



Use Attainability Analysis

for

WBID 3539 Buffalo Creek

Submitted by

BWR

June 1, 2007

Submitted to:

Missouri Department of Natural Resources

Division of Environmental Quality

Water Protection Program

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet A - Water Body Identification

I. Water Body Information (For water body being surveyed)

Water Body Name (from USGS 7.5' quad): <i>Buffalo Creek</i>	
Missouri Water Body Identification (WBID) Number: <i>3539</i>	
8-digit HUC: <i>10300104</i>	County: <i>Pettis</i>
Upstream Legal Description (from Table H): <i>north</i>	
Downstream Legal Description (from Table H): <i>28,48N, 22W</i>	
Number of sites evaluated: <i>3</i>	
List all sites numbers, listed consequently upstream to downstream: <i>3, 2, 1</i>	

Site Locations Map(s): Attach a map of entire segment with assessment sites clearly labeled. Mark any other items that may be of interest.

II. Subsegmentation (fill this section out only in cases where subsegmentation is being proposed)

LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION, IN METERS)			
Upstream Coordinates:		Downstream Coordinates:	
UTM X	Y	UTM X	Y
HORIZONTAL COLLECTION METHOD (Indicate the method used to determine the locational data.)			
Global Positioning System (GPS)		Interpolation	
Static Mode		Topographic Map or DRG	
Dynamic Mode (Kinematic)		Aerial Photograph or DOQQ	
Precise Positioning Service		Satellite Imagery	
Signal Averaging		Interpolation Other	
Real Time Differential Processing			
HORIZONTAL ACCURACY ESTIMATE			
GPS Data Quality		Interpolation Data Quality	
FOM	± _____ Meters	Source Map Scale: 1:24,000 1:100,000 Other _____	
EPE	± _____ Feet or ± _____ Meters		
PDOP			
		± _____ Feet or ± _____ Meters	

III. Discharger Facility Information (list all permitted dischargers on the stream)

Discharger Facility Name(s): <i>Houstonia Lagoon</i>
Discharger Permit Number(s): <i>MO 0058475</i>

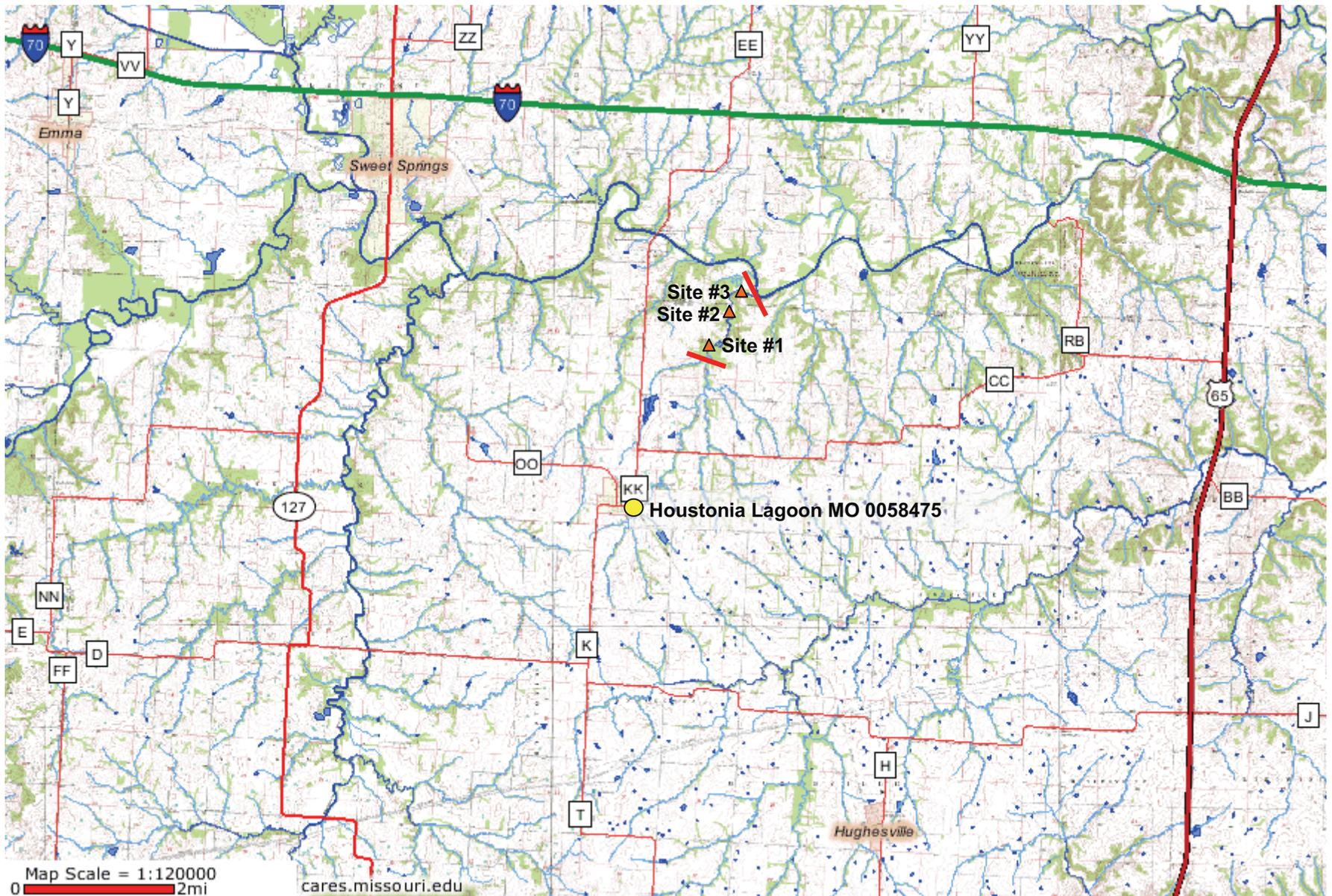
IV. UAA Surveyor (please print legibly)

