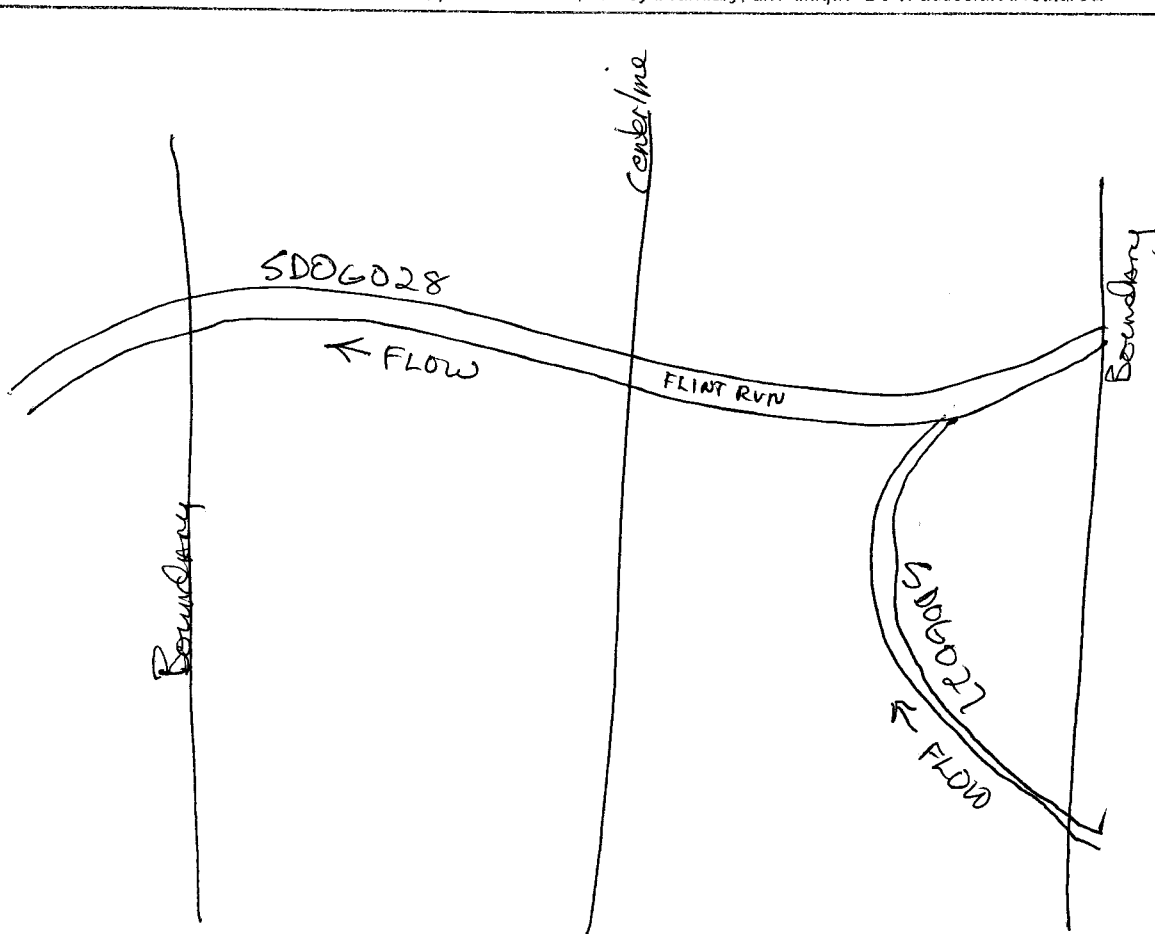
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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



sdog028



Waterbody sdog028 facing upstream



Waterbody sdog028 facing downstream

Sdog028



Waterbody sdog028 facing upline cross stream

Waterbody Data Sheet

Survey Description

Project Name: <i>Supply Header</i>		Waterbody Name: <i>UNT TO FLINT RUN</i>		Waterbody ID: <i>SD04018</i>	Date: <i>7-29-15</i>
State: <i>WV</i>	County: <i>Doddridge</i>	Company: <i>DDWEST</i>	Crew Member Initials: <i>JD, DB</i>	Photo ID(s):	
Tract Number(s): <i>31-056-A022</i>		Milepost Entry: <i>NA</i>	Milepost Exit: <i>NA</i>	Associated Wetland ID(s): <i>NONE</i>	
Survey Type: <small>(check one)</small>					
<input type="checkbox"/> Centerline		<input type="checkbox"/> Re-Route		<input checked="" type="checkbox"/> Access Road	
<input type="checkbox"/> Other:					

Physical Attributes

Stream Classification: <small>(check one)</small>					
<input type="checkbox"/> Ephemeral		<input type="checkbox"/> Intermittent		<input checked="" type="checkbox"/> Perennial	
Waterbody Type: <small>(check one)</small>					
<input checked="" type="checkbox"/> Stream		<input type="checkbox"/> River		<input type="checkbox"/> Ditch	
<input type="checkbox"/> Pond		<input type="checkbox"/> Lake		<input type="checkbox"/> Connecting swale ^a	
<input type="checkbox"/> Other:					
OHWM Width: <i>2</i> ft.		OHWM Indicator: <small>(check all that apply)</small>			
OHWM Height: _____ ft.		<input checked="" type="checkbox"/> Clear line on bank		<input type="checkbox"/> Shelving	
		<input checked="" type="checkbox"/> Wrested vegetation		<input type="checkbox"/> Scouring	
		<input type="checkbox"/> Bent, matted, or missing vegetation		<input checked="" type="checkbox"/> Water staining	
		<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 at Centerline: <i>4</i> ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: <i>1</i> ft.		Depth of Water at Centerline: <small>(Approx.)</small> <i>1"</i> ft.	
Sinuosity: <small>(check one)</small>		Water velocity: <small>(Approx.)</small>		Bank height	
<input type="checkbox"/> Straight		<i>< 2</i> fps		Right: <i>1</i> ft.	
<input checked="" type="checkbox"/> Meandering				Left: <i>1</i> ft.	
				Right: <i>30</i> degrees	
				Left: <i>40</i> 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 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: _____ % <i>70</i> % <i>10</i> % <i>20</i> % _____ % _____ %					
Width of Riparian Zone: <i>0</i> ft.		Vegetative Layers: <small>(check all that apply)</small>			
		<input type="checkbox"/> Trees:		<input type="checkbox"/> Shrubs:	
		<input type="checkbox"/> Avg. DBH of Dominants: <small>(approx.)</small> _____ in.		<input checked="" type="checkbox"/> Herbs	

Dominant Bank Vegetation:
(list) *Cynodon* *Trifolium pratense*

Aquatic Habitats (ex: submerged or emergent aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools):
(list) *riffles, pool*

Aquatic Organisms Observed:
(list) *small invertebrates*

Invasive and/or T&E Species Observed:
(list) *NONE*

Tributary is:
(check one)

Natural Artificial, man-made Manipulated

Disturbances:
(check all that apply)

Livestock access Manure in waterbody Waste discharge pipes Other: *PART of LAWN*

Stream Quality^b:
(check one)

High Moderate Low

Waterbody ID:
SD014018

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **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.

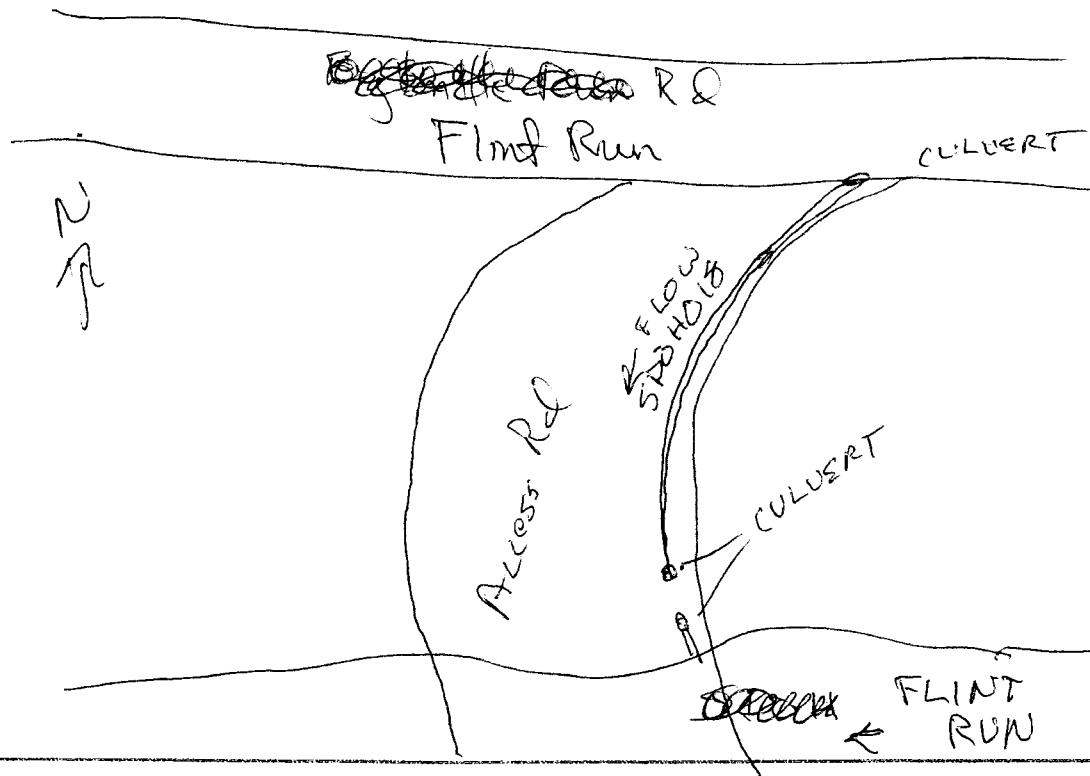
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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



SDOH018



Waterbody *SDOH018*
facing upstream



Waterbody *SDOH018*
facing downstream

SDOH018



Waterbody SDOH018 facing upline cross stream

Waterbody Data Sheet

Survey Description			
Project Name: <i>Supply Hender</i>		Waterbody Name: <i>UNT TO FLINT RUN</i>	
Waterbody ID: <i>SD0H019</i>		Date: <i>7-29-15</i>	
State: <i>WV</i>	County: <i>Dodderidge</i>	Company: <i>SDWEST</i>	Crew Member Initials: <i>JD, DB</i>
Photo ID(s):			
Tract Number(s): <i>31-069</i>		Milepost Entry: <i>NA</i>	Milepost Exit: <i>NA</i>
Associated Wetland ID(s): <i>NONE</i>			
Survey Type: <small>(check one)</small>			
<input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <small>(check one)</small>			
<input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial			
Waterbody Type: <small>(check one)</small>			
<input checked="" type="checkbox"/> Stream <input type="checkbox"/> River <input type="checkbox"/> Ditch <input type="checkbox"/> Pond <input type="checkbox"/> Lake <input type="checkbox"/> Connecting swale ^a <input type="checkbox"/> Other:			
OHWM		OHWM Indicator: <small>(check all that apply)</small>	
Width: <i>4</i> 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	
Height: _____ ft.		<input checked="" 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 at Centerline: <i>8</i> ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: _____ ft.	
Depth of Water at Centerline: <small>(Approx.)</small> _____ ft.			
Sinuosity: <small>(check one)</small>		Water velocity: <small>(Approx.)</small>	
<input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering		<i>< 1</i> fps	
Bank height		Bank slope	
Right: <i>2</i> ft.		Right: <i>20</i> degrees	
Left: <i>4</i> ft.		Left: <i>70</i> 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 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: _____ % <i>80</i> % <i>5</i> % <i>15</i> % _____ %			
Width of Riparian Zone: <i>10</i> ft.		Vegetative Layers: <small>(check all that apply)</small>	
		<input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Shrubs: <input checked="" type="checkbox"/> Herbs	
Avg. DBH of Dominants: <small>(approx.)</small> _____ in.			
Dominant Bank Vegetation: <small>(list)</small> <i>Rosa mult. flora, Juglans nigra, Microstegium vimineum</i>			
Aquatic Habitats (ex. submerged or emergent aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): <small>(list)</small> <i>Pools, Riffles</i>			
Aquatic Organisms Observed: <small>(list)</small> <i>small fish + invertebrates</i>			
Invasive and/or T&E Species Observed: <small>(list)</small> <i>Rosa mult. flora, Microstegium vimineum, Elymus unioloides</i>			
Tributary is: <small>(check one)</small>			
<input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated			
Disturbances: <small>(check all that apply)</small>			
<input type="checkbox"/> Livestock access <input type="checkbox"/> Manure in waterbody <input type="checkbox"/> Waste discharge pipes <input checked="" type="checkbox"/> Other: <i>edge of road with culvert pipes</i>			
Stream Quality: <small>(check one)</small>			
<input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low			

Waterbody ID:
SD0H019

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **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.

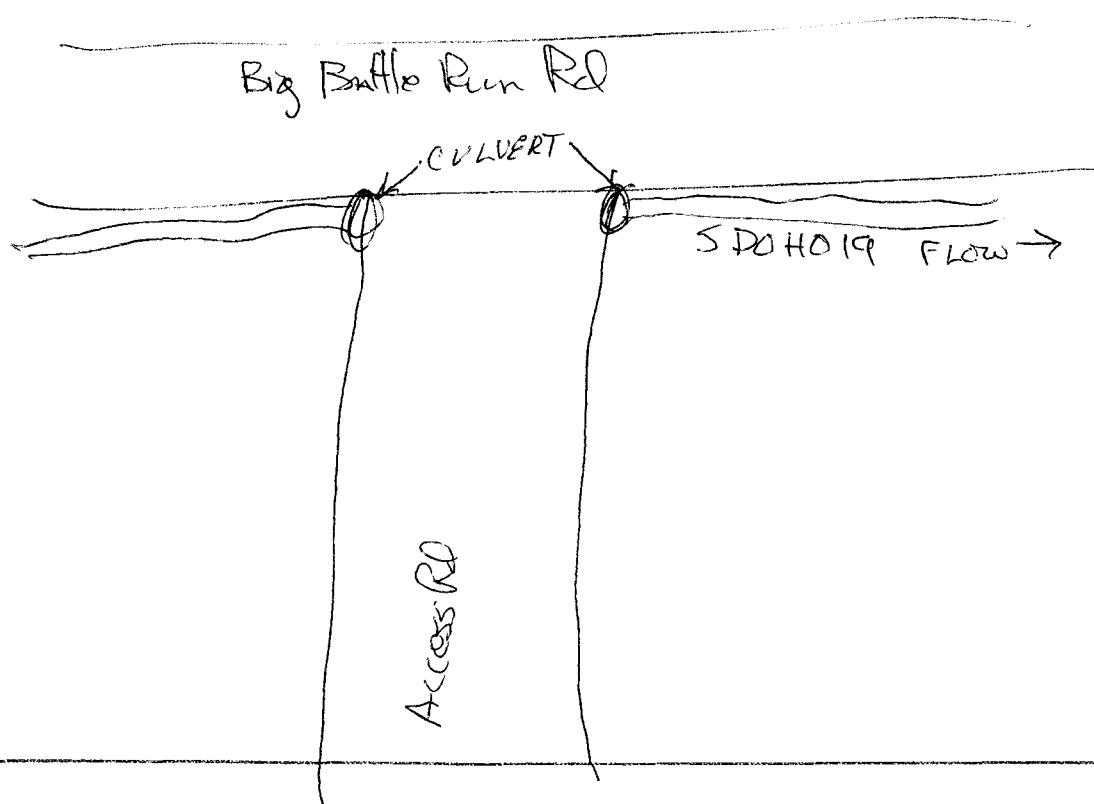
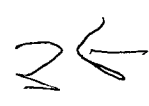
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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



SDOH019



Waterbody *SDOH019*
facing upstream



Waterbody *SDOH019*
facing downstream

SDOH019



Waterbody SDOH019 facing upline cross stream

Waterbody Data Sheet

Description			
Project Name: Supply Header Project		Date: 06/03/2016	Waterbody Survey ID: sdoa003
State: WV	County/Parish: Doddridge	USGS Waterbody Name: Unnamed upland drainage	
Company: Dominion Transmission, Inc.	Crew Member Initials: KTC, LCE	Latitude:	Longitude:
Survey Type: <i>(check one)</i>	<input type="checkbox"/> Centerline	<input type="checkbox"/> Re-Route	<input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other
Waterbody Type: <i>(check one)</i>	<input type="checkbox"/> River	<input checked="" type="checkbox"/> Stream	<input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other
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
Feature Quality^a: <i>(check one)</i>	<input type="checkbox"/> High	<input type="checkbox"/> Moderate	<input checked="" type="checkbox"/> Low
Feature Description: <i>(check one)</i>	<input checked="" type="checkbox"/> Natural	<input type="checkbox"/> Artificial, man-made	<input type="checkbox"/> Manipulated
Flow Regime: <i>(check one)</i>	<input checked="" type="checkbox"/> Ephemeral	<input type="checkbox"/> Intermittent	<input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale
Sinuosity within Survey Corridor: <i>(check one)</i>	<input checked="" type="checkbox"/> Straight	<input type="checkbox"/> Meandering	
Description Notes: Ephemeral stream naturally caused by dirt road; continues out of survey corridor.			
Measurements			
Depth of Water: _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: _____ ft. N/A <input checked="" type="checkbox"/>	
OHWM Width: <u> 1 </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
	<input checked="" type="checkbox"/> Bent, matted, or missing vegetation	<input type="checkbox"/> Wrack line	<input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change
Dominant 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
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input type="checkbox"/> Trees <input type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): forbs, grass			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): n/a			
Aquatic Organisms Observed (list): n/a			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): n/a			
Observation Notes: Ephemeral drainage; caused by dirt road.			

sdoa003



Waterbody sdoa003 facing upstream



Waterbody sdoa003 facing downstream

sdoa003



Waterbody sdoa003 cross stream

Waterbody Data Sheet

Survey Description

Project Name: Supply Header		Waterbody Name: UNT TO FORK RUN SAOHOZO		Waterbody ID: SAOHOZO	Date: 7-29-15
State: WV	County: DodDrIDGE	Company: DOWEST	Crew Member Initials: JD DB	Photo ID(s): XXXX	
Tract Number(s): 31-073-AR 74-AR		Milepost Entry: NA	Milepost Exit: NA	Associated Wetland ID(s): NDNE	
Survey Type: (check one) <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:					

Physical Attributes

Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial					
Waterbody Type: (check one) <input checked="" type="checkbox"/> Stream <input type="checkbox"/> River <input type="checkbox"/> Ditch <input type="checkbox"/> Pond <input type="checkbox"/> Lake <input type="checkbox"/> Connecting swale ^a <input type="checkbox"/> Other:					
OHWM Width: 4 ft. Height: _____ ft.		OHWM Indicator: (check all that apply) <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input checked="" type="checkbox"/> Water staining <input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Width of Waterbody - Top of Bank to Top of Bank at Centerline: 8 ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: 1 ft.		Depth of Water at Centerline: (Approx.) 1/2 " ft.	
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: (Approx.) <1 fps		Bank height Right: 2 ft. Left: 2 ft.	
				Bank slope Right: 30 degrees Left: 30 degrees	

Qualitative Attributes

Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:					
Substrate: (check all that apply) <input checked="" type="checkbox"/> Bedrock <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: 10 % 70 % 5 % 15 % _____ % _____ %					
Width of Riparian Zone: >50 ft.		Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: _____ in. <input checked="" type="checkbox"/> Shrubs: _____ in. <input checked="" type="checkbox"/> Herbs			
		Avg. DBH of Dominants: (approx.) _____ in. _____ in.			

