

Use Attainability Analysis

for

WBID 2441 Fall 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): Fall Creek	
Missouri Water Body Identification (WBID) Number: 2441	
8 digit HUC code: 11010003	County: Stone/Taney
Upstream Legal Description (from Table H): T23N R22W 28	
Downstream Legal Description (from Table H): T22N R22W 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): Branson View Campground MO 0111767

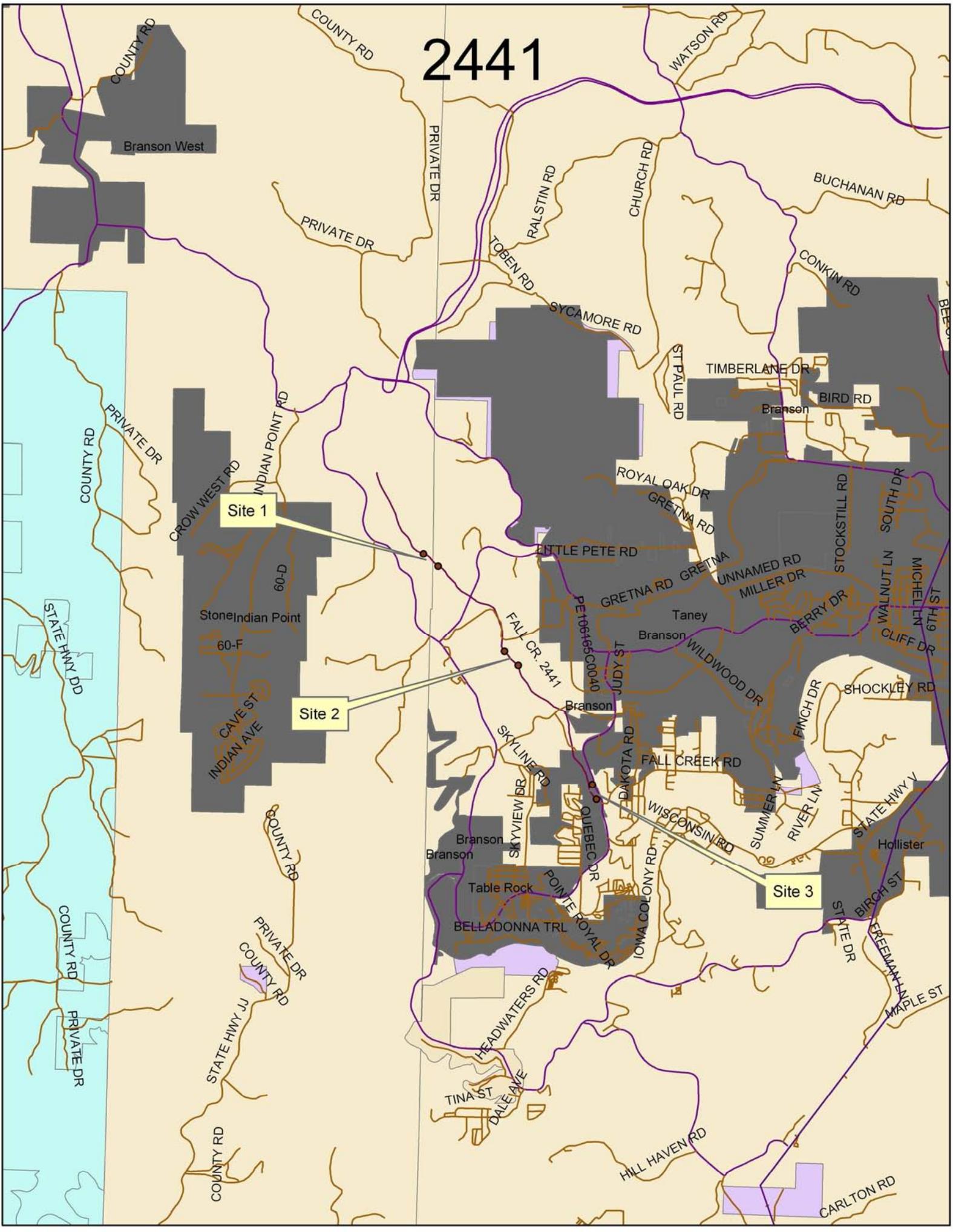
III. UAA Surveyor (please print legibly)

