



Missouri
Department of
Natural Resources

Use Attainability Analysis

for

WBID 2609 Middle Fork

Submitted by
Olsson Associates

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): Middle Fk.
Missouri Water Body Identification (WBID) Number: 2609
8-digit HUC: 11010011
County(ies), Listed Upstream to Downstream: Oregon, Howell
Upstream Legal Description (from Table H): 28, 25N, 6W
Downstream Legal Description (from Table H): 4, 24N, 7W
Number of sites evaluated: 7
List all site numbers, <u>consecutively upstream to downstream</u> : 2609-1, 2609-2, 2609-3, 2609-4, 2609-5, 2609-6, 2609-7 * corrected on map
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).

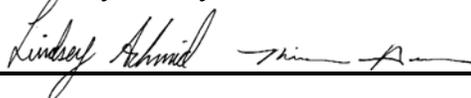
II. Facility Information (list all permitted discharges to this water body segment)

Facility Name(s) and Permit Number(s): Roadrunner RV Park MO 0132578
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III. UAA Surveyor (please **PRINT** legibly)

Name of Surveyor: Lindsey Schmid / Micah Hamer	Telephone Number: 417-890-8802
Organization/Employer: Olsson Associates	

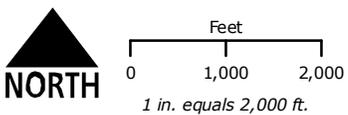
Please verify that you have completed all sections of all data sheets, checked all applicable boxes, provided a map (that includes all requirements listed in the *Missouri Recreational Use Attainability Analyses: Water Body Survey and Assessment Protocol*) and that this form is complete.