Name of Surveyor: <i>Alan Mitchell</i>	Telephone Number: <i>(816) 303-2696</i>
Organization/Employer: <i>BWR</i>	
Position: <i>Environmental Scientist</i>	

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

Signed: *Alan Mitchell*
February 5, 2007

Date: *May 20, 2007*



Map Scale = 1:120000
0 2mi

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Buffalo Creek
WBID #3539



WBID# 3539
 Site# 3

Field Data Sheets for Recreational Use Stream Surveys
Data Sheet B - Site Characterization
 (must be completed for each site)

Date & Time: <u>11:15 am 5/20/2007</u>	Site Location Description (e.g., road crossing):
Personnel (Data Collectors): <u>Alan Mitchell, Sadie Robb</u>	
Current Weather Conditions: <u>Sunny, warm</u>	Facility Name: <u>Houstonia Lagoon</u>
Weather Conditions for Past 10 days: <u>Sunny</u>	Permit Number: <u>MO 0058475</u>
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 Locations:

LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION, IN METERS)	
Site GPS Coordinates: UTM X: <u>93.32607°W</u>	Y: <u>38.93857°N</u>
HORIZONTAL COLLECTION METHOD (Indicate the method used to determine the locational data.)	
Global Positioning System (GPS)	Interpolation
Static Mode	Topographic Map or DRG
Dynamic Mode (Kinematic)	Aerial Photograph or DOQQ
Precise Positioning Service	Satellite Imagery
Signal Averaging	Interpolation Other
Real Time Differential Processing	
HORIZONTAL ACCURACY ESTIMATE	
GPS Data Quality	Interpolation Data Quality
FOM ± _____ Meters	Source Map Scale: 1:24,000 1:100,000 Other _____ ± _____ Feet or ± _____ Meters
EPE ± _____ Feet or ± _____ Meters	
PDOP	

Photos:

Upstream Photos		Downstream Photos		Other Photos	
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
<u>36</u>		<u>37</u>			

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 *Data Sheet D- Recreational Use Interview* when conducting interviews.)

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"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Fence	<input type="checkbox"/> Steep slopes	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:

Comments:

Indications of Human Use*: (attach photos)

<input type="checkbox"/> Roads	<input type="checkbox"/> Rope swings	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input type="checkbox"/> RV / ATV Tracks
<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Other:	

Comments: No evidence of Human

7% Channel Feature

RUN = 100%
RIFPLE = 0%
POOL = 0%

* Page Two - Data Sheet B for WBID # 3539 : Site #3
Stream Morphology:

Upstream View's Physical Dimensions: Is there any water present at this view? Yes No

If so, is there an obvious current? Yes No

Select one of the following channel features:

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFPLE					
RUN					
POOL					

Downstream View's Physical Dimensions: Is there any water present at this view? Yes No

If so, is there an obvious current? Yes No

Select one of the following channel features:

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFPLE					
RUN					
POOL					

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

<u>40</u> % Cobble	<u>60</u> % Gravel	<u>0</u> % Sand	<u>0</u> % Silt	<u>0</u> % Mud/Clay	% Bedrock
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Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site)

macrophyte - 20% coverage

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 type="checkbox"/> Fine sediments	<input checked="" 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:

Comments: Please attach any additional comments () to this form.

*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.

