



Missouri
Department of
Natural Resources

Use Attainability Analysis

for

WBID 0289 Florida 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): Florida Creek
Missouri Water Body Identification (WBID) Number: 289
8-digit HUC: 10240010
County(ies), Listed Upstream to Downstream: Nodaway
Upstream Legal Description (from Table H): T64N R37W Sec 24
Downstream Legal Description (from Table H): T63N R37W Sec 4
Number of sites evaluated: 5
List all site numbers, <u>consecutively upstream to downstream</u> : 1, 2, 3, 4, 5
Include a Site Location Map(s). 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): Nodaway Nursing Home MO0105694
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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:** _____ 9-02-08 _____

289 Florida Cr.



Site 1

Site 2

Site 3

Site 4

Site 5

289 Florida Cr.

Nodaway County

Skidmore

Quitman

WBID # 289

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)

Date & Time: 8-21-08 20:00	Location Description (e.g., road crossing): CR 565
Stream Name: Florida Cr.	
Current Weather Conditions: Partly Cloudy	Facility Name(s): Nodayway Nursing Home
Weather Conditions for Past 10 days: 0.21 cm	Permit Number(s): MO0105694
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): 0328769	Northing (UTM Y): 4466782	Horizontal Accuracy: (EPE / FOM / PDOP) 6 Meters
Site 11	Easting (UTM X): 0328816	Northing (UTM Y): 4466699	Horizontal Accuracy: (EPE / FOM / PDOP) 5 Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
80	Downstream	81	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.)				

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 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: 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%.)

10% Cobble	% Gravel	50% Sand	20% Silt	20% 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 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.

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: Bryan Deimeke and Gilisa Gould

Surveyor’s Signature: Gilisa Gould Date of Survey: 8-21-08

Organization: SES, Inc. Position: Field Team Leader

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: <u>Florida Cr.</u> Waterbody ID: <u>289</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) 01 UTM X: <u>0328769</u> UTM Y: <u>4466782</u> +/- <u>6</u> (meters) 11 UTM X: <u>0328816</u> UTM Y: <u>4466699</u> +/- <u>5</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>Bryan Deimeke and Gilisa Gould</u>	<h4 style="text-align: center; margin: 0;">Dissolved Oxygen</h4> Date: <u>8/21/2008</u> Time: <u>20:00</u> Dissolved Oxygen: <u>5.9</u> (mg/L) Dissolved Oxygen: _____ (% sat) Specific Cond: _____ (µS/cm) Water Temperature: <u>22.9</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)																				
Left Bank		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	0.01	0.30	0.01	0.60	0.05	0.40	0.01	0.50	0.05	0.10	0.01	0.20	0.30	0.50	0.01	0.40	0.05	0.40	0.05	0.40	0.05
	2	0.60	0.01	0.60	0.05	1.20	0.05	0.80	0.05	1.00	0.10	0.20	0.01	0.40	0.40	1.00	0.01	0.80	0.05	0.80	0.15	0.80	0.05
	3	0.90	0.05	0.90	0.05	1.80	0.01	1.20	0.01	1.50	0.05	0.30	0.05	0.60	0.35	1.50	0.05	1.20	0.10	1.20	0.30	1.20	0.10
	4	1.20	0.01	1.20	0.05	2.40	0.01	1.60	0.05	2.00	0.05	0.40	0.05	0.80	0.30	2.00	0.01	1.60	0.15	1.60	0.25	1.60	0.10
	5	1.50	0.01	1.50	0.05	3.00	0.00	2.00	0.10	2.50	0.05	0.50	0.05	1.00	0.25	2.50	0.00	2.00	0.15	2.00	0.20	2.00	0.10
	6	1.80	0.05	1.80	0.10	3.60	0.00	2.40	0.15	3.00	0.20	0.60	0.05	1.20	0.25	3.00	0.00	2.40	0.10	2.40	0.10	2.40	0.10
	7	2.10	0.10	2.10	0.05	4.20	0.01	2.80	0.20	3.50	0.25	0.70	0.01	1.40	0.15	3.50	0.01	2.80	0.05	2.80	0.05	2.80	0.10
	8	2.40	0.05	2.40	0.01	4.80	0.00	3.20	0.15	4.00	0.25	0.80	0.01	1.60	0.05	4.00	0.05	3.20	0.05	3.20	0.05	3.20	0.10
	9	2.70	0.01	2.70	0.01	5.40	0.05	3.60	0.10	4.50	0.20	0.90	0.01	1.80	0.05	4.50	0.05	3.60	0.01	3.60	0.01	3.60	0.05
Right Bank		3.00	0.00	3.00	0.00	6.00	0.00	4.00	0.00	5.00	0.00	1.00	0.00	2.00	0.00	5.00	0.00	4.00	0.00	4.00	0.00	4.00	0.00
Feature Type <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: 9/2/2008





