



Missouri  
Department of  
Natural Resources

Use Attainability Analysis

for

WBID 1258 Camp Branch

Submitted by  
SES, Inc.

To  
Missouri Department of Natural Resources  
Water Protection Program

On

October 14, 2008

**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): Camp Branch
Missouri Water Body Identification (WBID) Number: 1258
8-digit HUC: 10290108
County(ies), Listed Upstream to Downstream: Cass, Johnson
Upstream Legal Description (from Table H): T45N R30W Sec 28
Downstream Legal Description (from Table H): T44N R29W Sec2
Number of sites evaluated: 10
List all site numbers, <u>consecutively upstream to downstream</u> : 1, 2, 3, 4, 5, 6, 7, 8, 9, 10
<b>Include a Site Location Map(s).</b> The map must include all requirements detailed in the <i>Missouri Recreational Use Attainability Analyses: Water Body Survey and Assessment Protocol</i> (Section IV.D.8.a).

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

Facility Name(s) and Permit Number(s): East Lynne WW Stabilization MO0099961
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**III. UAA Surveyor** (please **PRINT** legibly)

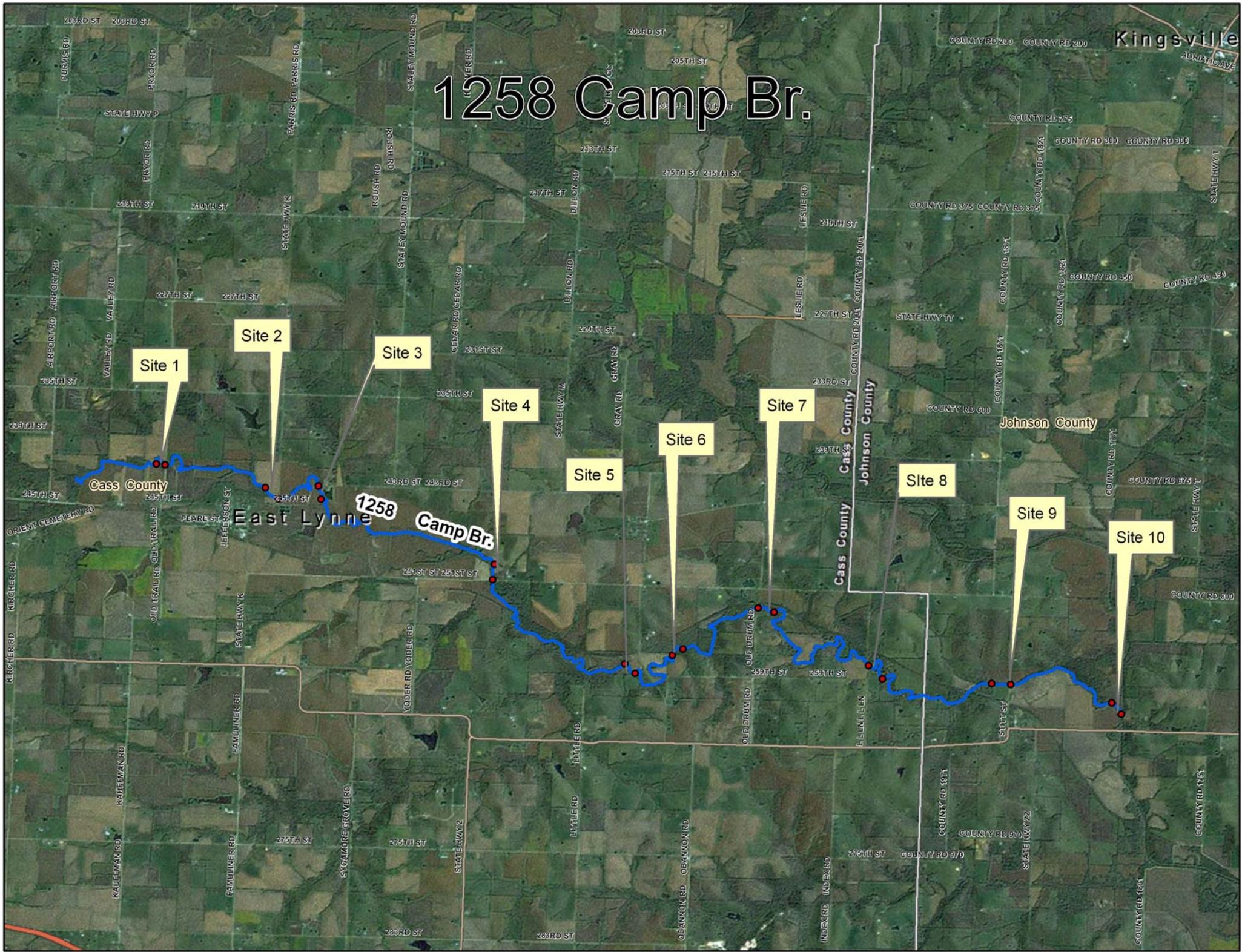
Name of Surveyor: Gilisa Gould	Telephone Number: 913-307-0046
Organization/Employer: SES, Inc.	

**Please verify that you have completed all sections of all data sheets, checked all applicable boxes, provided a map (that includes all requirements listed in the *Missouri Recreational Use Attainability Analyses: Water Body Survey and Assessment Protocol*) and that this form is complete.**

**Signed:** Gilisa Gould **Date:** 9/15/08

# 1258 Camp Br.

Kingsville



WBID # 1258

Site # 1

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

**Data Sheet B – Site Characterization** (Page 1 of 3)

(must be completed for each site)

<b>Date &amp; Time:</b> 9/09/08 13:25	Location Description (e.g., road crossing): Old Trail Rd.
<b>Stream Name:</b> Camp Br.	
Current Weather Conditions: Clear	Facility Name(s): East Lynne WW Stabilization
Weather Conditions for Past 10 days: 3.96 cm	Permit Number(s): MO0099961
Official Drought Conditions at time of this survey (search DNR home page for “drought”): 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): 0391995	Northing (UTM Y): 4281612	Horizontal Accuracy: (EPE / FOM / PDOP) 7 Meters
Site 11	Easting (UTM X): 0392119	Northing (UTM Y): 4281596	Horizontal Accuracy: (EPE / FOM / PDOP) 4 Meters

**Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
11	Upstream	12	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\*:** (Uses actually observed at the time of survey.)

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

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

**Data Sheet B – Site Characterization** (Page 2 of 3)

**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 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/walkway
<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\*:** (Attach photos and reference in "Photos" section.)

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

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

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

None

**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 type="checkbox"/> Green	<input type="checkbox"/> Gray	<input checked="" type="checkbox"/> Milky	<input checked="" type="checkbox"/> Other: Brown
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:

\*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 affect another use.