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

Surveyor's Signature: Patric Robb Date of Survey: 5/20/07

Organization: BWR Position: Field crew

Data Sheet C - Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 3539

Site # 3

Transect	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
B NEW	1 wetted width	<0.1		1 Channel feature:	
	2 3.5 m	0.1		2 RUN	
	3	0.2		3	
	4 measurements	0.2		4 Dissolved Oxygen	
	5 _____ m	0.2		5	
	6 apart	0.2		6 9.8 ppm	
	7	0.1		7 109 %	
	8	0.1		8 20.1°C	
	9	<0.1		9	
	10	<0.1		10	
A NEW	1 wetted width	<0.1		12 Channel Feature:	
	2 2.5 m	0.2		13 RUN	
	3	0.1		14	
	4 measurements	0.2		15 Dissolved Oxygen:	
	5 _____ m	0.1		16	
	6 apart	0.1		17 9.4 ppm	
	7	0.1		18 100 %	
	8	0.1		19 20.1°C	
	9	0.1		20	
	10	<0.1		21	
Transect	1 wetted width			23 Channel Feature:	
	2 _____ m			24	
	3			25	
	4 measurements			26 Dissolved Oxygen	
	5 _____ m			.	
	6 apart			.	
	7			.	
	8			n	
	9				
	10				

If there is an odd number of entries find middle rank $[(n+1)/2]$. The corresponding sorted value depth to the middle rank is the median depth.

If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: W. Mitchell

Date: May 20, 2007

Organization: EAE, Inc.

Position: Env. Eng.

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 3539

Site # 3

	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
Transect C	1 wetted width	0.2		1 Channel Feature:	
	2 5.5 m	0.4		2 RUN	
	3	0.5		3	
	4 measurements	0.6		4 Dissolved Oxygen	
	5 0.5 m	0.5		5	
	6 apart	0.4		6 8.7 ppm	
	7	0.4		7 95 %	
	8	0.4		8 20.5°C	
	9	0.2		9	
	10	0.1		10	
Transect D	1 wetted width	0.2		12 Channel Feature:	
	2 6.0 m	0.4		13 RUN	
	3	0.5		14	
	4 measurements	0.6		15 Dissolved Oxygen:	
	5 0.6 m	0.6		16	
	6 apart	0.6		17 8.2 ppm	
	7	0.5		18 91 %	
	8	0.5		19 20.6	
	9	0.4		20	
	10	0.1		21	
Transect E	1 wetted width	0.1		23 Channel Feature:	
	2 5.5 m	0.4		24 RUN	
	3	0.5		25	
	4 measurements	0.5		26 Dissolved Oxygen	
	5 0.5 m	0.5		.	
	6 apart	0.5		. 7.7 ppm	
	7	0.5		. 85 %	
	8	0.4		n 20.0°C	
	9	0.4			
	10	0.3			

If there is an odd number of entries find middle rank $[(n+1)/2]$. The corresponding sorted value depth to the middle rank is the median depth.

If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Steve Mitchell

Date: May 20, 2007

Organization: EAE, Inc.

Position: Env. Engr.

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 3539 Site # 3

	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
Transect F	1 wetted width	0.1		1 Channel Feature:	
	2 5.0 m	0.5		2 RUN	
	3	0.7		3	
	4 measurements	0.8		4 Dissolved Oxygen	
	5 0.5 m	0.8		5	
	6 apart	0.7		6 89 7.2 ppm	
	7	0.7		7 89 7.0	
	8	0.6		8 21.0°C	
	9	0.5		9	
	10	0.5		10	
Transect G	1 wetted width	0.2		12 Channel Feature:	
	2 5.5 m	0.3		13 RUN	
	3	0.5		14	
	4 measurements	0.7		15 Dissolved Oxygen:	
	5 m	0.7		16	
	6 apart	0.8		17 B.O. ppm	
	7	0.7		18 89 7.0	
	8	0.6		19 20.2°C	
	9	0.5		20	
	10	0.3		21	
Transect H	1 wetted width	0.1		23 Channel Feature:	
	2 6.0 m	0.4		24 RUN	
	3	0.5		25	
	4 measurements	0.6		26 Dissolved Oxygen	
	5 m	0.7		.	
	6 apart	0.6		.	
	7	0.6		.	
	8	0.5		n 7.8 ppm	
	9	0.4		87 7.0	
	10	0.3		20.4°C	

If there is an odd number of entries find middle rank $[(n+1)/2]$. The corresponding sorted value depth to the middle rank is the median depth.

If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Mark D. Mitchell

Date: May 20, 2007

Organization: EAE, Inc.

Position: Env. Eng.

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 3539

Site # 3

	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
Transect I	wetted width	0.2		1	Channel Feature:
	<u>6.0</u> m	0.4		2	RUN
		0.5		3	
	measurements	0.6		4	Dissolved Oxygen
	<u> </u> m	0.7		5	
	apart	0.7		6	<u>7.3</u> ppm
		0.7		7	<u>82</u> %
		0.6		8	<u>20.9</u> °C
		0.4		9	
		0.2		10	
			11		
Transect J	wetted width	0.3		12	Channel Feature:
	<u>6.0</u> m	0.5		13	RUN
		0.8		14	
	measurements	0.8		15	Dissolved Oxygen:
	<u>0.6</u> m	0.8		16	
	apart	0.8		17	<u>6.9</u> ppm
		0.8		18	<u>79</u> %
		0.7		19	<u>0.21</u> 50°C
		0.5		20	
		0.2		21	
			22		
Transect K	wetted width	impossible		23	Channel Feature: Run
	<u> </u> m		DD=	24	
		<u>7.1</u> m		25	
	measurements			26	Dissolved Oxygen
	<u> </u> m				(estimated)
	apart				<u>7.0</u> ppm
					<u>81</u> %
				n	<u>21.5</u> °C

