



Missouri  
Department of  
Natural Resources

## Use Attainability Analysis

for

WBID 3441 Tributary of East Fork Sin-A-Bar

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): Trib to E. Fk. Sni-a-bar
Missouri Water Body Identification (WBID) Number: 3441
8-digit HUC: 10300101
County(ies), Listed Upstream to Downstream: Lafayette
Upstream Legal Description (from Table H): T48N R28W Sec 15
Downstream Legal Description (from Table H): T48N R28W Sec 9
Number of sites evaluated: 3
List all site numbers, <u>consecutively upstream to downstream</u> : 3, 2, 1
<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): Odessa West Lagoon MO0026395
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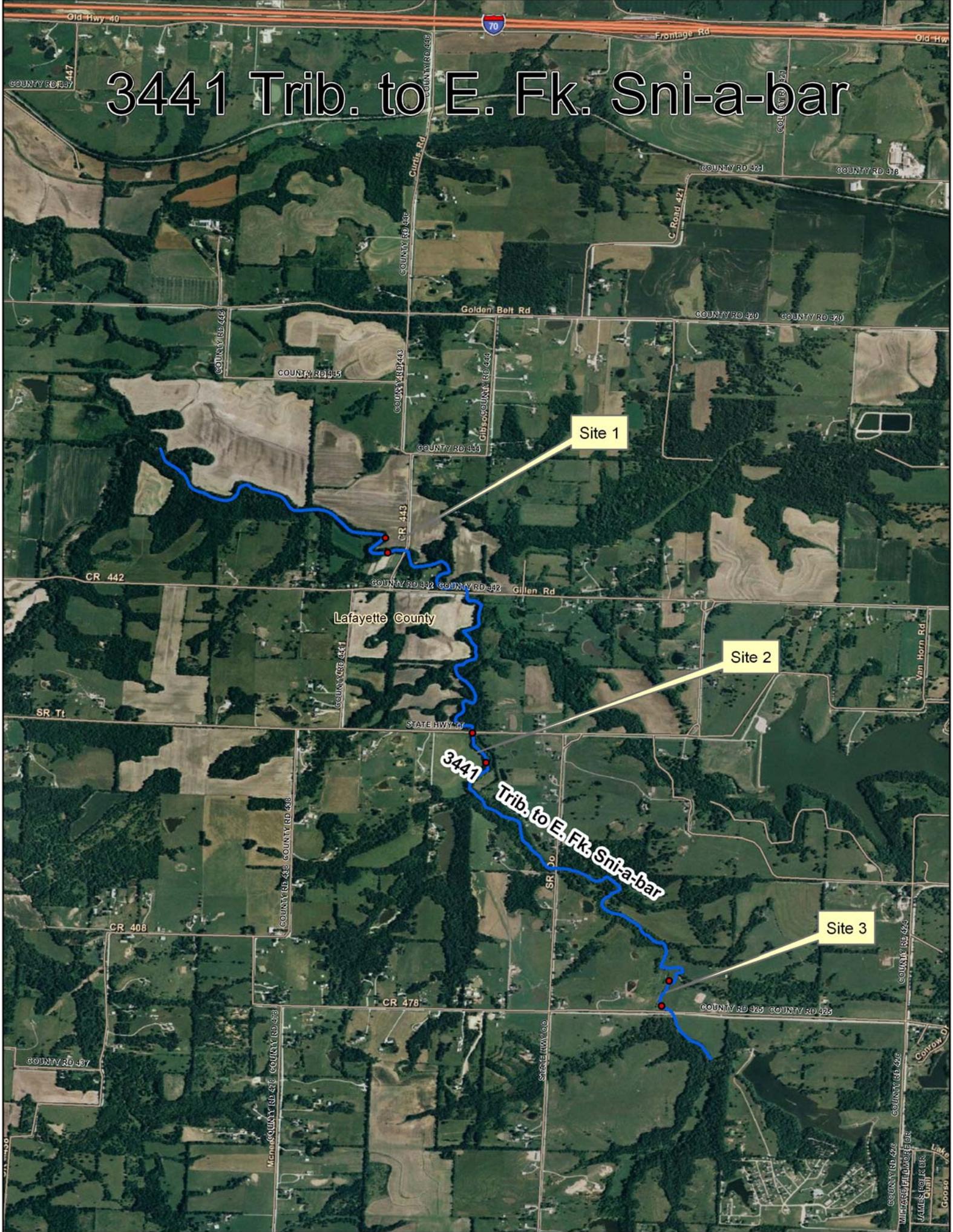
**III. UAA Surveyor** (please **PRINT** legibly)