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

**Data Sheet B – Site Characterization** (Page 3 of 3)

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

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

**Comments:** (Please record any additional comments here.)

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

Printed Names of Personnel Collecting Data: Bryan Deimeke and Gilisa Gould

Surveyor's Signature: Gilisa Gould Date of Survey: 9/09/08

Organization: SES, Inc. Position: Field Team Leader

## Field Data Sheets for Recreational Use Stream Surveys

### Data Sheet C - Field Survey Results

Stream Name: <u>Camp Br.</u> Waterbody ID: <u>1258</u> Site #: <u>1</u>  Estimated Channel Incision: <u>4</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>0391995</u> UTM Y: <u>4281612</u> +/- <u>7</u> (meters) <b>11</b> UTM X: <u>0392119</u> UTM Y: <u>4281596</u> +/- <u>4</u> (meters)  Average Stream Width: <u>9</u> (meters)                      Length of Survey Segment: <u>180</u> (meters) (To determine Length of Reach)                      (20x average stream width)  Field Staff: <u>Bryan Deimeke and Gilisa Gould</u>	<h4 style="text-align: center; margin: 0;">Dissolved Oxygen</h4> Date: <u>9/9/2008</u> Time: <u>13:25</u>  Dissolved Oxygen: <u>6.3</u> (mg/L)  Dissolved Oxygen: _____ (% sat)  Specific Cond: _____ (µS/cm)  Water Temperature: <u>17.0</u> (°C)
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#### Transect Cross-Section

		01		02		03		04		05		06		07		08		09		10		11	
Station		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		0.50	0.05	0.20	0.01	0.40	0.05	0.80	0.40	0.70	0.05	0.90	0.25	0.80	0.05	0.90	0.85	0.90	0.40	0.90	0.20	0.90	0.15
2		1.00	0.10	0.40	0.01	0.80	0.05	1.60	0.70	1.40	0.20	1.80	0.85	1.60	0.25	1.80	0.85	1.80	0.65	1.80	0.50	1.80	0.30
3		1.50	0.10	0.60	0.05	1.20	0.15	2.40	0.85	2.10	0.35	2.70	0.80	2.40	0.50	2.70	0.70	2.70	0.65	2.70	0.60	2.70	0.50
4		2.00	0.15	0.80	0.05	1.60	0.30	3.20	1.00	2.80	0.35	3.60	0.80	3.20	0.45	3.60	0.55	3.60	0.65	3.60	0.60	3.60	0.60
5		2.50	0.15	1.00	0.05	2.00	0.10	4.00	1.00	3.50	0.25	4.50	0.65	4.00	0.30	4.50	0.35	4.50	0.80	4.50	0.60	4.50	0.65
6		3.00	0.05	1.20	0.05	2.40	0.10	4.80	1.00	4.20	0.30	5.40	0.80	4.80	0.20	5.40	0.25	5.40	0.90	5.40	0.55	5.40	0.50
7		3.50	0.05	1.40	0.05	2.80	0.05	5.60	0.20	4.90	0.30	6.30	0.75	5.60	0.20	6.30	0.15	6.30	1.00	6.30	0.45	6.30	0.30
8		4.00	0.05	1.60	0.01	3.20	0.05	6.40	0.20	5.60	0.20	7.20	0.60	6.40	0.20	7.20	0.15	7.20	0.75	7.20	0.40	7.20	0.30
9		4.50	0.05	1.80	0.01	3.60	0.01	7.20	0.10	6.30	0.05	8.10	0.15	7.20	0.15	8.10	0.10	8.10	0.30	8.10	0.10	8.10	0.05
<b>Right Bank</b>		5.00	0.00	2.00	0.00	4.00	0.00	8.00	0.00	7.00	0.00	9.00	0.00	8.00	0.00	9.00	0.00	9.00	0.00	9.00	0.00	9.00	0.00
<b>Feature Type</b> <small>(riffle, run, or pool)</small>		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 0.1 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Surveyor's Signature: Gilisa Gould

Date: 9/15/2008



WBID # 1258

Site # 2

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

**Data Sheet B – Site Characterization** (Page 1 of 3)

(must be completed for each site)

<b>Date &amp; Time:</b> 9/09/08 14:10	Location Description (e.g., road crossing): State Hwy K
<b>Stream Name:</b> Camp Br.	
Current Weather Conditions: Clear	Facility Name(s): East Lynne WW Stabilization
Weather Conditions for Past 10 days: 3.96 cm	Permit Number(s): MO0099961
Official Drought Conditions at time of this survey (search DNR home page for “drought”): 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): 0393532	Northing (UTM Y): 4281161	Horizontal Accuracy: (EPE / FOM / PDOP) 10 Meters
Site 11	Easting (UTM X): 0393709	Northing (UTM Y): 4280959	Horizontal Accuracy: (EPE / FOM / PDOP) 3 Meters

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

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

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

**Data Sheet B – Site Characterization** (Page 2 of 3)

**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 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/walkway
<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\*:** (Attach photos and reference in "Photos" section.)

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

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

10% Cobble	10% Gravel	10% Sand	20% Silt	50% Mud/Clay	% Bedrock
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**Aquatic Vegetation\*:** (Note amount of vegetation or algal growth at the assessment site.)

None

**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 type="checkbox"/> Green	<input type="checkbox"/> Gray	<input checked="" type="checkbox"/> Milky	<input checked="" type="checkbox"/> Other: Brown
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:

\*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 affect another use.

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

**Data Sheet B – Site Characterization** (Page 3 of 3)

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

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

**Comments:** (Please record any additional comments here.)

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

Printed Names of Personnel Collecting Data: Bryan Deimeke and Gilisa Gould

Surveyor’s Signature: Gilisa Gould Date of Survey: 9/09/08

Organization: SES, Inc. Position: Field Team Leader

## Field Data Sheets for Recreational Use Stream Surveys

### Data Sheet C - Field Survey Results

Stream Name: <u>Camp Br.</u> Waterbody ID: <u>1258</u> Site #: <u>2</u> Estimated Channel Incision: <u>3</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>0393532</u> UTM Y: <u>4281161</u> +/- <u>10</u> (meters) <b>11</b> UTM X: <u>0393709</u> UTM Y: <u>4280959</u> +/- <u>3</u> (meters) Average Stream Width: <u>9</u> (meters)      Length of Survey Segment: <u>180</u> (meters) (To determine Length of Reach)      (20x average stream width)  Field Staff: <u>Bryan Deimeke and Gilisa Gould</u>	<b>Dissolved Oxygen</b> Date: <u>9/9/2008</u> Time: <u>14:10</u> Dissolved Oxygen: <u>6.7</u> (mg/L) Dissolved Oxygen: _____ (% sat) Specific Cond: _____ (µS/cm) Water Temperature: <u>17.8</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)																				
<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	0.50	0.05	0.70	0.10	0.80	0.25	0.70	0.15	0.60	0.25	0.80	0.50	0.80	0.10	0.70	0.25	0.90	0.10	0.90	0.20	0.30	0.01
2	1.00	0.10	1.40	0.20	1.60	0.60	1.40	0.55	1.20	0.55	1.60	0.55	1.60	0.20	1.40	0.40	1.80	0.20	1.80	0.25	0.60	0.01
3	1.50	0.30	2.10	0.40	2.40	0.85	2.10	0.60	1.80	0.80	2.40	1.00	2.40	0.30	2.10	0.50	2.70	0.20	2.70	0.35	0.90	0.01
4	2.00	0.45	2.80	0.65	3.20	1.00	2.80	0.60	2.40	0.95	3.20	0.70	3.20	0.40	2.80	0.70	3.60	0.30	3.60	0.40	1.20	0.00
5	2.50	0.50	3.50	0.70	4.00	1.00	3.50	0.50	3.00	1.00	4.00	0.65	4.00	0.40	3.50	1.00	4.50	0.20	4.50	0.40	1.50	0.05
6	3.00	0.75	4.20	0.50	4.80	0.65	4.20	0.40	3.60	0.95	4.80	0.50	4.80	0.40	4.20	1.00	5.40	0.10	5.40	0.20	1.80	0.00
7	3.50	0.35	4.90	0.25	5.60	0.40	4.90	0.40	4.20	1.00	5.60	0.40	5.60	0.35	4.90	0.40	6.30	0.05	6.30	0.10	2.10	0.01
8	4.00	0.20	5.60	0.20	6.40	0.10	5.60	0.25	4.80	0.90	6.40	0.40	6.40	0.25	5.60	0.05	7.20	0.10	7.20	0.01	2.40	0.05
9	4.50	0.05	6.30	0.10	7.20	0.05	6.30	0.10	5.40	0.75	7.20	0.10	7.20	0.05	6.30	0.01	8.10	0.01	8.10	0.01	2.70	0.05
<b>Right Bank</b>	5.00	0.00	7.00	0.00	8.00	0.00	7.00	0.00	6.00	0.00	8.00	0.00	8.00	0.00	7.00	0.00	9.00	0.00	9.00	0.00	3.00	0.00
<b>Feature Type</b> <small>(riffle, run, or pool)</small>	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 0.1 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Surveyor's Signature: Gilisa Gould      Date: 9/15/2008



