



Missouri  
Department of  
Natural Resources

Use Attainability Analysis

for

WBID 0510 Dog Creek

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): Dog Creek
Missouri Water Body Identification (WBID) Number: 510
8-digit HUC: 10280101
County(ies), Listed Upstream to Downstream: Daviess
Upstream Legal Description (from Table H): T58N R28W Sec 10
Downstream Legal Description (from Table H): T58N R28W Sec 13
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): Altamont/Winston Sewer District MO0111601
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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:** 10-07-08 \_\_\_\_\_

# 510 Dog Cr.

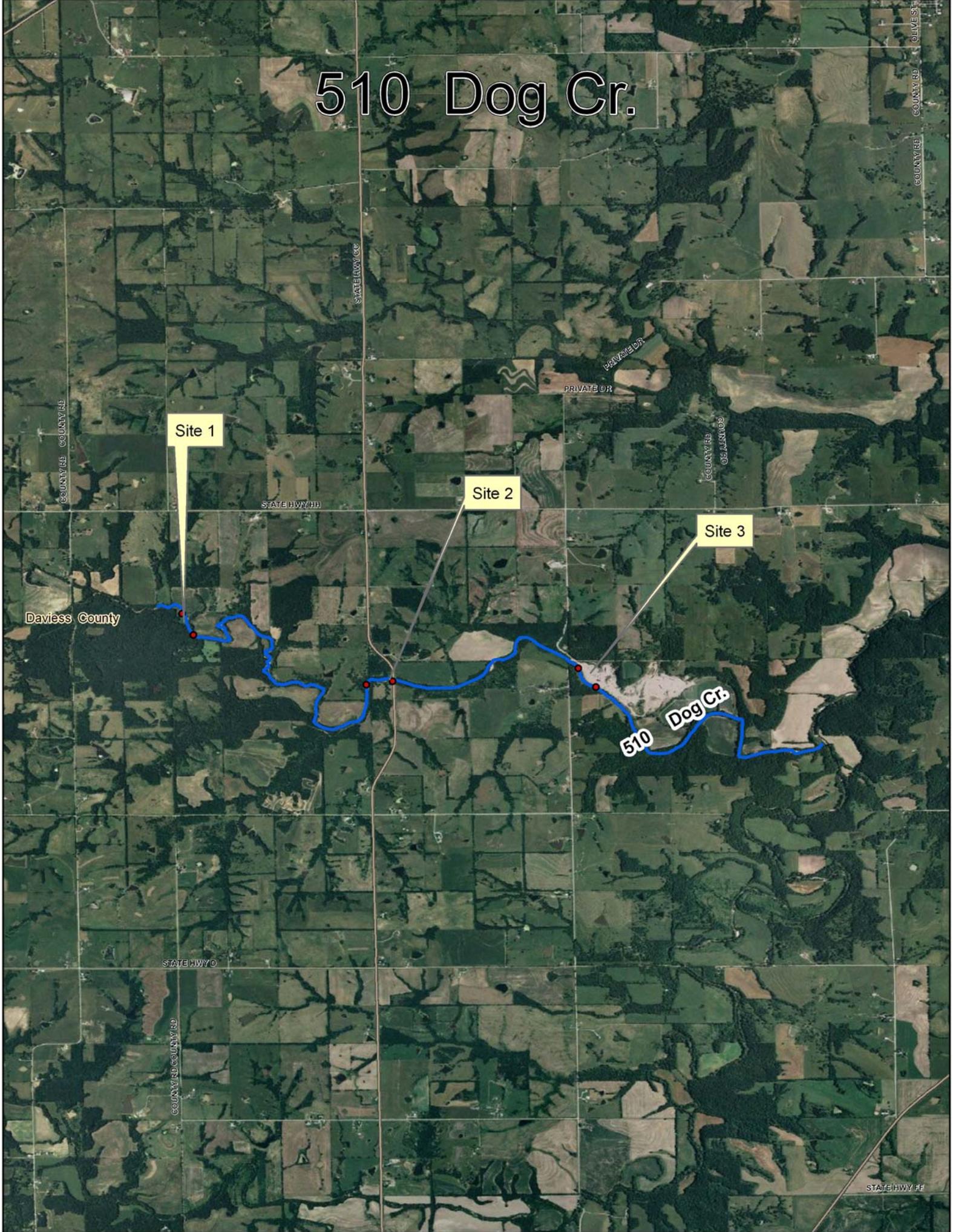
Site 1

Site 2

Site 3

Daviess County

510 Dog Cr.



WBID # 510 \_\_\_\_\_

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> 9-19-08      9:50	Location Description (e.g., road crossing): Downstream 185 <sup>th</sup> St.
<b>Stream Name:</b> Dog Cr.	
Current Weather Conditions: Clear	Facility Name(s): Altamont/Winston Sewer Distric
Weather Conditions for Past 10 days: 9.52 cm	Permit Number(s): MO0111601
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): 0410973	Northing (UTM Y): 4411455	Horizontal Accuracy: (EPE / FOM / PDOP) 4 Meters
Site 11	Easting (UTM X): 0411063	Northing (UTM Y): 4411229	Horizontal Accuracy: (EPE / FOM / PDOP) 5 Meters

**Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
62	Foot tracks 0.2mi. upstream site #1	63	Downstream	64	Road and tractor west bank
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
65	Road	66	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 checked="" type="checkbox"/> Other: woodlands, pasture, hay
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: Vehicle paths and general disturbance to banks and substrate in the vicinity of T1, T2, and T3			

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

20% Cobble	20% Gravel	70% Sand	% Silt	10% 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 except near noted disturbance
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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 checked="" type="checkbox"/> Foam	<input 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: Chris Schuler and Gilisa Gould

