

Use Attainability Analysis

for

WBID 3276 Buffalo Creek

Submitted by

SES, Inc.

To

Missouri Department of Natural Resources

Water Protection Program

Date Received: October 26, 2007

**Field Data Sheets for Recreation 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): Buffalo Creek	
Missouri Water Body Identification (WBID) Number: 3276	
8 digit HUC code: 11070208	County: Newton
Upstream Legal Description (from Table H): T24N R33W 12	
Downstream Legal Description (from Table H): T24N R33W 11	
Number of sites evaluated: 3	
List all site numbers, listed consequently upstream to downstream: 1,2,3	

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

**II. Facility Information** (list all permitted discharges to the water body segment)

Facility Name(s) and Permit Number(s): Neosho, Crowder MO 0039926
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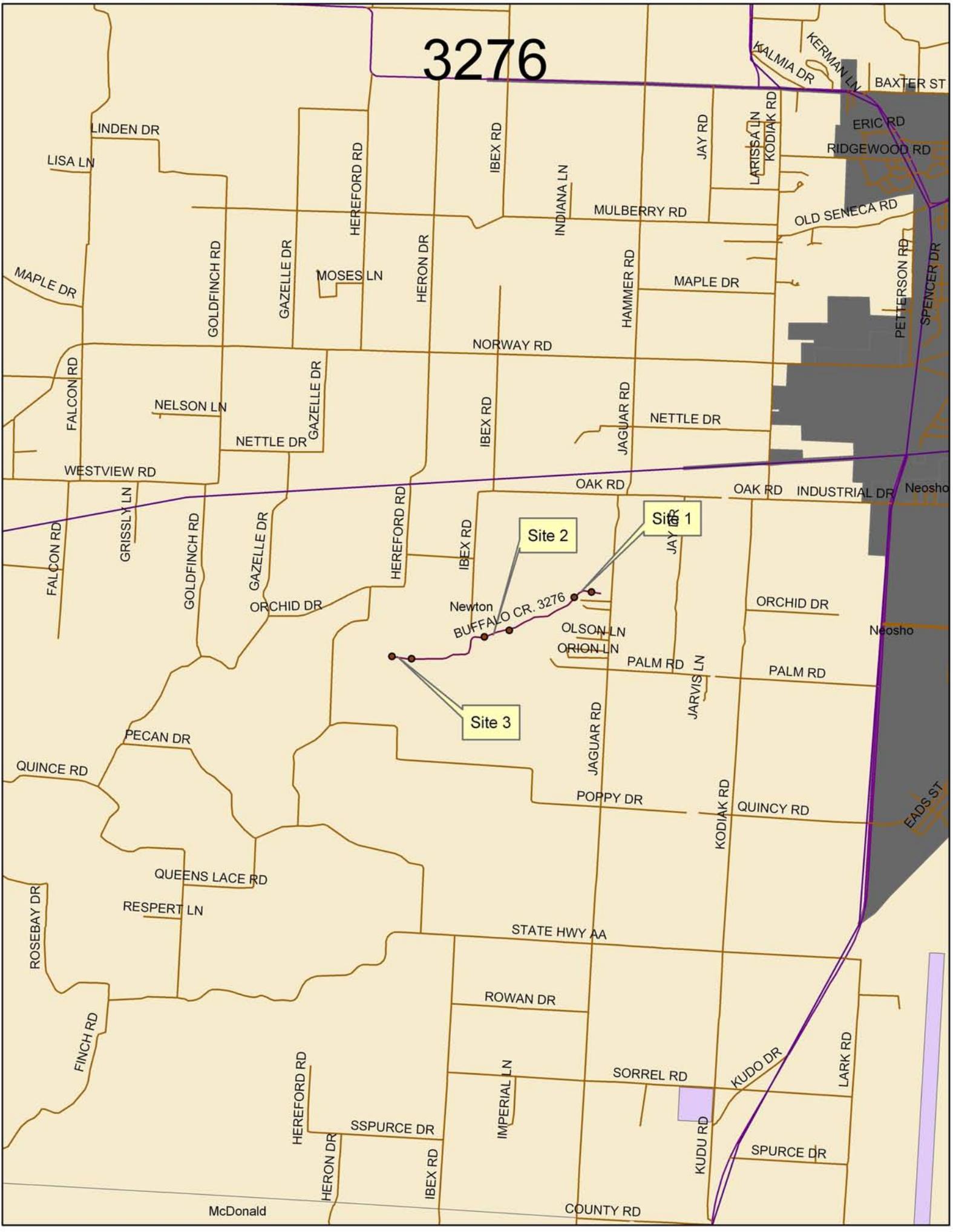
**III. UAA Surveyor** (please print legibly)

Name of Surveyor: Aaron Ball	Telephone Number: (913)307-0046
Organization/Employer: SES, Inc.	