WBID # 1258

Site # 3

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

**Data Sheet B – Site Characterization** (Page 1 of 3)

(must be completed for each site)

<b>Date &amp; Time:</b> 9/09/08 15:00	Location Description (e.g., road crossing): 243 <sup>rd</sup> St.
<b>Stream Name:</b> Camp Br.	
Current Weather Conditions: Clear	Facility Name(s): East Lynne WW Stabilization
Weather Conditions for Past 10 days: 3.96 cm	Permit Number(s): MO0099961
Official Drought Conditions at time of this survey (search DNR home page for “drought”): 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): 0394287	Northing (UTM Y): 4281187	Horizontal Accuracy: (EPE / FOM / PDOP) 6 Meters
Site 11	Easting (UTM X): 0394322	Northing (UTM Y): 4280947	Horizontal Accuracy: (EPE / FOM / PDOP) 6 Meters

**Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
15	Downstream	16	Foot Prints	17	Irrigation/Drain Tube
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
19	Upstream				
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

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

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

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

**Data Sheet B – Site Characterization** (Page 2 of 3)

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

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

**Evidence of Human Use\*:** (Attach photos and reference in “Photos” section.)

<input type="checkbox"/> Roads	<input checked="" type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input type="checkbox"/> RV / ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Livestock Watering
<input type="checkbox"/> None of the above	Comments / Other: Irrigation/Drain Tube at Transect 10			

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

10% Cobble	10% Gravel	30% Sand	30% Silt	20% Mud/Clay	% Bedrock
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**Aquatic Vegetation\*:** (Note amount of vegetation or algal growth at the assessment site.)

None
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**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 type="checkbox"/> Green	<input type="checkbox"/> Gray	<input checked="" type="checkbox"/> Milky	<input checked="" type="checkbox"/> Other: Brown
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:

\*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 affect another use.

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

**Data Sheet B – Site Characterization** (Page 3 of 3)

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

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

**Comments:** (Please record any additional comments here.)

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

Printed Names of Personnel Collecting Data: Bryan Deimeke and Gilisa Gould

Surveyor's Signature: Gilisa Gould Date of Survey: 9/09/08

Organization: SES, Inc. Position: Field Team Leader

## Field Data Sheets for Recreational Use Stream Surveys

### Data Sheet C - Field Survey Results

Stream Name: <u>Camp Br.</u> Waterbody ID: <u>1258</u> Site #: <u>3</u>  Estimated Channel Incision: <u>5</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>0394287</u> UTM Y: <u>4281187</u> +/- <u>6</u> (meters) <b>11</b> UTM X: <u>0394322</u> UTM Y: <u>4280947</u> +/- <u>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>Bryan Deimeke and Gilisa Gould</u>	<h4 style="text-align: center; margin: 0;">Dissolved Oxygen</h4> Date: <u>9/9/2008</u> Time: <u>15:00</u>  Dissolved Oxygen: <u>8.9</u> (mg/L)  Dissolved Oxygen: _____ (% sat)  Specific Cond: _____ (µS/cm)  Water Temperature: <u>19.3</u> (°C)
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#### Transect Cross-Section

		01		02		03		04		05		06		07		08		09		10		11	
Station		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	0.10	0.01	0.70	0.05	0.60	0.05	0.20	0.01	0.70	0.10	0.70	0.05	0.70	0.05	0.60	0.15	0.60	0.10	0.60	0.05	0.60	0.05
	2	0.20	0.05	1.40	0.30	1.20	0.10	0.40	0.05	1.40	0.15	1.40	0.40	1.40	0.10	1.20	0.25	1.20	0.30	1.20	0.35	1.20	0.30
	3	0.30	0.05	2.10	0.20	1.80	0.05	0.60	0.10	2.10	0.20	2.10	0.50	2.10	0.20	1.80	0.40	1.80	0.50	1.80	0.40	1.80	0.45
	4	0.40	0.05	2.80	0.05	2.40	0.15	0.80	0.10	2.80	0.35	2.80	0.40	2.80	0.30	2.40	0.45	2.40	0.55	2.40	0.50	2.40	0.45
	5	0.50	0.05	3.50	0.00	3.00	0.15	1.00	0.05	3.50	0.45	3.50	0.35	3.50	0.30	3.00	0.45	3.00	0.60	3.00	0.70	3.00	0.35
	6	0.60	0.05	4.20	0.10	3.60	0.10	1.20	0.05	4.20	0.50	4.20	0.25	4.20	0.20	3.60	0.45	3.60	0.60	3.60	0.75	3.60	0.20
	7	0.70	0.01	4.90	0.15	4.20	0.05	1.40	0.01	4.90	0.40	4.90	0.15	4.90	0.15	4.20	0.40	4.20	0.35	4.20	0.60	4.20	0.10
	8	0.80	0.05	5.60	0.10	4.80	0.05	1.60	0.05	5.60	0.20	5.60	0.10	5.60	0.10	4.80	0.25	4.80	0.25	4.80	0.50	4.80	0.10
	9	0.90	0.01	6.30	0.05	5.40	0.01	1.80	0.01	6.30	0.05	6.30	0.05	6.30	0.05	5.40	0.10	5.40	0.10	5.40	0.20	5.40	0.05
<b>Right Bank</b>		1.00	0.00	7.00	0.00	6.00	0.00	2.00	0.00	7.00	0.00	7.00	0.00	7.00	0.00	6.00	0.00	6.00	0.00	6.00	0.00	6.00	0.00
<b>Feature Type</b>		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 0.1 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Surveyor's Signature: Gilisa Gould

Date: 9/9/2008



WBID # 1258

Site # 4

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

**Data Sheet B – Site Characterization** (Page 1 of 3)

(must be completed for each site)

<b>Date &amp; Time:</b> 9/09/08 15:40	Location Description (e.g., road crossing): 251 <sup>st</sup> St.
<b>Stream Name:</b> Camp Br.	
Current Weather Conditions: Clear	Facility Name(s): East Lynne WW Stabilization
Weather Conditions for Past 10 days: 3.96 cm	Permit Number(s): MO0099961
Official Drought Conditions at time of this survey (search DNR home page for “drought”): 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): 0396742	Northing (UTM Y): 4279742	Horizontal Accuracy: (EPE / FOM / PDOP) 7 Meters
Site 11	Easting (UTM X): 0396714	Northing (UTM Y): 4279469	Horizontal Accuracy: (EPE / FOM / PDOP) 7 Meters

**Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
20	Upstream	21	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\*:** (Uses actually observed at the time of survey.)