If there is an odd number of entries find middle rank $[(n+1)/2]$. The corresponding sorted value depth to the middle rank is the median depth.
 If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Heather Mitchell Date: May 20, 2007

Organization: EAE, Inc. Position: Env. Engr

WBID# 3539
 Site# 2

Field Data Sheets for Recreational Use Stream Surveys
Data Sheet B - Site Characterization
 (must be completed for each site)

Date & Time: <u>5/20/07 10:00</u>	Site Location Description (e.g., road crossing):
Personnel (Data Collectors): <u>Alan Mitchell, Sadie Robb</u>	
Current Weather Conditions: <u>sunny, warm</u>	Facility Name: <u>Houstonia Lagoon</u>
Weather Conditions for Past 10 days: <u>rainy/warm</u>	Permit Number: <u>MD 0058475</u>
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 Locations:

LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION, IN METERS)	
Site GPS Coordinates: UTM X: <u>093.32858°W</u>	Y: <u>38.93910°N</u>
HORIZONTAL COLLECTION METHOD (Indicate the method used to determine the locational data.)	
Global Positioning System (GPS)	Interpolation
Static Mode	Topographic Map or DRG
Dynamic Mode (Kinematic)	Aerial Photograph or DOQQ
Precise Positioning Service	Satellite Imagery
Signal Averaging	Interpolation Other
Real Time Differential Processing	
HORIZONTAL ACCURACY ESTIMATE	
GPS Data Quality	Interpolation Data Quality
FOM ± <u>20</u> Meters	Source Map Scale: 1:24,000 1:100,000 Other _____ ± _____ Feet or ± _____ Meters
EPE ± _____ Feet or ± _____ Meters	
PDOP	

Photos:

Upstream Photos		Downstream Photos		Other Photos	
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
<u>32</u>		<u>33</u>			

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 *Data Sheet D- Recreational Use Interview* when conducting interviews.)

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"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Fence	<input type="checkbox"/> Steep slopes	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:

Comments:

Indications of Human Use*: (attach photos)

<input type="checkbox"/> Roads	<input type="checkbox"/> Rope swings	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input type="checkbox"/> RV / ATV Tracks
<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Other:	

Comments:

none

% Channel Features

RUN = 100%

RIFFLE = 0%

POOL = 0%

* Page Two - Data Sheet B for WBID # 3539 : Site #2

Stream Morphology:

Upstream View's Physical Dimensions: Is there any water present at this view? Yes No

If so, is there an obvious current? Yes No

Select one of the following channel features:

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE					
RUN	400	2	∞		
POOL					

Downstream View's Physical Dimensions: Is there any water present at this view? Yes No

If so, is there an obvious current? Yes No

Select one of the following channel features:

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE					
RUN					
POOL					

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

% Cobble	% Gravel	% Sand	% Silt	100% Mud/Clay	% Bedrock
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Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site)

No vegetation of any kind in stream

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 type="checkbox"/> Fine sediments	<input checked="" 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:

Comments: Please attach any additional comments () to this form.

*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.

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

Surveyor's Signature: [Signature] Date of Survey: May 20, 2007

Organization: EAE, Inc. Position: Env. Engr

Upstream 32
Downstream 33

LAT 38.939102°N
LON 93.32858°W

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 3539

Site # 2

	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
Transect A	1 wetted width	<0.1		1	Channel Feature:
	2 2.0 m	0.1		2	RUN
	3	0.1		3	
	4 measurements	0.1		4	Dissolved Oxygen
	5 0.1 m	0.1		5	
	6 apart	0.1		6	9.1 ppm
	7	0.2		7	97%
	8	0.1		8	18.5°C
	9	<0.1		9	
	10	<0.1		10	
Transect B	1 wetted width	0.1		12	Channel Feature:
	2 2.5 m	0.1		13	RUN
	3	0.1		14	
	4 measurements	0.1		15	Dissolved Oxygen:
	5 0.2 m	0.1		16	
	6 apart	0.1		17	9.0 ppm
	7	0.2		18	98%
	8	0.2		19	18.7°C
	9	0.2		20	
	10	<0.1		21	
Transect C	1 wetted width	<0.1		23	Channel Feature:
	2 3.0 m	0.2		24	RUN
	3	0.2		25	
	4 measurements	0.2		26	Dissolved Oxygen
	5 0.3 m	0.2		.	
	6 apart	0.2		.	8.9 ppm
	7	0.2		.	95%
	8	0.1		n	18.7°C
	9	0.1			
	10	0.1			

If there is an odd number of entries find middle rank $[(n+1)/2]$. The corresponding sorted value depth to the middle rank is the median depth.

If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Marko M. J. [Signature]

Date: May 20, 2007

Organization: EHE, Inc.

