



Missouri  
Department of  
Natural Resources

Use Attainability Analysis

for

WBID 0857 Long Branch

Submitted by  
SES, Inc.

To  
Missouri Department of Natural Resources  
Water Protection Program

On  
May 28, 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): Long Branch
Missouri Water Body Identification (WBID) Number: 857
8-digit HUC: 10300103
County(ies), Listed Upstream to Downstream: Johnson, Pettis
Upstream Legal Description (from Table H): 45N 24W section9
Downstream Legal Description (from Table H): 45N 23W section6
Number of sites evaluated: 3
List all site numbers, <u>consecutively upstream to downstream</u> : 1, 2, 3
<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)

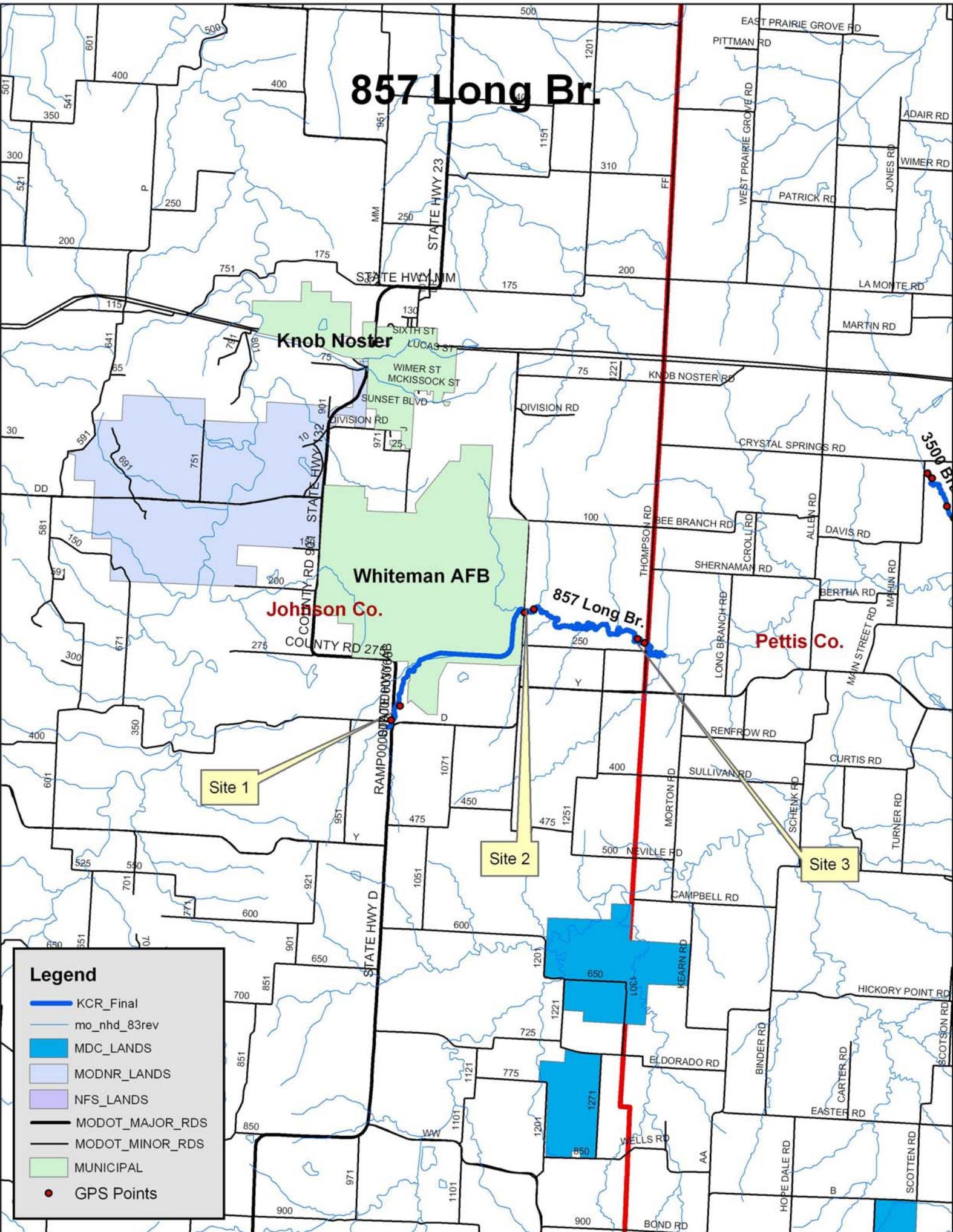
Facility Name(s) and Permit Number(s): Johnson County Egg Farm L <b>MO0118877</b>
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**III. UAA Surveyor** (please **PRINT** legibly)