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

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

**Data Sheet B – Site Characterization** (Page 2 of 3)

**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 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/walkway
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input checked="" type="checkbox"/> Steep slopes	<input type="checkbox"/> Other:
Comments:				

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

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

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

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

None

**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 type="checkbox"/> Green	<input type="checkbox"/> Gray	<input checked="" type="checkbox"/> Milky	<input checked="" type="checkbox"/> Other: Brown
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:

\*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 affect another use.

Site # 4

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

**Data Sheet B – Site Characterization** (Page 3 of 3)

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

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

**Comments:** (Please record any additional comments here.)

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

Printed Names of Personnel Collecting Data: Bryan Deimeke and Gilisa Gould

Surveyor’s Signature: Gilisa Gould Date of Survey: 9/09/08

Organization: SES, Inc. Position: Field Team Leader

## Field Data Sheets for Recreational Use Stream Surveys

### Data Sheet C - Field Survey Results

Stream Name: <u>Camp Br.</u> Waterbody ID: <u>1258</u> Site #: <u>4</u>  Estimated Channel Incision: <u>4</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>0396742</u> UTM Y: <u>4279742</u> +/- <u>7</u> (meters) <b>11</b> UTM X: <u>0396714</u> UTM Y: <u>4279469</u> +/- <u>7</u> (meters)  Average Stream Width: <u>8</u> (meters)                      Length of Survey Segment: <u>160</u> (meters) (To determine Length of Reach)                      (20x average stream width)  Field Staff: <u>Bryan Deimeke and Gilisa Gould</u>	<h4 style="text-align: center; margin: 0;">Dissolved Oxygen</h4> Date: <u>9/9/2008</u> Time: <u>15:40</u>  Dissolved Oxygen: <u>6.2</u> (mg/L)  Dissolved Oxygen: _____ (% sat)  Specific Cond: _____ (µS/cm)  Water Temperature: <u>17.6</u> (°C)
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#### Transect Cross-Section

		01		02		03		04		05		06		07		08		09		10		11	
Station		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	
	<b>1</b>	0.70	0.10	0.80	0.10	0.90	0.05	0.80	0.05	0.80	0.20	0.80	0.10	0.80	0.05	0.80	0.10	0.80	0.05	0.70	0.10	0.80	0.10
	<b>2</b>	1.40	0.20	1.60	0.25	1.80	0.25	1.60	0.40	1.60	0.60	1.60	0.25	1.60	0.15	1.60	0.25	1.60	0.15	1.40	0.20	1.60	0.35
	<b>3</b>	2.10	0.55	2.40	0.35	2.70	0.40	2.40	0.70	2.40	0.65	2.40	0.25	2.40	0.40	2.40	0.35	2.40	0.30	2.10	0.40	2.40	0.75
	<b>4</b>	2.80	0.55	3.20	0.40	3.60	0.50	3.20	0.70	3.20	0.65	3.20	0.20	3.20	0.40	3.20	0.45	3.20	0.40	2.80	0.25	3.20	0.85
	<b>5</b>	3.50	0.50	4.00	0.50	4.50	0.65	4.00	0.55	4.00	0.55	4.00	0.25	4.00	0.40	4.00	0.45	4.00	0.50	3.50	0.35	4.00	0.70
	<b>6</b>	4.20	0.45	4.80	0.40	5.40	0.65	4.80	0.35	4.80	0.55	4.80	0.30	4.80	0.40	4.80	0.45	4.80	0.40	4.20	0.30	4.80	0.70
	<b>7</b>	4.90	0.45	5.60	0.30	6.30	0.65	5.60	0.35	5.60	0.30	5.60	0.45	5.60	0.40	5.60	0.30	5.60	0.30	4.90	0.25	5.60	0.55
	<b>8</b>	5.60	0.25	6.40	0.30	7.20	0.25	6.40	0.25	6.40	0.30	6.40	0.30	6.40	0.20	6.40	0.15	6.40	0.25	5.60	0.20	6.40	0.30
	<b>9</b>	6.30	0.05	7.20	0.25	8.10	0.05	7.20	0.10	7.20	0.20	7.20	0.10	7.20	0.05	7.20	0.05	7.20	0.10	6.30	0.05	7.20	0.10
<b>Right Bank</b>		7.00	0.00	8.00	0.00	9.00	0.00	8.00	0.00	8.00	0.00	8.00	0.00	8.00	0.00	8.00	0.00	8.00	0.00	7.00	0.00	8.00	0.00
<b>Feature Type</b>		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 0.1 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Surveyor's Signature: Gilisa Gould                      Date: 9/15/2008



WBID # 1258

Site # 5

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

**Data Sheet B – Site Characterization** (Page 1 of 3)

(must be completed for each site)

<b>Date &amp; Time:</b> 9/09/08 16:35	Location Description (e.g., road crossing): Upstream Hwy M
<b>Stream Name:</b> Camp Br.	
Current Weather Conditions: Clear	Facility Name(s): East Lynne WW Stabilization
Weather Conditions for Past 10 days: 3.96 cm	Permit Number(s): MO0099961
Official Drought Conditions at time of this survey (search DNR home page for “drought”): 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): 0398563	Northing (UTM Y): 4277928	Horizontal Accuracy: (EPE / FOM / PDOP) 6 Meters
Site 11	Easting (UTM X): 0398708	Northing (UTM Y): 4277757	Horizontal Accuracy: (EPE / FOM / PDOP) 7 Meters

**Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
22	Downstream	23	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\*:** (Uses actually observed at the time of survey.)

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

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

**Data Sheet B – Site Characterization** (Page 2 of 3)

**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 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/walkway
<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\*:** (Attach photos and reference in "Photos" section.)

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

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

5% Cobble	75% Gravel	20% Sand	% Silt	% Mud/Clay	% Bedrock
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**Aquatic Vegetation\*:** (Note amount of vegetation or algal growth at the assessment site.)

None

**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 type="checkbox"/> Green	<input type="checkbox"/> Gray	<input checked="" type="checkbox"/> Milky	<input checked="" type="checkbox"/> Other: Brown
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:

\*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 affect another use.

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

**Data Sheet B – Site Characterization** (Page 3 of 3)

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

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

**Comments:** (Please record any additional comments here.)

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

Printed Names of Personnel Collecting Data: Bryan Deimeke and Gilisa Gould

Surveyor’s Signature: Gilisa Gould Date of Survey: 9.09.08

Organization: SES, Inc. Position: Field Team Leader

## Field Data Sheets for Recreational Use Stream Surveys

### Data Sheet C - Field Survey Results

Stream Name: <u>Camp Br.</u> Waterbody ID: <u>1258</u> Site #: <u>5</u>  Estimated Channel Incision: <u>4</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>0398563</u> UTM Y: <u>4277928</u> +/- <u>6</u> (meters) <b>11</b> UTM X: <u>0398708</u> UTM Y: <u>4277757</u> +/- <u>7</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>Bryan Deimeke and Gilisa Gould</u>	<h4 style="text-align: center; margin: 0;">Dissolved Oxygen</h4> Date: <u>9/9/2008</u> Time: <u>16:35</u>  Dissolved Oxygen: <u>8.5</u> (mg/L)  Dissolved Oxygen: _____ (% sat)  Specific Cond: _____ (µS/cm)  Water Temperature: <u>18.3</u> (°C)
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#### Transect Cross-Section