Dominant Bank Vegetation:
(list) **Juglans nigra, Elaeagnus umbellata, Microstegium vimineum, Verbesina occidentalis**

Aquatic Habitats (ex: submerged or emergent aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools):
(list) **Pools, Riffles**

Aquatic Organisms Observed:
(list) **Small invertebrates**

Invasive and/or T&E Species Observed:
(list) **Rosa multiflora, Elaeagnus umbellata, Microstegium vimineum**

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

Disturbances:
(check all that apply) Livestock access Manure in waterbody Waste discharge pipes Other: **NDHS**

Stream Quality:
(check one) High Moderate Low

SD0H020

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **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.

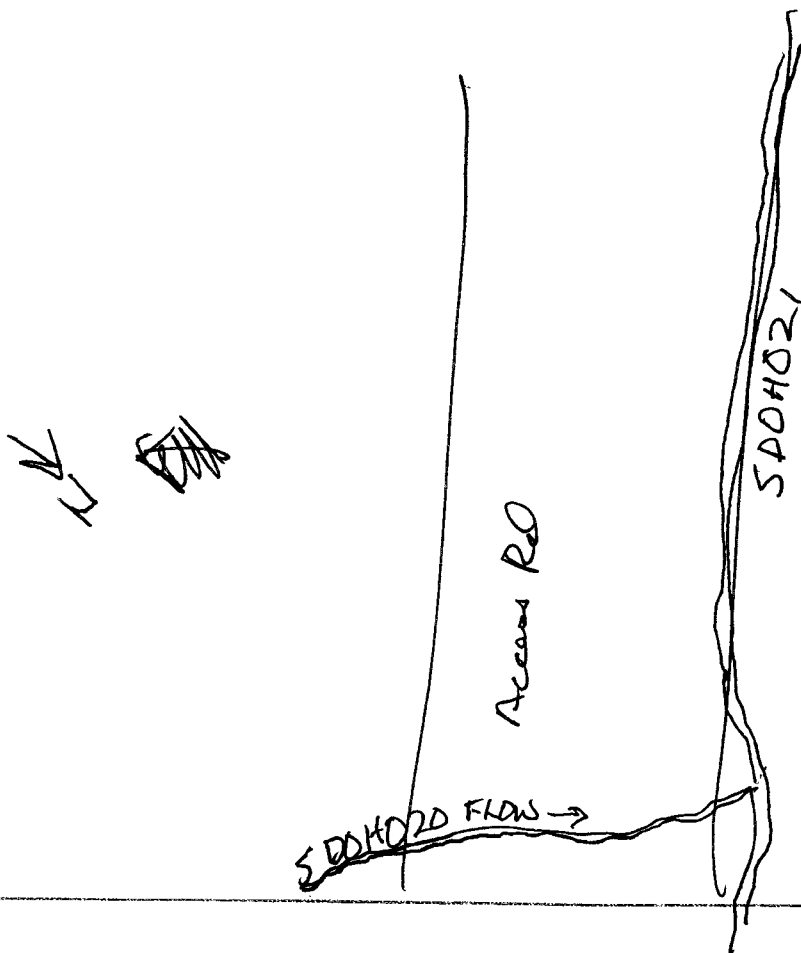
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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



SDOH020



Waterbody *SDOH020*
facing upstream



Waterbody *SDOH020*
facing downstream

SDOH020



Waterbody SDOH020 facing upline cross stream

waterbody Data Sheet

Survey Description

Project Name: DTI Supply Hender Waterbody Name: UNT to Right Hand Fork East Run Waterbody ID: SDOG007 Date: 10-24-14

State: WV County: Doddridge Company: DDWEST Crew Member Initials: JD, DB Photo ID(s): 3

Tract Number(s): 31-074 Milepost Entry: UNK Milepost Exit: UNK Associated Wetland ID(s): NONE

Survey Type: (check one) Centerline Re-Route Access Road Other:

Physical Attributes

Stream Classification: (check one) Ephemeral Intermittent Perennial

Waterbody Type: (check one) Stream River Ditch Pond Lake Connecting swale Other:

OHWI Width: 7 ft. Height: 1 ft. OHWI Indicator: (check all that apply) Clear line on bank Shelving Wrested vegetation Scouring Water staining Bent, matted, or missing vegetation Wrack line Litter and debris Abrupt plant community change Soil characteristic change

Width of Waterbody - Top of Bank to Top of Bank at Centerline: 15 ft. Width of Waterbody - Water Edge to Water Edge at Centerline: 3 ft. Depth of Water at Centerline: (Approx.) 2 ft.

Sinuosity: (check one) Straight Meandering Water velocity: (Approx.) 45 fps Bank height Right: 3 ft. Left: 5 ft. Bank slope Right: 60 degrees Left: 80 degrees

Qualitative Attributes

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

Substrate: (check all that apply) Bedrock Gravel Sand Silt/clay Organic Other: % of Substrate: 20% 40% 20% 20%

Width of Riparian Zone: > 100 ft. Vegetative Layers: (check all that apply) Trees: Shrubs: 1-2 in. Herbs Avg. DBH of Dominants: (approx.) 12 in.

Dominant Bank Vegetation: (list) *Vinus americana, Liquidambar styraciflua, Platanus occidentalis, Elaeagnus umbellata*

Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): (list) Pools

Aquatic Organisms Observed: (list) WATER SKATES

Invasive and/or T&E Species Observed: (list) *Elaeagnus umbellata*

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

Disturbances: (check all that apply) Livestock access Manure in waterbody Waste discharge pipes Other: ~~None~~ None

Stream Quality: (check one) High Moderate Low

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **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.

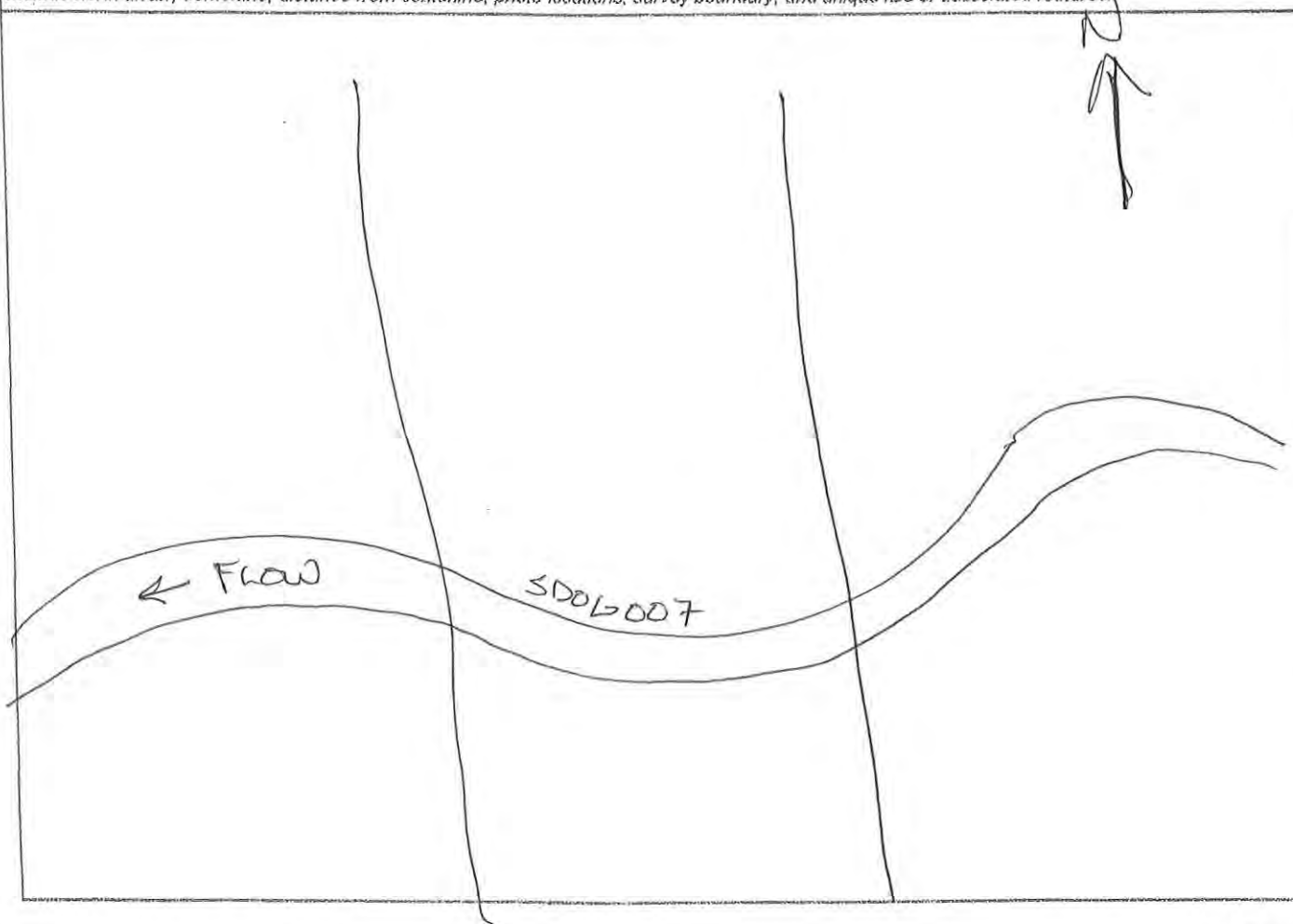
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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



sdog007



sdog007 facing upstream



sdog007 facing downstream

sdog007



sdog007 cross stream

Waterbody Data Sheet

Survey Description			
Project Name: Supply Header		Waterbody Name: UNT TO BIG BATTLE RUN	
Waterbody ID: S00H026		Date: 7-29-15	
State: WV	County: Dodderidge	Company: DAVEST	Crew Member Initials: JD, DB
Photo ID(s):			
Tract Number(s): 31-076		Milepost Entry: NA	Milepost Exit: NA
Associated Wetland ID(s): NONE			
Survey Type: (check one) <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial			
Waterbody Type: (check one) <input checked="" type="checkbox"/> Stream <input type="checkbox"/> River <input type="checkbox"/> Ditch <input type="checkbox"/> Pond <input type="checkbox"/> Lake <input type="checkbox"/> Connecting swale ^a <input type="checkbox"/> Other:			
OHWM Width: 8 ft. Height: _____ ft.		OHWM Indicator: (check all that apply) <input checked="" type="checkbox"/> Clear line on bank <input checked="" type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input checked="" type="checkbox"/> Water staining	
		<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change	
Width of Waterbody - Top of Bank to Top of Bank at Centerline: 10 ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: 2 ft.	
Depth of Water at Centerline: (Approx.) 2" ft.			
Sinuosity: (check one) <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering		Water velocity: (Approx.) 71 fps	
		Bank height Right: 5 ft. Left: 3 ft.	
		Bank slope Right: 70 degrees Left: 40 degrees	
Qualitative Attributes			
Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: (check all that apply) <input checked="" type="checkbox"/> Bedrock <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: 10 % 20 % 5 % 15 % _____ % _____ %			
Width of Riparian Zone: 10 ft.		Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: 12 in. <input checked="" type="checkbox"/> Shrubs: _____ in. <input checked="" type="checkbox"/> Herbs	
		Avg. DBH of Dominants: (approx.) _____ in.	
Dominant Bank Vegetation: (list) Pinus strobus, Elaeagnus umbellata, Microstegium Uiminea			
Aquatic Habitats (ex. submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): (list) riffles, pools			
Aquatic Organisms Observed: (list) small invertebrates + fish			
Invasive and/or T&E Species Observed: (list) Elaeagnus umbellata, Microstegium Uiminea			
Tributary is: (check one) <input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated			
Disturbances: (check all that apply) <input type="checkbox"/> Livestock access <input type="checkbox"/> Manure in waterbody <input type="checkbox"/> Waste discharge pipes <input checked="" type="checkbox"/> Other: Edge of Road + culvert pipes			
Stream Quality: (check one) <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low			

Waterbody ID:
SD01021

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **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.

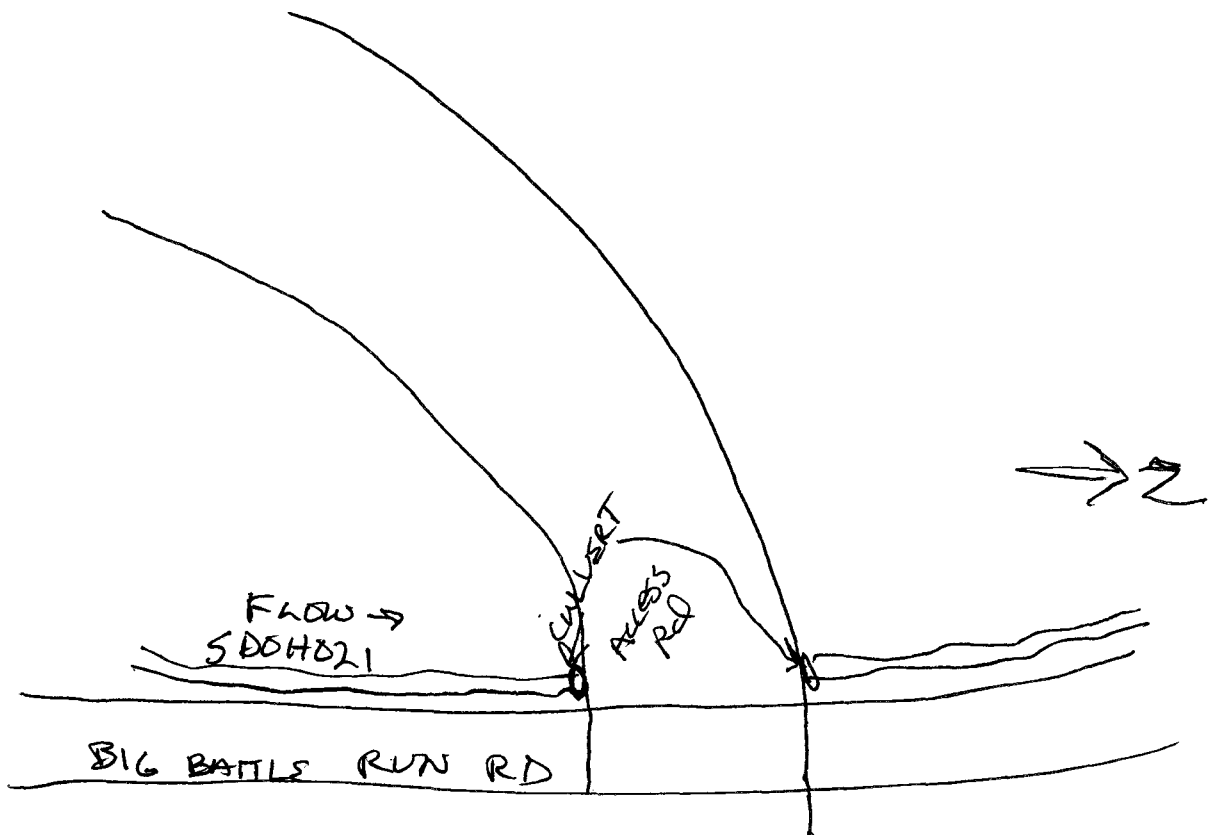
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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



SDOH021



Waterbody *SDOH021*
facing upstream



Waterbody *SDOH021*
facing downstream



Waterbody SDOH021 facing upline cross stream

Waterbody Data Sheet

Survey Description

Project Name: <i>DTI Supply Header</i>		Waterbody Name: <i>UNT TO Right Hand Fork East Run</i>		Waterbody ID: <i>SD06029</i>	Date: <i>4/23/15</i>
State: <i>WV</i>	County: <i>Doddridge</i>	Company: <i>DDWEST</i>	Crew Member Initials: <i>JD, DB</i>	Photo ID(s):	
Tract Number(s): <i>31-074</i>		Milepost Entry: <i>13.8</i>	Milepost Exit: <i>13.8</i>	Associated Wetland ID(s): <i>NONE</i>	
Survey Type: (check one)					
<input checked="" type="checkbox"/> Centerline		<input checked="" type="checkbox"/> Re-Route		<input type="checkbox"/> Access Road	
<input type="checkbox"/> Other: _____					

Physical Attributes

Stream Classification: (check one)					
<input type="checkbox"/> Ephemeral		<input checked="" type="checkbox"/> Intermittent		<input type="checkbox"/> Perennial	
Waterbody Type: (check one)					
<input checked="" type="checkbox"/> Stream		<input type="checkbox"/> River		<input type="checkbox"/> Ditch	
<input type="checkbox"/> Pond		<input type="checkbox"/> Lake		<input type="checkbox"/> Connecting swale*	
<input type="checkbox"/> Other: _____					
OHWM		OHWM Indicator: (check all that apply)			
Width: <i>3</i> ft.		<input checked="" type="checkbox"/> Clear line on bank		<input type="checkbox"/> Shelving	
Height: <i>4"</i> ft.		<input checked="" type="checkbox"/> Wrested vegetation		<input checked="" type="checkbox"/> Scouring	
		<input type="checkbox"/> Water staining		<input type="checkbox"/> Soil characteristic change	
<input checked="" 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 at Centerline: <i>5</i> ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: <i>1.5</i> ft.		Depth of Water at Centerline: (Approx.) <i>1"</i> ft.	
Sinuosity: (check one)		Water velocity: (Approx.)		Bank height	
<input type="checkbox"/> Straight		<i>< 1</i> fps		Right: <i>3</i> ft.	
<input checked="" type="checkbox"/> Meandering				Left: <i>2</i> ft.	
				Right: <i>60</i> degrees	
				Left: <i>60</i> degrees	

Qualitative Attributes

Water Appearance: (check one)					
<input type="checkbox"/> No water		<input checked="" type="checkbox"/> Clear		<input type="checkbox"/> Turbid	
<input type="checkbox"/> Sheen on surface		<input type="checkbox"/> Surface scum		<input type="checkbox"/> Algal mats	
<input type="checkbox"/> Other: _____					
Substrate: (check all that apply)					
<input checked="" type="checkbox"/> Bedrock		<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: <i>60</i> % <i>30</i> % <i>5</i> % <i>5</i> % _____ % _____ %					
Width of Riparian Zone: <i>700</i> ft.		Vegetative Layers: (check all that apply)			
		<input checked="" type="checkbox"/> Trees:		<input checked="" type="checkbox"/> Shrubs:	
		<input checked="" type="checkbox"/> Herbs:			
Avg. DBH of Dominants: (approx.) _____ in. _____ in.					
Dominant Bank Vegetation: (list) <i>Quercus rubra, Carya ovata, Cornus Florida, Elaeagnus umbellata, Polystichum acrostoides</i>					
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): (list) <i>riffles pools</i>					
Aquatic Organisms Observed: (list) <i>NONE</i>					
Invasive and/or T&E Species Observed: (list) <i>Elaeagnus umbellata</i>					
Tributary is: (check one)					
<input checked="" type="checkbox"/> Natural		<input type="checkbox"/> Artificial, man-made		<input type="checkbox"/> Manipulated	
Disturbances: (check all that apply)					
<input type="checkbox"/> Livestock access		<input type="checkbox"/> Manure in waterbody		<input type="checkbox"/> Waste discharge pipes	
<input checked="" type="checkbox"/> Other: <i>Encroachment</i>					
Stream Quality?: (check one)					
<input checked="" type="checkbox"/> High		<input checked="" type="checkbox"/> Moderate		<input type="checkbox"/> Low	

Waterbody ID:

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **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.