WBID # 289

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)

Date & Time: 8-22-08 7:35	Location Description (e.g., road crossing): CR 560
Stream Name: Florida Cr.	
Current Weather Conditions: clear	Facility Name(s): Nodayway Nursing Home
Weather Conditions for Past 10 days: 0.21 cm	Permit Number(s): MO0105694
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): 0327212	Northing (UTM Y): 4465352	Horizontal Accuracy: (EPE / FOM / PDOP) 3 Meters
Site 11	Easting (UTM X): 0327060	Northing (UTM Y): 4465168	Horizontal Accuracy: (EPE / FOM / PDOP) 3 Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
82	Upstream	83	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.)				

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 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: 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%.)

10% Cobble	% Gravel	75% Sand	10% Silt	5% 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 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.)

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: 8-21-08

Organization: SES, Inc. Position: Field Team Leader

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: <u>Florida Cr.</u> Waterbody ID: <u>289</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) 01 UTM X: <u>0327212</u> UTM Y: <u>4465352</u> +/- <u>3</u> (meters) 11 UTM X: <u>0327060</u> UTM Y: <u>4465168</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>8/22/2008</u> Time: <u>7:35</u> Dissolved Oxygen: <u>6.3</u> (mg/L) Dissolved Oxygen: _____ (% sat) Specific Cond: _____ (µS/cm) Water Temperature: <u>21.4</u> (°C)
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Transect Cross-Section

Station	01		02		03		04		05		06		07		08		09		10		11	
	Distance (m)	Depth (m)																				
Left Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.20	0.01	0.50	0.10	0.80	0.45	0.50	0.01	0.80	0.05	0.70	0.05	0.60	0.10	0.70	0.15	0.80	0.15	0.80	0.05	0.50	0.01
2	0.40	0.05	1.00	0.35	1.60	0.40	1.00	0.10	1.60	0.20	1.40	0.05	1.20	0.30	1.40	0.30	1.60	0.25	1.60	0.10	1.00	0.01
3	0.60	0.10	1.50	0.65	2.40	0.30	1.50	0.20	2.40	0.20	2.10	0.05	1.80	0.45	2.10	0.25	2.40	0.25	2.40	0.05	1.50	0.05
4	0.80	0.05	2.00	0.65	3.20	0.25	2.00	0.30	3.20	0.20	2.80	0.05	2.40	0.50	2.80	0.15	3.20	0.25	3.20	0.01	2.00	0.10
5	1.00	0.05	2.50	0.55	4.00	0.30	2.50	0.40	4.00	0.25	3.50	0.10	3.00	0.45	3.50	0.10	4.00	0.30	4.00	0.20	2.50	0.10
6	1.20	0.05	3.00	0.35	4.80	0.30	3.00	0.55	4.80	0.30	4.20	0.10	3.60	0.30	4.20	0.25	4.80	0.30	4.80	0.40	3.00	0.05
7	1.40	0.05	3.50	0.20	5.60	0.30	3.50	0.55	5.60	0.30	4.90	0.10	4.20	0.20	4.90	0.25	5.60	0.25	5.60	0.60	3.50	0.05
8	1.60	0.01	4.00	0.05	6.40	0.40	4.00	0.40	6.40	0.20	5.60	0.05	4.80	0.10	5.60	0.25	6.40	0.20	6.40	0.50	4.00	0.01
9	1.80	0.01	4.50	0.01	7.20	0.25	4.50	0.15	7.20	0.15	6.30	0.05	5.40	0.01	6.30	0.10	7.20	0.15	7.20	0.25	4.50	0.01
Right Bank	2.00	0.00	5.00	0.00	8.00	0.00	5.00	0.00	8.00	0.00	7.00	0.00	6.00	0.00	7.00	0.00	8.00	0.00	8.00	0.00	5.00	0.00
Feature Type <small>(riffle, run, or pool)</small>	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: 9/2/2008