Surveyor’s Signature: Gilisa Gould Date of Survey: 9-19-08

Organization: SES, Inc. Position: Field Team Leader

## Field Data Sheets for Recreational Use Stream Surveys

### Data Sheet C - Field Survey Results

Stream Name: <u>Dog Cr.</u> Waterbody ID: <u>510</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>0410973</u> UTM Y: <u>4411455</u> +/- <u>4</u> (meters) <b>11</b> UTM X: <u>0411063</u> UTM Y: <u>4411229</u> +/- <u>5</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>Gilisa Gould and Chris Schuler</u>	<b>Dissolved Oxygen</b> Date: <u>9/19/2008</u> Time: <u>9:50</u> Dissolved Oxygen: <u>9.4</u> (mg/L) Dissolved Oxygen: _____ (% sat) Specific Cond: _____ (µS/cm) Water Temperature: <u>16.4</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	0.50	0.05	0.30	0.01	0.50	0.15	0.70	0.20	0.40	0.05	0.70	0.10	1.10	0.10	0.30	0.05	0.70	0.10	0.60	0.05	0.70	0.10
2	1.00	0.15	0.60	0.10	1.00	0.30	1.40	0.15	0.80	0.10	1.40	0.15	2.20	0.15	0.60	0.10	1.40	0.10	1.20	0.01	1.40	0.15
3	1.50	0.10	0.90	0.20	1.50	0.25	2.10	0.10	1.20	0.05	2.10	0.10	3.30	0.00	0.90	0.15	2.10	0.10	1.80	0.05	2.10	0.10
4	2.00	0.15	1.20	0.25	2.00	0.20	2.80	0.20	1.60	0.10	2.80	0.15	4.40	0.00	1.20	0.20	2.80	0.10	2.40	0.05	2.80	0.01
5	2.50	0.10	1.50	0.25	2.50	0.20	3.50	0.20	2.00	0.15	3.50	0.01	5.50	0.00	1.50	0.20	3.50	0.00	3.00	0.05	3.50	0.05
6	3.00	0.20	1.80	0.30	3.00	0.20	4.20	0.15	2.40	0.15	4.20	0.05	6.60	0.00	1.80	0.15	4.20	0.10	3.60	0.05	4.20	0.05
7	3.50	0.20	2.10	0.30	3.50	0.30	4.90	0.15	2.80	0.05	4.90	0.10	7.70	0.00	2.10	0.15	4.90	0.10	4.20	0.05	4.90	0.10
8	4.00	0.15	2.40	0.35	4.00	0.35	5.60	0.10	3.20	0.05	5.60	0.15	8.80	0.10	2.40	0.05	5.60	0.05	4.80	0.10	5.60	0.05
9	4.50	0.10	2.70	0.15	4.50	0.40	6.30	0.10	3.60	0.10	6.30	0.05	9.90	0.20	2.70	0.05	6.30	0.10	5.40	0.01	6.30	0.10
<b>Right Bank</b>	5.00	0.00	3.00	0.00	5.00	0.00	7.00	0.00	4.00	0.00	7.00	0.00	11.00	0.00	3.00	0.00	7.00	0.00	6.00	0.00	7.00	0.00
<b>Feature Type</b> <small>(riffle, run, or pool)</small>	riffle		run		pool		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: Gilisa Gould      Date: 10.07.08