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

2441



WBID # 2441
 Site # 1

Field Data Sheets For Recreational Use Stream Surveys

Data Sheet B-Site Characterization

Date & Time: 10/11/07 8:10	Site Location Description (e.g. road crossing):
Personnel: Aaron Ball, Drew Dodson	Dirt Access from Schaffer Rd.
Current Weather Conditions: clear	Facility Name: Branson View Campground
Weather conditions for the past 10 days: 0.74 inches	Permit Number: MO 0111767
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
	0472037	4056259	8.1
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy: Meters
	0472263	4056067	6.0

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
63	Downstream	64	No Trespassing Sign	65	Upstream
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 # 2441
 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 checked="" 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/walkways
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> Fence	<input checked="" 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 type="checkbox"/> Livestock watering

comments/other:

Substrate:

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

Aquatic Vegetation:

N/A

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 type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input checked="" type="checkbox"/> Other:
					N/A
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 # 2441
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: 10/11/2007

Organization: SES, Inc. Position: Field Team Leader

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Waterbody ID: <u>2441</u> Site #: <u>1</u> Estimated Channel Incision: <u>2.0</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>0472037</u> UTM Y: <u>4056259</u> +/- <u>8.1</u> (meters) 11 UTM X: <u>0472263</u> UTM Y: <u>4056067</u> +/- <u>6</u> (meters) Average Stream Width: <u>3</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>	Dissolved Oxygen Date: <u>10/11/07</u> Time: <u>8:11</u> Dissolved Oxygen: <u>7.6</u> (mg/L) Dissolved Oxygen: _____ (% sat) Specific Cond: _____ (µS/cm) Water Temperature: <u>13.5</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	
1		#####	0.00	#####	0.00	#####	0.00	#####	0.00	#####	0.00	#####	0.00	#####	0.00	#####	0.00	0.1	0.05	0.3	0.05	0.2	0.05
2		#####	0.00	#####	0.00	#####	0.00	#####	0.00	#####	0.00	#####	0.00	#####	0.00	#####	0.00	0.2	0.05	0.6	0.10	0.4	0.10
3		#####	0.00	#####	0.00	#####	0.00	#####	0.00	#####	0.00	#####	0.00	#####	0.00	#####	0.00	0.3	0.05	0.9	0.10	0.6	0.05
4		#####	0.00	#####	0.00	#####	0.00	#####	0.00	#####	0.00	#####	0.00	#####	0.00	#####	0.00	0.4	0.05	1.2	0.10	0.8	0.05
5		#####	0.00	#####	0.00	#####	0.00	#####	0.00	#####	0.00	#####	0.00	#####	0.00	#####	0.00	0.5	0.05	1.5	0.15	1.0	0.05
6		#####	0.00	#####	0.00	#####	0.00	#####	0.00	#####	0.00	#####	0.00	#####	0.00	#####	0.00	0.6	0.05	1.8	0.10	1.2	0.05
7		#####	0.00	#####	0.00	#####	0.00	#####	0.00	#####	0.00	#####	0.00	#####	0.00	#####	0.00	0.7	0.05	2.1	0.05	1.4	0.05
8		#####	0.00	#####	0.00	#####	0.00	#####	0.00	#####	0.00	#####	0.00	#####	0.00	#####	0.00	0.8	0.05	2.4	0.05	1.6	0.05
9		#####	0.00	#####	0.00	#####	0.00	#####	0.00	#####	0.00	#####	0.00	#####	0.00	#####	0.00	0.9	0.05	2.7	0.05	1.8	0.05
Right Bank		N/A	0.00	1	0.00	3.0	0.00	2.0	0.00														
Feature Type <small>(riffle, run, or pool)</small>		N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A		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: Aaron Ball Date: 10/11/07