Name of Surveyor: Aaron Ball	Telephone Number: 913.307.0046 Ext.14
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:** Aaron Ball **Date:** 5.09.08



# 857 Long Br.

**Knob Noster**

**Whiteman AFB**

**Johnson Co.**

**Pettis Co.**

Site 1

Site 2

Site 3

**Legend**

- KCR\_Final
- mo\_nhd\_83rev
- MDC\_LANDS
- MODNR\_LANDS
- NFS\_LANDS
- MODOT\_MAJOR\_RDS
- MODOT\_MINOR\_RDS
- MUNICIPAL
- GPS Points

**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> 4.29.08 7:30	Location Description (e.g., road crossing): Highway 23
<b>Stream Name:</b> Long Branch	
Current Weather Conditions: clear	Facility Name(s): Johnson County Egg Farm L
Weather Conditions for Past 10 days: 3.50 inches	Permit Number(s): MO011887
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): 0451214	Northing (UTM Y): 4284038	Horizontal Accuracy: (EPE / FOM / PDOP) 7 Meters
Site 11	Easting (UTM X): 0451279	Northing (UTM Y): 4284290	Horizontal Accuracy: (EPE / FOM / PDOP) 9 Meters

**Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
23	downstream, T1	24	upstream, T11		
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.)				

Site #1

**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 checked="" type="checkbox"/> Other:
Comments: Whiteman AFB				

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

none in water; banks are vegetated
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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.

Site #1

**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: Gilisa Gould and Aaron Ball

Surveyor’s Signature: Aaron Ball                      Date of Survey: 4.29.08

Organization: SES, Inc.                                      Position: Field Team Leader

## Field Data Sheets for Recreational Use Stream Surveys

### Data Sheet C - Field Survey Results

Stream Name: <u>Long Branch</u> Waterbody ID: <u>857</u> Site #: <u>1</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>0451214</u> UTM Y: <u>4284038</u> +/- <u>7</u> (meters) <b>11</b> UTM X: <u>0451279</u> UTM Y: <u>4284290</u> +/- <u>9</u> (meters) Average Stream Width: <u>2</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 Aaron Ball</u>	<b>Dissolved Oxygen</b> Date: <u>4.29.08</u> Time: <u>7:30</u> Dissolved Oxygen: <u>9.5</u> (mg/L) Dissolved Oxygen: _____ (% sat) Specific Cond: _____ (µS/cm) Water Temperature: <u>8.1</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	0.20	0.10	0.10	0.01	0.40	0.10	0.20	0.01	0.20	0.05	0.30	0.01	0.10	0.10	0.40	0.10	0.10	0.01	0.20	0.10	0.30	0.10
2	0.40	0.10	0.20	0.01	0.80	0.15	0.40	0.01	0.40	0.05	0.60	0.05	0.20	0.10	0.80	0.10	0.20	0.05	0.40	0.10	0.60	0.05
3	0.60	0.20	0.30	0.01	1.20	0.20	0.60	0.10	0.60	0.10	0.90	0.10	0.30	0.10	1.20	0.10	0.30	0.10	0.60	0.05	0.90	0.05
4	0.80	0.20	0.40	0.01	1.60	0.20	0.80	0.10	0.80	0.10	1.20	0.10	0.40	0.10	1.60	0.10	0.40	0.10	0.80	0.01	1.20	0.05
5	1.00	0.25	0.50	0.01	2.00	0.20	1.00	0.10	1.00	0.10	1.50	0.10	0.50	0.10	2.00	0.15	0.50	0.10	1.00	0.05	1.50	0.05
6	1.20	0.25	0.60	0.05	2.40	0.20	1.20	0.10	1.20	0.10	1.80	0.10	0.60	0.10	2.40	0.15	0.60	0.10	1.20	0.10	1.80	0.10
7	1.40	0.25	0.70	0.10	2.80	0.20	1.40	0.10	1.40	0.10	2.10	0.10	0.70	0.10	2.80	0.15	0.70	0.10	1.40	0.10	2.10	0.10
8	1.60	0.25	0.80	0.10	3.20	0.20	1.60	0.10	1.60	0.10	2.40	0.10	0.80	0.05	3.20	0.10	0.80	0.10	1.60	0.05	2.40	0.10
9	1.80	0.20	0.90	0.05	3.60	0.15	1.80	0.05	1.80	0.10	2.70	0.10	0.90	0.05	3.60	0.10	0.90	0.10	1.80	0.05	2.70	0.05
<b>Right Bank</b>	2.00	0.00	1.00	0.00	4.00	0.00	2.00	0.00	2.00	0.00	3.00	0.00	1.00	0.00	4.00	0.00	1.00	0.00	2.00	0.00	3.00	0.00
<b>Feature Type</b> <small>(riffle, run, or pool)</small>	run		riffle		run		riffle		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: Aaron Ball      Date: 5.09.08