WBID # 510 \_\_\_\_\_

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> 9-19-08      10:35	Location Description (e.g., road crossing): Hwy CC
<b>Stream Name:</b> Dog Cr.	
Current Weather Conditions: Clear	Facility Name(s): Altamont/Winston Sewer Distric
Weather Conditions for Past 10 days: 9.52 cm	Permit Number(s): MO0111601
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): 0412462	Northing (UTM Y): 4410683	Horizontal Accuracy: (EPE / FOM / PDOP) 7 Meters
Site 11	Easting (UTM X): 0412676	Northing (UTM Y): 4410716	Horizontal Accuracy: (EPE / FOM / PDOP) 4 Meters

**Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
60	upstream	61	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 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: farmland
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%.)

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

20% algae
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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 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: Chris Schuler and Gilisa Gould

Surveyor’s Signature: Gilisa Gould Date of Survey: 9-18-08

Organization: SES, Inc. Position: Field Team Leader

## Field Data Sheets for Recreational Use Stream Surveys

### Data Sheet C - Field Survey Results

Stream Name: <u>Dog Cr.</u> Waterbody ID: <u>510</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>0412462</u> UTM Y: <u>4410683</u> +/- <u>7</u> (meters) <b>11</b> UTM X: <u>0412676</u> UTM Y: <u>4410716</u> +/- <u>4</u> (meters)  Average Stream Width: <u>8</u> (meters)      Length of Survey Segment: <u>3</u> (meters) (To determine Length of Reach)      (20x average stream width)  Field Staff: <u>Gilisa Gould and Chris Schuler</u>	<b>Dissolved Oxygen</b>
	Date: <u>9/19/2008</u> Time: <u>10:35</u>
	Dissolved Oxygen: <u>8</u> (mg/L)
	Dissolved Oxygen: _____ (% sat)
	Specific Cond: _____ (µS/cm)
	Water Temperature: <u>20.4</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
	<b>1</b>	0.60	0.10	0.60	0.20	0.80	0.15	0.90	0.10	0.70	0.20	1.30	0.05	1.10	0.05	1.20	0.20	1.00	0.10	0.40	0.05	0.30	0.05
	<b>2</b>	1.20	0.10	1.20	0.15	1.60	0.40	1.80	0.20	1.40	0.25	2.60	0.10	2.20	0.10	2.40	0.60	2.00	0.10	0.80	0.05	0.60	0.10
	<b>3</b>	1.80	0.10	1.80	0.05	2.40	0.25	2.70	0.25	2.10	0.45	3.90	0.05	3.30	0.20	3.60	0.50	3.00	0.05	1.20	0.10	0.90	0.25
	<b>4</b>	2.40	0.05	2.40	0.05	3.20	0.20	3.60	0.15	2.80	0.55	5.20	0.01	4.40	0.20	4.80	0.35	4.00	0.01	1.60	0.20	1.20	0.25
	<b>5</b>	3.00	0.15	3.00	0.05	4.00	0.10	4.50	0.20	3.50	0.55	6.50	0.01	5.50	0.00	6.00	0.25	5.00	0.00	2.00	0.20	1.50	0.15
	<b>6</b>	3.60	0.20	3.60	0.05	4.80	0.10	5.40	0.20	4.20	0.40	7.80	0.01	6.60	0.05	7.20	0.25	6.00	0.00	2.40	0.15	1.80	0.15
	<b>7</b>	4.20	0.15	4.20	0.10	5.60	0.10	6.30	0.15	4.90	0.25	9.10	0.10	7.70	0.05	8.40	0.20	7.00	0.20	2.80	0.15	2.10	0.10
	<b>8</b>	4.80	0.20	4.80	0.10	6.40	0.05	7.20	0.15	5.60	0.10	10.40	0.15	8.80	0.10	9.60	0.25	8.00	0.20	3.20	0.10	2.40	0.01
	<b>9</b>	5.40	0.05	5.40	0.05	7.20	0.05	8.10	0.20	6.30	0.05	11.70	0.10	9.90	0.15	10.80	0.05	9.00	0.05	3.60	0.05	2.70	0.05
<b>Right Bank</b>		6.00	0.00	6.00	0.00	8.00	0.00	9.00	0.00	7.00	0.00	13.00	0.00	11.00	0.00	12.00	0.00	10.00	0.00	4.00	0.00	3.00	0.00
<b>Feature Type</b>		run		riffle		pool		pool		pool		run		run		pool		riffle		riffle		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: 10.07.08