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:** 10.06.08

# 3441 Trib. to E. Fk. Sni-a-bar



Site 1

Site 2

Site 3

3441 Trib. to E. Fk. Sni-a-bar

Lafayette County



Old Hwy 40  
Frontage Rd  
Old Hwy  
COUNTY RD 447  
COUNTY RD 448  
COUNTY RD 449  
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Gillen Rd  
Van Horn Rd  
SR Tt  
STATE HWY 77  
SR 30  
STATE HWY 60  
McNee COUNTY RD 436  
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COUNTY RD 500  
Lakes  
Goosoo

WBID # 3441

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> 9/16/08                      15:40	Location Description (e.g., road crossing): CR 425
<b>Stream Name:</b> Trib to E. Fk. Sni-a-bar	
Current Weather Conditions: Clear	Facility Name(s): Osborn WWTF
Weather Conditions for Past 10 days: 10.87 cm	Permit Number(s): MO0099856
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): 0413744	Northing (UTM Y): 4312601	Horizontal Accuracy: (EPE / FOM / PDOP)    5 Meters
Site 11	Easting (UTM X): 0413780	Northing (UTM Y): 4312750	Horizontal Accuracy: (EPE / FOM / PDOP)    3 Meters

**Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
14	Road crossing	15	downstream	16	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 checked="" type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep slopes	<input checked="" type="checkbox"/> Other: pasture
Comments:				

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

<input checked="" 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 type="checkbox"/> None of the above	Comments / Other:			

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

70% Cobble	10% Gravel	10% Sand	% Silt	% Mud/Clay	10% 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 type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input checked="" type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

\*This information is not to be used solely for removal of a recreational use designation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that 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: 9/16/2008

Organization: SES, Inc. Position: Field Team Leader

## Field Data Sheets for Recreational Use Stream Surveys

### Data Sheet C - Field Survey Results

Stream Name: <u>Trib to E. Fk. Sni-a-bar</u> Waterbody ID: <u>3441</u> Site #: <u>1</u>  Estimated Channel Incision: <u>1</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>0413744</u> UTM Y: <u>4312601</u> +/- <u>5</u> (meters) <b>11</b> UTM X: <u>0413780</u> UTM Y: <u>4312750</u> +/- <u>3</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>Gilisa Gould and Bryan Deimeke</u>	<h4 style="text-align: center; margin: 0;">Dissolved Oxygen</h4> Date: <u>9/16/2008</u> Time: <u>15:40</u>  Dissolved Oxygen: <u>7.9</u> (mg/L)  Dissolved Oxygen: _____ (% sat)  Specific Cond: _____ (µS/cm)  Water Temperature: <u>23.1</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>	0.30	0.01	0.60	0.20	0.80	0.25	0.50	0.20	0.20	0.10	0.30	0.05	0.30	0.20	0.20	0.10	0.40	0.10	0.40	0.20	0.40	0.15
	<b>2</b>	0.60	0.05	1.20	0.45	1.60	0.40	1.00	0.40	0.40	0.15	0.60	0.20	0.60	0.30	0.40	0.15	0.80	0.30	0.80	0.30	0.80	0.25
	<b>3</b>	0.90	0.10	1.80	0.60	2.40	0.40	1.50	0.45	0.60	0.10	0.90	0.25	0.90	0.50	0.60	0.15	1.20	0.40	1.20	0.40	1.20	0.30
	<b>4</b>	1.20	0.10	2.40	0.55	3.20	0.40	2.00	0.60	0.80	0.20	1.20	0.20	1.20	0.55	0.80	0.20	1.60	0.40	1.60	0.45	1.60	0.35
	<b>5</b>	1.50	0.15	3.00	0.60	4.00	0.40	2.50	0.60	1.00	0.15	1.50	0.20	1.50	0.45	1.00	0.25	2.00	0.45	2.00	0.45	2.00	0.40
	<b>6</b>	1.80	0.15	3.60	0.55	4.80	0.30	3.00	0.60	1.20	0.05	1.80	0.20	1.80	0.35	1.20	0.20	2.40	0.40	2.40	0.50	2.40	0.35
	<b>7</b>	2.10	0.10	4.20	0.60	5.60	0.30	3.50	0.50	1.40	0.15	2.10	0.15	2.10	0.30	1.40	0.15	2.80	0.40	2.80	0.50	2.80	0.35
	<b>8</b>	2.40	0.10	4.80	0.45	6.40	0.45	4.00	0.45	1.60	0.10	2.40	0.15	2.40	0.25	1.60	0.15	3.20	0.35	3.20	0.25	3.20	0.30
	<b>9</b>	2.70	0.05	5.40	0.15	7.20	0.20	4.50	0.25	1.80	0.05	2.70	0.05	2.70	0.05	1.80	0.05	3.60	0.05	3.60	0.10	3.60	0.20
<b>Right Bank</b>		3.00	0.00	6.00	0.00	8.00	0.00	5.00	0.00	2.00	0.00	3.00	0.00	3.00	0.00	2.00	0.00	4.00	0.00	4.00	0.00	4.00	0.00
<b>Feature Type</b>		rifle		run		pool		run		rifle		rifle		run		run		pool		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: 10.06.08