**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> 4.28.08 17:30	Location Description (e.g., road crossing): Highway D
<b>Stream Name:</b> Long Branch	
Current Weather Conditions: clear	Facility Name(s): Johnson County Egg Farm L
Weather Conditions for Past 10 days: 3.50 inches	Permit Number(s): MO0118877
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): 0453792	Northing (UTM Y): 4286122	Horizontal Accuracy: (EPE / FOM / PDOP) 2 Meters
Site 11	Easting (UTM X): 0453970	Northing (UTM Y): 4286192	Horizontal Accuracy: (EPE / FOM / PDOP) 4 Meters

**Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
21	downstream, T1	22	upstream, T11		
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.)				

Site #2

**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 checked="" type="checkbox"/> Other:
Comments: Whiteman AFB				

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

none in water
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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 checked="" 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.

Site #2

**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: Gilisa Gould and Aaron Ball

Surveyor’s Signature: Aaron Ball                      Date of Survey: 4.28.08

Organization: SES, Inc.                                      Position: Field Team Leader

## Field Data Sheets for Recreational Use Stream Surveys

### Data Sheet C - Field Survey Results

Stream Name: <u>Long Branch</u> Waterbody ID: <u>857</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>0453792</u> UTM Y: <u>4286122</u> +/- <u>2</u> (meters) <b>11</b> UTM X: <u>0453970</u> UTM Y: <u>4286192</u> +/- <u>2</u> (meters) Average Stream Width: <u>4</u> (meters)      Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach)      (20x average stream width) Field Staff: <u>Gilisa Gould and Aaron Ball</u>	<b>Dissolved Oxygen</b> Date: <u>4.29.08</u> Time: <u>17:30</u> Dissolved Oxygen: <u>9.9</u> (mg/L) Dissolved Oxygen: _____ (% sat) Specific Cond: _____ (µS/cm) Water Temperature: <u>15.3</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	0.30	0.10	0.40	0.10	0.50	0.10	0.50	0.15	0.40	0.10	0.60	0.10	0.20	0.15	0.40	0.15	0.40	0.15	0.50	0.10	0.30	0.05
2	0.60	0.10	0.80	0.10	1.00	0.20	1.00	0.20	0.80	0.10	1.20	0.15	0.40	0.10	0.80	0.25	0.80	0.30	1.00	0.10	0.60	0.10
3	0.90	0.10	1.20	0.15	1.50	0.20	1.50	0.15	1.20	0.20	1.80	0.20	0.60	0.15	1.20	0.30	1.20	0.30	1.50	0.10	0.90	0.10
4	1.20	0.10	1.60	0.20	2.00	0.30	2.00	0.15	1.60	0.30	2.40	0.10	0.80	0.15	1.60	0.20	1.60	0.25	2.00	0.10	1.20	0.10
5	1.50	0.15	2.00	0.25	2.50	0.30	2.50	0.20	2.00	0.30	3.00	0.10	1.00	0.15	2.00	0.20	2.00	0.25	2.50	0.10	1.50	0.10
6	1.80	0.15	2.40	0.40	3.00	0.35	3.00	0.20	2.40	0.30	3.60	0.10	1.20	0.15	2.40	0.15	2.40	0.25	3.00	0.10	1.80	0.10
7	2.10	0.15	2.80	0.40	3.50	0.40	3.50	0.20	2.80	0.25	4.20	0.15	1.40	0.10	2.80	0.10	2.80	0.20	3.50	0.10	2.10	0.15
8	2.40	0.15	3.20	0.35	4.00	0.40	4.00	0.20	3.20	0.25	4.80	0.20	1.60	0.10	3.20	0.10	3.20	0.10	4.00	0.10	2.40	0.10
9	2.70	0.10	3.60	0.25	4.50	0.35	4.50	0.10	3.60	0.15	5.40	0.15	1.80	0.05	3.60	0.05	3.60	0.10	4.50	0.10	2.70	0.10
<b>Right Bank</b>	3.00	0.00	4.00	0.00	5.00	0.00	5.00	0.00	4.00	0.00	6.00	0.00	2.00	0.00	4.00	0.00	4.00	0.00	5.00	0.00	3.00	0.00
<b>Feature Type</b> <small>(riffle, run, or pool)</small>	run	run	run	run	pool	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: Aaron Ball      Date: 5.09.08

**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> 4.29.08      8:20	Location Description (e.g., road crossing):  1310 Road
<b>Stream Name:</b> Long Branch	
Current Weather Conditions: clear	Facility Name(s): Johnson County Egg Farm L
Weather Conditions for Past 10 days: 3.50 inches	Permit Number(s): MO0118877
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): 0455990	Northing (UTM Y): 4285611	Horizontal Accuracy: (EPE / FOM / PDOP)      7 Meters
Site 11	Easting (UTM X): 0456127	Northing (UTM Y): 4285537	Horizontal Accuracy: (EPE / FOM / PDOP)      8 Meters

**Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
25	upstream, T11	26	downstream, T1		
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.)				