		01		02		03		04		05		06		07		08		09		10		11	
Station		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	
	<b>1</b>	0.60	0.05	0.30	0.05	0.40	0.01	0.50	0.05	0.40	0.01	0.30	0.05	0.40	0.01	0.60	0.05	0.60	0.05	0.60	0.05	0.60	0.15
	<b>2</b>	1.20	0.20	0.60	0.05	0.80	0.05	1.00	0.05	0.80	0.05	0.60	0.05	0.80	0.01	1.20	0.10	1.20	0.05	1.20	0.20	1.20	0.15
	<b>3</b>	1.80	0.20	0.90	0.10	1.20	0.01	1.50	0.10	1.20	0.05	0.90	0.05	1.20	0.01	1.80	0.15	1.80	0.15	1.80	0.40	1.80	0.20
	<b>4</b>	2.40	0.15	1.20	0.20	1.60	0.05	2.00	0.10	1.60	0.10	1.20	0.15	1.60	0.01	2.40	0.30	2.40	0.01	2.40	0.35	2.40	0.20
	<b>5</b>	3.00	0.10	1.50	0.20	2.00	0.05	2.50	0.15	2.00	0.10	1.50	0.15	2.00	0.05	3.00	0.40	3.00	0.05	3.00	0.35	3.00	0.25
	<b>6</b>	3.60	0.05	1.80	0.15	2.40	0.05	3.00	0.15	2.40	0.10	1.80	0.15	2.40	0.05	3.60	0.45	3.60	0.10	3.60	0.10	3.60	0.15
	<b>7</b>	4.20	0.10	2.10	0.10	2.80	0.05	3.50	0.15	2.80	0.05	2.10	0.05	2.80	0.05	4.20	0.35	4.20	0.05	4.20	0.05	4.20	0.10
	<b>8</b>	4.80	0.05	2.40	0.05	3.20	0.10	4.00	0.10	3.20	0.05	2.40	0.05	3.20	0.01	4.80	0.30	4.80	0.01	4.80	0.05	4.80	0.01
	<b>9</b>	5.40	0.05	2.70	0.01	3.60	0.10	4.50	0.05	3.60	0.01	2.70	0.01	3.60	0.01	5.40	0.10	5.40	0.01	5.40	0.05	5.40	0.01
<b>Right Bank</b>		6.00	0.00	3.00	0.00	4.00	0.00	5.00	0.00	4.00	0.00	3.00	0.00	4.00	0.00	6.00	0.00	6.00	0.00	6.00	0.00	6.00	0.00
<b>Feature Type</b>		pool		pool		pool		pool		pool		run		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 0.1 meter unless depth is too deep to measure (then record as > 1)  
 All measurements to be taken to the nearest 0.01 meter.

Surveyor's Signature: Gilisa Gould                      Date: 9/9/2008



WBID # 1258

Site # 6

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

**Data Sheet B – Site Characterization** (Page 1 of 3)

(must be completed for each site)

<b>Date &amp; Time:</b> 9/10/09 8:50	Location Description (e.g., road crossing): Downstream Hwy M
<b>Stream Name:</b> Camp Br.	
Current Weather Conditions: Overcast	Facility Name(s): East Lynne WW Stabilization
Weather Conditions for Past 10 days: 3.96 cm	Permit Number(s): MO0099961
Official Drought Conditions at time of this survey (search DNR home page for “drought”): 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): 0399243	Northing (UTM Y): 4278069	Horizontal Accuracy: (EPE / FOM / PDOP) 4 Meters
Site 11	Easting (UTM X): 0399396	Northing (UTM Y): 4278182	Horizontal Accuracy: (EPE / FOM / PDOP) 7 Meters

**Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
24	Downstream	25	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\*:** (Uses actually observed at the time of survey.)

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

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

**Data Sheet B – Site Characterization** (Page 2 of 3)

**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 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/walkway
<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\*:** (Attach photos and reference in "Photos" section.)

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

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

% Cobble	% Gravel	30% Sand	20% Silt	50% Mud/Clay	% Bedrock
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**Aquatic Vegetation\*:** (Note amount of vegetation or algal growth at the assessment site.)

None

**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 type="checkbox"/> Green	<input type="checkbox"/> Gray	<input checked="" type="checkbox"/> Milky	<input checked="" type="checkbox"/> Other: Brown
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:

\*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 affect another use.

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

**Data Sheet B – Site Characterization** (Page 3 of 3)

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

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

**Comments:** (Please record any additional comments here.)

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

Printed Names of Personnel Collecting Data: Bryan Deimeke and Gilisa Gould

Surveyor’s Signature: Gilisa Gould Date of Survey: 9/10/08

Organization: SES, Inc. Position: Field Team Leader

## Field Data Sheets for Recreational Use Stream Surveys

### Data Sheet C - Field Survey Results

Stream Name: <u>Camp Br.</u> Waterbody ID: <u>1258</u> Site #: <u>6</u>  Estimated Channel Incision: <u>4</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>0399243</u> UTM Y: <u>4278069</u> +/- <u>4</u> (meters) <b>11</b> UTM X: <u>0399396</u> UTM Y: <u>4278182</u> +/- <u>7</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>Bryan Deimeke and Gilisa Gould</u>	<h4 style="text-align: center; margin: 0;">Dissolved Oxygen</h4> Date: <u>9/10/2008</u> Time: <u>8:50</u>  Dissolved Oxygen: <u>5.1</u> (mg/L)  Dissolved Oxygen: _____ (% sat)  Specific Cond: _____ (µS/cm)  Water Temperature: <u>16.5</u> (°C)
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#### Transect Cross-Section

		01		02		03		04		05		06		07		08		09		10		11	
Station		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
	<b>1</b>	0.70	0.05	0.70	0.20	0.80	0.20	0.80	0.05	0.70	0.20	0.90	0.05	0.80	0.15	0.70	0.15	0.60	0.05	0.70	0.10	0.70	0.40
	<b>2</b>	1.40	0.05	1.40	0.30	1.60	0.40	1.60	0.10	1.40	0.30	1.80	0.01	1.60	0.35	1.40	0.30	1.20	0.10	1.40	0.35	1.40	0.95
	<b>3</b>	2.10	0.10	2.10	0.30	2.40	0.80	2.40	0.25	2.10	0.45	2.70	0.15	2.40	0.15	2.10	0.40	1.80	0.25	2.10	0.40	2.10	1.00
	<b>4</b>	2.80	0.25	2.80	0.50	3.20	0.90	3.20	0.40	2.80	0.45	3.60	0.00	3.20	0.65	2.80	0.65	2.40	0.30	2.80	0.30	2.80	1.00
	<b>5</b>	3.50	0.30	3.50	0.55	4.00	0.90	4.00	0.85	3.50	0.45	4.50	0.00	4.00	0.30	3.50	0.70	3.00	0.30	3.50	0.50	3.50	0.95
	<b>6</b>	4.20	0.35	4.20	0.40	4.80	0.35	4.80	1.00	4.20	0.35	5.40	0.00	4.80	0.50	4.20	0.90	3.60	0.35	4.20	0.85	4.20	0.65
	<b>7</b>	4.90	0.15	4.90	0.30	5.60	0.60	5.60	1.00	4.90	0.25	6.30	0.00	5.60	0.50	4.90	0.85	4.20	0.30	4.90	0.75	4.90	0.50
	<b>8</b>	5.60	0.15	5.60	0.30	6.40	0.65	6.40	0.70	5.60	0.10	7.20	0.20	6.40	0.30	5.60	0.95	4.80	0.15	5.60	0.70	5.60	0.20
	<b>9</b>	6.30	0.05	6.30	0.15	7.20	0.30	7.20	0.30	6.30	0.05	8.10	0.30	7.20	0.10	6.30	0.80	5.40	0.05	6.30	0.20	6.30	0.05
<b>Right Bank</b>		7.00	0.00	7.00	0.00	8.00	0.00	8.00	0.00	7.00	0.00	9.00	0.00	8.00	0.00	7.00	0.00	6.00	0.00	7.00	0.00	7.00	0.00
<b>Feature Type</b> <small>(riffle, run, or pool)</small>		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 0.1 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Surveyor's Signature: Gilisa Gould      Date: 9/15/2008