WBID # 3441

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> 9/16/2008 15:00	Location Description (e.g., road crossing): CR 425
<b>Stream Name:</b> Trib to E. Fk. Sni-a-bar	
Current Weather Conditions: Clear	Facility Name(s): Osborn WWTF
Weather Conditions for Past 10 days: 10.87 cm	Permit Number(s): MO0099856
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): 0412968	Northing (UTM Y): 4313992	Horizontal Accuracy: (EPE / FOM / PDOP) 2 Meters
Site 11	Easting (UTM X):0412907	Northing (UTM Y): 4314194	Horizontal Accuracy: (EPE / FOM / PDOP) 4 Meters

**Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
12	upstream	13	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 checked="" type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep slopes	<input type="checkbox"/> Other: pasture
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	40% Gravel	40% 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
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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 checked="" type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input checked="" 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:

\*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: 9/16/2008

Organization: SES, Inc. Position: Field Team Leader

## Field Data Sheets for Recreational Use Stream Surveys

### Data Sheet C - Field Survey Results

Stream Name: <u>Trib to E. Fk. Sni-a-bar</u> Waterbody ID: <u>3441</u> Site #: <u>2</u> Estimated Channel Incision: <u>2</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>0412968</u> UTM Y: <u>4313992</u> +/- <u>2</u> (meters) <b>11</b> UTM X: <u>0412907</u> UTM Y: <u>4314194</u> +/- <u>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>Gilisa Gould and Bryan Deimeke</u>	<h4 style="text-align: center; margin: 0;">Dissolved Oxygen</h4> Date: <u>9/16/2008</u> Time: <u>15:00</u> Dissolved Oxygen: <u>8.8</u> (mg/L) Dissolved Oxygen: _____ (% sat) Specific Cond: _____ (µS/cm) Water Temperature: <u>20.2</u> (°C)
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#### Transect Cross-Section

Station		01		02		03		04		05		06		07		08		09		10		11	
		Distance (m)	Depth (m)																				
<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	0.20	0.05	0.40	0.05	0.50	0.10	0.30	0.20	0.40	0.10	0.40	0.10	0.30	0.20	0.40	0.25	0.40	0.20	0.50	0.10	0.40	0.20
	2	0.40	0.10	0.80	0.10	1.00	0.20	0.60	0.50	0.80	0.10	0.80	0.05	0.60	0.40	0.80	0.40	0.80	0.45	1.00	0.35	0.80	0.15
	3	0.60	0.10	1.20	0.15	1.50	0.25	0.90	0.60	1.20	0.20	1.20	0.10	0.90	0.45	1.20	0.45	1.20	0.55	1.50	0.50	1.20	0.15
	4	0.80	0.15	1.60	0.20	2.00	0.45	1.20	0.55	1.60	0.20	1.60	0.20	1.20	0.40	1.60	0.30	1.60	0.55	2.00	0.60	1.60	0.15
	5	1.00	0.15	2.00	0.20	2.50	0.70	1.50	0.45	2.00	0.20	2.00	0.30	1.50	0.35	2.00	0.30	2.00	0.55	2.50	0.70	2.00	0.20
	6	1.20	0.15	2.40	0.20	3.00	0.90	1.80	0.35	2.40	0.20	2.40	0.30	1.80	0.25	2.40	0.25	2.40	0.40	3.00	0.70	2.40	0.25
	7	1.40	0.15	2.80	0.20	3.50	0.95	2.10	0.20	2.80	0.20	2.80	0.35	2.10	0.15	2.80	0.25	2.80	0.30	3.50	0.70	2.80	0.25
	8	1.60	0.15	3.20	0.15	4.00	0.75	2.40	0.15	3.20	0.25	3.20	0.30	2.40	0.10	3.20	0.20	3.20	0.35	4.00	0.60	3.20	0.30
	9	1.80	0.05	3.60	0.10	4.50	0.40	2.70	0.05	3.60	0.15	3.60	0.20	2.70	0.05	3.60	0.05	3.60	0.15	4.50	0.20	3.60	0.20
<b>Right Bank</b>		2.00	0.00	4.00	0.00	5.00	0.00	3.00	0.00	4.00	0.00	4.00	0.00	3.00	0.00	4.00	0.00	4.00	0.00	5.00	0.00	4.00	0.00
<b>Feature Type</b>		riffle		run		pool		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: 10.06.08



