



Use Attainability Analysis

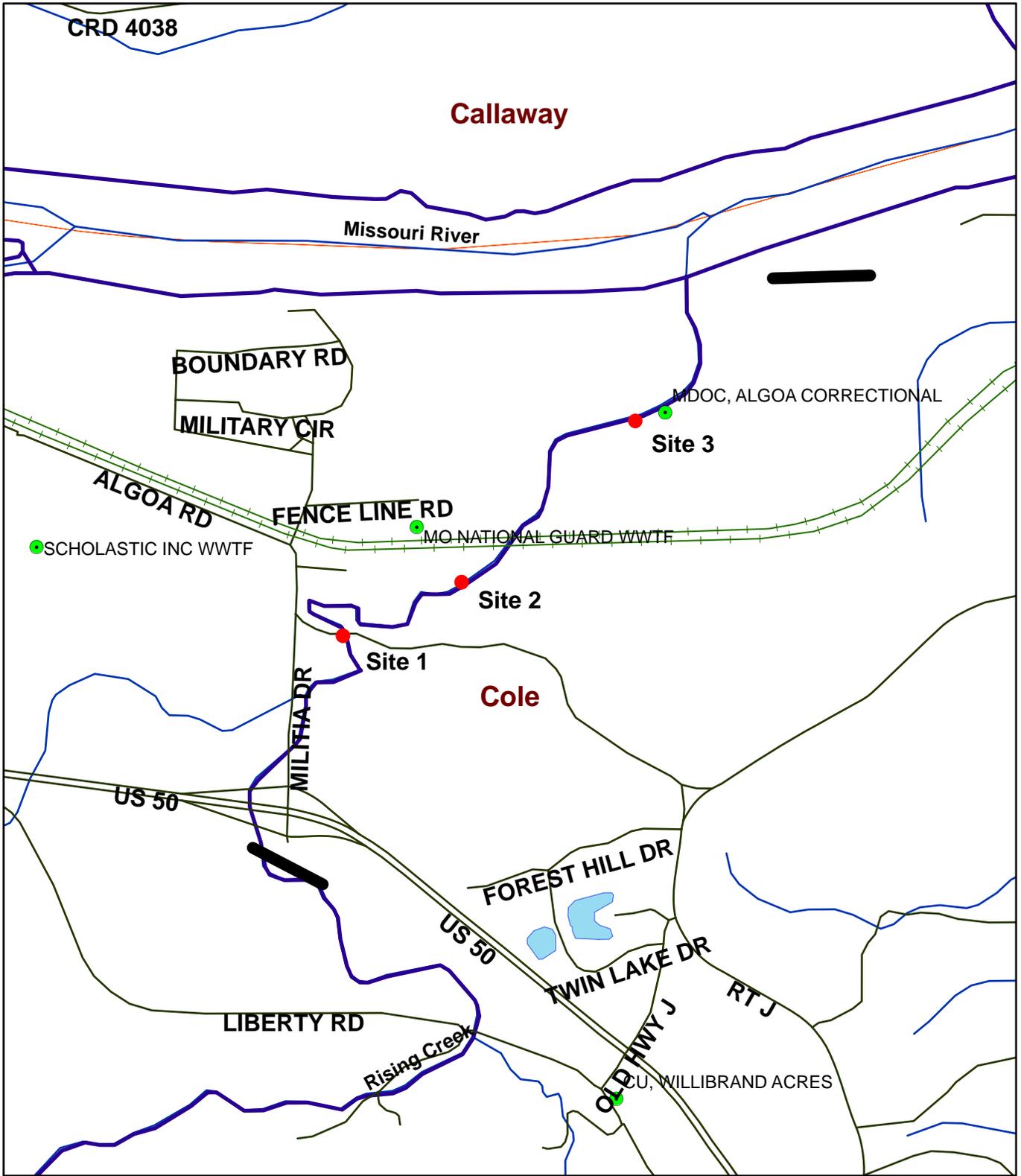
for

WBID 0828 Rising Creek

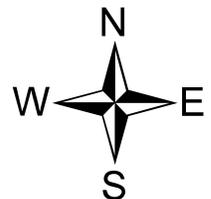
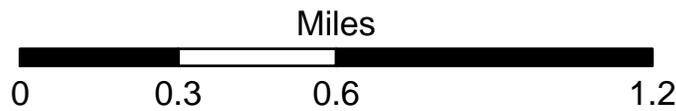
Submitted by
MEC Water Resources