Position: Env. Engr

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 3539

Site # 2

	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
Transect D	wetted width	0.1		1	Channel Feature:
	<u>3.0 m</u>	0.1		2	RUN
		0.1		3	
	measurements	0.2		4	Dissolved Oxygen
	<u> m</u>	0.2		5	
	apart	0.2		6	<u>8.2</u> ppm
		0.2		7	<u>88</u> %
		0.2		8	<u>18.7°C</u>
		0.1		9	
		<0.1		10	
Transect E	wetted width	0.1		12	Channel Feature:
	<u>3.5 m</u>	0.1		13	RUN
		0.2		14	
	measurements	0.2		15	Dissolved Oxygen:
	<u> m</u>	0.2		16	
	apart	0.2		17	<u>7.8</u> ppm
		0.2		18	<u>81</u> %
		0.2		19	<u>18.7°C</u>
		0.2		20	
		0.1		21	
Transect F	wetted width	0.1		23	Channel Feature:
	<u>5.0 m</u>	0.2		24	RUN
		0.2		25	
	measurements	0.2		26	Dissolved Oxygen
	<u>0.5 m</u>	0.2		.	
	apart	0.3		.	<u>8.3</u> ppm
		0.3		.	<u>90</u> %
		0.3		n	<u>18.8°C</u>
		0.3			
		0.3			

If there is an odd number of entries find middle rank $[(n+1)/2]$. The corresponding sorted value depth to the middle rank is the median depth.

If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: [Signature]

Date: May 20, 2007

Organization: EAE, Inc

Position: Env. Eng.

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 3539

Site # 2

	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
Transect G	wetted width	0.1		1	Channel Feature:
	<u>4.0 m</u>	0.2		2	RUN
		0.3		3	
	measurements	0.3		4	Dissolved Oxygen
	<u>0.4 m</u>	0.3		5	
	apart	0.3		6	8.6 ppm
		0.3		7	91%
		0.3		8	18.9°C
		0.2		9	
		0.1		10	
Transect H	wetted width	<0.1		12	Channel Feature:
	<u>4.5 m</u>	0.2		13	RUN
		0.2		14	
	measurements	0.2		15	Dissolved Oxygen:
	<u>0.4 m</u>	0.3		16	
	apart	0.3		17	8.9 ppm
		0.3		18	96%
		0.3		19	18.9°C
		0.2		20	
		0.1		21	
Transect I	wetted width	0.1		23	Channel Feature:
	<u>4.0 m</u>	0.4		24	RUN
		0.4		25	
	measurements	0.3		26	Dissolved Oxygen
	<u> m</u>	0.3			
	apart	0.3			8.9 ppm
		0.3			96%
		0.3		n	18.9°C
		0.1			
		<0.1			

If there is an odd number of entries find middle rank $[(n+1)/2]$. The corresponding sorted value depth to the middle rank is the median depth.

If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Alvin D. Mitchell

Date: May 20, 2007

Organization: EAE, Inc

Position: Env. Eng

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 3539

Site # 2

	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
Transect J	1 wetted width	<0.1		1 Channel Feature:	
	2 5.0 m	0.2		2 RUN	
	3	0.3		3	
	4 measurements	0.4		4 Dissolved Oxygen	
	5 0.5 m	0.4		5	
	6 apart	0.4		6 9.2 ppm	
	7	0.3		7 97%	
	8	0.3		8 18.6°C	
	9	0.3		9	
	10	0.1		10	
Transect K	1 wetted width	0.1		12 Channel Feature:	
	2 5.0 m	0.3		13 RUN	
	3	0.3		14	
	4 measurements	0.4		15 Dissolved Oxygen:	
	5 m	0.3		16	
	6 apart	0.4		17 8.2 ppm	
	7	0.4		18 90%	
	8	0.3		19 18.6	
	9	0.3		20	
	10	0.1		21	
Transect	1 wetted width			23 Channel Feature:	
	2 m			24	
	3			25	
	4 measurements			26 Dissolved Oxygen	
	5 m			.	
	6 apart			.	
	7			.	
	8			n	
	9				
	10				

If there is an odd number of entries find middle rank $[(n+1)/2]$. The corresponding sorted value depth to the middle rank is the median depth.