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

**Signed:**                     Aaron Ball                     **Date:**                     10/23/2007

3276



Site 2

Site 1

Site 3

Newton  
BUFFALO CR. 3276

OLSON LN  
ORION LN

McDonald

COUNTY RD

WBID # 3276  
 Site # 1

**Field Data Sheets For Recreational Use Stream Surveys**

**Data Sheet B-Site Characterization**

Date & Time: 10/9/07 9:33	Site Location Description (e.g. road crossing):
Personnel: Aaron Ball, Drew Dodson	Farmer Access at Jaguar
Current Weather Conditions: clear	Facility Name: Neosho, Crowder
Weather conditions for the past 10 days: 2.28 inches	Permit Number: MO 0039926
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):	Northing (UTM Y):	Horizontal Accuracy: Meters
	0372202	4076613	5.7
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy: Meters
	0371998	4076529	9.6

**Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
15	Upstream	16	Downstream		
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:**

<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:				

WBID # 3276  
 Site # 1

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B- Site Characterization (Continued)**

**Surrounding Conditions:**

<input type="checkbox"/> City/County parks	<input type="checkbox"/> playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input checked="" 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/walkways
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep Slopes	<input type="checkbox"/> Other:

Comments:

**Evidence of Human Use:**

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot path/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 checked="" type="checkbox"/> Livestock watering

comments/other:

**Substrate:**

% Cobble	% Gravel	% Sand	% Silt	% Mud/Clay	% Bedrock
40	50				10

**Aquatic Vegetation:**

Rooted aquatic vegetation in shallow areas

**Water Characteristics:**

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:

WBID # 3276  
Site # 1

**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.)

none

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

Surveyor's Signature: Aaron Ball Date of Survey: 10/9/2007

Organization: SES, Inc. Position: Field Team Leader

## Field Data Sheets for Recreational Use Stream Surveys

### Data Sheet C - Field Survey Results

Waterbody ID: <u>3276</u> Site #: <u>1</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) <b>01</b> UTM X: <u>0372202</u> UTM Y: <u>4076613</u> +/- <u>5.7</u> (meters) <b>11</b> UTM X: <u>0371998</u> UTM Y: <u>4076529</u> +/- <u>9.6</u> (meters)  Average Stream Width: <u>6</u> (meters)                      Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach)                      (20x average stream width)  Field Staff: <u>Aaron Ball, Drew Dodson</u>	<h4 style="text-align: center; margin: 0;">Dissolved Oxygen</h4> Date: _____ Time: _____ D.O. meter Dissolved Oxygen: <u>not working</u> (mg/L)  Dissolved Oxygen: _____ (% sat)  Specific Cond: _____ (µS/cm)  Water Temperature: _____ (°C)
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#### Transect Cross-Section