WBID # 289

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)

Date & Time: 8-22-08 8:33	Location Description (e.g., road crossing): CR 821
Stream Name: Florida Cr.	
Current Weather Conditions: Clear	Facility Name(s): Nodayway Nursing Home
Weather Conditions for Past 10 days: 0.21 cm	Permit Number(s): MO0105694
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): 0326049	Northing (UTM Y): 4464685	Horizontal Accuracy: (EPE / FOM / PDOP) 5 Meters
Site 11	Easting (UTM X): 0325939	Northing (UTM Y): 4464510	Horizontal Accuracy: (EPE / FOM / PDOP) 6 Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
84	Downstream	85	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.)				

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: farmland, woods
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.)

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 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.

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: Bryan Deimeke and Gilisa Gould

Surveyor’s Signature: Gilisa Gould Date of Survey: 8-22-08

Organization: SES, Inc. Position: Field Team Leader

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: <u>Florida Cr.</u> Waterbody ID: <u>289</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) 01 UTM X: <u>0326049</u> UTM Y: <u>4464685</u> +/- <u>5</u> (meters) 11 UTM X: <u>0325939</u> UTM Y: <u>4464510</u> +/- <u>6</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>8/22/2008</u> Time: <u>8:33</u> Dissolved Oxygen: <u>6.9</u> (mg/L) Dissolved Oxygen: _____ (% sat) Specific Cond: _____ (µS/cm) Water Temperature: <u>21.9</u> (°C)
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Transect Cross-Section

Station	01		02		03		04		05		06		07		08		09		10		11	
	Distance (m)	Depth (m)																				
Left Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.60	0.05	0.80	0.15	0.70	0.01	0.20	0.25	0.20	0.01	0.40	0.05	0.10	0.01	0.10	0.01	0.30	0.01	0.30	0.05	0.30	0.01
2	1.20	0.05	1.60	0.30	1.40	0.05	0.40	0.25	0.40	0.05	0.80	0.15	0.20	0.01	0.20	0.05	0.60	0.10	0.60	0.20	0.60	0.01
3	1.80	0.05	2.40	0.05	2.10	0.20	0.60	0.25	0.60	0.05	1.20	0.15	0.30	0.05	0.30	0.15	0.90	0.15	0.90	0.20	0.90	0.05
4	2.40	0.01	3.20	0.20	2.80	0.30	0.80	0.20	0.80	0.10	1.60	0.20	0.40	0.05	0.40	0.20	1.20	0.30	1.20	0.20	1.20	0.05
5	3.00	0.05	4.00	0.25	3.50	0.50	1.00	0.20	1.00	0.05	2.00	0.20	0.50	0.01	0.50	0.20	1.50	0.35	1.50	0.15	1.50	0.10
6	3.60	0.10	4.80	0.20	4.20	0.40	1.20	0.15	1.20	0.05	2.40	0.20	0.60	0.01	0.60	0.15	1.80	0.30	1.80	0.15	1.80	0.20
7	4.20	0.10	5.60	0.15	4.90	0.40	1.40	0.10	1.40	0.05	2.80	0.15	0.70	0.01	0.70	0.10	2.10	0.25	2.10	0.10	2.10	0.20
8	4.80	0.10	6.40	0.10	5.60	0.20	1.60	0.05	1.60	0.05	3.20	0.10	0.80	0.01	0.80	0.05	2.40	0.15	2.40	0.05	2.40	0.10
9	5.40	0.05	7.20	0.01	6.30	0.05	1.80	0.01	1.80	0.01	3.60	0.05	0.90	0.01	0.90	0.01	2.70	0.05	2.70	0.01	2.70	0.05
Right Bank	6.00	0.00	8.00	0.00	7.00	0.00	2.00	0.00	2.00	0.00	4.00	0.00	1.00	0.00	1.00	0.00	3.00	0.00	3.00	0.00	3.00	0.00
Feature Type <small>(riffle, run, or pool)</small>	pool		riffle		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: 9/2/2008