WBID # 2441
 Site # 2

Field Data Sheets For Recreational Use Stream Surveys

Data Sheet B-Site Characterization

Date & Time: 10/11/07 7:33	Site Location Description (e.g. road crossing):
Personnel: Aaron Ball and Drew Dodson	Off Schaffer Rd.
Current Weather Conditions: clear	Facility Name: Branson View Campground
Weather conditions for the past 10 days: 0.74 inches	Permit Number: MO 0111767
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	
	0473280	4054746		6.0	
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0473494	4054536		6.0	

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
60	Upstream	61	Downstream	62	road
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 # 2441
 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 checked="" 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/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 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 type="checkbox"/> Livestock watering

comments/other:

Substrate:

% Cobble	% Gravel	% Sand	% Silt	% Mud/Clay	% Bedrock
30	40				30

Aquatic Vegetation:

none

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 # 2441
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: 10/17/2007

Organization: SES, Inc. Position: Field Team Leader

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Waterbody ID: <u>2441</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) 01 UTM X: <u>0473280</u> UTM Y: <u>4054746</u> +/- <u>6</u> (meters) 11 UTM X: <u>0473494</u> UTM Y: <u>4054536</u> +/- <u>6</u> (meters) Average Stream Width: <u>4</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>	Dissolved Oxygen Date: <u>10/11/07</u> Time: <u>7:30</u> Dissolved Oxygen: <u>8.8</u> (mg/L) Dissolved Oxygen: _____ (% sat) Specific Cond: _____ (µS/cm) Water Temperature: <u>14.4</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	
1		0.3	0.05	0.5	0.05	0.2	0.10	0.2	0.05	0.4	0.05	0.5	0.20	0.4	0.05	0.5	0.05	0.3	0.05	0.2	0.05	0.3	0.40
2		0.6	0.00	1.0	0.10	0.4	0.10	0.4	0.05	0.8	0.05	1.0	0.20	0.8	0.10	1.0	0.05	0.6	0.05	0.4	0.10	0.6	0.40
3		0.9	0.05	1.5	0.10	0.6	0.10	0.6	0.10	1.2	0.10	1.5	0.15	1.2	0.10	1.5	0.05	0.9	0.05	0.6	0.10	0.9	0.45
4		1.2	0.00	2.0	0.05	0.8	0.05	0.8	0.10	1.6	0.10	2.0	0.10	1.6	0.05	2.0	0.05	1.2	0.05	0.8	0.10	1.2	0.40
5		1.5	0.00	2.5	0.20	1.0	0.15	1.0	0.10	2.0	0.10	2.5	0.20	2.0	0.05	2.5	0.10	1.5	0.10	1.0	0.10	1.5	0.35
6		1.8	0.05	3.0	0.10	1.2	0.20	1.2	0.05	2.4	0.05	3.0	0.30	2.4	0.10	3.0	0.05	1.8	0.05	1.2	0.15	1.8	0.30
7		2.1	0.15	3.5	0.05	1.4	0.20	1.4	0.05	2.8	0.05	3.5	0.40	2.8	0.10	3.5	0.05	2.1	0.05	1.4	0.20	2.1	0.15
8		2.4	0.20	4.0	0.05	1.6	0.25	1.6	0.05	3.2	0.05	4.0	0.40	3.2	0.10	4.0	0.01	2.4	0.05	1.6	0.20	2.4	0.10
9		2.7	0.10	4.5	0.05	1.8	0.05	1.8	0.05	3.6	0.05	4.5	0.20	3.6	0.10	4.5	0.01	2.7	0.05	1.8	0.10	2.7	0.10
Right Bank		3.0	0.00	5.0	0.00	2.0	0.00	2.0	0.00	4.0	0.00	5.0	0.00	4.0	0.00	5.0	0.00	3	0.00	2.0	0.00	3.0	0.00
Feature Type <small>(riffle, run, or pool)</small>		riffle		pool		riffle		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: Aaron Ball Date: 10/11/07

WBID # 2441
 Site # 3

Field Data Sheets For Recreational Use Stream Surveys

Data Sheet B-Site Characterization

Date & Time: 10/10/07 17:10	Site Location Description (e.g. road crossing):
Personnel: Aaron Ball and Drew Dodson	Hwy 165
Current Weather Conditions: clear	Facility Name: Branson View Campground
Weather conditions for the past 10 days: 0.74 inches	Permit Number: MO 0111767
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
	0474696	4052474	9.9
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy: Meters
	0474632	4052705	5.4