09/18/2008



09/18/2008

WBID # 510 \_\_\_\_\_

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> 9-18-08      17:30	Location Description (e.g., road crossing): NW Harley
<b>Stream Name:</b> Dog Cr.	
Current Weather Conditions: Clear	Facility Name(s): Altamont/Winston Sewer District
Weather Conditions for Past 10 days: 9.52 cm	Permit Number(s): MO0111601
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): 0414185	Northing (UTM Y): 4410837	Horizontal Accuracy: (EPE / FOM / PDOP) 10 Meters
Site 11	Easting (UTM X): 0414326	Northing (UTM Y): 4410638	Horizontal Accuracy: (EPE / FOM / PDOP) 5 Meters

**Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
56	downstream	57	Rockpile/dam	58	quarry
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
59	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 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: quarry
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: Quarry			

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

5% Cobble	10% Gravel	85% Sand	% Silt	% 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 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 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.)

Pool and rock pile are products of quarry (pictures 57 and 58), and are located at the same location with Transect 11.

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

Printed Names of Personnel Collecting Data: Chris Schuler and Gilisa Gould

Surveyor’s Signature: Gilisa Gould Date of Survey: 9-18-08

Organization: SES, Inc.

Position: Field Team Leader

## Field Data Sheets for Recreational Use Stream Surveys

### Data Sheet C - Field Survey Results

Stream Name: <u>Dog Cr.</u> Waterbody ID: <u>510</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>0414185</u> UTM Y: <u>4410837</u> +/- <u>10</u> (meters) <b>11</b> UTM X: <u>0414326</u> UTM Y: <u>4410638</u> +/- <u>5</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>Gilisa Gould and Chris Schuler</u>	<b>Dissolved Oxygen</b>
	Date: <u>9/19/2008</u> Time: <u>17:30</u>  Dissolved Oxygen: <u>6.7</u> (mg/L)  Dissolved Oxygen: _____ (% sat)  Specific Cond: _____ (µS/cm)  Water Temperature: <u>20.6</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	0.90	0.65	0.90	0.30	1.00	0.15	1.10	0.20	1.10	0.35	0.70	0.01	0.80	0.05	1.40	0.15	1.20	0.20	1.30	0.15	1.50	0.10
	2	1.80	1.00	1.80	0.60	2.00	0.45	2.20	0.25	2.20	0.40	1.40	0.05	1.60	0.45	2.80	0.25	2.40	0.40	2.60	0.50	3.00	0.30
	3	2.70	1.00	2.70	0.40	3.00	0.55	3.30	0.30	3.30	0.40	2.10	0.10	2.40	0.60	4.20	0.55	3.60	0.80	3.90	0.90	4.50	0.20
	4	3.60	1.00	3.60	0.40	4.00	0.65	4.40	0.30	4.40	0.35	2.80	0.30	3.20	0.85	5.60	0.85	4.80	0.85	5.20	1.00	6.00	0.50
	5	4.50	0.90	4.50	0.45	5.00	0.65	5.50	0.40	5.50	0.30	3.50	0.35	4.00	1.00	7.00	1.00	6.00	1.00	6.50	1.00	7.50	0.40
	6	5.40	0.75	5.40	0.40	6.00	0.50	6.60	0.25	6.60	0.25	4.20	0.35	4.80	1.00	8.40	1.00	7.20	1.00	7.80	1.00	9.00	0.20
	7	6.30	0.80	6.30	0.50	7.00	0.40	7.70	0.35	7.70	0.10	4.90	0.35	5.60	1.00	9.80	1.00	8.40	1.00	9.10	1.00	10.50	0.10
	8	7.20	0.50	7.20	0.55	8.00	0.35	8.80	0.30	8.80	0.15	5.60	0.15	6.40	0.80	11.20	0.90	9.60	1.00	10.40	0.90	12.00	0.20
	9	8.10	0.15	8.10	0.15	9.00	0.10	9.90	0.15	9.90	0.05	6.30	0.05	7.20	0.65	12.60	0.30	10.80	0.40	11.70	0.25	13.50	0.15
<b>Right Bank</b>		9.00	0.00	9.00	0.00	10.00	0.00	11.00	0.00	11.00	0.00	7.00	0.00	8.00	0.00	14.00	0.00	12.00	0.00	13.00	0.00	15.00	0.00
<b>Feature Type</b>		pool		pool		pool		pool		pool		run		pool		pool		pool		pool		riffle	

**Notes:** Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.1 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: 10.07.08