WBID # 1258

Site # 7

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

**Data Sheet B – Site Characterization** (Page 1 of 3)

(must be completed for each site)

<b>Date &amp; Time:</b> 9/10/08      10:15	Location Description (e.g., road crossing): Old Drum Rd.
<b>Stream Name:</b> Camp Br.	
Current Weather Conditions: Cloudy	Facility Name(s): East Lynne WW Stabilization
Weather Conditions for Past 10 days: 3.96 cm	Permit Number(s): MO0099961
Official Drought Conditions at time of this survey (search DNR home page for “drought”): 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): 0400462	Northing (UTM Y): 4278910	Horizontal Accuracy: (EPE / FOM / PDOP)	3 Meters
Site 11	Easting (UTM X): 0400686	Northing (UTM Y): 4278828	Horizontal Accuracy: (EPE / FOM / PDOP)	7 Meters

**Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
26	Downstream	27	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\*:** (Uses actually observed at the time of survey.)

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

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

**Data Sheet B – Site Characterization** (Page 2 of 3)

**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 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/walkway
<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\*:** (Attach photos and reference in “Photos” section.)

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

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

10% Cobble	40% Gravel	30% Sand	% Silt	% Mud/Clay	20% Bedrock
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**Aquatic Vegetation\*:** (Note amount of vegetation or algal growth at the assessment site.)

None

**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 type="checkbox"/> Green	<input type="checkbox"/> Gray	<input checked="" type="checkbox"/> Milky	<input checked="" type="checkbox"/> Other: Brown
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:

\*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 affect another use.

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

**Data Sheet B – Site Characterization** (Page 3 of 3)

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

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

**Comments:** (Please record any additional comments here.)

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

Printed Names of Personnel Collecting Data: Bryan Deimeke and Gilisa Gould

Surveyor's Signature: Gilisa Gould Date of Survey: 9/10/08

Organization: SES, Inc. Position: Field Team Leader

## Field Data Sheets for Recreational Use Stream Surveys

### Data Sheet C - Field Survey Results

Stream Name: <u>Camp Br.</u> Waterbody ID: <u>1258</u> Site #: <u>7</u>  Estimated Channel Incision: <u>3</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>0400462</u> UTM Y: <u>4278910</u> +/- <u>3</u> (meters) <b>11</b> UTM X: <u>0400686</u> UTM Y: <u>4278828</u> +/- <u>7</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>Bryan Deimeke and Gilisa Gould</u>	<h4 style="text-align: center; margin: 0;">Dissolved Oxygen</h4> Date: <u>9/10/2008</u> Time: <u>10:15</u>  Dissolved Oxygen: <u>6.4</u> (mg/L)  Dissolved Oxygen: _____ (% sat)  Specific Cond: _____ (µS/cm)  Water Temperature: <u>17.6</u> (°C)
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#### Transect Cross-Section

		01		02		03		04		05		06		07		08		09		10		11	
Station		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	
	<b>1</b>	0.80	0.01	0.80	0.30	0.60	0.15	0.40	0.10	0.40	0.15	0.70	0.01	0.40	0.05	0.40	0.25	0.50	0.05	0.70	0.05	0.50	0.05
	<b>2</b>	1.60	0.05	1.60	0.45	1.20	0.30	0.80	0.20	0.80	0.30	1.40	0.15	0.80	0.20	0.80	0.30	1.00	0.25	1.40	0.20	1.00	0.15
	<b>3</b>	2.40	0.10	2.40	0.45	1.80	0.30	1.20	0.25	1.20	0.35	2.10	0.30	1.20	0.40	1.20	0.40	1.50	0.35	2.10	0.35	1.50	0.25
	<b>4</b>	3.20	0.00	3.20	0.45	2.40	0.30	1.60	0.25	1.60	0.35	2.80	0.35	1.60	0.70	1.60	0.55	2.00	0.40	2.80	0.40	2.00	0.25
	<b>5</b>	4.00	0.01	4.00	0.50	3.00	0.25	2.00	0.30	2.00	0.40	3.50	0.30	2.00	0.65	2.00	0.50	2.50	0.25	3.50	0.25	2.50	0.20
	<b>6</b>	4.80	0.00	4.80	0.50	3.60	0.25	2.40	0.35	2.40	0.30	4.20	0.30	2.40	0.40	2.40	0.35	3.00	0.25	4.20	0.20	3.00	0.20
	<b>7</b>	5.60	0.10	5.60	0.45	4.20	0.20	2.80	0.25	2.80	0.20	4.90	0.30	2.80	0.25	2.80	0.15	3.50	0.25	4.90	0.20	3.50	0.10
	<b>8</b>	6.40	0.20	6.40	0.40	4.80	0.15	3.20	0.10	3.20	0.10	5.60	0.15	3.20	0.10	3.20	0.05	4.00	0.15	5.60	0.05	4.00	0.05
	<b>9</b>	7.20	0.15	7.20	0.10	5.40	0.10	3.60	0.01	3.60	0.01	6.30	0.05	3.60	0.01	3.60	0.01	4.50	0.05	6.30	0.05	4.50	0.05
<b>Right Bank</b>		8.00	0.00	8.00	0.00	6.00	0.00	4.00	0.00	4.00	0.00	7.00	0.00	4.00	0.00	4.00	0.00	5.00	0.00	7.00	0.00	5.00	0.00
<b>Feature Type</b>		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 0.1 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Surveyor's Signature: Gilisa Gould                      Date: 9/15/2008



WBID # 1258

Site # 8

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

**Data Sheet B – Site Characterization** (Page 1 of 3)

(must be completed for each site)

<b>Date &amp; Time:</b> 9/10/08 10:50	Location Description (e.g., road crossing): LL Ln
<b>Stream Name:</b> Camp Br.	
Current Weather Conditions: Cloudy	Facility Name(s): East Lynne WW Stabilization
Weather Conditions for Past 10 days: 3.96 cm	Permit Number(s): MO 0099961
Official Drought Conditions at time of this survey (search DNR home page for “drought”): 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): 0402003	Northing (UTM Y): 4277852	Horizontal Accuracy: (EPE / FOM / PDOP) 3 Meters
Site 11	Easting (UTM X): 0402197	Northing (UTM Y): 4277611	Horizontal Accuracy: (EPE / FOM / PDOP) 3 Meters

**Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
28	Downstream	29	Upstream	30	Road/Cattle Trail
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

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

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

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

**Data Sheet B – Site Characterization** (Page 2 of 3)

**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 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/walkway
<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\*:** (Attach photos and reference in “Photos” section.)