WBID # 289

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)

Date & Time: 8-22-08 9:05	Location Description (e.g., road crossing): Hwy 113
Stream Name: Florida Cr.	
Current Weather Conditions: Clear	Facility Name(s): Nodayway Nursing Home
Weather Conditions for Past 10 days: 0.21 cm	Permit Number(s): MO0105694
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): 0324412	Northing (UTM Y): 4463523	Horizontal Accuracy: (EPE / FOM / PDOP)	5 Meters
Site 11	Easting (UTM X): 0324237	Northing (UTM Y): 4463422	Horizontal Accuracy: (EPE / FOM / PDOP)	7 Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
86	Downstream	87	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.)				

Site # 4

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

20% on substrate

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 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.

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: 8-22-08

Organization: SES, Inc. Position: Field Team Leader

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: <u>Florida Cr.</u> Waterbody ID: <u>289</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) 01 UTM X: <u>0324412</u> UTM Y: <u>4463523</u> +/- <u>5</u> (meters) 11 UTM X: <u>0324237</u> UTM Y: <u>4463422</u> +/- <u>7</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>8/22/2008</u> Time: <u>9:05</u> Dissolved Oxygen: <u>5</u> (mg/L) Dissolved Oxygen: _____ (% sat) Specific Cond: _____ (µS/cm) Water Temperature: <u>21.3</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)																				
Left Bank		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1	0.20	0.10	0.70	0.20	0.70	0.05	0.80	0.01	0.10	0.01	0.30	0.01	0.30	0.01	0.50	0.05	0.30	0.05	0.40	0.05	0.60	0.01
	2	0.40	0.05	1.40	0.20	1.40	0.10	1.60	0.05	0.20	0.05	0.60	0.05	0.60	0.05	1.00	0.15	0.60	0.05	0.80	0.01	1.20	0.01
	3	0.60	0.05	2.10	0.35	2.10	0.15	2.40	0.10	0.30	0.05	0.90	0.05	0.90	0.05	1.50	0.20	0.90	0.10	1.20	0.05	1.80	0.01
	4	0.80	0.05	2.80	0.45	2.80	0.20	3.20	0.05	0.40	0.05	1.20	0.10	1.20	0.05	2.00	0.20	1.20	0.10	1.60	0.05	2.40	0.00
	5	1.00	0.00	3.50	0.35	3.50	0.25	4.00	0.15	0.50	0.05	1.50	0.15	1.50	0.05	2.50	0.15	1.50	0.10	2.00	0.05	3.00	0.00
	6	1.20	0.01	4.20	0.20	4.20	0.30	4.80	0.15	0.60	0.05	1.80	0.10	1.80	0.05	3.00	0.20	1.80	0.05	2.40	0.05	3.60	0.01
	7	1.40	0.01	4.90	0.40	4.90	0.20	5.60	0.10	0.70	0.05	2.10	0.10	2.10	0.01	3.50	0.20	2.10	0.05	2.80	0.05	4.20	0.05
	8	1.60	0.01	5.60	0.25	5.60	0.10	6.40	0.10	0.80	0.01	2.40	0.05	2.40	0.01	4.00	0.10	2.40	0.01	3.20	0.05	4.80	0.05
	9	1.80	0.01	6.30	0.10	6.30	0.01	7.20	0.05	0.90	0.01	2.70	0.01	2.70	0.01	4.50	0.05	2.70	0.01	3.60	0.01	5.40	0.05
Right Bank		2.00	0.00	7.00	0.00	7.00	0.00	8.00	0.00	1.00	0.00	3.00	0.00	3.00	0.00	5.00	0.00	3.00	0.00	4.00	0.00	6.00	0.00
Feature Type <small>(riffle, run, or pool)</small>		riffle	pool	pool	pool	pool	riffle	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: 9/2/2008