If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Radie Robb Date: 5/20/07

Organization: BWR Position: Field crew

WBID# 3539
 Site# 1

Field Data Sheets for Recreational Use Stream Surveys
Data Sheet B - Site Characterization
 (must be completed for each site)

Date & Time: <u>5/20/07 08:30</u>	Site Location Description (e.g., road crossing):
Personnel (Data Collectors): <u>Alan Mitchell, Sadie Ridd</u>	
Current Weather Conditions: <u>Sunny, warm</u>	Facility Name: <u>Houstonia Lagoon</u>
Weather Conditions for Past 10 days: <u>rainy, warm</u>	Permit Number: <u>MD0058475</u>
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 Locations:

LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION, IN METERS)	
Site GPS Coordinates: UTM X: <u>93.33102°W</u>	Y: <u>38.93702°N</u>
HORIZONTAL COLLECTION METHOD (Indicate the method used to determine the locational data.)	
Global Positioning System (GPS)	Interpolation
Static Mode	Topographic Map or DRG
Dynamic Mode (Kinematic)	Aerial Photograph or DOQQ
Precise Positioning Service	Satellite Imagery
Signal Averaging	Interpolation Other
Real Time Differential Processing	
HORIZONTAL ACCURACY ESTIMATE	
GPS Data Quality	Interpolation Data Quality
FOM ± _____ Meters	Source Map Scale: 1:24,000 1:100,000 Other _____ ± _____ Feet or ± _____ Meters
EPE ± _____ Feet or ± _____ Meters	
PDOP	

Photos:

Upstream Photos		Downstream Photos		Other Photos	
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
<u>30</u>		<u>31</u>			

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 *Data Sheet D- Recreational Use Interview* when conducting interviews.)

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"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Fence	<input checked="" type="checkbox"/> Steep slopes	<input type="checkbox"/> None of the above	<input type="checkbox"/> Other:

Comments: Cattle Pasture

Indications of Human Use*: (attach photos)

<input type="checkbox"/> Roads	<input type="checkbox"/> Rope swings	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input type="checkbox"/> RV / ATV Tracks
<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Other:	

Comments: No evidence of human use

70 Channel Feature

RUN = 00%
RIFPLE = 01%
POOL = 40%

* Page Two – Data Sheet B for WBID # 3539 : Site #1
Stream Morphology:

Upstream View's Physical Dimensions: Is there any water present at this view? Yes No
If so, is there an obvious current? Yes No

Select one of the following channel features:

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFPLE					
RUN					
POOL	30m	8	50	0.2	0.5

Downstream View's Physical Dimensions: Is there any water present at this view? Yes No
If so, is there an obvious current? Yes No

Select one of the following channel features:

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFPLE					
RUN					
POOL	0	9	2.5	0.5	0.1

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

<input checked="" type="checkbox"/> % Cobble	<input type="checkbox"/> % Gravel	<input type="checkbox"/> % Sand	<input type="checkbox"/> % Silt	<input checked="" type="checkbox"/> 100 % Mud/Clay	<input type="checkbox"/> % Bedrock
--	-----------------------------------	---------------------------------	---------------------------------	--	------------------------------------

Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site)

[Empty box for Aquatic Vegetation notes]

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 type="checkbox"/> Clear	<input checked="" 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 type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input checked="" type="checkbox"/> Foam	<input type="checkbox"/> None	<input type="checkbox"/> Other:

Comments: Please attach any additional comments () to this form.

*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.

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

Surveyor's Signature: Jodie Robb Date of Survey: 5/20/07

Organization: BWR Position: Field crew

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 3539

Site # 1

	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
Transect A	1 wetted width	0.1		1	Channel Feature:
	2 4.0 m	0.4		2	POOL
	3 0.4	0.4		3	
	4 measurements	0.4		4	Dissolved Oxygen
	5 _____ m	0.4		5	
	6 apart	0.4		6	85 ppm
	7	0.4		7	8.3 %
	8	0.4		8	16.2°C
	9	0.2		9	
	10	<0.1		10	
Transect B	1 wetted width	0.1		12	Channel Feature:
	2 3.1 m	0.3		13	POOL
	3	0.4		14	
	4 measurements	0.6		15	Dissolved Oxygen:
	5 0.3 m	0.6		16	
	6 apart	0.8		17	8.26 ppm
	7	0.9		18	84.0 %
	8	0.9		19	16.3°C
	9	0.8		20	
	10	0.9		21	
Transect C	1 wetted width	0.7		23	Channel Feature:
	2 4.0 m	0.8		24	POOL
	3	0.8		25	
	4 measurements	0.8		26	Dissolved Oxygen
	5 0.4 m	0.7		.	
	6 apart	0.4		.	7.7 ppm
	7	0.3		.	78 %
	8	0.2		n	16.2°C
	9	0.1			
	10	<0.1			

If there is an odd number of entries find middle rank $[(n+1)/2]$. The corresponding sorted value depth to the middle rank is the median depth.

If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Alan D. M. Till

Date: May 20, 2007

Organization: EAE, Inc.