Station	01		02		03		04		05		06		07		08		09		10		11	
	Distance (m)	Depth (m)																				
<b>Left Bank</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.7	0.25	0.6	0.30	0.5	0.05	0.4	0.15	0.4	0.15	0.7	0.50	0.7	0.35	0.8	0.20	0.6	0.15	0.7	0.25	0.7	0.25
2	1.4	0.35	1.2	0.35	1.0	0.10	0.8	0.25	0.8	0.35	1.4	0.40	1.4	0.40	1.6	0.20	1.2	0.20	1.4	0.25	1.4	0.30
3	2.1	0.40	1.8	0.40	1.5	0.20	1.2	0.30	1.2	0.35	2.1	0.40	2.1	0.05	2.4	0.05	1.8	0.30	2.1	0.30	2.1	0.30
4	2.8	0.30	2.4	0.45	2.0	0.30	1.6	0.35	1.6	0.40	2.8	0.40	2.8	0.10	3.2	0.20	2.4	0.30	2.8	0.30	2.8	0.35
5	3.5	0.10	3.0	0.70	2.5	0.35	2.0	0.30	2.0	0.50	3.5	0.40	3.5	0.15	4.0	0.15	3.0	0.20	3.5	0.25	3.5	0.30
6	4.2	0.10	3.6	0.90	3.0	0.30	2.4	0.30	2.4	0.60	4.2	0.30	4.2	0.20	4.8	0.15	3.6	0.20	4.2	0.25	4.2	0.30
7	4.9	0.15	4.2	1.00	3.5	0.30	2.8	0.35	2.8	0.60	4.9	0.30	4.9	0.35	5.6	0.30	4.2	0.20	4.9	0.35	4.9	0.30
8	5.6	0.30	4.8	1.00	4.0	0.30	3.2	0.30	3.2	0.70	5.6	0.30	5.6	0.35	6.4	0.30	4.8	0.30	5.6	0.20	5.6	0.20
9	6.3	0.35	5.4	1.00	4.5	0.30	3.6	0.30	3.6	0.80	6.3	0.35	6.3	0.35	7.2	0.30	5.4	0.30	6.3	0.20	6.3	0.15
<b>Right Bank</b>	7.0	0.00	6.0	0.00	5.0	0.00	4.0	0.00	4.0	0.00	7.0	0.00	7.0	0.00	8.0	0.00	6	0.00	7.0	0.00	7.0	0.00
<b>Feature Type</b> <small>(riffle, run, or pool)</small>	pool		riffle		riffle		riffle		riffle		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: Aaron Ball                      Date: 10/9/07

WBID # 3276  
 Site # 2

**Field Data Sheets For Recreational Use Stream Surveys**

**Data Sheet B-Site Characterization**

Date & Time: 10/9/07 7:55	Site Location Description (e.g. road crossing):
Personnel: Aaron Ball, Drew Dodson	Farmer Access off Ibex
Current Weather Conditions: clear	Facility Name: Neosho, Crowder
Weather conditions for the past 10 days: 2.28 inches	Permit Number: MO 0039926
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):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0371236	4076141		11.4	
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0370944	4076058		18.0	

**Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
9	Downstream	10	road	11	fence
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
12	Upstream				
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

**Uses Observed:**

<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:				

WBID # 3276  
 Site # 2

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B- Site Characterization (Continued)**

**Surrounding Conditions:**

<input type="checkbox"/> City/County parks	<input type="checkbox"/> playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input checked="" 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/walkways
<input type="checkbox"/> Boating accesses	<input checked="" type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep Slopes	<input type="checkbox"/> Other:

Comments:

**Evidence of Human Use:**

<input checked="" type="checkbox"/> Roads	<input type="checkbox"/> Foot path/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 checked="" type="checkbox"/> Livestock watering

comments/other:

**Substrate:**

% Cobble	% Gravel	% Sand	% Silt	% Mud/Clay	% Bedrock
60	40				

**Aquatic Vegetation:**

Rooted aquatic vegetation in shallow areas

**Water Characteristics:**

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:

WBID # 3276  
Site # 2

**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.)

none

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

Surveyor's Signature: Aaron Ball Date of Survey: 10/9/2007

Organization: SES, Inc. Position: Field Team Leader

## Field Data Sheets for Recreational Use Stream Surveys

### Data Sheet C - Field Survey Results

Waterbody ID: <u>3276</u> Site #: <u>2</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) <b>01</b> UTM X: <u>0371236</u> UTM Y: <u>4076141</u> +/- <u>11.4</u> (meters) <b>11</b> UTM X: <u>0370944</u> UTM Y: <u>4076058</u> +/- <u>18</u> (meters)  Average Stream Width: <u>7</u> (meters)                      Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach)                      (20x average stream width)  Field Staff: <u>Aaron Ball, Drew Dodson</u>	<h4 style="text-align: center; margin: 0;">Dissolved Oxygen</h4> Date: _____ Time: _____ D.O. meter Dissolved Oxygen: <u>not working</u> (mg/L)  Dissolved Oxygen: _____ (% sat)  Specific Cond: _____ (µS/cm)  Water Temperature: _____ (°C)
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#### Transect Cross-Section