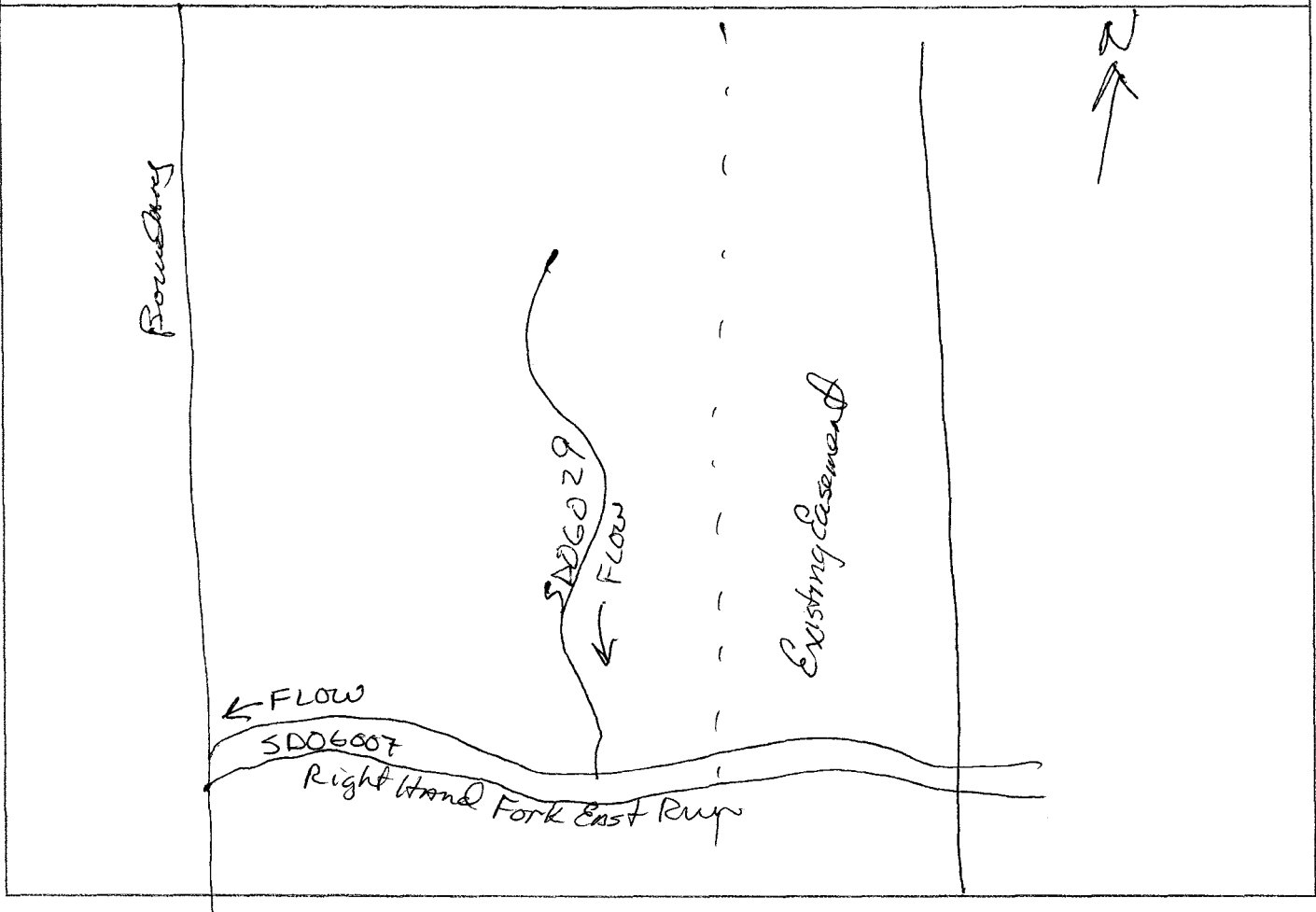
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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



sdog029



Waterbody sdog029 facing upstream



Waterbody sdog029 facing downstream

Sdog029



Waterbody sdog029 facing upline cross stream

waterbody Data Sheet

Survey Description

Project Name: DTI Supply Header Waterbody Name: UNT TO Big Battle Run Waterbody ID: SDOG008 Date: 10-24-14

State: WV County: Doddridge Company: DOWEST Crew Member Initials: JD, DB Photo ID(s): 3

Tract Number(s): 31-080 Milepost Entry: UNK Milepost Exit: UNK Associated Wetland ID(s): NONE

Survey Type: (check one) Centerline Re-Route Access Road Other:

Physical Attributes

Stream Classification: (check one) Ephemeral Intermittent Perennial

Waterbody Type: (check one) Stream River Ditch Pond Lake Connecting swale Other:

OHWB Width: 5 ft. Height: 1 ft. OHWB Indicator: (check all that apply) Clear line on bank Shelving Wrested vegetation Scouring Water staining Bent, matted, or missing vegetation Wrack line Litter and debris Abrupt plant community change Soil characteristic change

Width of Waterbody - Top of Bank to Top of Bank at Centerline: 10 ft. Width of Waterbody - Water Edge to Water Edge at Centerline: 1 ft. Depth of Water at Centerline: (Approx.) _____ ft.

Sinuosity: (check one) Straight Meandering Water velocity: (Approx.) < 1 fps Bank height Right: 2 ft. Left: 3 ft. Bank slope Right: 60 degrees Left: 80 degrees

Qualitative Attributes

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

Substrate: (check all that apply) Bedrock Gravel Sand Silt/clay Organic Other: % of Substrate: 30 % 40 % 15 % 15 % _____ % _____ %

Width of Riparian Zone: 10 ft. Vegetative Layers: (check all that apply) Trees: Shrubs: Herbs Avg. DBH of Dominants: _____ in. _____ in.

Dominant Bank Vegetation: (list) *Hatanus occidentalis, Rosa multiflora, Elaeagnus umbellata, Microstegium viminea*

Aquatic Habitats (ex: submerged or emergent aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): (list) *Rifle, pools*

Aquatic Organisms Observed: (list) *NONE*

Invasive and/or T&E Species Observed: (list) *Rosa multiflora, Elaeagnus umbellata, Microstegium viminea*

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

Disturbances: (check all that apply) Livestock access Manure in waterbody Waste discharge pipes Other: *Some Mowing*

Stream Quality: (check one) High Moderate Low

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **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.

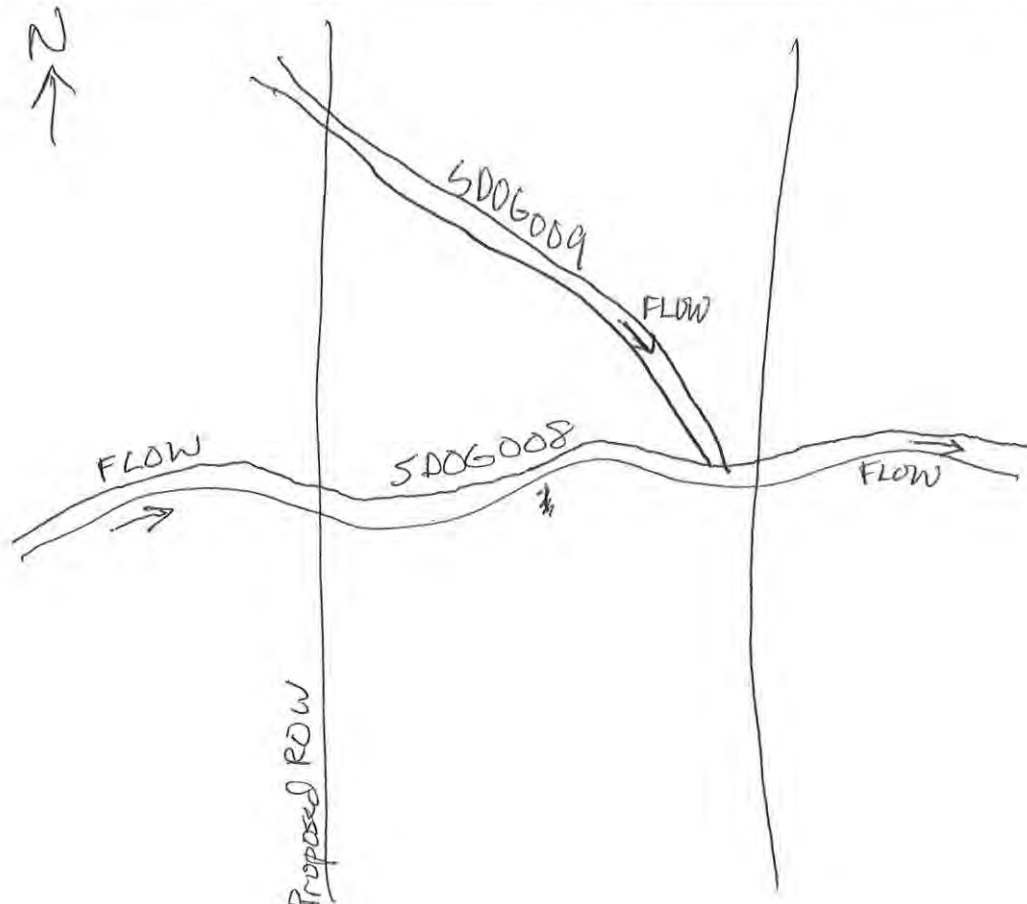
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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



sdog008



sdog008 facing upstream



sdog008 facing downstream

sdog008



sdog08 cross stream

waterbody Data Sheet

Survey Description

Project Name: DTI Supply Header Waterbody Name: UNT TO Big Battle Run Waterbody ID: SD06009 Date: 10-24-14

State: WV County: Doddridge Company: DB WEST Crew Member Initials: JD, DB Photo ID(s): 3

Tract Number(s): 31-080 Milepost Entry: UNK Milepost Exit: UNK Associated Wetland ID(s): 3

Survey Type: (check one) Centerline Re-Route Access Road Other: _____

Physical Attributes

Stream Classification: (check one) Ephemeral Intermittent Perennial

Waterbody Type: (check one) Stream River Ditch Pond Lake Connecting swale^a Other: _____

OHWM Width: 2 ft. Height: 8" ft. OHWM Indicator: (check all that apply) Clear line on bank Shelving Wrested vegetation Scouring Water staining Bent, matted, or missing vegetation Wrack line Litter and debris Abrupt plant community change Soil characteristic change

Width of Waterbody - Top of Bank to Top of Bank at Centerline: 4 ft. Width of Waterbody - Water Edge to Water Edge at Centerline: 1 ft. Depth of Water at Centerline: (Approx.) 1" ft.

Sinuosity: (check one) Straight Meandering Water velocity: (Approx.) < 1 fps Bank height Right: 2 ft. Left: 3 ft. Bank slope Right: 50 degrees Left: 70 degrees

Qualitative Attributes

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

Substrate: (check all that apply) Bedrock Gravel Sand Silt/clay Organic Other: _____

% of Substrate: _____ % 60 % 20 % 20 % _____ % _____ %

Width of Riparian Zone: 5 ft. Vegetative Layers: (check all that apply) Trees: _____ Shrubs: _____ Herbs: _____ Avg. DBH of Dominants: _____ in. _____ in.

Dominant Bank Vegetation: (list) Platanus occidentalis, Salix nigra, Microstegium vimineum, Carex comosa

Aquatic Habitats (ex: submerged or emergent aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): (list) Pools, riffle

Aquatic Organisms Observed: (list) tadpoles

Invasive and/or T&E Species Observed: (list) Microstegium vimineum

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

Disturbances: (check all that apply) Livestock access Manure in waterbody Waste discharge pipes Other: NONE

Stream Quality^b: (check one) High Moderate Low

SD06009

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **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.

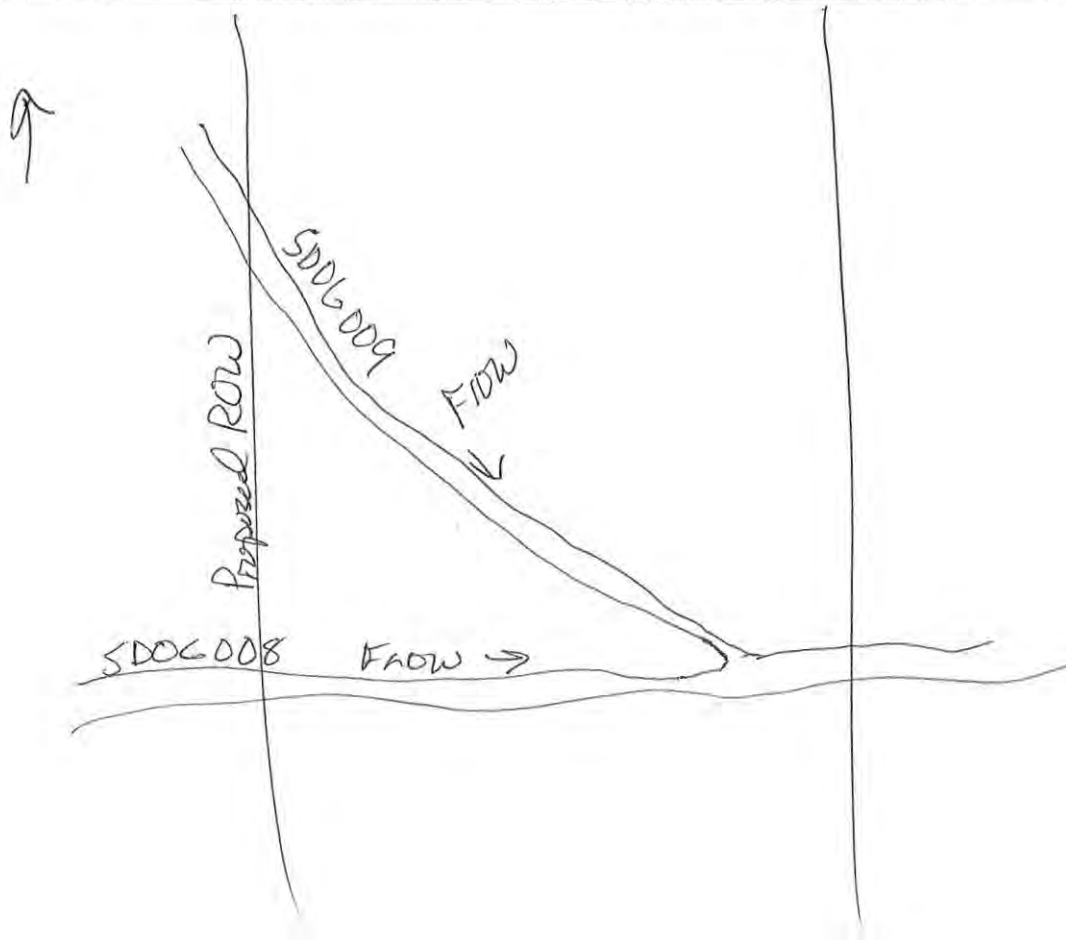
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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



sdog009



sdog009 facing upstream



sdog009 facing downstream

sdog009



sdog009 cross stream

Waterbody Data Sheet

Survey Description

Project Name: Supply Header		Waterbody Name: Big Battle Run		Waterbody ID: SD04022	Date: 2-29-15
State: WV	County: Dodge	Company: POWEST	Crew Member Initials: JD, DB	Photo ID(s):	
Tract Number(s): NONE		Milepost Entry: NA	Milepost Exit: NA	Associated Wetland ID(s): NONE	

Survey Type: (check one) Centerline Re-Route Access Road Other:

Physical Attributes

Stream Classification: (check one) Ephemeral Intermittent Perennial

Waterbody Type: (check one) Stream River Ditch Pond Lake Connecting swale^a Other:

OHWM
 Width: 15 ft.
 Height: 1 ft.

OHWM Indicator: (check all that apply)
 Clear line on bank Shelving Wrested vegetation Scouring Water staining
 Bent, matted, or missing vegetation Wrack line Litter and debris Abrupt plant community change Soil characteristic change

Width of Waterbody - Top of Bank to Top of Bank at Centerline: 20 ft.

Width of Waterbody - Water Edge to Water Edge at Centerline: 4 ft.

Depth of Water at Centerline: (Approx.) _____ ft.

Sinuosity: (check one) Straight Meandering

Water velocity: (Approx.) 2.5 fps

Bank height
 Right: 2 ft.
 Left: 4 ft.

Bank slope
 Right: 20 degrees
 Left: 80 degrees

Qualitative Attributes

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

Substrate: (check all that apply) Bedrock Gravel Sand Silt/clay Organic Other:

% of Substrate: 20 % 60 % 5 % 15 % _____ % _____ %

Width of Riparian Zone: _____ ft.

Vegetative Layers: (check all that apply) Trees: _____ Shrubs: _____ Herbs: _____

Avg. DBH of Dominants: (approx.) 16 in. _____ in.