Position: Env. Engineer

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 3539

Site # 1

	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
Transect D	1 wetted width	0.1		1	Channel Feature:
	2 5.0 m	0.3		2	POOL
	3	0.6		3	
	4 measurements	0.8		4	Dissolved Oxygen
	5 0.5 m	> 1		5	
	6 apart	> 1		6	7.8 ppm
	7	0.9		7	7.5 %
	8	0.9		8	16.1 °C
	9	0.3		9	
	10	0.3		10	
Transect E	1 wetted width	0.1		12	Channel Feature:
	2 5.0 m	0.4		13	POOL
	3	0.5		14	
	4 measurements	0.6		15	Dissolved Oxygen:
	5 0.5 m	0.6		16	
	6 apart	0.7		17	7.8 ppm
	7	0.7		18	7.9 %
	8	0.5		19	16.1 °C
	9	0.5		20	
	10	0.2		21	
Transect F	1 wetted width	0.2		23	Channel Feature:
	2 6.0 m	0.4		24	RUN
	3	0.5		25	
	4 measurements	0.5		26	Dissolved Oxygen
	5 0.6 m	0.5		.	
	6 apart	0.4		.	8.0 ppm
	7	0.4		.	82.0 %
	8	0.4		n	16.5 °C
	9	0.3			
	10	0.1			

If there is an odd number of entries find middle rank $[(n+1)/2]$. The corresponding sorted value depth to the middle rank is the median depth.

If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Maedyn M. Stull

Date: May 20, 2007

Organization: EAE, Inc.

Position: Env. Engnr

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 3539

Site # 1

	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
Transect G	1 wetted width	0.2		1 Channel Feature:	
	2 6.5 m	0.3		2 RUN	
	3	0.5		3	
	4 measurements	0.5		4 Dissolved Oxygen	
	5 0.6 m	0.5		5	
	6 apart	0.6		6 8.2 ppm	
	7	0.6		7 84 %	
	8	0.4		8 16.6 °C	
	9	0.1		9	
	10	0.1		10	
Transect H	1 wetted width	0.5		12 Channel Feature:	
	2 1.0 m	0.6		13 RUN	
	3	0.6		14	
	4 measurements	0.6		15 Dissolved Oxygen:	
	5 0.7 m	0.6		16	
	6 apart	0.5		17 8.0 ppm	
	7	0.4		18 83 %	
	8	0.4		19 16.8 °C	
	9	0.3		20	
	10	<0.1		21	
Transect I	1 wetted width	0.1		23 Channel Feature:	
	2 3.0 m	0.1		24 RUN	
	3	0.1		25	
	4 measurements	0.1		26 Dissolved Oxygen	
	5 0.3 m	0.2		.	
	6 apart	0.2		. 8.1 ppm	
	7	0.2		. 84 %	
	8	0.1		n 17.2 °C	
	9	<0.1			
	10	<0.1			

If there is an odd number of entries find middle rank $[(n+1)/2]$. The corresponding sorted value depth to the middle rank is the median depth.

If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Alan G. Mitchell

Date: May 20, 2007

Organization: F&E, Inc.

Position: Env. Engr

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 3539

Site # 1

	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
Transect J	wetted width	<0.1		1	Channel Feature:
	2.5 m	<0.1		2	RUN
		<0.1		3	
	measurements	0.1		4	Dissolved Oxygen
	0.2 m	0.1		5	
	apart	0.1		6	8.1 ppm
		0.1		7	8.5 %
		<0.1		8	17.5 °C
		0.1		9	
		<0.1		10	
Transect K	wetted width	<0.1		12	Channel Feature:
	2.1 m	<0.1		13	RUN
		<0.1		14	
	measurements	0.1		15	Dissolved Oxygen:
	0.2 m	0.1		16	
	apart	0.1		17	8.3 ppm
		0.1		18	8.7 %
		0.1		19	17.6
		0.1		20	
		0.1		21	
Transect	wetted width	<0.1		23	Channel Feature:
	3.0 m	0.1		24	RUN
		0.2		25	
	measurements	0.3		26	Dissolved Oxygen
	m	0.4			
	apart	0.9			
		0.7			
		0.8			
		0.5			
		0.4			

If there is an odd number of entries find middle rank $[(n+1)/2]$. The corresponding sorted value depth to the middle rank is the median depth.
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I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Alan W. Smith Date: May 20, 2007

Organization: EAE, Inc. Position: Env. Engr



Upstream (Site 1) of Buffalo Creek



Downstream (Site 1) of Buffalo Creek



Upstream (Site 2) of Buffalo Creek



Downstream (Site 2) of Buffalo Creek



Upstream (Site 3) of Buffalo Creek



Downstream (Site 3) of Buffalo Creek



Supplemental photo (Site 3) of Buffalo Creek



Supplemental photo (Site 3) of Buffalo Creek

Field Data Sheet for Recreational Use Stream Survey

Data Sheet D—Recreational Use Interview

Stream Name BUFFALO CREEK (WBID # 3539)

I. Introduction

Date & Time (include AM or PM): 10:30 am 5-08-07

Interviewed: In person By phone By mail

(NOTE: If you are an Interviewee filling out this form to mail back to DNR, proceed to Question #1.)

Interviewee selected because (e.g., house next to stream; standing by stream, etc.) PROPERTY OWNER

Interviewer introduction to Interviewee: "My name is _____, I work for _____ (name of your employer) _____, and I am collecting information on how people use _____ (name of the stream) _____."

ASK:

1.) Are you willing to respond to a survey about this stream? (It will just take a few minutes.)