To
Missouri Department of Natural Resources
Water Protection Program

On
May 29, 2008



**Rising Creek
WBID 0828
Cole County**



Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization

(must be completed for each site)

Date & Time: 4-8-08 07:20	Site Location Description (e.g., road crossing): Algoa Rd. Crossing
Personnel (Data Collectors): Jennifer Hrabik, Renee Martin	
Current Weather Conditions: overcast	Facility Name:
Weather Conditions for Past 10 days: rain on and off	Permit Number:
Drought Conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>	

Site Location:

LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION, IN METERS)			
Site 01	Easting (UTM X): 0580863	Northing (UTM Y): 4266508	Horizontal Accuracy: (EPE / FOM / PDOP) 18 ft
Site 11	Easting (UTM X): 0580741	Northing (UTM Y): 4266581	Horizontal Accuracy: (EPE / FOM / PDOP) 24 ft

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
2867	Upstream site 1	2868	Downstream site 1		

Uses Observed*: (Uses actually observed at time of survey.)

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe: (Include number of individuals recreating, photo-documentation of evidence of recreational uses, etc. Use <i>Data Sheet D- Recreational Use Interview</i> when conducting interviews.)				

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (continued)

Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

<input type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep slopes	<input checked="" type="checkbox"/> Other:
Comments: Power lines, state government property				

Evidence of Human Use*: (Attach photos and reference in "Photos" section)

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input type="checkbox"/> RV / ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Livestock Watering
Comments / Other: none				

Substrate*: (These values should add up to 100%.)

-% Cobble	20% Gravel	20% Sand	-% Silt	55% Mud/Clay	5% Bedrock
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Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site)

Minor algae on bedrock

Water Characteristics*: (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

*This information is not to be used solely for removal of a recreational use designation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that effect another use.

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (continued)

Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

Comments: (Please record any additional comments here.)

Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.

Surveyor's Signature: _____ Date of Survey: _____

Organization: _____ Position: _____

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Waterbody ID: <u>0828</u> Site #: <u>0828_01</u> Estimated Channel Incision: <u>0.8</u> (m) (height between low bank width and water) GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM) 01 UTM X: <u>580863</u> UTM Y: <u>4266508</u> +/- <u>18</u> (feet) 11 UTM X: <u>580741</u> UTM Y: <u>4266581</u> +/- <u>24</u> (feet) Average Stream Width: <u>5.0</u> (meters) Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach) (20x average stream width) Field Staff: <u>Jennifer Hrabik and Renee Martin</u>	<p align="center">Dissolved Oxygen</p> Date: <u>4/8/2008</u> Time: <u>7:20</u> Dissolved Oxygen: <u>7.03</u> (mg/L) Dissolved Oxygen: <u>65.7</u> (% sat) Specific Cond: <u>385.0</u> (µS/cm) Water Temperature: <u>12.2</u> (°C)
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Transect Cross-Section