Dominant Bank Vegetation: (list) **Platanus occidentalis, Dactylis glomerata, Microstegium vimineum**

Aquatic Habitats (ex: submerged or emergent aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): (list) **Pools, Riffles**

Aquatic Organisms Observed: (list) **Small fish, invertebrates**

Invasive and/or T&E Species Observed: (list) **Microstegium vimineum**

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

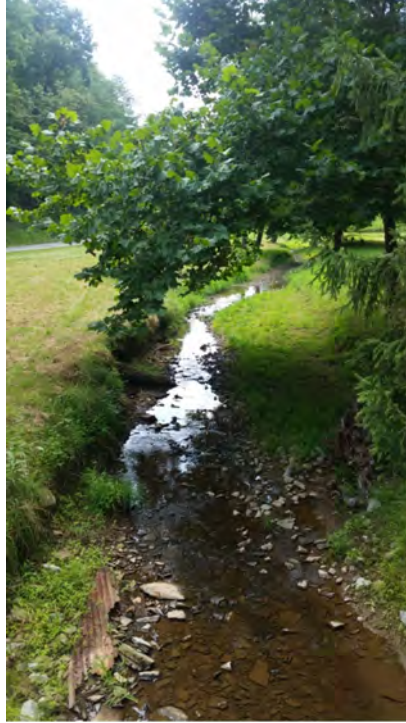
Disturbances: (check all that apply) Livestock access Manure in waterbody Waste discharge pipes Other: **Large culvert + next to Road**

Stream Quality^b: (check one) High Moderate Low

Waterbody Data Sheet

Survey Description			
Project Name: <u>Supply Undercar</u>		Waterbody Name: <u>Big Bottle Run</u>	
Waterbody ID: <u>SD040 Z3</u>		Date: <u>7-29-15</u>	
State: <u>WV</u>	County: <u>Doddridge</u>	Company: <u>DDWEST</u>	Crew Member Initials: <u>JD, DB</u>
Photo ID(s):			
Tract Number: <u>31-0000.AR</u>		Milepost Entry: <u>NA</u>	Milepost Exit: <u>NA</u>
Associated Wetland ID(s): <u>NDDE</u>			
Survey Type: (check one) <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial			
Waterbody Type: (check one) <input checked="" type="checkbox"/> Stream <input type="checkbox"/> River <input type="checkbox"/> Ditch <input type="checkbox"/> Pond <input type="checkbox"/> Lake <input type="checkbox"/> Connecting swale ^a <input type="checkbox"/> Other:			
OHWM Width: <u>15</u> ft. Height: _____ ft.		OHWM Indicator: (check all that apply) <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining	
<input type="checkbox"/> 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 at Centerline: <u>20</u> ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: <u>6</u> ft.	
Depth of Water at Centerline: (Approx.) _____ ft.			
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: (Approx.) <u><5</u> fps	
Bank height Right: <u>2</u> ft. Left: <u>7</u> ft.		Bank slope Right: <u>15</u> degrees Left: <u>60</u> degrees	
Qualitative Attributes			
Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: (check all that apply) <input checked="" type="checkbox"/> Bedrock <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>20</u> % <u>70</u> % <u>5</u> % <u>5</u> % _____ % _____ %			
Width of Riparian Zone: <u>10</u> ft.		Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: _____ in. <input checked="" type="checkbox"/> Shrubs: _____ in. <input checked="" type="checkbox"/> Herbs	
Avg. DBH of Dominants: (approx.) _____ in. _____ in.			
Dominant Bank Vegetation: (list) <u>Platanus occidentalis, Elaeagnus umbellata, Salix nigra, Microstegium, Urtica</u>			
Aquatic Habitats (ex: submerged or emergent aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): (list) <u>Rocks Riffles, overhang banks/veg</u>			
Aquatic Organisms Observed: (list) <u>small fish, invertebrate</u>			
Invasive and/or T&E Species Observed: (list) <u>Microstegium urticaria, Elaeagnus umbellata, Polygonum cuspidatum</u>			
Tributary is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Disturbances: (check all that apply) <input checked="" type="checkbox"/> Livestock access <input type="checkbox"/> Manure in waterbody <input type="checkbox"/> Waste discharge pipes <input checked="" type="checkbox"/> Other: <u>road crossings</u>			
Stream Quality: (check one) <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low			

SDOH022



Waterbody *SDOH022*
facing upstream



Waterbody *SDOH022*
facing downstream

SDOH022



Waterbody SDOH022 facing upline cross stream

Waterbody Data Sheet

Survey Description			
Project Name: <u>DTI Supply Header</u>		Waterbody Name: <u>UNT To Big Battle Run</u>	
Waterbody ID: <u>Sdoh 009</u>		Date: <u>24 Oct 19</u>	
State: <u>WV</u>	County: <u>Doddridge</u>	Company: <u>DD WEST</u>	Crew Member Initials: <u>JG</u>
Photo ID(s): <u>Upstream, Downstream, Sid</u>			
Tract Number(s): <u>31-083, 31-085</u>		Milepost Entry:	Milepost Exit:
		Associated Wetland ID(s): <u>None</u>	
Survey Type: <small>(check one)</small>			
<input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
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 checked="" type="checkbox"/> Stream <input type="checkbox"/> River <input type="checkbox"/> Ditch <input type="checkbox"/> Pond <input type="checkbox"/> Lake <input type="checkbox"/> Connecting swale * <input type="checkbox"/> Other:			
OHWM		OHWM Indicator: <small>(check all that apply)</small>	
Width: <u>5</u> ft.		<input checked="" type="checkbox"/> Clear line on bank <input checked="" type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining	
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	
Width of Waterbody - Top of Bank to Top of Bank at Centerline: <u>10</u> ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: <u>5</u> ft.	
		Depth of Water at Centerline: <small>(Approx.)</small> <u>0.3</u> ft.	
Sinuosity: <small>(check one)</small>		Water velocity: <small>(Approx.)</small>	
<input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering		<u>1</u> fps	
		Bank height	
		Right: <u>3</u> ft.	
		Left: <u>5</u> ft.	
		Bank slope	
		Right: <u>45</u> degrees	
		Left: <u>45</u> degrees	
Qualitative Attributes			
Water Appearance: <small>(check one)</small>			
<input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bedrock <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>70</u> % _____ % <u>20</u> % _____ % _____ %			
Width of Riparian Zone: <u>5</u> ft.		Vegetative Layers: <small>(check all that apply)</small>	
		<input type="checkbox"/> Trees: <input checked="" type="checkbox"/> Shrubs: <input checked="" type="checkbox"/> Herbs	
Avg. DBH of Dominants: <small>(approx.)</small>		<u>2</u> in.	
Dominant Bank Vegetation: <small>(list)</small> <u>Alnus tenuifolia, Eleagnus umbellata, Rosa mult. Ploca, Verbesina alternifolia</u>			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): <small>(list)</small> <u>leaf packs, riffles, Pools</u>			
Aquatic Organisms Observed: <small>(list)</small> <u>None observed</u>			
Invasive and/or T&E Species Observed: <small>(list)</small> <u>None Observed</u>			
Tributary Is: <small>(check one)</small>			
<input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated			
Disturbances: <small>(check all that apply)</small>			
<input type="checkbox"/> Livestock access <input type="checkbox"/> Manure in waterbody <input type="checkbox"/> Waste discharge pipes <input checked="" type="checkbox"/> Other: <u>roadside relocation gas pipe through center</u>			
Stream Quality: <small>(check one)</small>			
<input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low			

Waterbody ID:

Sddh 009

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.

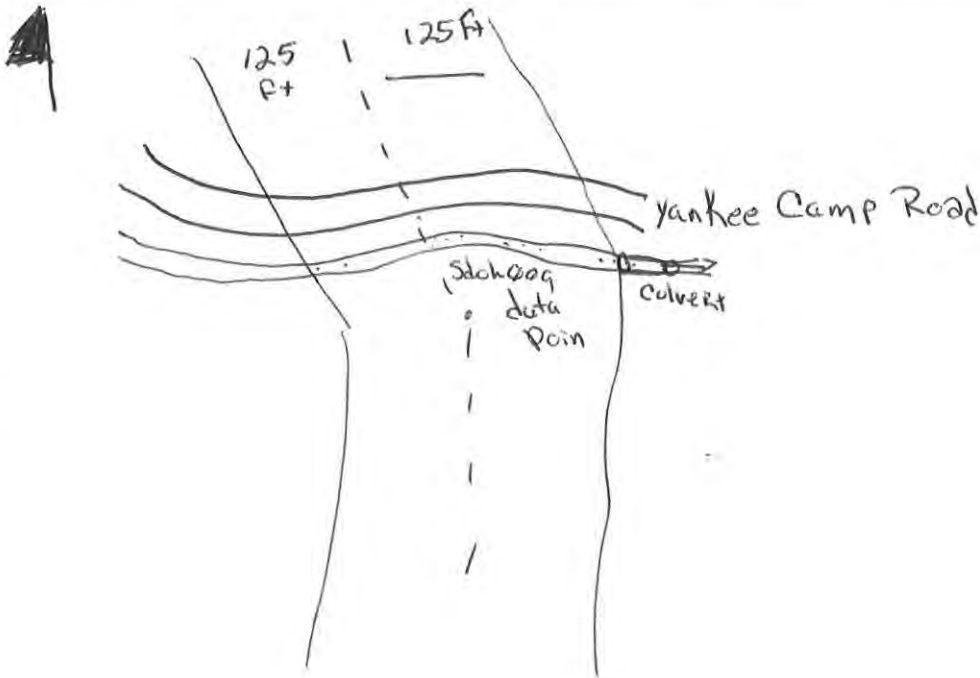
Low Quality: Rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface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

Notes:

DHWM width 5'

Bank width 10'

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



sdoh009



sdoh009 facing upstream



sdoh009 facing downstream

sdoh009



sdoh009 cross stream

waterbody Data Sheet

Survey Description

Project Name: DTI Supply Header		Waterbody Name: UNT To Big Battle Run		Waterbody ID: Sdch 008	Date: 24 Oct 14
State: WV	County: Putnam	Company: DD WEST	Crew Member Initials: JG	Photo ID(s): upstream, downstream, side	
Tract Number(s): 31-086		Milepost Entry:	Milepost Exit:	Associated Wetland ID(s): None	
Survey Type: <small>(check one)</small>					
<input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:					

Physical Attributes

Stream Classification: <small>(check one)</small>					
<input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial					
Waterbody Type: <small>(check one)</small>					
<input checked="" type="checkbox"/> Stream <input type="checkbox"/> River <input type="checkbox"/> Ditch <input type="checkbox"/> Pond <input type="checkbox"/> Lake <input type="checkbox"/> Connecting swale ^a <input type="checkbox"/> Other:					
OHWM		OHWM Indicator: <small>(check all that apply)</small>			
Width: 5 ft.		<input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining			
Height: 0.5 ft.		<input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Width of Waterbody - Top of Bank to Top of Bank at Centerline: 5 ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: 5 ft.		Depth of Water at Centerline: <small>(Approx.)</small> 0.2 ft.	
Sinuosity: <small>(check one)</small>		Water velocity: <small>(Approx.)</small>		Bank height	
<input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		2 fps		Right: 1 ft. Left: 1 ft.	
				Bank slope Right: 90 degrees Left: 90 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 checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/clay <input type="checkbox"/> Organic <input type="checkbox"/> Other:					
% of Substrate: _____ % 50 % _____ % 50 % _____ % _____ %					
Width of Riparian Zone: >300 ft.		Vegetative Layers: <small>(check all that apply)</small>			
		<input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Shrubs: 3 in. <input checked="" type="checkbox"/> Herbs			
		Avg. DBH of Dominants: <small>(approx.)</small> 10 in.			
Dominant Bank Vegetation: <i>Quercus montana, Liquidambar tulipifera, Carpinus Caroliniana, Polystichum acrostichoides, Arundinaria gigantea</i>					
Aquatic Habitats (ex: submerged or emergent aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): <small>(list)</small> Leaf packs, riffles					
Aquatic Organisms Observed: <small>(list)</small> None observed					
Invasive and/or T&E Species Observed: <small>(list)</small> None observed					
Tributary is: <small>(check one)</small>					
<input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated					
Disturbances: <small>(check all that apply)</small>					
<input type="checkbox"/> Livestock access <input type="checkbox"/> Manure in waterbody <input type="checkbox"/> Waste discharge pipes <input checked="" type="checkbox"/> Other: Culvert installed					
Stream Quality ^b : <small>(check one)</small>					
<input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low					

Waterbody ID:

SDH 008

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.

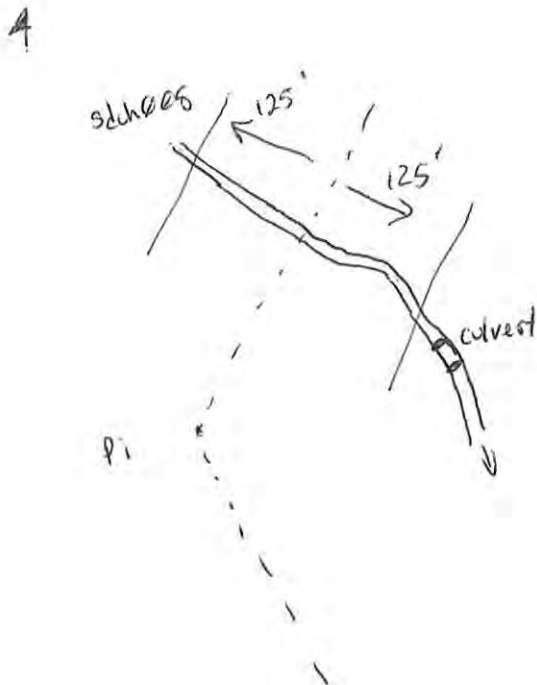
Moderate Quality: Altered by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or bank vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers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

OHWM width 5'
Bank width 5'

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



sdoh008



sdoh008 facing upstream



sdoh008 facing downstream

sdoh008



sdoh008 cross stream

Waterbody Data Sheet

Survey Description			
Project Name: <u>DTI Supply Header</u>		Waterbody Name: <u>ULT TO BIG BATTLE CREEK</u>	
Waterbody ID: <u>SD06030</u>		Date: <u>4/24/15</u>	
State: <u>WV</u>	County: <u>Doddridge</u>	Company: <u>DDWEST</u>	Crew Member Initials: <u>JD, DB</u>
Photo ID(s):			
Tract Number(s): <u>31-086</u>		Milepost Entry: <u>15.3</u>	Milepost Exit: <u>15.3</u>
Associated Wetland ID(s): <u>NONE</u>			
Survey Type: <small>(check one)</small>			
<input checked="" type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <small>(check one)</small>			
<input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial			
Waterbody Type: <small>(check one)</small>			
<input checked="" type="checkbox"/> Stream <input type="checkbox"/> River <input type="checkbox"/> Ditch <input type="checkbox"/> Pond <input type="checkbox"/> Lake <input type="checkbox"/> Connecting swale ^a <input type="checkbox"/> Other:			
OHWM		OHWM Indicator: <small>(check all that apply)</small>	
Width: <u>3</u> ft.		<input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining	
Height: <u>8.5</u> ft.		<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 at Centerline: <u>5</u> ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: _____ ft.	
Depth of Water at Centerline: <small>(Approx.)</small> _____ ft.			
Sinuosity: <small>(check one)</small>		Water velocity: <small>(Approx.)</small>	
<input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		<u><1</u> fps	
Bank height		Bank slope	
Right: <u>3</u> ft.		Right: <u>90</u> degrees	
Left: <u>2</u> ft.		Left: <u>80</u> degrees	
Qualitative Attributes			
Water Appearance: <small>(check one)</small>			
<input checked="" type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bedrock <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>30</u> % <u>50</u> % <u>10</u> % <u>10</u> % _____ % _____ %			
Width of Riparian Zone: <u>0</u> ft.		Vegetative Layers: <small>(check all that apply)</small>	
		<input type="checkbox"/> Trees: <input checked="" type="checkbox"/> Shrubs: <input checked="" type="checkbox"/> Herbs	
Avg. DBH of Dominants: <small>(approx.)</small> _____ in. _____ in.			
Dominant Bank Vegetation: <small>(list)</small> <u>Elaeagnus umbellata, Dactylis glomerata, *</u>			
Aquatic Habitats (ex: submerged or emergent aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): <small>(list)</small> <u>leaf packs</u>			
Aquatic Organisms Observed: <small>(list)</small> <u>NONE</u>			
Invasive and/or T&E Species Observed: <small>(list)</small> <u>Elaeagnus umbellata</u>			
Tributary Is: <small>(check one)</small>			
<input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated			
Disturbances: <small>(check all that apply)</small>			
<input type="checkbox"/> Livestock access <input type="checkbox"/> Manure in waterbody <input type="checkbox"/> Waste discharge pipes <input checked="" type="checkbox"/> Other: <u>Pipeline easement</u>			
Stream Quality: <small>(check one)</small>			
<input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low			

Waterbody ID:

SD06030

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **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.

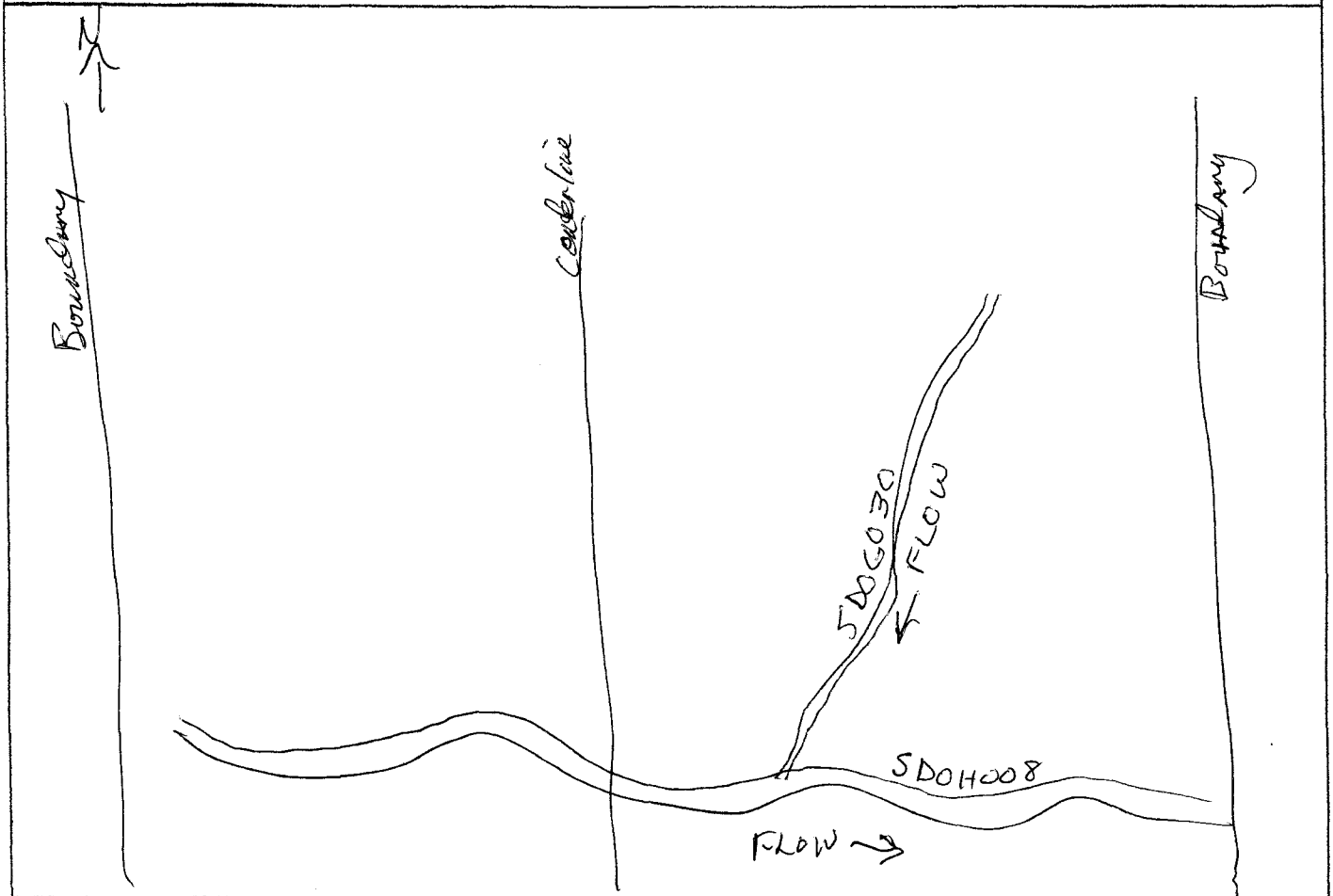
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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



sdog030



Waterbody sdog030 facing upstream



Waterbody sdog030 facing downstream

Sdog030



Waterbody sdog030 facing upline cross stream

Waterbody Data Sheet

Survey Description			
Project Name: <i>Supply Wadswor</i>	Waterbody Name: <i>Big Bottle Run</i>	Waterbody ID: <i>SD040 Z3</i>	Date: <i>7-29-15</i>
State: <i>WV</i>	County: <i>Doddridge</i>	Company: <i>DDWEST</i>	Crew Member Initials: <i>JD, DB</i>
Photo ID(s):	Tract Number(s): <i>31-0000. AR</i>	Milepost Entry: <i>NA</i>	Milepost Exit: <i>NA</i>
Associated Wetland ID(s): <i>NONE</i>	Survey Type: (check one) <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:		
Physical Attributes			
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial			
Waterbody Type: (check one) <input checked="" type="checkbox"/> Stream <input type="checkbox"/> River <input type="checkbox"/> Ditch <input type="checkbox"/> Pond <input type="checkbox"/> Lake <input type="checkbox"/> Connecting swale ^a <input type="checkbox"/> Other:			
OHWM Width: <i>15</i> ft. Height: _____ ft.		OHWM Indicator: (check all that apply) <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input type="checkbox"/> 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 at Centerline: <i>20</i> ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: <i>6</i> ft.	
Depth of Water at Centerline: (Approx.) _____ ft.		Bank height Right: <i>2</i> ft. Left: <i>7</i> ft.	
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: (Approx.) <i><5</i> fps	
Bank slope Right: <i>15</i> degrees Left: <i>60</i> degrees			
Qualitative Attributes			
Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: (check all that apply) <input checked="" type="checkbox"/> Bedrock <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: <i>20</i> % <i>70</i> % <i>5</i> % <i>5</i> % _____ % _____ %			
Width of Riparian Zone: <i>10</i> ft.		Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: _____ in. <input checked="" type="checkbox"/> Shrubs: _____ in. <input checked="" type="checkbox"/> Herbs	
Avg. DBH of Dominants: (approx.) _____ in.		Dominant Bank Vegetation: (list) <i>Platanus occidentalis, Elaeagnus umbellata, Salix nigra, Microstegium vimineum</i>	
Aquatic Habitats (ex: submerged or emergent aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): (list) <i>Roots Riffles, overhang banks/weg</i>			
Aquatic Organisms Observed: (list) <i>small fish, invertebrate</i>			
Invasive and/or T&E Species Observed: (list) <i>Microstegium vimineum, Elaeagnus umbellata, Polygonum cuspidatum</i>			
Tributary is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Disturbances: (check all that apply) <input checked="" type="checkbox"/> Livestock access <input type="checkbox"/> Manure in waterbody <input type="checkbox"/> Waste discharge pipes <input checked="" type="checkbox"/> Other: <i>road crossings</i>			
Stream Quality ^b : (check one) <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low			

Waterbody ID:
SD04023

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **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.