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
58	Downstream	59	Upstream		
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 # 2441
 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 checked="" 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/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 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 type="checkbox"/> Livestock watering

comments/other: Landscaping (waterfalls and pools)
 Bridge

Substrate:

% Cobble	% Gravel	% Sand	% Silt	% Mud/Clay	% Bedrock
20	20		20	20	20

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 # 2441
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: 10/10/2007

Organization: SES, Inc. Position: Field Team Leader

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Waterbody ID: <u>2441</u> Site #: <u>3</u> Estimated Channel Incision: <u>4.0</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>0474696</u> UTM Y: <u>4052474</u> +/- <u>9.9</u> (meters) 11 UTM X: <u>0474632</u> UTM Y: <u>4052705</u> +/- <u>5.4</u> (meters) Average Stream Width: <u>5</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>	Dissolved Oxygen Date: <u>10/10/07</u> Time: <u>17:10</u> Dissolved Oxygen: <u>13.6</u> (mg/L) Dissolved Oxygen: _____ (% sat) Specific Cond: _____ (µS/cm) Water Temperature: <u>20.5</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	0	
1	1.0	0.05	0.6	0.30	0.6	0.20	0.7	0.20	0.4	0.20	1.1	0.40	0.7	0.20	1.1	0.40	0.9	0.40	0.5	0.05	0.7	0.10		
2	2.0	0.05	1.2	0.50	1.2	0.35	1.4	0.50	0.8	0.30	2.2	0.60	1.4	0.50	2.2	0.55	1.8	1.00	1.0	0.10	1.4	0.10		
3	3.0	0.05	1.8	0.50	1.8	0.45	2.1	0.60	1.2	0.50	3.3	0.80	2.1	0.70	3.3	0.45	2.7	1.00	1.5	0.10	2.1	0.10		
4	4.0	0.20	2.4	0.50	2.4	0.45	2.8	0.60	1.6	0.40	4.4	1.00	2.8	0.80	4.4	0.40	3.6	1.00	2.0	0.15	2.8	0.10		
5	5.0	0.20	3.0	0.50	3.0	0.35	3.5	0.80	2.0	0.60	5.5	1.00	3.5	0.90	5.5	0.40	4.5	1.00	2.5	0.15	3.5	0.05		
6	6.0	0.30	3.6	0.50	3.6	0.90	4.2	1.00	2.4	0.50	6.6	1.00	4.2	1.00	6.6	0.40	5.4	1.00	3.0	0.05	4.2	0.25		
7	7.0	0.25	4.2	0.50	4.2	0.70	4.9	0.95	2.8	0.50	7.7	0.90	4.9	1.00	7.7	0.30	6.3	1.00	3.5	0.05	4.9	0.10		
8	8.0	0.15	4.8	0.50	4.8	0.70	5.6	0.70	3.2	0.60	8.8	0.70	5.6	0.80	8.8	0.30	7.2	1.00	4.0	0.05	5.6	0.10		
9	9.0	0.20	5.4	0.50	5.4	0.70	6.3	0.45	3.6	0.10	9.9	0.30	6.3	0.60	9.9	0.30	8.1	0.40	4.5	0.05	6.3	0.10		
Right Bank	10.0	0.00	6.0	0.00	6.0	0.00	7.0	0.00	4.0	0.00	11.0	0.00	7.0	0.00	11.0	0.00	9	0.00	5.0	0.00	7.0	0.00		
Feature Type <small>(riffle, run, or pool)</small>	pool		pool		pool		pool		pool		pool		pool		pool		pool		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: Aaron Ball Date: 10/11/07

WBID# 2441 Fall Creek



Site# 1 Photo ID# 63, Downstream



Site# 1 Photo ID# 65, Upstream



Site# 1 Photo ID# 64, No trespassing sign



Site# 2 Photo ID# 61, Upstream

WBID# 2441 Fall Creek



Site# 2 Photo ID# 60, Downstream



Site# 2 Photo ID# 62, Road



Site# 3 Photo ID# 58, Downstream



Site# 3 Photo ID# 59, Upstream