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input type="checkbox"/> RV / ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input checked="" type="checkbox"/> Livestock Watering
<input type="checkbox"/> None of the above	Comments / Other: Road at transect 11			

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

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

None
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**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 type="checkbox"/> Green	<input type="checkbox"/> Gray	<input checked="" type="checkbox"/> Milky	<input checked="" type="checkbox"/> Other: Brown
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:

\*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 affect another use.

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

**Data Sheet B – Site Characterization** (Page 3 of 3)

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

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

**Comments:** (Please record any additional comments here.)

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

Printed Names of Personnel Collecting Data: Bryan Deimeke and Gilisa Gould

Surveyor’s Signature: Gilisa Gould Date of Survey: 9/10/08

Organization: SES, Inc. Position: Field Team Leader

## Field Data Sheets for Recreational Use Stream Surveys

### Data Sheet C - Field Survey Results

Stream Name: <u>Camp Br.</u> Waterbody ID: <u>1258</u> Site #: <u>8</u>  Estimated Channel Incision: <u>4</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>0402003</u> UTM Y: <u>4277852</u> +/- <u>3</u> (meters) <b>11</b> UTM X: <u>0402197</u> UTM Y: <u>4277611</u> +/- <u>3</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>Bryan Deimeke and Gilisa Gould</u>	<h4 style="text-align: center; margin: 0;">Dissolved Oxygen</h4> Date: <u>9/10/2008</u> Time: <u>10:50</u>  Dissolved Oxygen: <u>7.4</u> (mg/L)  Dissolved Oxygen: _____ (% sat)  Specific Cond: _____ (µS/cm)  Water Temperature: <u>17.6</u> (°C)
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#### Transect Cross-Section

		01		02		03		04		05		06		07		08		09		10		11	
Station		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	0.20	0.01	0.70	0.05	0.70	0.15	0.70	0.15	0.60	0.05	0.70	0.05	0.90	0.35	0.80	0.70	0.80	0.10	1.00	0.20	1.20	0.15
	2	0.40	0.05	1.40	0.20	1.40	0.25	1.40	0.55	1.20	0.20	1.40	0.20	1.80	0.70	1.60	0.90	1.60	0.50	2.00	0.60	2.40	0.25
	3	0.60	0.05	2.10	0.25	2.10	0.30	2.10	0.80	1.80	0.40	2.10	0.25	2.70	0.95	2.40	1.00	2.40	0.80	3.00	0.70	3.60	0.40
	4	0.80	0.05	2.80	0.30	2.80	0.40	2.80	0.70	2.40	0.40	2.80	0.40	3.60	1.00	3.20	1.00	3.20	0.90	4.00	0.90	4.80	0.35
	5	1.00	0.05	3.50	0.35	3.50	0.55	3.50	0.50	3.00	0.20	3.50	0.55	4.50	1.00	4.00	1.00	4.00	0.85	5.00	1.00	6.00	0.45
	6	1.20	0.05	4.20	0.35	4.20	0.45	4.20	0.45	3.60	0.15	4.20	0.55	5.40	0.95	4.80	0.95	4.80	0.65	6.00	1.00	7.20	0.50
	7	1.40	0.01	4.90	0.25	4.90	0.30	4.90	0.30	4.20	0.15	4.90	0.25	6.30	0.70	5.60	0.80	5.60	0.60	7.00	0.80	8.40	0.45
	8	1.60	0.01	5.60	0.25	5.60	0.20	5.60	0.25	4.80	0.10	5.60	0.15	7.20	0.60	6.40	0.70	6.40	0.50	8.00	0.70	9.60	0.45
	9	1.80	0.01	6.30	0.10	6.30	0.10	6.30	0.10	5.40	0.05	6.30	0.10	8.10	0.20	7.20	0.40	7.20	0.25	9.00	0.35	10.80	0.30
<b>Right Bank</b>		2.00	0.00	7.00	0.00	7.00	0.00	7.00	0.00	6.00	0.00	7.00	0.00	9.00	0.00	8.00	0.00	8.00	0.00	10.00	0.00	12.00	0.00
<b>Feature Type</b> <small>(riffle, run, or pool)</small>		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 0.1 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Surveyor's Signature: Gilisa Gould                      Date: 9/10/2008





WBID # 1258

Site # 9

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

**Data Sheet B – Site Characterization** (Page 1 of 3)

(must be completed for each site)

<b>Date &amp; Time:</b> 9/10/08 11:55	Location Description (e.g., road crossing): CR 1921
<b>Stream Name:</b> Camp Br.	
Current Weather Conditions: Cloudy	Facility Name(s): East Lynne WW Stabilization
Weather Conditions for Past 10 days: 3.96 cm	Permit Number(s): MO0099961
Official Drought Conditions at time of this survey (search DNR home page for “drought”): 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): 0403738	Northing (UTM Y): 4277511	Horizontal Accuracy: (EPE / FOM / PDOP) 6 Meters
Site 11	Easting (UTM X): 0404007	Northing (UTM Y): 4277490	Horizontal Accuracy: (EPE / FOM / PDOP) 3 Meters

**Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
31	Upstream	32	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\*:** (Uses actually observed at the time of survey.)

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

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

**Data Sheet B – Site Characterization** (Page 2 of 3)

**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 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/walkway
<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\*:** (Attach photos and reference in “Photos” section.)

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

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

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

None

**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 type="checkbox"/> Green	<input type="checkbox"/> Gray	<input checked="" type="checkbox"/> Milky	<input checked="" type="checkbox"/> Other: Brown
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:

\*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 affect another use.

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

**Data Sheet B – Site Characterization** (Page 3 of 3)

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

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

**Comments:** (Please record any additional comments here.)

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

Printed Names of Personnel Collecting Data: Bryan Deimeke and Gilisa Gould

Surveyor's Signature: Gilisa Gould Date of Survey: 9/10/08

Organization: SES, Inc. Position: Field Team Leader

## Field Data Sheets for Recreational Use Stream Surveys

### Data Sheet C - Field Survey Results

Stream Name: <u>Camp Br.</u> Waterbody ID: <u>1258</u> Site #: <u>9</u> Estimated Channel Incision: <u>5</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>0403738</u> UTM Y: <u>4277511</u> +/- <u>6</u> (meters) <b>11</b> UTM X: <u>0404007</u> UTM Y: <u>4277490</u> +/- <u>3</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>Bryan Deimeke and Gilisa Gould</u>	<h4 style="text-align: center; margin: 0;">Dissolved Oxygen</h4> Date: <u>9/10/2008</u> Time: <u>11:55</u> Dissolved Oxygen: <u>7.0</u> (mg/L) Dissolved Oxygen: _____ (% sat) Specific Cond: _____ (µS/cm) Water Temperature: <u>17.7</u> (°C)
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#### Transect Cross-Section