Yes No If yes, list contact information for the interviewee below:

Legal name: C. E. SMITH
Current mailing address: 18246 McCallister Rd. 65333
Daytime phone number: (568) 3330 HOUSTONIA MO
E-mail address (optional): (816)

2.a.) Do you live in this area? Yes No

If yes, how many years? 83 yrs

2.b.) If you don't live nearby, are you still familiar with this stream? Yes No

If yes, how many years?

If no, thank the individual for taking the time to talk to you and conclude the interview.

3.) Are you familiar with this particular stretch of the stream? (show them the map, pointing out local landmarks such as roads, bridges, property lines) Yes No

If yes, proceed to "II. Personal Use?".

If no, proceed to Section V.

II. Personal Use?

1.) Have you or your family personally used the stream for recreation since November 28, 1975?

Yes No

If yes, proceed to #3.

If no, proceed to #2.

2.a.) List reasons stream not used.

DOES NOT USE STREAM

2.b.) Proceed to "III. Witnessed Use?".

3.) How do you use the stream?

Whole Body Contact Recreation			
Swimming <input type="checkbox"/>	Tubing <input type="checkbox"/>	Snorkeling/Skin Diving <input type="checkbox"/>	Water Skiing <input type="checkbox"/>

If Interviewee (or family) used the stream for WBCR since Nov. 28, 1975, ask:

4.a.) When (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? _____

4.b.) Where, exactly? Describe specific location *and mark on the map* (See map requirements in the protocol). _____

Secondary Contact Recreation				
Fishing <input type="checkbox"/>	Wading <input type="checkbox"/>	Boating <input type="checkbox"/>	Trapping <input type="checkbox"/>	Other: <input type="checkbox"/> List:

If Interviewee (or family) used the stream for SCR since Nov. 28, 1975, ask:

4.c.) When (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? _____

4.d.) Where, exactly? Describe specific location *and mark on the map* (See map requirements in the protocol). _____

III. Witnessed Use?

1.) Have you observed others using this stream for recreation since Nov. 28, 1975? Yes No

If yes, proceed to #2.

If no, proceed to, "IV. Anecdotal Use?".

2.) What kinds of uses have you witnessed?

Whole Body Contact Recreation			
Swimming <input type="checkbox"/>	Tubing <input type="checkbox"/>	Snorkeling/Skin Diving <input type="checkbox"/>	Water Skiing <input type="checkbox"/>

If Interviewee witnessed WBCR use since Nov. 28, 1975, ask the following questions:

2.a.) When (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? _____

2.b.) Where, exactly? Describe specific location *and mark on the map* (Seemap requirements in the protocol). _____

Secondary Contact Recreation				
Fishing <input type="checkbox"/>	Wading <input type="checkbox"/>	Boating <input type="checkbox"/>	Trapping <input type="checkbox"/>	Other: <input type="checkbox"/> List:

If Interviewee witnessed SCR use since Nov. 28, 1975, ask the following questions:

2.c.) When (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? _____

2.d.) Where, exactly? Describe specific location *and mark on the map* (Seemap requirements in the protocol). _____

IV. Anecdotal Use?

1.) Have you heard about anyone using this stream since ~~Nov. 28, 1975~~ for recreation – not seen or done yourself, but just heard about it? Yes No

If yes, proceed to #2.

If no, thank the individual for taking the time to talk to you and conclude the interview.

2.) What kind of uses have you heard about?

Whole Body Contact Recreation			
Swimming <input type="checkbox"/>	Tubing <input type="checkbox"/>	Snorkeling/Skin Diving <input type="checkbox"/>	Water Skiing <input type="checkbox"/>

If Interviewee heard of WBCR use since Nov. 28, 1975, ask the following questions:

2.a.) When did these uses take place (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? _____

2.b.) Where, exactly? Describe specific location *and mark on the map* (See map requirements in the protocol). _____

Secondary Contact Recreation

Fishing Wading Boating Trapping Other: List:

If Interviewee heard of SCR use since Nov. 28, 1975, ask the following questions:

2.c.) When did these uses take place (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? _____

2.d.) Where, exactly? Describe specific location *and mark on the* (See map requirements in the protocol). _____

V. Others to Contact?

Can you recommend someone else we could contact that knows the stream? Yes No
If yes, that person's contact info (name, address, phone, directions?)

DAVID WILLIAMS Houghtonville Mo

If no, thank the individual for taking the time to talk to you and conclude the interview.

VI. Additional Comments

1.) From the Interviewee: _____

2.) From the Interviewer: _____

VII. Information on Interviewer

Has interviewer been trained by Missouri DNR to conduct UAA Interviews?

Yes No If yes, how (check all that apply):

Workshop? (if so, enter date): _____

On-line training seminar? _____

Followed Interview Instruction Sheets? _____

Other _____

Interviewer Information:

Signature: _____

Printed Name: _____

Employer (where applicable): _____

Interviewer's phone #: _____ E-mail: _____