Signed:  Date: 08-25-08



Joins to: Middle Fk. 2/3

**MISSOURI RECREATIONAL
USE ATTAINABILITY ANALYSIS**

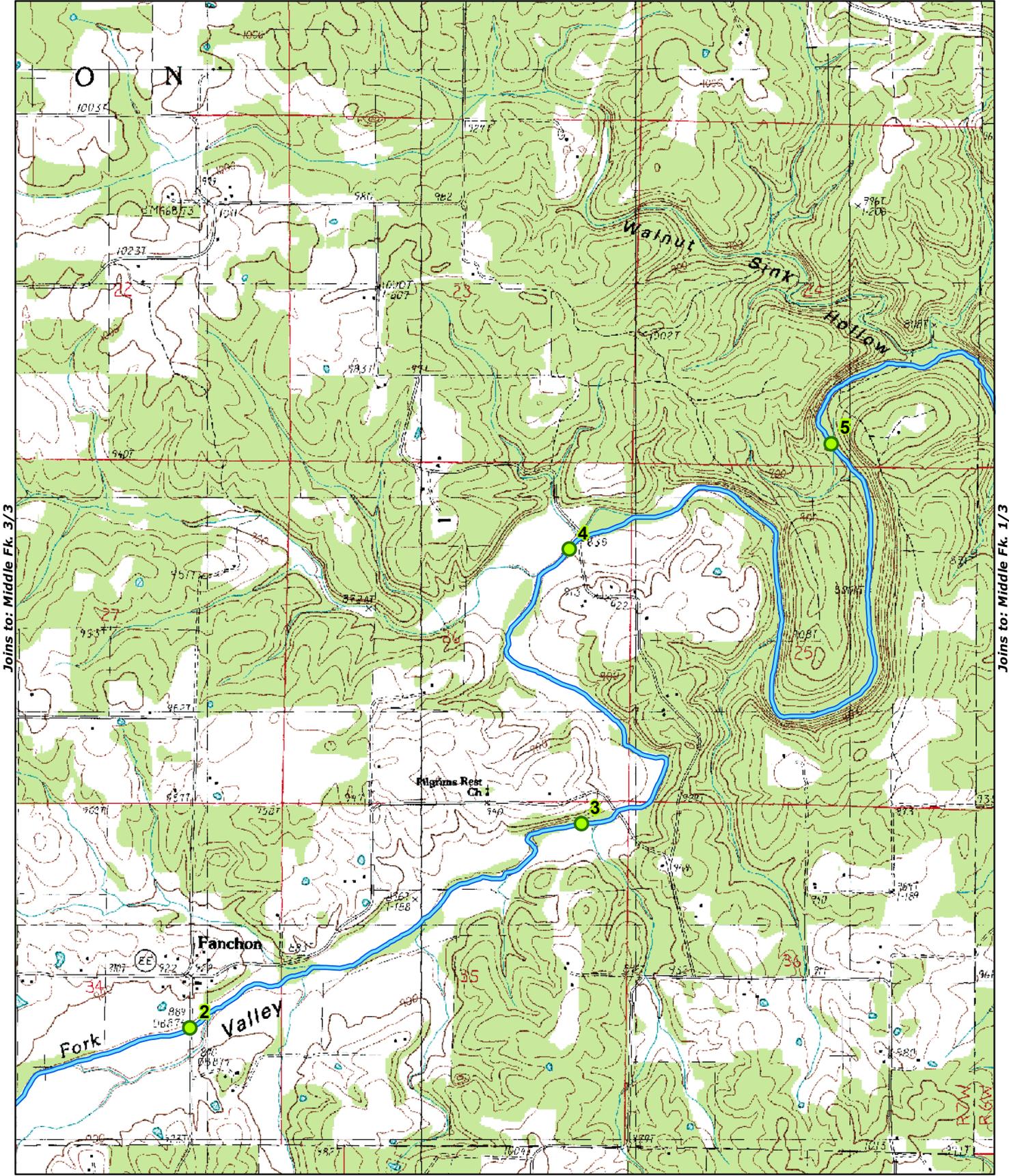


Stream: Middle Fk.
WBID: 2609

Map Sheet: 3/3
County: Howell



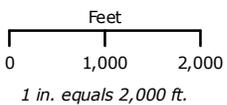
Project No. 008-1298



Joins to: Middle Fk. 3/3

Joins to: Middle Fk. 1/3

**MISSOURI RECREATIONAL
USE ATTAINABILITY ANALYSIS**



Stream: Middle Fk.
WBID: 2609

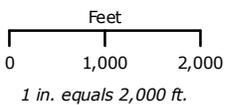
Map Sheet: 2/3
County: Howell



Project No. 008-1298



Joins to: Middle Fk. 2/3



**MISSOURI RECREATIONAL
USE ATTAINABILITY ANALYSIS**

Stream: Middle Fk.
WBID: 2609

Map Sheet: 1/3
County: Oregon



Project No. 008-1298

WBID # 2609

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: 08-25-08 4:15 p.m.	Location Description (e.g., road crossing): West of private road, cattle grazing lands
Stream Name: Middle Fk.	
Current Weather Conditions: clear, warm	Facility Name(s): Roadrunner RV Park
Weather Conditions for Past 10 days: 1.63" @ West Plains	Permit Number(s): MO 0132578
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): 612699	Northing (UTM Y): 4071526	Horizontal Accuracy: (EPE / FOM / PDOP) 29 ft. Meters
Site 11	Easting (UTM X): 612886	Northing (UTM Y): 4071599	Horizontal Accuracy: (EPE / FOM / PDOP) 43 ft. Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
2609-7-A	Upstream looking down	2609-7-B	Downstream looking up		
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

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

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

Field Data Sheets for Recreational Use Stream Surveys

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

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

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

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

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

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

% Cobble	80 % Gravel	20%Sand	% Silt	% Mud/Clay	% Bedrock
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Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site.)

Lots of creek grass, 30% brown algae

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 type="checkbox"/> Milky	<input checked="" type="checkbox"/> Other: brown
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 checked="" type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input 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.)

#7 is most upstream segment on river.