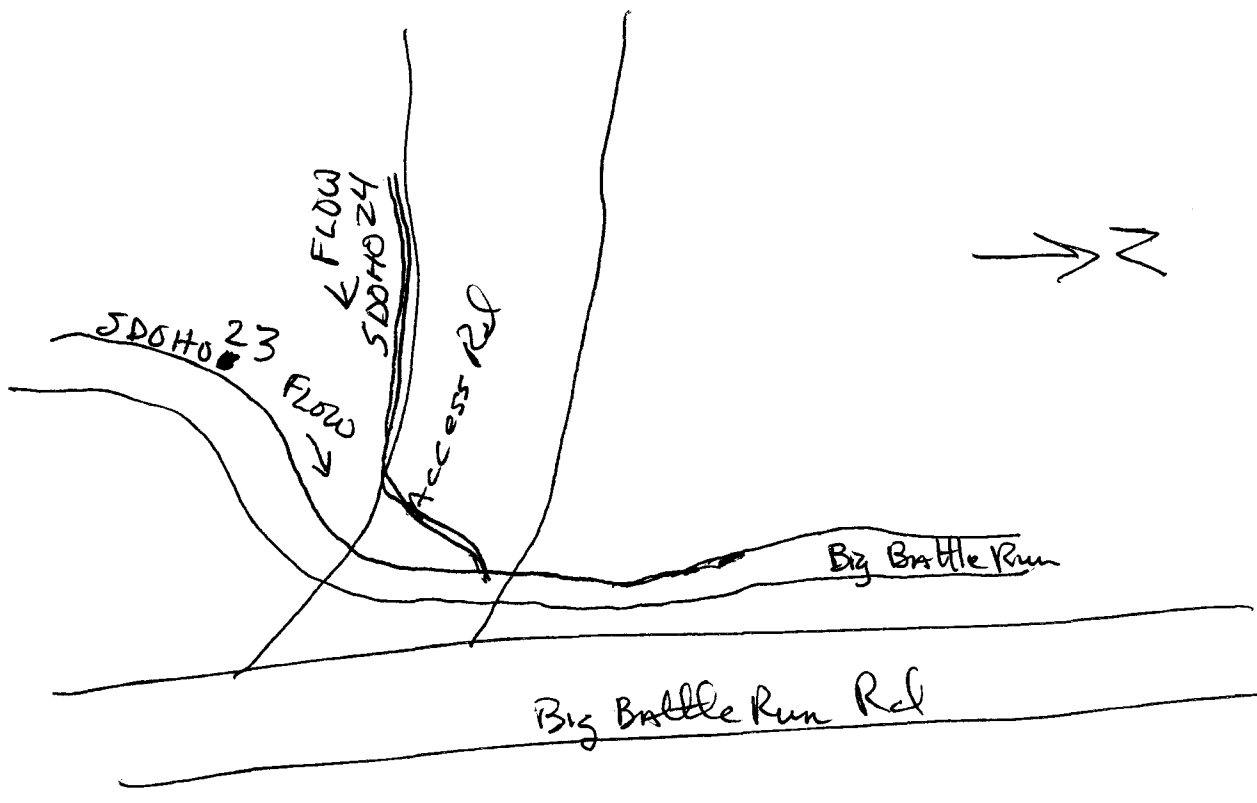
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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



SDOH023



Waterbody *SDOH023*
facing upstream



Waterbody *SDOH023*
facing downstream

SDOH023



Waterbody SDOH023 facing upline cross stream

Waterbody Data Sheet

Survey Description			
Project Name: <u>Supply Headbr</u>		Waterbody Name: <u>UNT TO BIG BATTLE RUN</u>	
Waterbody ID: <u>SDOH024</u>		Date: <u>7-29-15</u>	
State: <u>WV</u>	County: <u>Doddridge</u>	Company: <u>DWEST</u>	Crew Member Initials: <u>JD, DB</u>
Photo ID(s):			
Tract Number(s): <u>31-090. AR</u>		Milepost Entry: <u>NA</u>	Milepost Exit: <u>NA</u>
Associated Wetland ID(s): <u>NONE</u>			
Survey Type: <small>(check one)</small>			
<input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <small>(check one)</small>			
<input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial			
Waterbody Type: <small>(check one)</small>			
<input checked="" type="checkbox"/> Stream <input type="checkbox"/> River <input type="checkbox"/> Ditch <input type="checkbox"/> Pond <input type="checkbox"/> Lake <input type="checkbox"/> Connecting swale* <input type="checkbox"/> Other:			
OHWM		OHWM Indicator: <small>(check all that apply)</small>	
Width: <u>4</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	
Height: _____ ft.		<input type="checkbox"/> Bent, matted, or missing vegetation <input checked="" type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change	
Width of Waterbody - Top of Bank to Top of Bank at Centerline: <u>8</u> ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: <u>1</u> ft.	
Depth of Water at Centerline: <small>(Approx.)</small> <u>1/2</u> ft.			
Sinuosity: <small>(check one)</small>		Water velocity: <small>(Approx.)</small>	
<input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		<u>< 1</u> fps	
Bank height		Bank slope	
Right: <u>2</u> ft.		Right: <u>30</u> degrees	
Left: <u>1</u> ft.		Left: <u>15</u> degrees	
Qualitative Attributes			
Water Appearance: <small>(check one)</small>			
<input type="checkbox"/> No water <input type="checkbox"/> Clear <input checked="" type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: <small>(check all that apply)</small>			
<input type="checkbox"/> Bedrock <input 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>60</u> % <u>10</u> % <u>30</u> % _____ %			
Width of Riparian Zone: _____ ft.		Vegetative Layers: <small>(check all that apply)</small>	
		<input type="checkbox"/> Trees: <input type="checkbox"/> Shrubs: <input checked="" type="checkbox"/> Herbs	
Avg. DBH of Dominants: <small>(approx.)</small> _____ in.			
Dominant Bank Vegetation: <small>(list)</small> <u>lawn grassess, microstegium umineca</u>			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): <small>(list)</small> <u>potholes</u>			
Aquatic Organisms Observed: <small>(list)</small> <u>small invertebrate</u>			
Invasive and/or T&E Species Observed: <small>(list)</small> <u>Microstegium Umineca</u>			
Tributary is: <small>(check one)</small>			
<input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated			
Disturbances: <small>(check all that apply)</small>			
<input type="checkbox"/> Livestock access <input type="checkbox"/> Manure in waterbody <input type="checkbox"/> Waste discharge pipes <input checked="" type="checkbox"/> Other: <u>within lawn</u>			
Stream Quality ^P : <small>(check one)</small>			
<input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low			

Waterbody ID:
SD0A024

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **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.

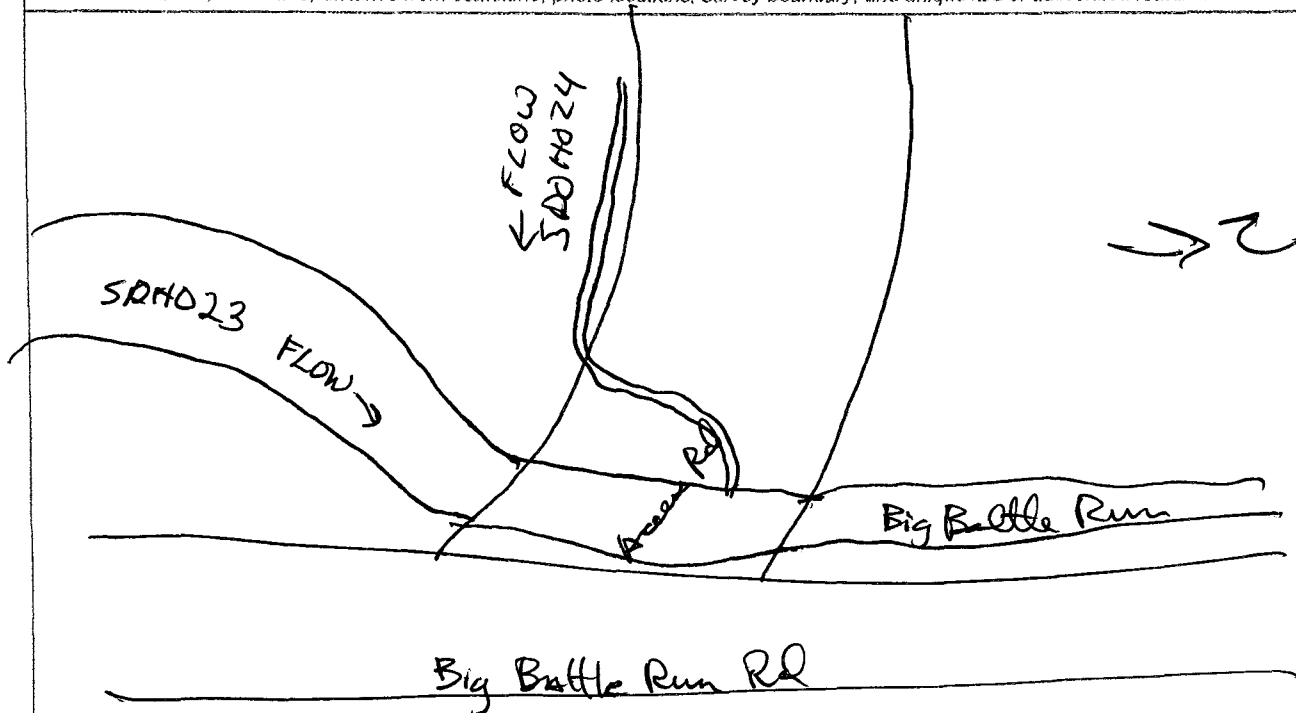
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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



SDOH024



Waterbody *SDOH024*
facing upstream



Waterbody *SDOH024*
facing downstream

SDOH024



Waterbody SDOH024 facing upline cross stream

Waterbody Data Sheet

Survey Description

Project Name: Supply Header		Waterbody Name: 00000 Little Battle Run		Waterbody ID: SD06017	Date: 7-28-15
State: WV	County: Doddridge	Company: DOWEST	Crew Member Initials: JD, DB	Photo ID(s):	
Tract Number(s): 31-094. AR		Milepost Entry: NA	Milepost Exit: NA	Associated Wetland ID(s): NONE	
Survey Type: (check one) <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:					

Physical Attributes

Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial					
Waterbody Type: (check one) <input checked="" type="checkbox"/> Stream <input type="checkbox"/> River <input type="checkbox"/> Ditch <input type="checkbox"/> Pond <input type="checkbox"/> Lake <input type="checkbox"/> Connecting swale ^a <input type="checkbox"/> Other:					
OHWM Width: 10 ft. Height: 1 ft.		OHWM Indicator: (check all that apply) <input checked="" type="checkbox"/> Clear line on bank <input checked="" type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <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 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 at Centerline: 25 ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: 6 ft.		Depth of Water at Centerline: (Approx.) _____ ft.	

Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: (Approx.) <u>5</u> fps		Bank height Right: 3 ft. Left: 5 ft.		Bank slope Right: 25 degrees Left: 40 degrees	
--	--	---	--	--	--	---	--

Qualitative Attributes

Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:							
Substrate: (check all that apply) <input checked="" type="checkbox"/> Bedrock <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: 10% 70% 5% 15% _____%							
Width of Riparian Zone: _____ ft.		Vegetative Layers: (check all that apply) <input type="checkbox"/> Trees: _____ <input type="checkbox"/> Shrubs: _____ <input type="checkbox"/> Herbs Avg. DBH of Dominants: (approx.) _____ in. _____ in.					

Dominant Bank Vegetation:
(list) *Platanus occidentalis, Cornus florida, Rosa multiflora, C. laeagnus umbellata, Microstegium umineus*

Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools):
(list) *pools n fls*

Aquatic Organisms Observed:
(list) *small fish + invertebrates*

Invasive and/or T&E Species Observed:
(list) *Rosa mult, flora, C. laeagnus umbellata, Polygonum cuspidatum, Microstegium umineus*

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

Disturbances:
(check all that apply) Livestock access Manure in waterbody Waste discharge pipes Other: *Adjacent Road + culvert*

Stream Quality:
(check one) High Moderate Low

SDDH017

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **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.

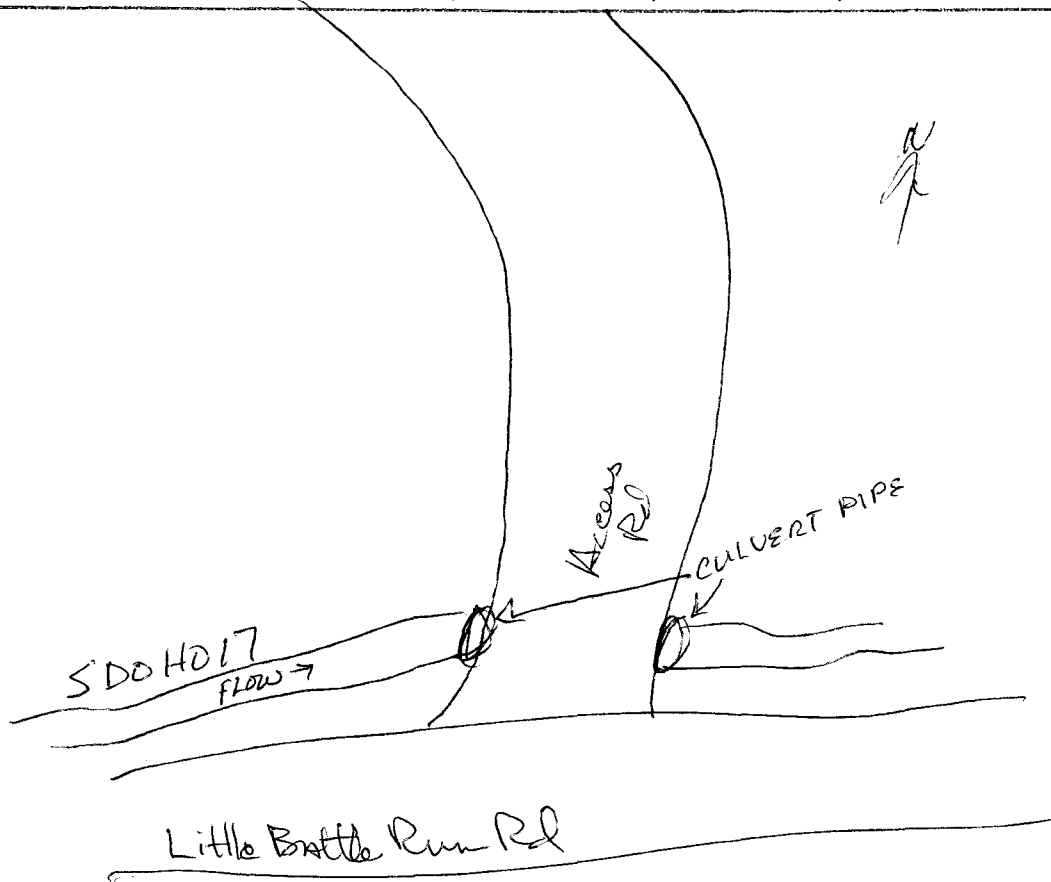
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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



SDOH017



Waterbody *SDOH017*
facing upstream



Waterbody *SDOH017*
facing downstream

SDOH017



Waterbody SDOH017 facing upline cross stream

Waterbody Data Sheet

Survey Description

Project Name: DTI Supply Header		Waterbody Name: Little Battle Run		Waterbody ID: sdo010	Date: 10/25/14
State: WV	County: Doddridge	Company: D&J West	Crew Member Initials: EPP + JUB	Photo ID(s):	
Tract Number(s): 31-098 + 31099		Milepost Entry:	Milepost Exit:	Associated Wetland ID(s):	
Survey Type: (check one) <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input checked="" type="checkbox"/> Other: downline OTHWM					

Physical Attributes

Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial					
Waterbody Type: (check one) <input checked="" type="checkbox"/> Stream <input type="checkbox"/> River <input type="checkbox"/> Ditch <input type="checkbox"/> Pond <input type="checkbox"/> Lake <input type="checkbox"/> Connecting swale * <input type="checkbox"/> Other:					
OTHWM Width: 6 ft. Height: 1 ft.		OTHWM Indicator: (check all that apply) <input checked="" 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 <input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input checked="" type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input checked="" type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Width of Waterbody - Top of Bank to Top of Bank at Centerline: 20 ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: 6 ft.		Depth of Water at Centerline: (Approx.) 2-6"	
Sinuosity: (check one) <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering		Water velocity: (Approx.) 1 fps		Bank height Right: 6 ft. Left: 6 ft.	
Bank slope Right: 75 degrees Left: 75 degrees					