Station	01		02		03		04		05		06		07		08		09		10		11	
	Distance (m)	Depth (m)																				
Left Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.70	0.18	0.41	0.14	0.64	0.13	0.46	0.06	0.58	0.20	0.66	0.39	0.54	0.32	0.45	0.15	0.62	0.50	0.68	0.43	0.68	0.22
2	1.40	0.22	0.82	0.20	1.28	0.08	0.92	0.13	1.16	0.30	1.32	0.35	1.08	0.45	0.90	0.35	1.24	0.75	1.36	0.39	1.36	0.90
3	2.10	0.26	1.23	0.20	1.92	0.09	1.38	0.17	1.74	0.31	1.98	0.35	1.62	0.51	1.35	0.50	1.86	0.75	2.04	0.32	2.04	0.88
4	2.80	0.25	1.64	0.21	2.56	0.12	1.84	0.20	2.32	0.35	2.64	0.35	2.16	0.50	1.80	0.62	2.48	0.63	2.72	0.25	2.72	0.58
5	3.50	0.29	2.05	0.18	3.20	0.13	2.30	0.25	2.90	0.35	3.30	0.34	2.70	0.47	2.25	0.75	3.10	0.50	3.40	0.25	3.40	0.35
6	4.20	0.32	2.46	0.20	3.84	0.20	2.76	0.25	3.48	0.36	3.96	0.30	3.24	0.41	2.70	0.84	3.72	0.47	4.08	0.23	4.08	0.21
7	4.90	0.32	2.87	0.16	4.48	0.25	3.22	0.20	4.06	0.26	4.62	0.35	3.78	0.30	3.15	0.80	4.34	0.44	4.76	0.15	4.76	0.15
8	5.60	0.30	3.28	0.14	5.12	0.22	3.68	0.10	4.64	0.31	5.28	0.43	4.32	0.15	3.60	0.75	4.96	0.35	5.44	0.15	5.44	0.10
9	6.30	0.36	3.69	0.14	5.76	0.20	4.14	0.12	5.22	0.13	5.94	0.16	4.86	0.10	4.05	0.70	5.58	0.19	6.12	0.16	6.12	0.03
Right Bank	7.40	0.00	4.10	0.00	6.45	0.00	4.65	0.00	5.80	0.00	6.60	0.00	5.45	0.00	4.50	0.65	6.20	0.00	6.85	0.00	6.85	0.00
Feature Type <small>(riffle, run, or pool)</small>	Run	Riffle	Run	Run	Pool	Pool	Run	Pool	Pool	Run	Pool	Pool	Run	Pool	Pool	Run	Pool	Pool	Run	Pool	Pool	Pool

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width.
 GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.
 Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)
 Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)
 All measurements to be taken to the nearest 0.01 meter.

Signed: _____ Date: _____

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization

(must be completed for each site)

Date & Time: 4-8-08 08:20	Site Location Description (e.g., road crossing): downstream of site 1
Personnel (Data Collectors): Jennifer Hrabik, Renee Martin	
Current Weather Conditions: Overcast/Sprinkles	Facility Name:
Weather Conditions for Past 10 days: rain on and off	Permit Number:
Drought Conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>	

Site Location:

LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION, IN METERS)			
Site 01	Easting (UTM X): 581313	Northing (UTM Y): 4266691	Horizontal Accuracy: (EPE / FOM / PDOP) 25 ft
Site 11	Easting (UTM X): 58363	Northing (UTM Y): 4266811	Horizontal Accuracy: (EPE / FOM / PDOP) 23 ft

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
2869	downstream site 2	2870	upstream site 2		

Uses Observed*: (Uses actually observed at time of survey.)

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe: (Include number of individuals recreating, photo-documentation of evidence of recreational uses, etc. Use <i>Data Sheet D- Recreational Use Interview</i> when conducting interviews.)				

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (continued)

Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

<input type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input checked="" type="checkbox"/> Steep slopes	<input checked="" type="checkbox"/> Other:
Comments: Power lines, state government property				

Evidence of Human Use*: (Attach photos and reference in "Photos" section)

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input type="checkbox"/> RV / ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Livestock Watering
Comments / Other: none				

Substrate*: (These values should add up to 100%.)

-% Cobble	-% Gravel	10% Sand	-% Silt	60% Mud/Clay	30% Bedrock
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Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site)

Minor algae on bedrock

Water Characteristics*: (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

*This information is not to be used solely for removal of a recreational use designation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that effect another use.

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (continued)

Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

Comments: (Please record any additional comments here.)

Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.

Surveyor's Signature: _____ Date of Survey: _____

Organization: _____ Position: _____

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Waterbody ID: <u>0828</u> Site #: <u>0828_02</u> Estimated Channel Incision: <u>1.0</u> (m) (height between low bank width and water) GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM) 01 UTM X: <u>581313</u> UTM Y: <u>4266691</u> +/- <u>25</u> (feet) 11 UTM X: <u>58363</u> UTM Y: <u>4266811</u> +/- <u>23</u> (feet) Average Stream Width: <u>8.0</u> (meters) Length of Survey Segment: <u>160</u> (meters) (To determine Length of Reach) (20x average stream width) Field Staff: <u>Jennifer Hrabik and Renee Martin</u>	<p align="center">Dissolved Oxygen</p> Date: <u>4/8/2008</u> Time: <u>8:20</u> Dissolved Oxygen: <u>8.25</u> (mg/L) Dissolved Oxygen: <u>76.9</u> (% sat) Specific Cond: <u>386.6</u> (µS/cm) Water Temperature: <u>12.2</u> (°C)
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Transect Cross-Section