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

Printed Names of Personnel Collecting Data: Lindsey Schmid / Micah Hamer

Surveyor's Signature:  Date of Survey: 08-25-08

Organization: Olsson Associates Position: Field Service

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: <u> Middle Fk. </u> Waterbody ID: <u> 2609 </u> Site #: <u> 1 </u> Estimated Channel Incision: <u> 0.05 </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> 612699 </u> UTM Y: <u> 4071526 </u> +/- <u> 29 ft. </u> (meters) 11 UTM X: <u> 612886 </u> UTM Y: <u> 4071599 </u> +/- <u> 43 ft. </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> Lindsey Schmid / Micah Hamer </u>	<h4 style="text-align: center; margin: 0;">Dissolved Oxygen</h4> Date: <u> 08-25-08 </u> Time: <u> 4:15 p.m. </u> Dissolved Oxygen: <u> 9.63 </u> (mg/L) Dissolved Oxygen: <u> 129.6 </u> (% sat) Specific Cond: <u> 264 </u> (µS/cm) Water Temperature: <u> 29.7 </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	0.52	0.10	0.39	0.09	0.58	0.25	0.77	0.38	0.89	0.57	1.07	0.40	1.03	0.41	0.27	0.05	0.34	0.05	0.23	0.05	0.77	0.07
	2	1.04	0.33	0.78	0.10	1.16	0.22	1.54	0.42	1.78	0.58	2.14	0.38	2.06	0.39	0.54	0.05	0.68	0.05	0.46	0.05	1.54	0.09
	3	1.56	0.38	1.17	0.12	1.74	0.18	2.31	0.38	2.67	0.52	3.21	0.35	3.09	0.37	0.81	0.05	1.02	0.05	0.69	0.05	2.31	0.08
	4	2.08	0.35	1.56	0.20	2.32	0.09	3.08	0.36	3.56	0.44	4.28	0.31	4.12	0.29	1.08	0.05	1.36	0.05	0.92	0.05	3.08	0.17
	5	2.60	0.36	1.95	0.23	2.90	0.10	3.85	0.34	4.45	0.37	5.35	0.24	5.15	0.24	1.35	0.05	1.70	0.05	1.15	0.05	3.85	0.31
	6	3.12	0.35	2.34	0.26	3.48	0.08	4.62	0.39	5.34	0.33	6.42	0.23	6.18	0.18	1.62	0.05	2.04	0.05	1.38	0.05	4.62	0.44
	7	3.64	0.34	2.73	0.21	4.06	0.06	5.39	0.35	6.23	0.25	7.49	0.16	7.21	0.14	1.89	0.05	2.38	0.06	1.61	0.05	5.39	0.43
	8	4.16	0.26	3.12	0.14	4.64	0.07	6.16	0.29	7.12	0.18	8.56	0.09	8.24	0.09	2.16	0.06	2.72	0.08	1.84	0.05	6.16	0.40
9	4.68	0.17	3.51	0.10	5.22	0.06	6.93	0.19	8.01	0.12	9.63	0.07	9.27	0.06	2.43	0.05	3.06	0.05	2.07	0.05	6.93	0.33	
Right Bank		5.20	0.00	3.90	0.00	5.80	0.00	7.70	0.00	8.90	0.00	10.70	0.00	10.30	0.00	2.70	0.00	3.40	0.00	2.30	0.00	7.70	0.00
Feature Type <small>(riffle, run, or pool)</small>		Run		Run		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.

MAXIMUM 0.58
 MEDIAN 0.11

Surveyor's Signature:

Date: 08-25-08

WBID # 2609

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: 08-25-08 4:50 p.m.	Location Description (e.g., road crossing): road crossing county road 3730
Stream Name: Middle Fk.	
Current Weather Conditions: sunny, warm	Facility Name(s): Roadrunner RV Park
Weather Conditions for Past 10 days: 1.63" @ West Plains	Permit Number(s): MO 0132578
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): 615918	Northing (UTM Y): 4072751	Horizontal Accuracy: (EPE / FOM / PDOP) 57 ft. Meters
Site 11	Easting (UTM X): 616106	Northing (UTM Y): 4072874	Horizontal Accuracy: (EPE / FOM / PDOP) 73 ft. Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
2609-6-A	Upstream looking down	2906-6-B	Bridge	2609-6-C	Downstream looking up
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 checked="" type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep slopes	<input type="checkbox"/> Other:
Comments:				

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

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

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

% Cobble	80% Gravel	20% Sand	% Silt	% Mud/Clay	% Bedrock
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Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site.)