Qualitative Attributes

Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:					
Substrate: (check all that apply) <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Bedrock <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/clay <input type="checkbox"/> Organic <input checked="" type="checkbox"/> Other: Boulder					
% of Substrate: 40 % 35 % 15 % 10 %					
Width of Riparian Zone: N/A ft.		Vegetative Layers: (check all that apply) <input type="checkbox"/> Trees: <input checked="" type="checkbox"/> Shrubs: <input checked="" type="checkbox"/> Herbs: <input checked="" type="checkbox"/> Avg. DBH of Dominants: (approx.) 1-3 in.			
Dominant Bank Vegetation: (list) Rubus pubescens, Rosa multiflora, Polygonum cuspidatum					
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): (list) riffles/pools, aquatic veg, leaf litter					
Aquatic Organisms Observed: (list) Fish					
Invasive and/or T&E Species Observed: (list) R. multiflora, P. cuspidatum					
Tributary is: (check one) <input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated					
Disturbances: (check all that apply) <input type="checkbox"/> Livestock access <input type="checkbox"/> Manure in waterbody <input type="checkbox"/> Waste discharge pipes <input checked="" type="checkbox"/> Other: adjacent road					
Stream Quality: (check one) <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low insect & birds riparian zone					

sdoh010

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

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

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

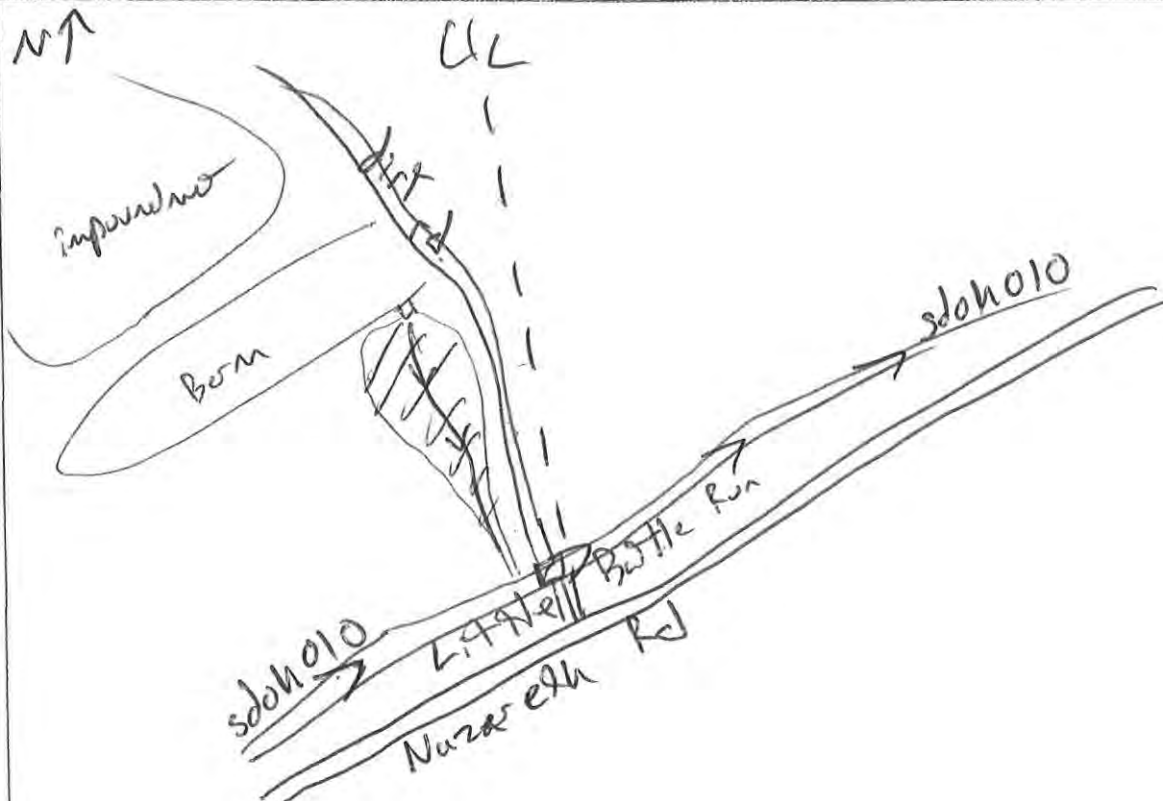
Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious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

Notes

- Flows NE
- Incised

Waterbody Sketch

Include north arrow, centerline, distance from centerline, photo locations, survey boundary, and unique IDs of associated features.



sdoh010



sdoh010 facing upstream



sdoh010 facing downstream

sdoh010



sdoh010 cross stream

Waterbody Data Sheet

Survey Description

Project Name: DTI Supply Header Waterbody Name: UNT to Little Battle Run Waterbody ID: wdoh011 Date: 10/25/14
 State: WV County: Doddridge Company: D&D WEST Crew Member Initials: CDP + JUB Photo ID(s):
 Tract Number(s): 31-098 Milepost Entry: Milepost Exit: Associated Wetland ID(s): wdoh004
 Survey Type: (check one) Centerline Re-Route Access Road Other:

Physical Attributes

Stream Classification: (check one) Ephemeral Intermittent Perennial
 Waterbody Type: (check one) Stream River Ditch Pond Lake Connecting swale ^a Other:
 OHWM Width: 1 ft. Height: 0.5 ft. OHWM Indicator: (check all that apply) Clear line on bank Shelving Wrested vegetation Scouring Water staining
 Bent, matted, or missing vegetation Wrack line Litter and debris Abrupt plant community change Soil characteristic change
 Width of Waterbody - Top of Bank to Top of Bank at Centerline: 4 ft. Width of Waterbody - Water Edge to Water Edge at Centerline: 1 ft. Depth of Water at Centerline: (Approx.) 1-3" ft.
 Sinuosity: (check one) Straight Meandering Water velocity: (Approx.) < 1 fps Bank height Right: 2 ft. Left: 2 ft. Bank slope Right: 20 degrees Left: 20 degrees

Qualitative Attributes

Water Appearance: (check one) No water Clear Turbid Sheen on surface Surface scum Algal mats Other:
 Substrate: (check all that apply) Bedrock Gravel Sand Silt/clay Organic Other: Cobble
 % of Substrate: 25 % 5 % 70 %
 Width of Riparian Zone: 10 ft. Vegetative Layers: (check all that apply) Trees: Shrubs: Herbs
 Avg. DBH of Dominants: _____ in. _____ in.

Dominant Bank Vegetation: (list)

Carex comosa, Cyperus erythrorhizus, Eulalia viminea, Juncus effusus

Aquatic Habitats (ex: submerged or emergent aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools); (list)

leaf packs

Aquatic Organisms Observed: (list)

not observed

Invasive and/or T&E Species Observed: (list)

Eulalia viminea

Tributary is: (check one)

Natural Artificial, man-made Manipulated

Disturbances: (check all that apply)

Livestock access Manure in waterbody Waste discharge pipes Other: mowed mowed riparian area

Stream Quality^b: (check one)

High Moderate Low

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

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

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

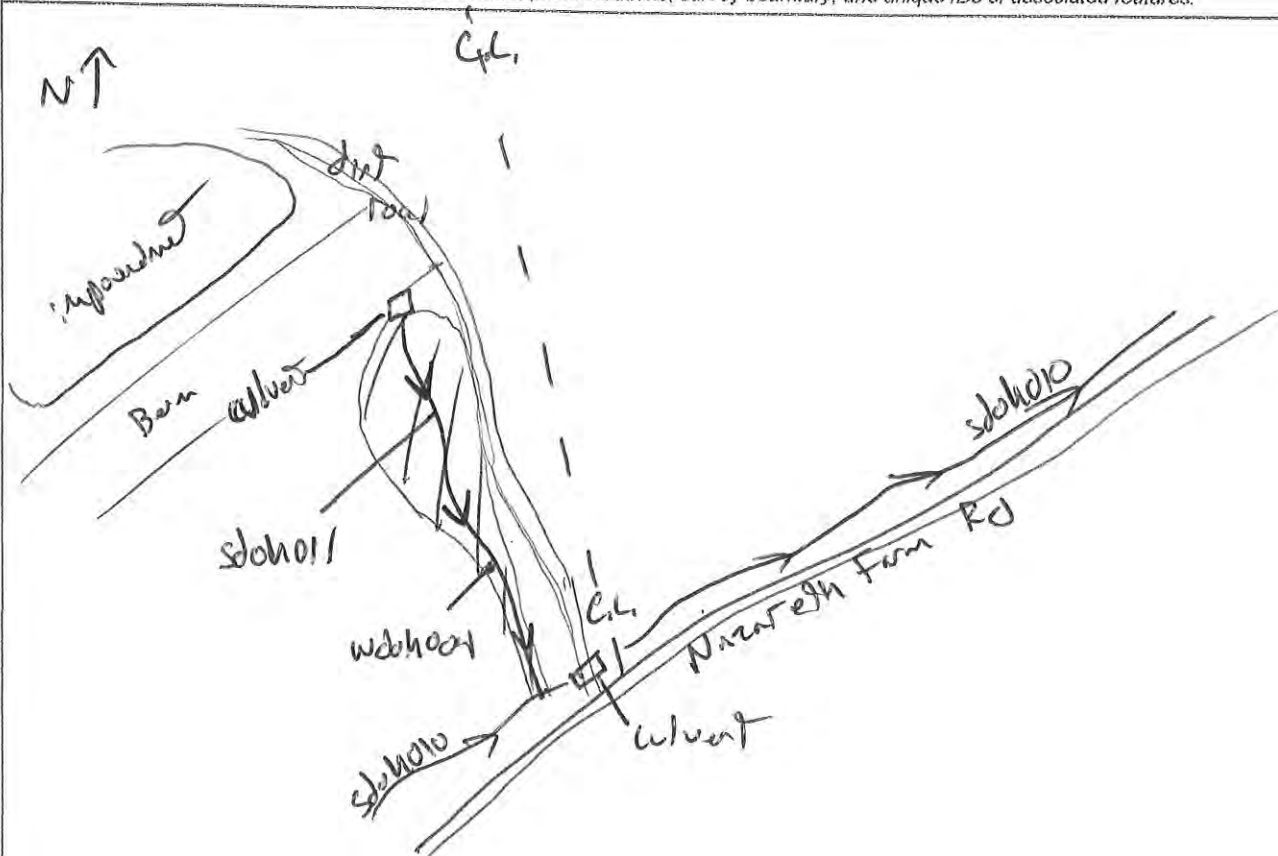
Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious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

Notes

- Upstream impairment (sdoh001)
- sdoh011 flows to sdoh010
- C.L. not marked in the field

Waterbody Sketch

Include north arrow, centerline, distance from centerline, photo locations, survey boundary, and unique IDs of associated features.



sdoh011



sdoh011 facing upstream



sdoh011 facing downstream

sdoh011



sdoh011 cross stream

Waterbody Data Sheet

Survey Description

Project Name: <u>DTI Header Supply</u>		Waterbody Name: <u>McElroy Creek</u>		Waterbody ID: <u>scho12</u>	Date: <u>10/25</u>
State: <u>WV</u>	County: <u>Doddridge Co</u>	Company: <u>D+D WEST</u>	Crew Member Initials: <u>CPP + JVG</u>	Photo ID(s):	
Tract Number(s): <u>31-100 + 31-103</u>		Milepost Entry: <u>12.4</u>	Milepost Exit:	Associated Wetland ID(s): <u>—</u>	

Survey Type: (check one)

Centerline
 Re-Route
 Access Road
 Other: upline + downline

Physical Attributes

Stream Classification: (check one)

Ephemeral
 Intermittent
 Perennial

Waterbody Type: (check one)

Stream
 River
 Ditch
 Pond
 Lake
 Connecting swale *
 Other:

OHWM

Width: 55 ft.

Height: near 4 ft.

OHWM Indicator: (check all that apply)

Clear line on bank
 Shelving
 Wrested vegetation
 Scouring
 Water staining
 Bent, matted, or missing vegetation
 Wrack line
 Litter and debris
 Abrupt plant community change
 Soil characteristic change

Width of Waterbody - Top of Bank to Top of Bank at Centerline: 70 ft.

Width of Waterbody - Water Edge to Water Edge at Centerline: 55 ft.

Depth of Water at Centerline: (Approx.) 2 to 4 ft.

Sinuosity: (check one)

Straight
 Meandering

Water velocity: (Approx.) < 1 fps

Bank height

Right: 15 ft.

Left: 25 ft.

Bank slope

Right: 70 degrees

Left: 60 degrees

Qualitative Attributes

Water Appearance: (check one)

No water
 Clear
 Turbid
 Sheen on surface
 Surface scum
 Algal mats
 Other:

Substrate: (check all that apply)

Bedrock
 Gravel
 Sand
 Silt/clay
 Organic
 Other: Boulder

% of Substrate: _____ % 90 % _____ % 10 % _____ % 20 %

Width of Riparian Zone: 25 ft.

Vegetative Layers: (check all that apply)

Trees:
 Shrubs:
 Herbs

Avg. DBH of Dominants: (approx.) < 18 in. 2-3 in.

Dominant Bank Vegetation: (list)

Platanus occidentalis, Prunus serotina, Eleagnus umbellata, Rosa multiflora, Ailanthus

Aquatic Habitats (ex: submerged or emergent aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): (list)

Deep pools, riffles, submerged wood

Aquatic Organisms Observed: (list)

Fish

Invasive and/or T&E Species Observed: (list)

E. umbellata, R. multiflora, A. alissima

Tributary is: (check one)

Natural
 Artificial, man-made
 Manipulated

Disturbances: (check all that apply)

Livestock access
 Manure in waterbody
 Waste discharge pipes
 Other: hay field to the south

Stream Quality: (check one)

High
 Moderate
 Low

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

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

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

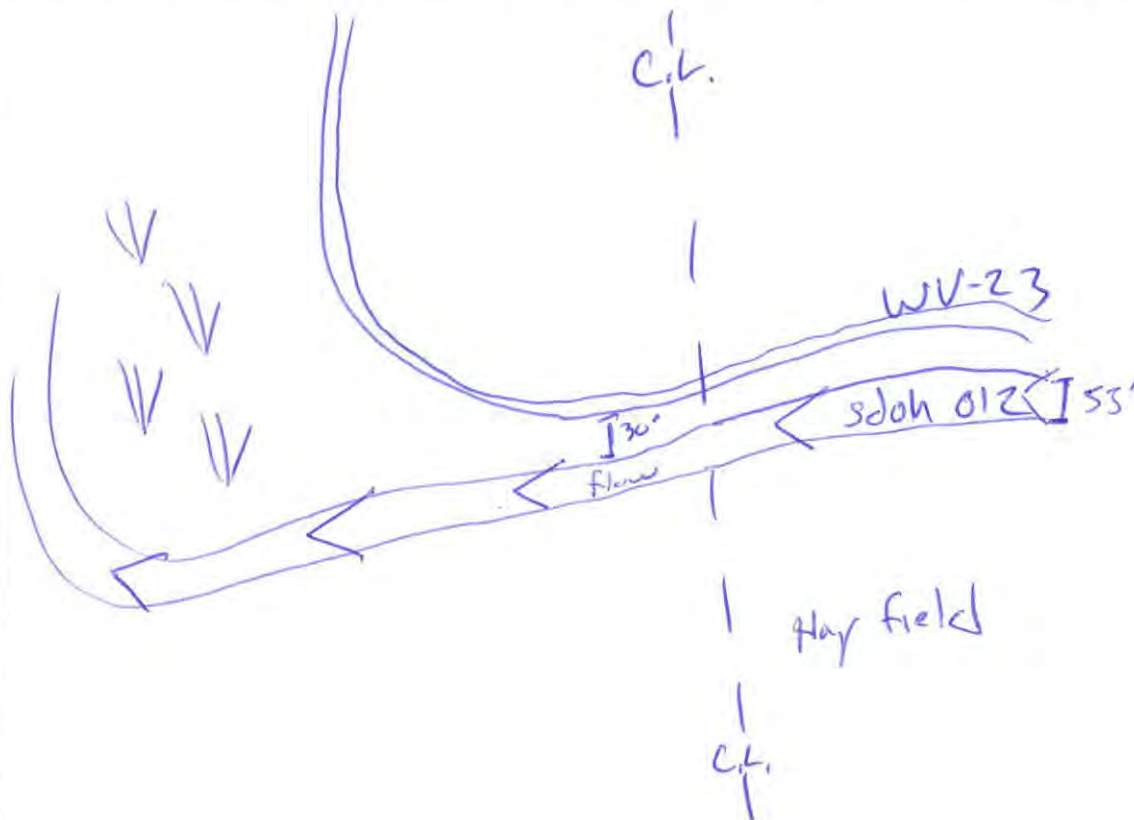
Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious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

Notes

Flows SW @ C.L. meanders to the N outside corridor.

Waterbody Sketch

Include north arrow, centerline, distance from centerline, photo locations, survey boundary, and unique IDs of associated features.



sdoh012



sdoh012 facing upstream



sdoh012 facing downstream

sdoh012



sdoh012 cross stream

Linear Waterbody Data Sheet

Survey Description				
Project Name: Supply Header Project		Waterbody Name: Talkington Fork		Waterbody ID: sdoa100
State: West Virginia		County: Doddridge	Company: NRG - ERM	Crew Member Initials: GB, AD
Tract Number(s): 31-100-A002		Nearest Milepost: Proposed water impoundment access road		Associated Wetland ID(s): None
Date: 11/28/2016				
Photos: 3 photos				
Survey Type: <i>(check one)</i> <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input checked="" type="checkbox"/> Other: water impoundment				
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: _____ ft. N/A <input type="checkbox"/>	Depth of Water: <i>(Approx.)</i> _____ ft. N/A <input type="checkbox"/>	
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> <input type="checkbox"/> Bedrock <input 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: _____% _____% _____% _____% _____% _____% _____%				
Width of Riparian Zone: _____ ft. N/A <input type="checkbox"/>	Vegetative Layers: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Trees: _____ in. <input checked="" type="checkbox"/> Saplings/Shrubs: _____ in. <input checked="" type="checkbox"/> Herbs Avg. DBH of Dominants: <i>(approx.)</i>			
Dominant Bank Vegetation (list): Boxelder, sycamore, buckeye, pawpaw, autumn olive, multiflora rose, grape, black cherry, wild rye, buttercup, wing stem, ground ivy, violet, waterleaf, common privet				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Coarse woody debris, overhanging banks and roots, leaf packs, wrack piles				
Aquatic Organisms Observed (list): Caddisfly, minnows, water striders				
T&E Species Observed (list): none				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Debris observed in channel; only thin strip of woody vegetation remains – mostly hayfield				
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:

sdoa100

^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.

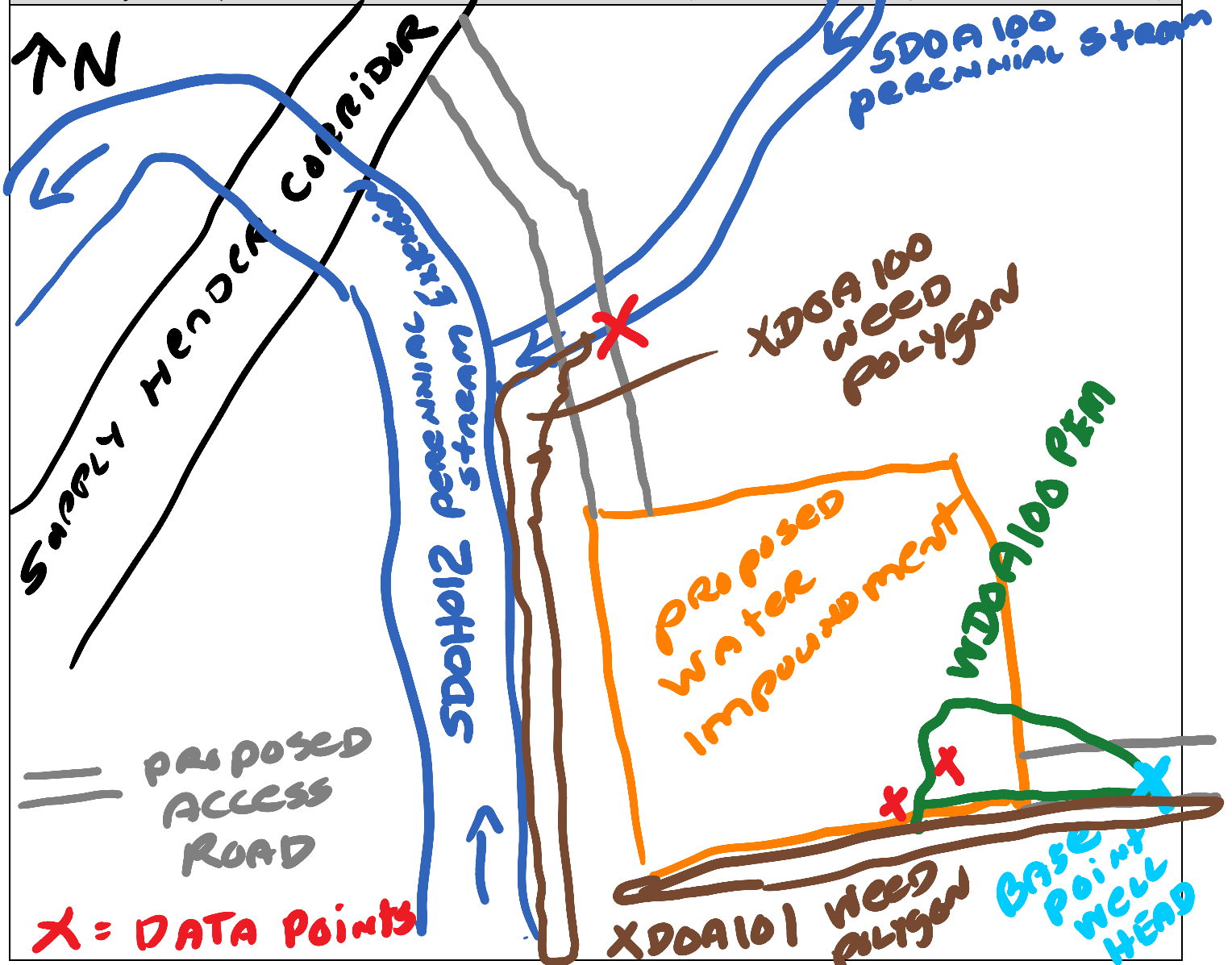
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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

Flows into perennial stream sdoh012 within the area surveyed for proposed water impoundment and associated access road; upstream continues out of survey area.