Station	01		02		03		04		05		06		07		08		09		10		11	
	Distance (m)	Depth (m)																				
Left Bank	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.65	0.18	0.70	0.35	0.90	>1	0.80	0.67	0.80	0.42	0.85	0.80	>1	0.85	0.70	1.00	0.55	0.75	>1	0.75	0.80	
2	1.30	0.45	1.40	0.60	1.80	>1	1.60	0.60	1.60	0.35	1.70	>1	1.70	>1	1.70	>1	2.00	0.55	1.50	>1	1.50	>1
3	1.95	0.98	2.10	0.90	2.70	>1	2.40	0.32	2.40	0.38	2.55	>1	2.55	0.84	2.55	>1	3.00	0.88	2.25	>1	2.25	>1
4	2.60	>1	2.80	>1	3.60	>1	3.20	0.32	3.20	0.27	3.40	>1	3.40	0.55	3.40	>1	4.00	0.80	3.00	0.92	3.00	>1
5	3.25	>1	3.50	>1	4.50	>1	4.00	0.25	4.00	0.35	4.25	>1	4.25	0.40	4.25	>1	5.00	0.72	3.75	0.80	3.75	0.94
6	3.90	>1	4.20	>1	5.40	>1	4.80	0.22	4.80	0.25	5.10	0.82	5.10	0.28	5.10	0.82	6.00	0.65	4.50	0.83	4.50	0.90
7	4.55	0.65	4.90	0.90	6.30	>1	5.60	0.25	5.60	0.17	5.95	0.63	5.95	0.22	5.95	0.63	7.00	0.55	5.25	0.80	5.25	0.92
8	5.20	0.30	5.60	0.65	7.20	>1	6.40	0.27	6.40	0.17	6.80	0.46	6.80	0.20	6.80	0.46	8.00	0.55	6.00	0.45	6.00	0.76
9	5.85	0.18	6.30	0.40	8.10	0.60	7.20	0.20	7.20	0.15	7.65	0.21	7.65	0.15	7.65	0.21	9.00	0.35	6.75	0.20	6.75	0.52
Right Bank	6.50	0.00	7.00	0.00	9.00	0.00	8.00	0.00	8.00	0.00	8.50	0.00	8.50	0.00	8.50	0.00	10.00	0.00	7.50	0.00	7.50	0.00
Feature Type <small>(riffle, run, or pool)</small>	Pool	Pool	Pool	run	run	run																

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width.
 GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.
 Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)
 Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)
 All measurements to be taken to the nearest 0.01 meter.

Signed: _____ Date: _____

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization

(must be completed for each site)

Date & Time: 4-8-08 09:15	Site Location Description (e.g., road crossing): downstream of site 2
Personnel (Data Collectors): Jennifer Hrabik, Renee Martin	
Current Weather Conditions: overcast/rain	Facility Name:
Weather Conditions for Past 10 days: rain on and off	Permit Number:
Drought Conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>	

Site Location:

LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION, IN METERS)			
Site 01	Easting (UTM X): 582055	Northing (UTM Y): 4267352	Horizontal Accuracy: (EPE / FOM / PDOP) 19 ft
Site 11	Easting (UTM X): 582100	Northing (UTM Y): 4267547	Horizontal Accuracy: (EPE / FOM / PDOP) 28 ft

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
2871	upstream site 3	2872	downstream site 3	2873	Storm drain at Trans. 1
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

Uses Observed*: (Uses actually observed at time of survey.)

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe: (Include number of individuals recreating, photo-documentation of evidence of recreational uses, etc. Use <i>Data Sheet D- Recreational Use Interview</i> when conducting interviews.)				

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (continued)

Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

<input type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input checked="" type="checkbox"/> Steep slopes	<input checked="" type="checkbox"/> Other:
Comments: Power lines, state government property				

Evidence of Human Use*: (Attach photos and reference in "Photos" section)

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input type="checkbox"/> RV / ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Livestock Watering
Comments / Other: Storm drains at Transect 1, 6, and 10				

Substrate*: (These values should add up to 100%.)