	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	0.80	0.10	0.20	0.01	0.70	0.10	0.80	0.10	0.80	0.05	0.50	0.10	0.60	0.15	0.70	0.20	0.70	0.25	0.60	0.10	0.30	0.01
2	1.60	0.35	0.40	0.01	1.40	0.20	1.60	0.50	1.60	0.30	1.00	0.30	1.20	0.40	1.40	0.35	1.40	0.60	1.20	0.40	0.60	0.01
3	2.40	0.50	0.60	0.01	2.10	0.40	2.40	0.55	2.40	0.40	1.50	0.60	1.80	0.45	2.10	0.50	2.10	0.75	1.80	0.45	0.90	0.05
4	3.20	0.50	0.80	0.01	2.80	0.50	3.20	0.80	3.20	0.30	2.00	0.65	2.40	0.50	2.80	0.65	2.80	0.90	2.40	0.60	1.20	0.05
5	4.00	0.50	1.00	0.05	3.50	0.60	4.00	0.75	4.00	0.35	2.50	0.55	3.00	0.55	3.50	0.65	3.50	1.00	3.00	0.60	1.50	0.05
6	4.80	0.50	1.20	0.01	4.20	0.55	4.80	0.70	4.80	0.25	3.00	0.40	3.60	0.55	4.20	0.80	4.20	0.90	3.60	0.60	1.80	0.01
7	5.60	0.50	1.40	0.05	4.90	0.45	5.60	0.70	5.60	0.35	3.50	0.25	4.20	0.70	4.90	0.25	4.90	0.65	4.20	0.50	2.10	0.00
8	6.40	0.50	1.60	0.10	5.60	0.25	6.40	0.50	6.40	0.40	4.00	0.20	4.80	0.30	5.60	0.30	5.60	0.50	4.80	0.45	2.40	0.05
9	7.20	0.30	1.80	0.05	6.30	0.10	7.20	0.15	7.20	0.10	4.50	0.05	5.40	0.10	6.30	0.10	6.30	0.20	5.40	0.25	2.70	0.01
<b>Right Bank</b>	8.00	0.00	2.00	0.00	7.00	0.00	8.00	0.00	8.00	0.00	5.00	0.00	6.00	0.00	7.00	0.00	7.00	0.00	6.00	0.00	3.00	0.00
<b>Feature Type</b> <small>(riffle, run, or pool)</small>	pool		riffle		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 0.1 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Surveyor's Signature: Gilisa Gould      Date: 9/15/2008



WBID # 1258

Site # 10

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

**Data Sheet B – Site Characterization** (Page 1 of 3)

(must be completed for each site)

<b>Date &amp; Time:</b> 9/10/08 12:15	Location Description (e.g., road crossing): At mouth entering Big Creek
<b>Stream Name:</b> Camp Br.	
Current Weather Conditions: Cloudy	Facility Name(s): East Lynne WW Stabilization
Weather Conditions for Past 10 days: 3.96 cm	Permit Number(s): MO0099961
Official Drought Conditions at time of this survey (search DNR home page for “drought”): 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): 0405430	Northing (UTM Y): 4277144	Horizontal Accuracy: (EPE / FOM / PDOP) 7 Meters
Site 11	Easting (UTM X): 0405563	Northing (UTM Y): 4276935	Horizontal Accuracy: (EPE / FOM / PDOP) 4 Meters

**Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
33	Upstream	34	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\*:** (Uses actually observed at the time of survey.)

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

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

**Data Sheet B – Site Characterization** (Page 2 of 3)

**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 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/walkway
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep slopes	<input checked="" type="checkbox"/> Other: Crop Fields
Comments:				

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

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

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

% Cobble	% Gravel	% Sand	30% Silt	70% Mud/Clay	% Bedrock
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**Aquatic Vegetation\*:** (Note amount of vegetation or algal growth at the assessment site.)

None
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**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 type="checkbox"/> Green	<input type="checkbox"/> Gray	<input checked="" type="checkbox"/> Milky	<input checked="" type="checkbox"/> Other: Brown
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:

\*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 affect another use.

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

**Data Sheet B – Site Characterization** (Page 3 of 3)

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

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

**Comments:** (Please record any additional comments here.)

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

Printed Names of Personnel Collecting Data: Bryan Deimeke and Gilisa Gould

Surveyor’s Signature: Gilisa Gould Date of Survey: 9/10/08

Organization: SES, Inc. Position: Field Team Leader

## Field Data Sheets for Recreational Use Stream Surveys

### Data Sheet C - Field Survey Results

Stream Name: <u>Camp Br.</u> Waterbody ID: <u>1258</u> Site #: <u>10</u> Estimated Channel Incision: <u>5</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>0405430</u> UTM Y: <u>4277144</u> +/- <u>7</u> (meters) <b>11</b> UTM X: <u>0405563</u> UTM Y: <u>4276935</u> +/- <u>4</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>Bryan Deimeke and Gilisa Gould</u>	<h4 style="text-align: center; margin: 0;">Dissolved Oxygen</h4> Date: <u>9/10/2008</u> Time: <u>12:45</u> Dissolved Oxygen: <u>6.6</u> (mg/L) Dissolved Oxygen: _____ (% sat) Specific Cond: _____ (µS/cm) Water Temperature: <u>17.9</u> (°C)
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#### Transect Cross-Section

	01		02		03		04		05		06		07		08		09		10		11	
	Station	Distance (m)	Depth (m)	Distance (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	0.40	0.25	0.40	0.10	0.50	0.20	0.60	0.10	0.60	0.20	0.60	0.35	0.70	0.35	0.70	0.10	0.70	0.30	0.70	0.40	0.70	1.00
2	0.80	0.55	0.80	0.35	1.00	0.25	1.20	0.20	1.20	0.40	1.20	0.60	1.40	0.60	1.40	0.35	1.40	0.70	1.40	0.70	1.40	1.00
3	1.20	0.60	1.20	0.30	1.50	0.50	1.80	0.25	1.80	0.40	1.80	0.65	2.10	1.00	2.10	0.50	2.10	0.90	2.10	0.90	2.10	1.00
4	1.60	0.80	1.60	0.40	2.00	0.75	2.40	0.40	2.40	0.40	2.40	0.65	2.80	0.85	2.80	0.85	2.80	1.00	2.80	0.85	2.80	1.00
5	2.00	1.00	2.00	0.60	2.50	0.65	3.00	0.50	3.00	0.40	3.00	0.65	3.50	0.75	3.50	1.00	3.50	1.00	3.50	0.75	3.50	1.00
6	2.40	0.90	2.40	0.80	3.00	0.40	3.60	0.55	3.60	0.15	3.60	0.40	4.20	0.65	4.20	1.00	4.20	0.90	4.20	0.70	4.20	1.00
7	2.80	0.75	2.80	0.65	3.50	0.30	4.20	0.45	4.20	0.15	4.20	0.35	4.90	0.50	4.90	1.00	4.90	0.85	4.90	0.65	4.90	1.00
8	3.20	0.45	3.20	0.40	4.00	0.15	4.80	0.40	4.80	0.25	4.80	0.10	5.60	0.30	5.60	0.50	5.60	0.65	5.60	0.60	5.60	1.00
9	3.60	0.30	3.60	0.20	4.50	0.10	5.40	0.05	5.40	0.10	5.40	0.05	6.30	0.15	6.30	0.15	6.30	0.35	6.30	0.20	6.30	1.00
<b>Right Bank</b>	4.00	0.00	4.00	0.00	5.00	0.00	6.00	0.00	6.00	0.00	6.00	0.00	7.00	0.00	7.00	0.00	7.00	0.00	7.00	0.00	7.00	0.00
<b>Feature Type</b> <small>(riffle, run, or pool)</small>	run		run		run		run		run		run		run		run		run		run		run	

**Notes:** Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width  
 GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.  
 Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)  
 Mark dry depth measurements as 0; record actual measurements to 0.1 meter unless depth is too deep to measure (then record as > 1)  
 All measurements to be taken to the nearest 0.01 meter.

Surveyor's Signature: Gilisa Gould                      Date: 9/15/2008