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





Waterbody SDOA100 facing west



Waterbody SDOA100 facing north



Waterbody SDOA100 facing east

Waterbody Data Sheet

Survey Description			
Project Name: <i>DTI Supply Headbar</i>		Waterbody Name: <i>UNT TO McElroy Creek</i>	
Waterbody ID: <i>5006031</i>		Date: <i>4/28/15</i>	
State: <i>WV</i>	County: <i>Doddridge</i>	Company: <i>DDWEST</i>	Crew Member Initials: Photo ID(s): <i>JJD, JG</i>
Tract Number(s): <i>31-100-A002</i>		Milepost Entry: <i>18.1</i>	Milepost Exit: <i>18.1</i>
Associated Wetland ID(s): <i>NONE</i>			
Survey Type: (check one) <input checked="" type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial			
Waterbody Type: (check one) <input checked="" type="checkbox"/> Stream <input type="checkbox"/> River <input type="checkbox"/> Ditch <input type="checkbox"/> Pond <input type="checkbox"/> Lake <input type="checkbox"/> Connecting swale ^a <input type="checkbox"/> Other:			
OHWM Width: <i>6</i> ft. Height: <i>3"</i> ft.		OHWM Indicator: (check all that apply) <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input checked="" 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 at Centerline: <i>8</i> ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: _____ ft.	
Depth of Water at Centerline: (Approx.) _____ ft.			
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: (Approx.) <i>< 1</i> fps	
Bank height Right: <i>1 1/2</i> ft. Left: <i>1 1/2</i> ft.		Bank slope Right: <i>25</i> degrees Left: <i>35</i> degrees	
Qualitative Attributes			
Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input checked="" type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <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: _____ % <i>40</i> % <i>30</i> % <i>30</i> % _____ %			
Width of Riparian Zone: <i>0</i> ft.		Vegetative Layers: (check all that apply) <input type="checkbox"/> Trees: _____ in. <input type="checkbox"/> Shrubs: _____ in. <input checked="" type="checkbox"/> Herbs	
Avg. DBH of Dominants: (approx.) _____ in.			
Dominant Bank Vegetation: <i>(list) Dactylis glomerata, Brassica napus, Setaria sp.</i>			
Aquatic Habitats (ex. submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): <i>(list) pools,</i>			
Aquatic Organisms Observed: <i>(list) NONE</i>			
Invasive and/or T&E Species Observed: <i>(list) NONE</i>			
Tributary is: (check one) <input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated			
Disturbances: (check all that apply) <input checked="" type="checkbox"/> Livestock access <input type="checkbox"/> Manure in waterbody <input checked="" type="checkbox"/> Waste discharge pipes <input type="checkbox"/> Other:			
Stream Quality ^b : (check one) <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low			

Waterbody ID:

SD06031

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **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.

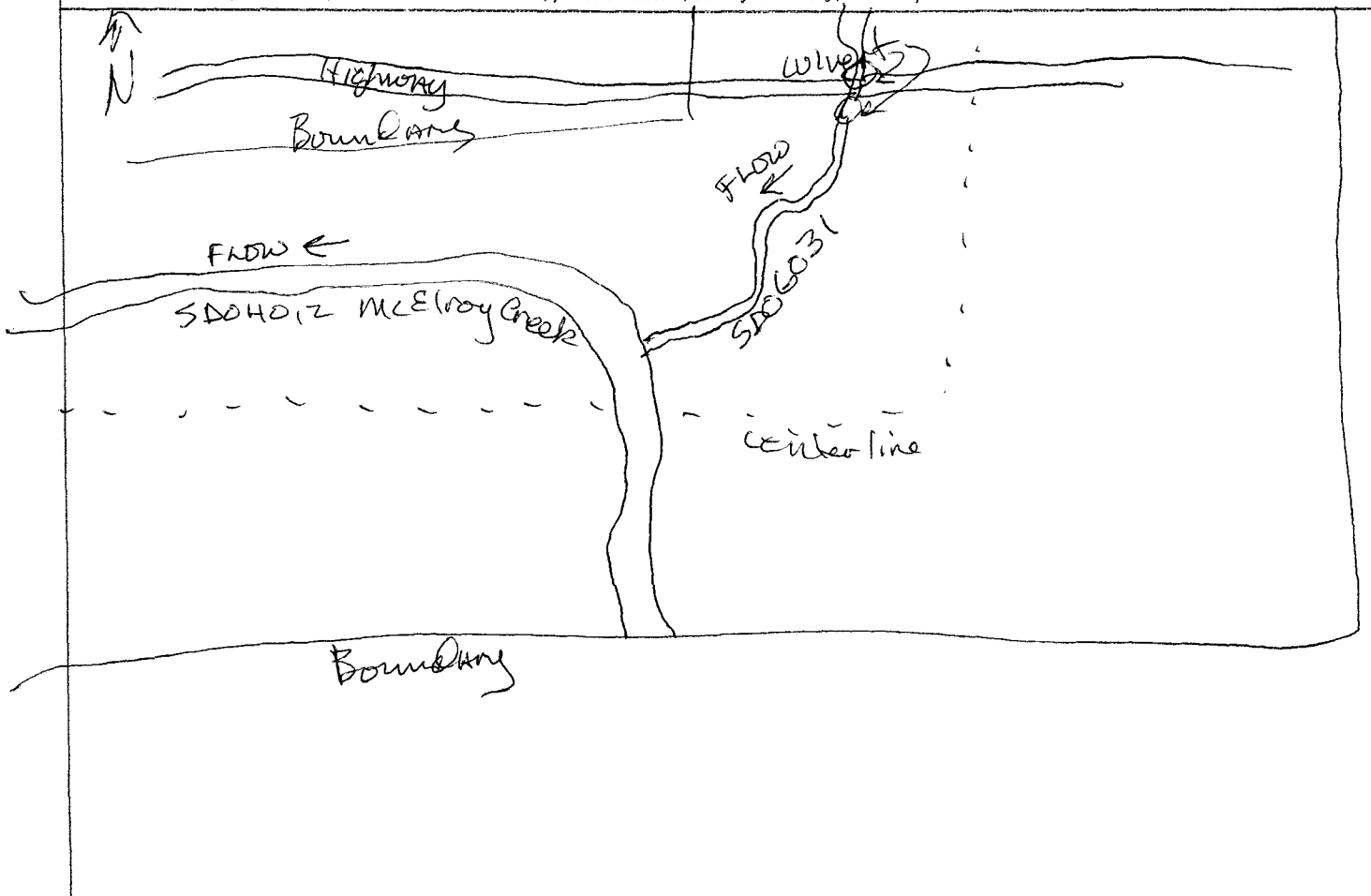
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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



sdog031



Waterbody sdog031 facing upstream



Waterbody sdog031 facing downstream

Sdog031



Waterbody sdog031 facing upline cross stream

Waterbody Data Sheet

4

Survey Description			
Project Name: Supply Harbor		Waterbody Name: WPT. TO TALKINGTON FORK	
Waterbody ID: SDOH016		Date: 7-28-15	
State: WV	County: Doddridge	Company: DDWEST	Crew Member Initials: JD, DB
Photo ID(s):			
Tract Number(s): 31-106		Milepost Entry: NA	Milepost Exit: NA
Associated Wetland ID(s): AD000 W000 H000 S000 R000			
Survey Type: (check one) <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input checked="" type="checkbox"/> Other: CONTRACTOR YARD			
Physical Attributes			
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial			
Waterbody Type: (check one) <input checked="" type="checkbox"/> Stream <input type="checkbox"/> River <input type="checkbox"/> Ditch <input type="checkbox"/> Pond <input type="checkbox"/> Lake <input type="checkbox"/> Connecting swale* <input type="checkbox"/> Other:			
OHWM Width: 8 ft. Height: 4 ft.		OHWM Indicator: (check all that apply) <input checked="" type="checkbox"/> Clear line on bank <input checked="" type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <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 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 at Centerline: 15 ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: 4 ft.	
Depth of Water at Centerline: (Approx.) _____ ft.			
Sinuosity: (check one) <input type="checkbox"/> Straight <input type="checkbox"/> Meandering		Water velocity: (Approx.) <3 fps	
Bank height Right: 9 ft. Left: 5 ft.		Bank slope Right: 35 degrees Left: 25 degrees	
Qualitative Attributes			
Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: (check all that apply) <input checked="" type="checkbox"/> Bedrock <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Silt/clay <input type="checkbox"/> Organic <input type="checkbox"/> Other:			
% of Substrate: 10% 70% 5% 15% _____%			
Width of Riparian Zone: 0 ft.		Vegetative Layers: (check all that apply) <input type="checkbox"/> Trees: _____ <input type="checkbox"/> Shrubs: _____ <input checked="" type="checkbox"/> Herbs	
Avg. DBH of Dominants: (approx.) _____ in. _____ in.			
Dominant Bank Vegetation: (list) <i>Dactylis glomerata, Daucus carota, Microstegium vimineum</i>			
Aquatic Habitats (ex: submerged or emergent aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): (list) riffle, pools			
Aquatic Organisms Observed: (list) small fish, invertebrates			
Invasive and/or T&E Species Observed: (list) <i>Microstegium vimineum</i>			
Tributary is: (check one) <input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated			
Disturbances: (check all that apply) <input type="checkbox"/> Livestock access <input type="checkbox"/> Manure in waterbody <input type="checkbox"/> Waste discharge pipes <input checked="" type="checkbox"/> Other: Adjacent Road			
Stream Quality ^b : (check one) <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low Pond			

SDC HD 16

^a Connecting swales are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **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.

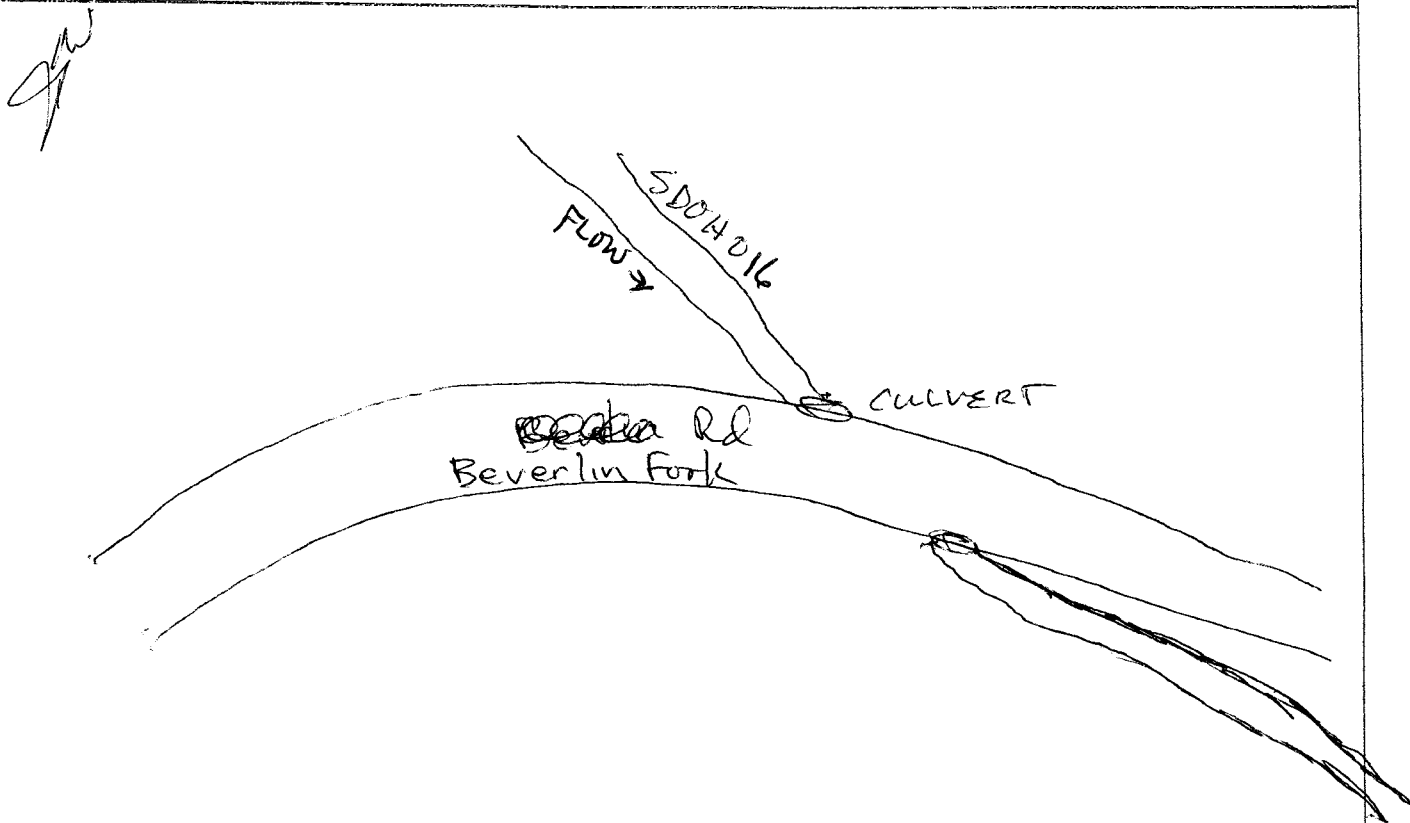
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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



SDOH016



Waterbody *SDOH016*
facing upstream



Waterbody *SDOH016*
facing downstream

SDOH016



Waterbody SDOH016 facing upline cross stream

Waterbody Data Sheet

Survey Description

Project Name: <i>Supply Header</i>	Waterbody Name: <i>Franklin Run</i>	Waterbody ID: <i>SDOH015</i>	Date: <i>7-28-15</i>
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State: <i>WV</i>	County: <i>Doddridge</i>	Company: <i>DDWEST</i>	Crew Member Initials: <i>JD, DB</i>	Photo ID(s):
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Tract Number(s): <i>31-100-A009</i>	Milepost Entry: <i>NA</i>	Milepost Exit: <i>NA</i>	Associated Wetland ID(s): <i>W00H005 e w</i>
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Survey Type: (check one)

Centerline
 Re-Route
 Access Road
 Other: *Contractor Yard*

Physical Attributes

Stream Classification: (check one)

Ephemeral
 Intermittent
 Perennial

Waterbody Type: (check one)

Stream
 River
 Ditch
 Pond
 Lake
 Connecting swale^a
 Other:

OHWM

Width: *10* ft.

Height: *1* ft.

OHWM Indicator: (check all that apply)

Clear line on bank
 Shelving
 Wrested vegetation
 Scouring
 Water staining
 Bent, matted, or missing vegetation
 Wrack line
 Litter and debris
 Abrupt plant community change
 Soil characteristic change

Width of Waterbody - Top of Bank to Top of Bank at Centerline: <i>20</i> ft.	Width of Waterbody - Water Edge to Water Edge at Centerline: <i>6</i> ft.	Depth of Water at Centerline: (Approx.) <i>3</i> ft.
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Sinuosity: (check one)	Water velocity: (Approx.)	Bank height	Bank slope
<input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	<i>15</i> fps	Right: <i>3</i> ft. Left: <i>4</i> ft.	Right: <i>30</i> degrees Left: <i>30</i> degrees

Qualitative Attributes

Water Appearance: (check one)

No water
 Clear
 Turbid
 Sheen on surface
 Surface scum
 Algal mats
 Other:

Substrate: (check all that apply)

Bedrock
 Gravel
 Sand
 Silt/clay
 Organic
 Other:

% of Substrate: *10* % *70* % *5* % *15* % _____ %

Width of Riparian Zone: *25* ft.

Vegetative Layers: (check all that apply)

Trees:
 Shrubs:
 Herbs

Avg. DBH of Dominants: (approx.) *10* in.

Dominant Bank Vegetation: (list)

Platanus occidentalis, Rosa multiflora, Polygonum crispidentum, Acer negundo

Aquatic Habitats (ex. submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): (list)

Pools, Riffles, overhanging veg/banks

Aquatic Organisms Observed: (list)

small fish, invertebrates

Invasive and/or T&E Species Observed: (list)

Rosa multiflora, Polygonum crispidentum, Ailanthus altissima

Tributary is: (check one)

Natural
 Artificial, man-made
 Manipulated

Disturbances: (check all that apply)

Livestock access
 Manure in waterbody
 Waste discharge pipes
 Other: *Bridge + adjacent Rd.*

Stream Quality^b: (check one)

High
 Moderate
 Low

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **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.