-% Cobble	10% Gravel	10% Sand	-% Silt	50% Mud/Clay	30% Bedrock
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Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site)

Minor benthic algae on bedrock

Water Characteristics*: (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

*This information is not to be used solely for removal of a recreational use designation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that effect another use.

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (continued)

Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

Comments: (Please record any additional comments here.)

Log jam at end of site

Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.

Surveyor's Signature: _____ Date of Survey: _____

Organization: _____ Position: _____

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Waterbody ID: <u>0828</u> Site #: <u>0828_03</u> Estimated Channel Incision: <u>1.0</u> (m) (height between low bank width and water) GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM) 01 UTM X: <u>582055</u> UTM Y: <u>4267352</u> +/- <u>19</u> (feet) 11 UTM X: <u>582100</u> UTM Y: <u>4267547</u> +/- <u>28</u> (feet) Average Stream Width: <u>8.5</u> (meters) Length of Survey Segment: <u>170</u> (meters) (To determine Length of Reach) (20x average stream width) Field Staff: <u>Jennifer Hrabik and Renee Martin</u>	<p align="center">Dissolved Oxygen</p> Date: <u>4/8/2008</u> Time: <u>9:15</u> Dissolved Oxygen: <u>7.40</u> (mg/L) Dissolved Oxygen: <u>69.5</u> (% sat) Specific Cond: <u>389.8</u> (µS/cm) Water Temperature: <u>12.5</u> (°C)
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rwc

Transect Cross-Section																							
Station		01		02		03		04		05		06		07		08		09		10		11	
		Distance (m)	Depth (m)																				
Left Bank		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1		0.80	0.20	0.80	0.15	0.75	0.40	0.78	0.42	0.80	0.60	0.80	0.81	0.63	0.50	0.85	0.02	0.95	0.05	1.00	0.30	1.15	0.30
2		1.60	0.25	1.60	0.25	1.50	>1	1.56	0.63	1.60	>1	1.60	>1	1.26	0.55	1.70	0.05	1.90	0.00	2.00	0.62	2.30	0.42
3		2.40	0.30	2.40	0.56	2.25	>1	2.34	0.75	2.40	>1	2.40	>1	1.89	0.60	2.55	0.05	2.85	0.05	3.00	0.75	3.45	0.18
4		3.20	0.25	3.20	0.55	3.00	>1	3.12	0.79	3.20	>1	3.20	>1	2.52	0.40	3.40	0.10	3.80	0.05	4.00	0.68	4.60	0.12
5		4.00	0.22	4.00	>1	3.75	>1	3.90	0.90	4.00	>1	4.00	>1	3.15	0.32	4.25	0.10	4.75	0.05	5.00	0.62	5.75	0.32
6		4.80	0.35	4.80	>1	4.50	>1	4.68	0.75	4.80	>1	4.80	>1	3.78	0.22	5.10	0.10	5.70	0.15	6.00	0.62	6.90	0.45
7		5.60	0.40	5.60	>1	5.25	>1	5.46	0.68	5.60	>1	5.60	0.88	4.41	0.15	5.95	0.15	6.65	0.15	7.00	0.50	8.05	0.58
8		6.40	0.38	6.40	>1	6.00	0.45	6.24	0.45	6.40	0.92	6.40	0.61	5.04	0.15	6.80	0.10	7.60	0.12	8.00	0.37	9.20	0.62
9		7.20	0.30	7.20	0.75	6.75	0.41	7.02	0.35	7.20	0.35	7.20	0.40	5.67	0.10	7.65	0.05	8.55	0.12	9.00	0.20	10.35	0.40
Right Bank		8.00	0.00	8.00	0.00	7.50	0.00	7.80	0.00	8.00	0.00	8.00	0.20	6.30	0.00	8.50	0.00	9.50	0.00	10.00	0.00	11.50	0.00
Feature Type		run	pool	pool	pool	pool	pool	pool	pool	run	riffle	riffle	run	run									