Site #3

**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 checked="" type="checkbox"/> Other:
Comments: Crop fields				

**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	20% 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

**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 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 #3

**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: Gilisa Gould and Aaron Ball

Surveyor’s Signature: Aaron Ball                      Date of Survey: 4.29.08

Organization: SES, Inc.                                      Position: Field Team Leader

## Field Data Sheets for Recreational Use Stream Surveys

### Data Sheet C - Field Survey Results

Stream Name: <u>Long Branch</u> Waterbody ID: <u>857</u> Site #: <u>3</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>0455990</u> UTM Y: <u>4285611</u> +/- <u>7</u> (meters) <b>11</b> UTM X: <u>0456127</u> UTM Y: <u>4285537</u> +/- <u>8</u> (meters) Average Stream Width: <u>4</u> (meters)      Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach)      (20x average stream width) Field Staff: <u>Gilisa Gould and Aaron Ball</u>	<b>Dissolved Oxygen</b> Date: <u>4.29.08</u> Time: <u>8:20</u> Dissolved Oxygen: <u>5.6</u> (mg/L) Dissolved Oxygen: _____ (% sat) Specific Cond: _____ (µS/cm) Water Temperature: <u>10.2</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	0
1	0.40	0.40	0.50	0.30	0.30	0.10	0.40	0.20	0.30	0.05	0.30	0.20	0.40	0.10	0.60	0.10	0.40	0.10	0.50	0.20	0.40	0.20
2	0.80	0.65	1.00	0.50	0.60	0.20	0.80	0.15	0.60	0.20	0.60	0.35	0.80	0.20	1.20	0.15	0.80	0.20	1.00	0.30	0.80	0.40
3	1.20	0.85	1.50	0.70	0.90	0.20	1.20	0.20	0.90	0.20	0.90	0.40	1.20	0.20	1.80	0.25	1.20	0.30	1.50	0.40	1.20	0.50
4	1.60	0.80	2.00	1.00	1.20	0.30	1.60	0.20	1.20	0.30	1.20	0.65	1.60	0.30	2.40	0.25	1.60	0.40	2.00	0.80	1.60	0.60
5	2.00	0.70	2.50	1.00	1.50	0.30	2.00	0.15	1.50	0.30	1.50	0.75	2.00	0.40	3.00	0.20	2.00	0.45	2.50	0.95	2.00	0.50
6	2.40	0.60	3.00	0.95	1.80	0.40	2.40	0.20	1.80	0.25	1.80	0.65	2.40	0.45	3.60	0.15	2.40	0.40	3.00	0.80	2.40	0.50
7	2.80	0.55	3.50	0.90	2.10	0.40	2.80	0.15	2.10	0.20	2.10	0.30	2.80	0.50	4.20	0.15	2.80	0.25	3.50	0.50	2.80	0.50
8	3.20	0.40	4.00	0.70	2.40	0.40	3.20	0.10	2.40	0.10	2.40	0.15	3.20	0.30	4.80	0.15	3.20	0.25	4.00	0.40	3.20	0.30
9	3.60	0.30	4.50	0.40	2.70	0.30	3.60	0.10	2.70	0.10	2.70	0.10	3.60	0.20	5.40	0.10	3.60	0.10	4.50	0.20	3.60	0.20
<b>Right Bank</b>	4.00	0.00	5.00	0.00	3.00	0.00	4.00	0.00	3.00	0.00	3.00	0.00	4.00	0.00	6.00	0.00	4.00	0.00	5.00	0.00	4.00	0.00
<b>Feature Type</b> <small>(riffle, run, or pool)</small>	run		pool		run		run		run		pool		pool		run		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: Aaron Ball      Date: 5.09.08

**WBID# 0857 Long Branch**



**Site# 1 Photo ID# 23, Downstream, T01**



**Site# 1 Photo ID# 24, Upstream, T11**



**Site#2 Photo ID# 21, Downstream, T01**



**Site# 2 Photo ID# 22 Upstream, T11**

**WBID# 0857 Long Branch**



**Site# 3 Photo ID# 25 Upstream, T11**



**Site# 3 Photo ID# 26, Downstream, T01**