WBID # 289

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)

Date & Time: 8-22-08 9:35	Location Description (e.g., road crossing): North of CR 825
Stream Name: Florida Cr.	
Current Weather Conditions: Clear	Facility Name(s): Nodayway Nursing Home
Weather Conditions for Past 10 days: 0.21 cm	Permit Number(s): MO0105694
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): 0323527	Northing (UTM Y): 4462984	Horizontal Accuracy: (EPE / FOM / PDOP) 6 Meters
Site 11	Easting (UTM X): 0323240	Northing (UTM Y): 4463002	Horizontal Accuracy: (EPE / FOM / PDOP) 3 Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
88	Downstream at T1	89	Upstream at T1	90	Downstream at 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.)				

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 checked="" type="checkbox"/> Urban areas	<input type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/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%.)

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

Moss on 30% of substrate Aquatic grasses in bottom of creek (30%)
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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 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.)

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: 8-22-08

Organization: SES, Inc. Position: Field Team Leader

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: <u>Florida Cr.</u> Waterbody ID: <u>289</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) 01 UTM X: <u>0323527</u> UTM Y: <u>4462984</u> +/- <u>6</u> (meters) 11 UTM X: <u>0323240</u> UTM Y: <u>4463002</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>8/22/2008</u> Time: <u>9:35</u> Dissolved Oxygen: <u>6.5</u> (mg/L) Dissolved Oxygen: _____ (% sat) Specific Cond: _____ (µS/cm) Water Temperature: <u>24</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)																				
Left Bank		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1	0.70	0.05	0.80	0.10	0.60	0.05	0.70	0.05	0.70	0.25	0.80	0.20	0.40	0.15	0.70	0.05	0.60	0.10	0.80	0.15	0.70	0.20
	2	1.40	0.10	1.60	0.40	1.20	0.20	1.40	0.25	1.40	0.35	1.60	0.65	0.80	0.15	1.40	0.15	1.20	0.30	1.60	0.25	1.40	0.35
	3	2.10	0.15	2.40	0.45	1.80	0.20	2.10	0.30	2.10	0.55	2.40	0.80	1.20	0.15	2.10	0.15	1.80	0.20	2.40	0.25	2.10	0.35
	4	2.80	0.15	3.20	0.45	2.40	0.25	2.80	0.20	2.80	0.30	3.20	0.40	1.60	0.20	2.80	0.20	2.40	0.20	3.20	0.20	2.80	0.30
	5	3.50	0.30	4.00	0.50	3.00	0.30	3.50	0.05	3.50	0.25	4.00	0.60	2.00	0.20	3.50	0.15	3.00	0.25	4.00	0.25	3.50	0.30
	6	4.20	0.55	4.80	0.60	3.60	0.30	4.20	0.25	4.20	0.20	4.80	0.60	2.40	0.20	4.20	0.25	3.60	0.25	4.80	0.25	4.20	0.30
	7	4.90	0.65	5.60	0.70	4.20	0.30	4.90	0.45	4.90	0.20	5.60	0.50	2.80	0.20	4.90	0.20	4.20	0.20	5.60	0.30	4.90	0.30
	8	5.60	0.70	6.40	0.55	4.80	0.20	5.60	0.35	5.60	0.20	6.40	0.25	3.20	0.15	5.60	0.15	4.80	0.20	6.40	0.25	5.60	0.30
	9	6.30	0.25	7.20	0.25	5.40	0.05	6.30	0.15	6.30	0.10	7.20	0.10	3.60	0.05	6.30	0.05	5.40	0.05	7.20	0.10	6.30	0.40
Right Bank		7.00	0.00	8.00	0.00	6.00	0.00	7.00	0.00	7.00	0.00	8.00	0.00	4.00	0.00	7.00	0.00	6.00	0.00	8.00	0.00	7.00	0.00
Feature Type		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: 9/2/2008