Station		01		02		03		04		05		06		07		08		09		10		11	
		Distance (m)	Depth (m)																				
<b>Left Bank</b>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1		0.6	0.30	0.5	0.30	0.6	0.30	0.6	0.20	0.7	0.30	0.6	0.25	0.4	0.20	0.6	0.30	1.3	0.20	1.2	0.20	0.7	0.20
2		1.2	0.30	1.0	0.30	1.2	0.30	1.2	0.30	1.4	0.30	1.2	0.30	0.8	0.35	1.2	0.45	2.6	0.10	2.4	0.20	1.4	0.35
3		1.8	0.40	1.5	0.40	1.8	0.35	1.8	0.40	2.1	0.30	1.8	0.35	1.2	0.40	1.8	0.50	3.9	0.00	3.6	0.00	2.1	0.35
4		2.4	0.30	2.0	0.40	2.4	0.40	2.4	0.40	2.8	0.30	2.4	0.35	1.6	0.40	2.4	0.50	5.2	0.00	4.8	0.00	2.8	0.50
5		3.0	0.35	2.5	0.45	3.0	0.55	3.0	0.40	3.5	0.30	3.0	0.35	2.0	0.45	3.0	0.55	6.5	0.10	6.0	0.00	3.5	0.35
6		3.6	0.30	3.0	0.45	3.6	0.60	3.6	0.40	4.2	0.30	3.6	0.45	2.4	0.40	3.6	0.55	7.8	0.20	7.2	0.15	4.2	0.35
7		4.2	0.30	3.5	0.50	4.2	0.60	4.2	0.30	4.9	0.25	4.2	0.60	2.8	0.40	4.2	0.55	9.1	0.35	8.4	0.40	4.9	0.35
8		4.8	0.30	4.0	0.55	4.8	0.40	4.8	0.25	5.6	0.20	4.8	0.55	3.2	0.30	4.8	0.45	10.4	0.60	9.6	0.50	5.6	0.20
9		5.4	0.30	4.5	0.30	5.4	0.30	5.4	0.15	6.3	0.10	5.4	0.30	3.6	0.30	5.4	0.40	11.7	0.50	10.8	0.45	6.3	0.10
<b>Right Bank</b>		6.0	0.00	5.0	0.00	6.0	0.00	6.0	0.00	7.0	0.00	6.0	0.00	4.0	0.00	6.0	0.00	13.0	0.00	12.0	0.00	7.0	0.00
<b>Feature Type</b> <small>(riffle, run, or pool)</small>		riffle		pool		pool		pool		riffle		riffle		run		pool		run		run		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: Aaron Ball                      Date: 10/9/07

WBID # 3276  
 Site # 3

**Field Data Sheets For Recreational Use Stream Surveys**

**Data Sheet B-Site Characterization**

Date & Time: 10/9/07 8:40	Site Location Description (e.g. road crossing):
Personnel: Aaron Ball, Drew Dodson	Farmer Access of Ibx (2)
Current Weather Conditions: clear	Facility Name: Neosho, Crowder
Weather conditions for the past 10 days: 2.28 inches	Permit Number: MO 0039926
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):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0370090	4075808		6.9	
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0369858	4075836		6.9	

**Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
13	Upstream	14	Downstream		
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:**

<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:				

WBID # 3276  
 Site # 3

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B- Site Characterization (Continued)**

**Surrounding Conditions:**

<input type="checkbox"/> City/County parks	<input type="checkbox"/> playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input checked="" 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/walkways
<input type="checkbox"/> Boating accesses	<input checked="" type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input checked="" type="checkbox"/> Steep Slopes	<input type="checkbox"/> Other:

Comments:

**Evidence of Human Use:**

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot path/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:**

% Cobble	% Gravel	% Sand	% Silt	% Mud/Clay	% Bedrock
60	40				

**Aquatic Vegetation:**

Rooted vegetation in shallow areas

**Water Characteristics:**

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:

WBID # 3276  
Site # 3

**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.)

none

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

Surveyor's Signature: Aaron Ball Date of Survey: 10/9/2007

Organization: SES, Inc. Position: Field Team Leader

## Field Data Sheets for Recreational Use Stream Surveys

### Data Sheet C - Field Survey Results

Waterbody ID: <u>3276</u> Site #: <u>3</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) <b>01</b> UTM X: <u>0370090</u> UTM Y: <u>4075808</u> +/- <u>6.9</u> (meters) <b>11</b> UTM X: <u>0369808</u> UTM Y: <u>4075836</u> +/- <u>6.9</u> (meters)  Average Stream Width: <u>7</u> (meters)                      Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach)                      (20x average stream width)  Field Staff: <u>Aaron Ball, Drew Dodson</u>	<h4 style="text-align: center; margin: 0;">Dissolved Oxygen</h4> Date: _____ Time: _____ D.O. meter Dissolved Oxygen: <u>not working</u> (mg/L)  Dissolved Oxygen: _____ (% sat)  Specific Cond: _____ (µS/cm)  Water Temperature: _____ (°C)
--	---

#### Transect Cross-Section

Station		01		02		03		04		05		06		07		08		09		10		11	
		Distance (m)	Depth (m)																				
<b>Left Bank</b>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1		0.5	0.30	0.7	0.35	0.8	0.25	0.8	0.15	0.8	0.20	0.7	0.30	0.8	0.35	0.6	0.25	1.0	0.40	0.8	0.45	1.0	0.30
2		1.0	0.30	1.4	0.35	1.6	0.30	1.6	0.15	1.6	0.35	1.4	0.45	1.6	0.50	1.2	0.35	2.0	0.40	1.6	0.60	2.0	0.25
3		1.5	0.35	2.1	0.35	2.4	0.30	2.4	0.20	2.4	0.40	2.1	0.50	2.4	0.50	1.8	0.30	3.0	0.25	2.4	0.55	3.0	0.15
4		2.0	0.35	2.8	0.35	3.2	0.30	3.2	0.30	3.2	0.40	2.8	0.45	3.2	0.45	2.4	0.35	4.0	0.30	3.2	0.55	4.0	0.10
5		2.5	0.40	3.5	0.40	4.0	0.30	4.0	0.40	4.0	0.50	3.5	0.35	4.0	0.50	3.0	0.45	5.0	0.45	4.0	0.40	5.0	0.15
6		3.0	0.45	4.2	0.40	4.8	0.25	4.8	0.35	4.8	0.50	4.2	0.30	4.8	0.30	3.6	0.60	6.0	0.50	4.8	0.40	6.0	0.20
7		3.5	0.40	4.9	0.35	5.6	0.20	5.6	0.40	5.6	0.45	4.9	0.30	5.6	0.25	4.2	0.60	7.0	0.50	5.6	0.45	7.0	0.30
8		4.0	0.40	5.6	0.35	6.4	0.20	6.4	0.40	6.4	0.30	5.6	0.30	6.4	0.30	4.8	0.50	8.0	0.40	6.4	0.45	8.0	0.30
9		4.5	0.35	6.3	0.40	7.2	0.10	7.2	0.30	7.2	0.20	6.3	0.25	7.2	0.25	5.4	0.40	9.0	0.30	7.2	0.50	9.0	0.30
<b>Right Bank</b>		5.0	0.00	7.0	0.00	8.0	0.00	8.0	0.00	8.0	0.00	7.0	0.00	8.0	0.00	6.0	0.00	10	0.00	8.0	0.00	10.0	0.00
<b>Feature Type</b> <small>(riffle, run, or pool)</small>		pool		pool		riffle		pool		pool		pool		pool		run		pool		pool		riffle	

**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: Aaron Ball                      Date: 10/9/07

**WBID# 3276 Buffalo Creek**



**Site# 1 Photo ID# 16, Downstream**



**Site# 1 Photo ID# 15, Upstream**



**Site# 2 Photo ID# 9, Downstream**



**Site# 2 Photo ID# 12, Upstream**

**WBID# 3276 Buffalo Creek**



**Site# 2 Photo ID# 10, Road**



**Site# 2 Photo ID# 11, Fence**



**Site# 3 Photo ID# 14, Downstream**



**Site# 3 Photo ID# 13, Upstream**