WBID # 3441

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> 9/16/08 14:07	Location Description (e.g., road crossing): CR 425
<b>Stream Name:</b> Trib to E. Fk. Sni-a-bar	
Current Weather Conditions: Clear	Facility Name(s): Osborn WWTF
Weather Conditions for Past 10 days: 10.87 cm	Permit Number(s): MO0099856
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): 0412534	Northing (UTM Y): 4315247	Horizontal Accuracy: (EPE / FOM / PDOP) 7 Meters
Site 11	Easting (UTM X): 0412528	Northing (UTM Y): 4315333	Horizontal Accuracy: (EPE / FOM / PDOP) 3 Meters

**Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
9	downstream	10	upstream	11	Tree stand
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 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	10% Gravel	80% Sand	5% Silt	5% Mud/Clay	10% 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 checked="" type="checkbox"/> Clear	<input checked="" type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input 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.)

Tree stand just upstream site 3.

**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: 9/16/2008

Organization: SES, Inc. Position: Field Team Leader

## Field Data Sheets for Recreational Use Stream Surveys

### Data Sheet C - Field Survey Results

Stream Name: <u>Trib to E. Fk. Sni-a-bar</u> Waterbody ID: <u>3441</u> Site #: <u>3</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>0412534</u> UTM Y: <u>4315247</u> +/- <u>7</u> (meters) <b>11</b> UTM X: <u>0412528</u> UTM Y: <u>4315333</u> +/- <u>3</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>Gilisa Gould and Bryan Deimeke</u>	<b>Dissolved Oxygen</b>
	Date: <u>9/16/2008</u> Time: <u>14:07</u>
	Dissolved Oxygen: <u>9.1</u> (mg/L)
	Dissolved Oxygen: _____ (% sat)
	Specific Cond: _____ (µS/cm)
	Water Temperature: <u>20.3</u> (°C)

#### 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	0.60	0.05	0.40	0.20	0.40	0.40	0.40	0.10	0.50	0.10	0.50	0.15	0.50	0.10	0.40	0.05	0.50	0.10	0.50	0.10	0.60	0.15
	2	1.20	0.15	0.80	0.40	0.80	0.60	0.80	0.40	1.00	0.40	1.00	0.45	1.00	0.40	0.80	0.20	1.00	0.50	1.00	0.40	1.20	0.40
	3	1.80	0.25	1.20	0.40	1.20	0.55	1.20	0.50	1.50	0.50	1.50	0.80	1.50	0.45	1.20	0.30	1.50	0.65	1.50	0.50	1.80	0.40
	4	2.40	0.30	1.60	0.40	1.60	0.45	1.60	0.55	2.00	0.55	2.00	1.00	2.00	0.30	1.60	0.30	2.00	0.65	2.00	0.50	2.40	0.45
	5	3.00	0.50	2.00	0.35	2.00	0.40	2.00	0.50	2.50	0.50	2.50	1.00	2.50	0.25	2.00	0.35	2.50	0.50	2.50	0.55	3.00	0.45
	6	3.60	0.35	2.40	0.35	2.40	0.35	2.40	0.50	3.00	0.50	3.00	0.90	3.00	0.25	2.40	0.40	3.00	0.40	3.00	0.50	3.60	0.45
	7	4.20	0.55	2.80	0.40	2.80	0.30	2.80	0.40	3.50	0.40	3.50	0.70	3.50	0.30	2.80	0.45	3.50	0.40	3.50	0.55	4.20	0.50
	8	4.80	0.55	3.20	0.45	3.20	0.20	3.20	0.35	4.00	0.35	4.00	0.50	4.00	0.25	3.20	0.50	4.00	0.40	4.00	0.35	4.80	0.35
	9	5.40	0.35	3.60	0.30	3.60	0.10	3.60	0.20	4.50	0.20	4.50	0.35	4.50	0.15	3.60	0.50	4.50	0.35	4.50	0.20	5.40	0.10
<b>Right Bank</b>		6.00	0.00	4.00	0.00	4.00	0.00	4.00	0.00	5.00	0.00	5.00	0.00	5.00	0.00	4.00	0.00	5.00	0.00	5.00	0.00	6.00	0.00
<b>Feature Type</b>		run		run		run		run		run		run		riffle		run		pool		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: 10.06.08