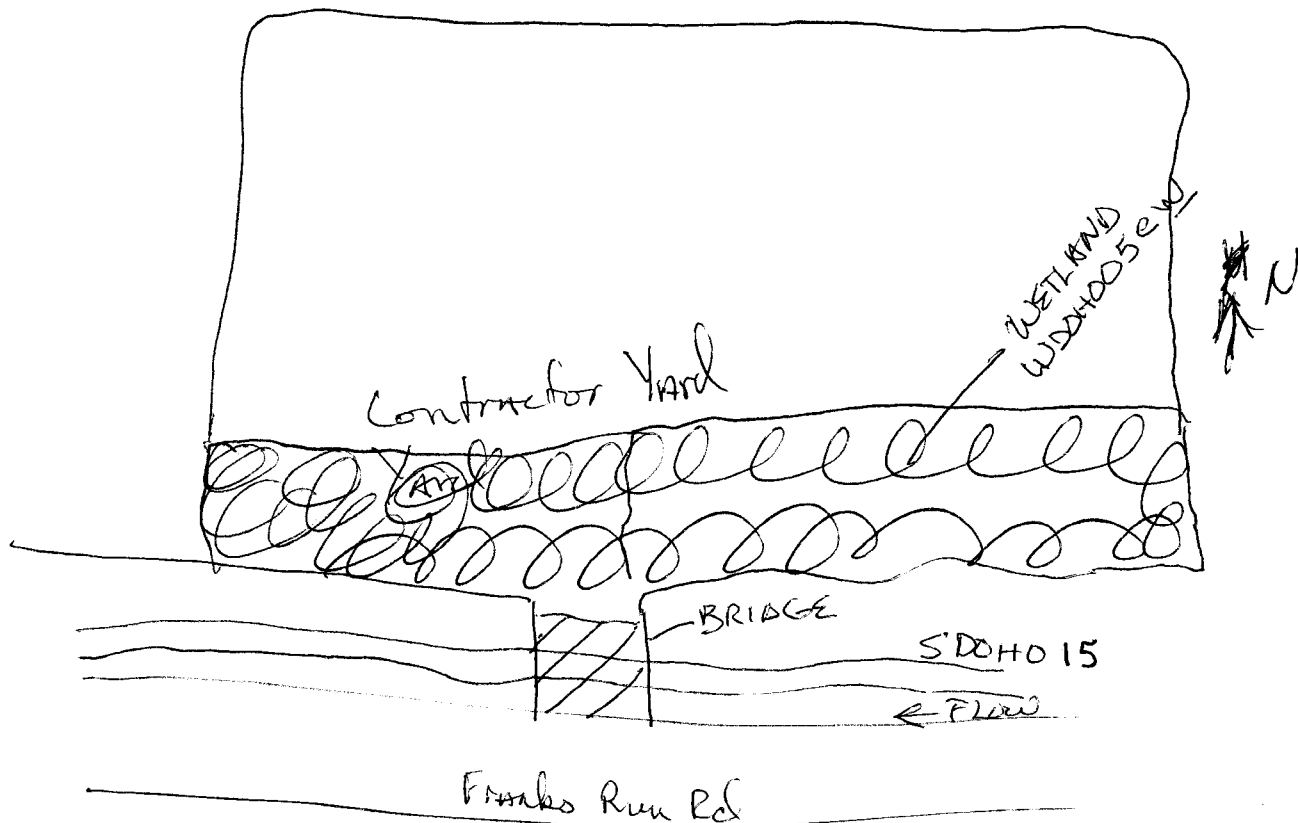
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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



SDOH015



Waterbody *SDOH015*
facing upstream



Waterbody *SDOH015*
facing downstream

SDOH015



Waterbody SDOH015 facing upline cross stream

Waterbody Data Sheet

Survey Description			
Project Name: DTI Supply		Waterbody Name: Franks Run Run	
Waterbody ID: SD06032		Date: 4-28-15	
State: WV	County: Doddridge	Company: DDWEST	Crew Member Initials: JD, JG
Tract Number(s): 31-100-A016 31-100-A017		Milepost Entry: 20.15	Milepost Exit: 20.15
Associated Wetland ID(s): WDOG012 30 W			
Survey Type: (check one) <input checked="" type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial			
Waterbody Type: (check one) <input checked="" type="checkbox"/> Stream <input type="checkbox"/> River <input type="checkbox"/> Ditch <input type="checkbox"/> Pond <input type="checkbox"/> Lake <input type="checkbox"/> Connecting swale* <input type="checkbox"/> Other:			
OHWM Width: <u>20</u> ft. Height: <u>1</u> ft.		OHWM Indicator: (check all that apply) <input checked="" type="checkbox"/> Clear line on bank <input checked="" type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <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 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 at Centerline: <u>30</u> ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: <u>15</u> ft.	
Depth of Water at Centerline: (Approx.) <u>6</u> " ft.			
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: (Approx.) <u>7.5</u> fps	
Bank height Right: <u>2</u> ft. Left: <u>3</u> ft.		Bank slope Right: <u>30</u> degrees Left: <u>30</u> degrees	
Qualitative Attributes			
Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: (check all that apply) <input checked="" type="checkbox"/> Bedrock <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/clay <input type="checkbox"/> Organic <input type="checkbox"/> Other:			
% of Substrate: <u>10</u> % <u>50</u> % <u>20</u> % <u>20</u> % _____ % _____ %			
Width of Riparian Zone: <u>10</u> ft.		Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Shrubs: <input checked="" type="checkbox"/> Herbs Avg. DBH of Dominants: <u>8</u> in. _____ in.	
Dominant Bank Vegetation: (list) <u>Aesculus</u> , Quercus <u>Rosa multiflora</u> , <u>Fagus grandifolia</u> , <u>Dactylis glomerata</u>			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools); (list) <u>Pools, riffles, & overhanging banks</u>			
Aquatic Organisms Observed: (list) <u>small fish, frogs</u>			
Invasive and/or T&E Species Observed: (list) <u>Rosa multiflora, Eleoagnus umbellata, Polygonum cuspidatum</u>			
Tributary is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Disturbances: (check all that apply) <input checked="" type="checkbox"/> Livestock access <input type="checkbox"/> Manure in waterbody <input checked="" type="checkbox"/> Waste discharge pipes <input type="checkbox"/> Other:			
Stream Quality ^b : (check one) <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low			

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **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.

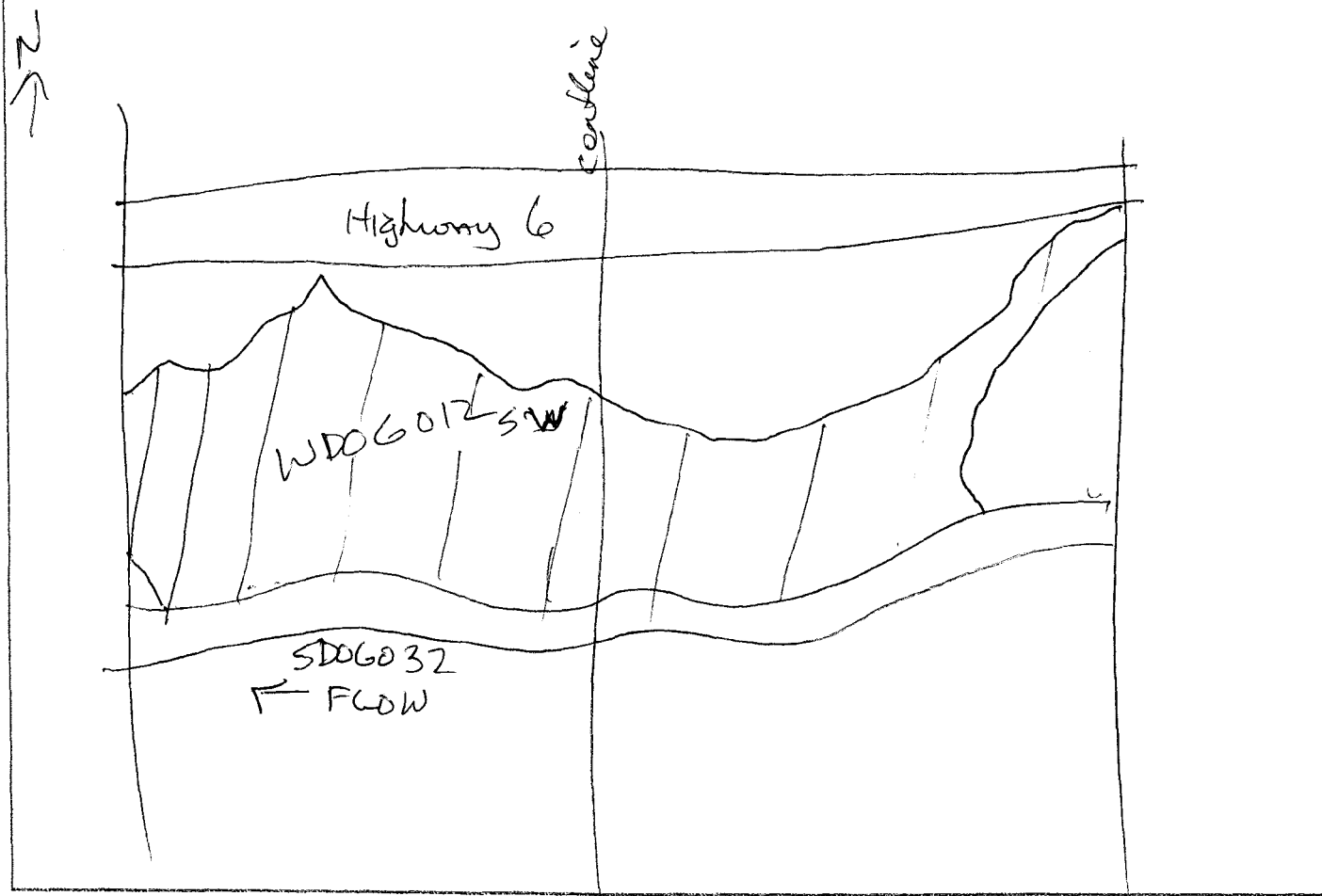
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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



sdog032



Waterbody sdog032 facing upstream



Waterbody sdog032 facing downstream

Sdog032



Waterbody sdog032 facing upline cross stream

Waterbody Data Sheet

Survey Description			
Project Name: Supply Header		Waterbody Name: UNT TO FRANKS RUN	
Waterbody ID: SD0H014		Date: 7-28-15	
State: WV	County: Dodderidge	Company: DDWEST	Crew Member Initials: JD, DB
Photo ID(s): +			
Tract Number(s): 31-100-A017		Milepost Entry: NA	Milepost Exit: NA
Associated Wetland ID(s): NDWE			
Survey Type: (check one) <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial			
Waterbody Type: (check one) <input checked="" type="checkbox"/> Stream <input type="checkbox"/> River <input type="checkbox"/> Ditch <input type="checkbox"/> Pond <input type="checkbox"/> Lake <input type="checkbox"/> Connecting swale* <input type="checkbox"/> Other:			
OHWM Width: 3 ft. Height: 1 ft.		OHWM Indicator: (check all that apply) <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input checked="" type="checkbox"/> Water staining	
<input type="checkbox"/> Bent, matted, or missing vegetation		<input type="checkbox"/> Wrack line <input 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 at Centerline: 6 ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: _____ ft.	
Depth of Water at Centerline: (Approx.) _____ ft.			
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: (Approx.) < 1 fps	
Bank height Right: 3 ft. Left: 4 ft.		Bank slope Right: 70 degrees Left: 80 degrees	
Qualitative Attributes			
Water Appearance: (check one) <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: (check all that apply) <input type="checkbox"/> Bedrock <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: _____ % 80 % 5 % 15 % _____ %			
Width of Riparian Zone: 750 ft.		Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Shrubs: <input checked="" type="checkbox"/> Herbs	
Avg. DBH of Dominants: (approx.) 10 in.		_____ in.	
Dominant Bank Vegetation: (list) Platanus occidentalis, Carpinus caroliniana, Polystichum acrostichoides, Rosa multiflora			
Aquatic Habitats (ex: submerged or emergent aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): (list) riffles			
Aquatic Organisms Observed: (list) NDWE			
Invasive and/or T&E Species Observed: (list) Rosa multiflora, Microstegium vimineum			
Tributary is: (check one) <input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated			
Disturbances: (check all that apply) <input type="checkbox"/> Livestock access <input type="checkbox"/> Manure in waterbody <input type="checkbox"/> Waste discharge pipes <input checked="" type="checkbox"/> Other: Adjacent forest road + culvert			
Stream Quality ^b : (check one) <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low			

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **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.

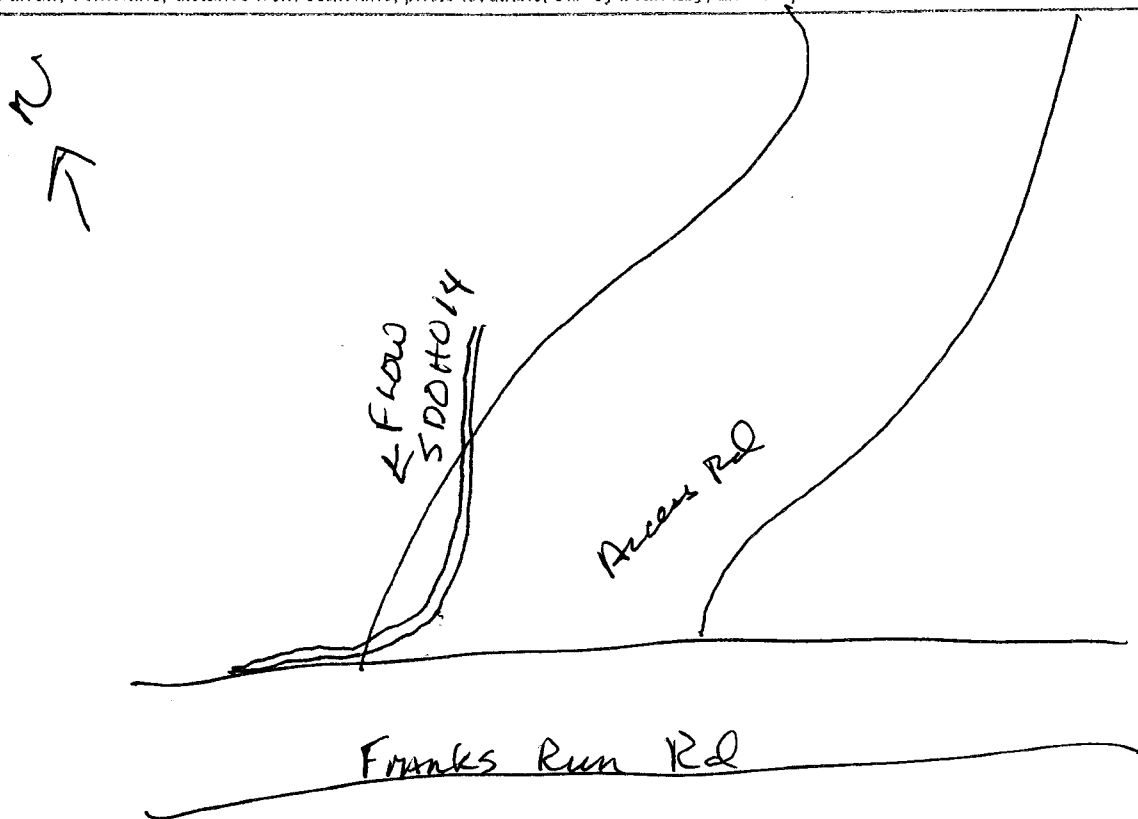
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate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



SDOH014



Waterbody *SDOH014*
facing upstream



Waterbody *SDOH014*
facing downstream

SDOH014



Waterbody SDOH014 facing upline cross stream

Waterbody Data Sheet

Survey Description			
Project Name: Supply Header		Waterbody Name: UNT TO BROAD RUN	
Waterbody ID: SDOHO 13		Date: 7-28-15	
State: WV	County: DoDodge	Company: DDWEST	Crew Member Initials: Photo ID(s): JD, DB
Tract Number(s): 31-134		Milepost Entry: NA	Milepost Exit: NA
Associated Wetland ID(s): NONE			
Survey Type: (check one) <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial			
Waterbody Type: (check one) <input type="checkbox"/> Stream <input type="checkbox"/> River <input type="checkbox"/> Ditch <input type="checkbox"/> Pond <input type="checkbox"/> Lake <input type="checkbox"/> Connecting swale ^a <input type="checkbox"/> Other:			
OHWM Width: 4 ft. Height: 4" ft.		OHWM Indicator: (check all that apply) <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input checked="" type="checkbox"/> Water staining <input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change	
Width of Waterbody - Top of Bank to Top of Bank at Centerline: 6 ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: _____ ft.	
Depth of Water at Centerline: (Approx.) _____ ft.			
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: (Approx.) < 1 fps	
Bank height Right: 2 ft. Left: 2 ft.		Bank slope Right: 35 degrees Left: 45 degrees	
Qualitative Attributes			
Water Appearance: (check one) <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: (check all that apply) <input checked="" type="checkbox"/> Bedrock <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Silt/clay <input type="checkbox"/> Organic <input type="checkbox"/> Other:			
% of Substrate: 20 % 70 % 5 % 5 % _____% _____%			
Width of Riparian Zone: 725 ft.		Vegetative Layers: (check all that apply) <input type="checkbox"/> Trees: <input type="checkbox"/> Shrubs: <input type="checkbox"/> Herbs Avg. DBH of Dominants: _____ in. _____ in.	
Dominant Bank Vegetation: (list) Quercus alba, Carpinus caroliniana, Microstegium vimineum			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): (list) riffles			
Aquatic Organisms Observed: (list) NON			
Invasive and/or T&E Species Observed: (list) Microstegium vimineum			
Tributary is: (check one) <input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated			
Disturbances: (check all that apply) <input type="checkbox"/> Livestock access <input type="checkbox"/> Manure in waterbody <input type="checkbox"/> Waste discharge pipes <input checked="" type="checkbox"/> Other: culvert pipe + Broad Run Rd.			
Stream Quality ^b : (check one) <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low			

^a Connecting swales are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

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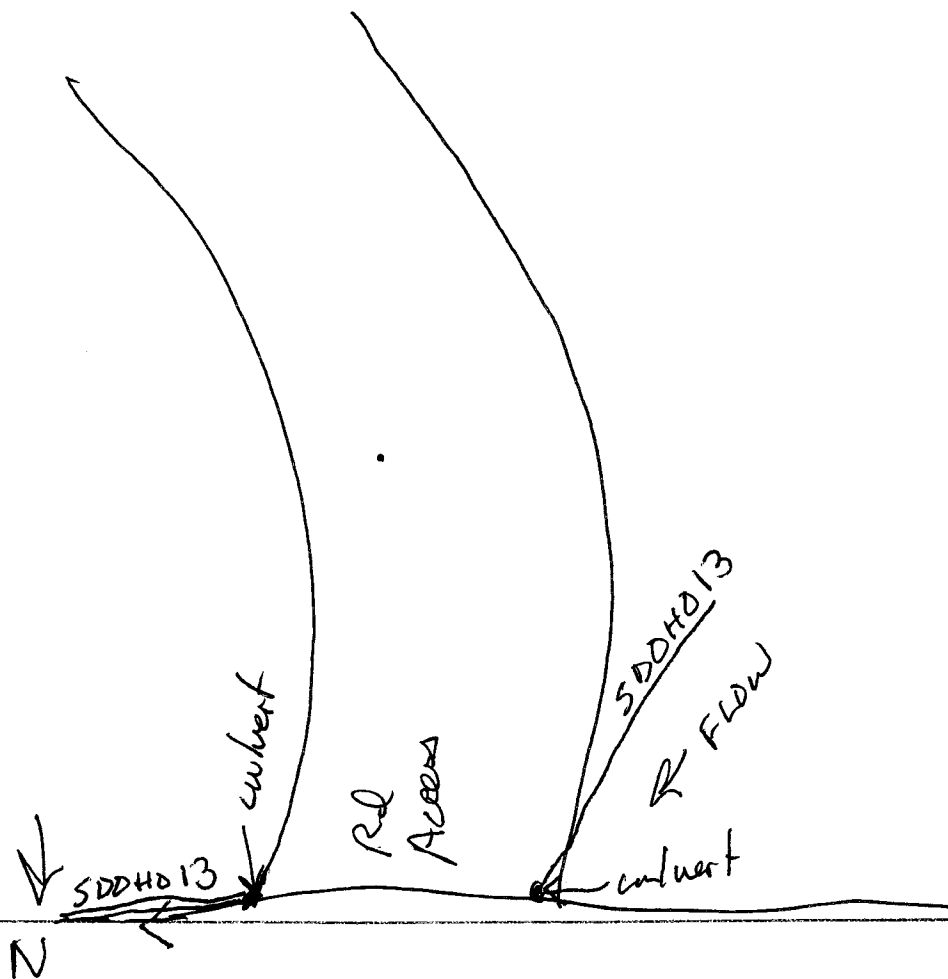
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Notes

Waterbody Sketch

Include north arrow, centerline, distance from centerline, photo locations, survey boundary, and unique IDs of associated features.



Broad Run Rd

SDOH013



Waterbody *SDOH013*
facing upstream



Waterbody *SDOH013*
facing downstream

SDOH013



Waterbody SDOH013 facing upline cross stream