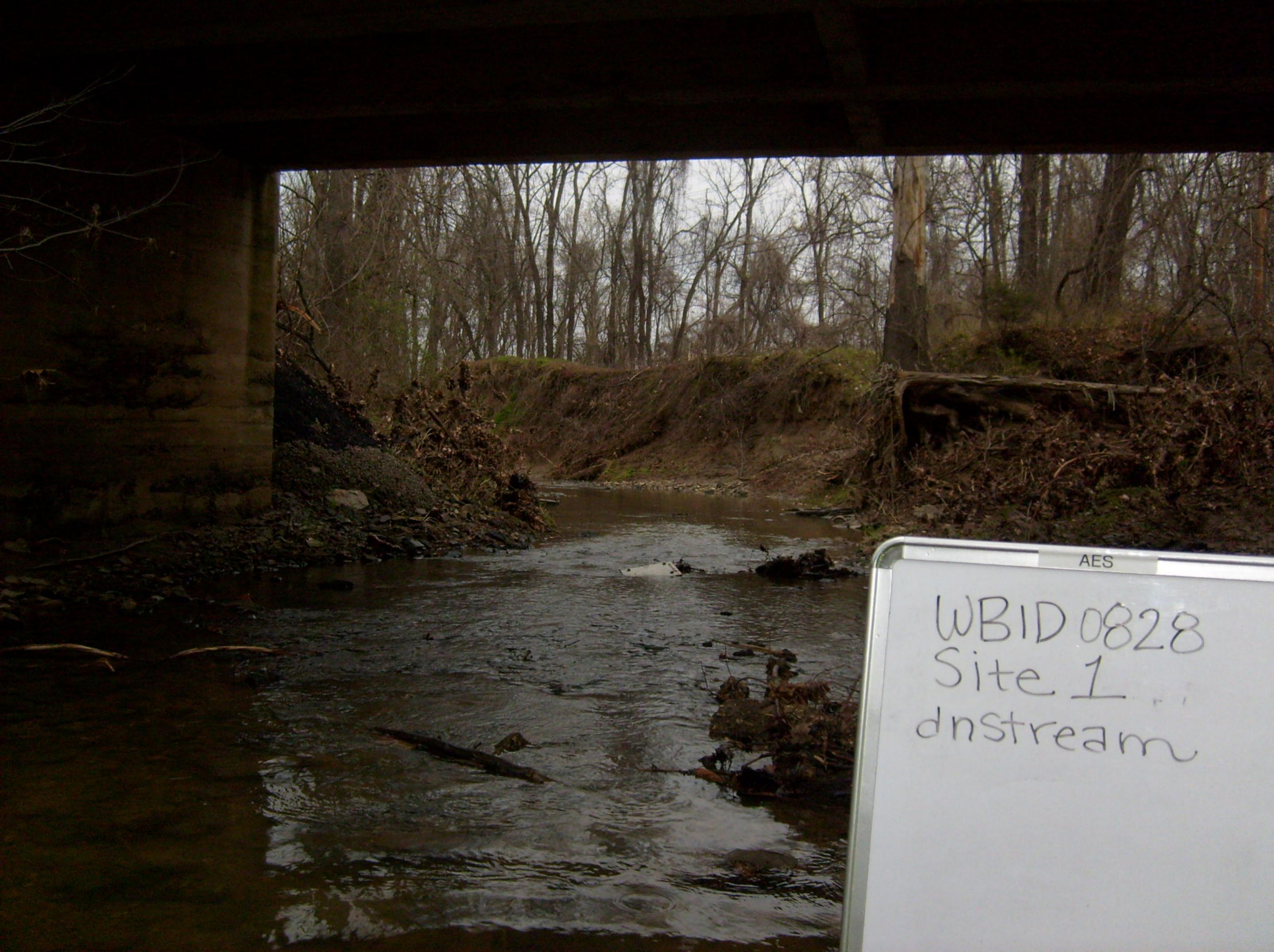
Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width.
 GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.
 Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)
 Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)
 All measurements to be taken to the nearest 0.01 meter.

Signed: _____ Date: _____

AES

WBID 0828
Site 1
upstream





AES

WBID 0828
Site 1
dnstream



AES

WBID 0828
Site 2
Dnstream



AES

WBID 0828
Site 2
Upstream

AES

WBID 0828

SITE³

UPSTREAM



AES
WBID 0828
SITE 3
DNSTREAM

AES

WBID 0828

Site # 3

STORM DRAIN