Trace moss on rocks

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: N/A	<input 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 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)

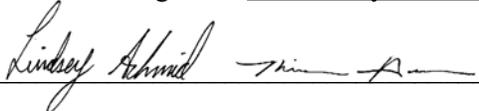
Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses.)

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: Lindsey Schmid / Micah Hamer

Surveyor's Signature:  Date of Survey: 08-25-08

Organization: Olsson Associates Position: Field Service

Field Data Sheets for Recreational Use Stream Surveys
Data Sheet C - Field Survey Results

Stream Name: <u> Middle Fk. </u> Waterbody ID: <u> 2609 </u> Site #: <u> 2 </u> Estimated Channel Incision: <u> 1 </u> (m) (height between low bank width and water) GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM) 01 UTM X: <u> 615918 </u> UTM Y: <u> 4072751 </u> +/- <u> 57 ft. </u> (meters) 11 UTM X: <u> 616106 </u> UTM Y: <u> 4072874 </u> +/- <u> 73 ft. </u> (meters) Average Stream Width: <u> 5 </u> (meters) Length of Survey Segment: <u> 150 </u> (meters) (To determine Length of Reach) (20x average stream width) Field Staff: <u> Lindsey Schmid / Micah Hamer </u>	<p align="center">Dissolved Oxygen</p> Date: <u> 8/25/2008 </u> Time: <u> 4:50 p.m. </u> Dissolved Oxygen: <u> * </u> (mg/L) Dissolved Oxygen: <u> * </u> (% sat) Specific Cond: <u> * </u> (µS/cm) Water Temperature: <u> * </u> (°C) *DRY
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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	0.57	0.00	0.38	0.00	0.39	0.00	0.57	0.00	0.59	0.00	0.49	0.00	0.40	0.00	0.54	0.05	0.75	0.00	0.51	0.00	0.47	0.00
2	1.14	0.00	0.76	0.00	0.78	0.00	1.14	0.00	1.18	0.00	0.98	0.00	0.80	0.00	1.08	0.05	1.50	0.00	1.02	0.00	0.94	0.00
3	1.71	0.00	1.14	0.00	1.17	0.00	1.71	0.00	1.77	0.00	1.47	0.00	1.20	0.00	1.62	0.05	2.25	0.00	1.53	0.00	1.41	0.00
4	2.28	0.00	1.52	0.00	1.56	0.00	2.28	0.00	2.36	0.00	1.96	0.00	1.60	0.00	2.16	0.00	3.00	0.00	2.04	0.00	1.88	0.00
5	2.85	0.00	1.90	0.00	1.95	0.00	2.85	0.00	2.95	0.00	2.45	0.00	2.00	0.00	2.70	0.00	3.75	0.00	2.55	0.00	2.35	0.00
6	3.42	0.00	2.28	0.00	2.34	0.00	3.42	0.00	3.54	0.00	2.94	0.00	2.40	0.00	3.24	0.00	4.50	0.00	3.06	0.00	2.82	0.00
7	3.99	0.00	2.66	0.00	2.73	0.00	3.99	0.00	4.13	0.00	3.43	0.00	2.80	0.00	3.78	0.00	5.25	0.00	3.57	0.00	3.29	0.00
8	4.56	0.00	3.04	0.00	3.12	0.00	4.56	0.00	4.72	0.00	3.92	0.00	3.20	0.00	4.32	0.00	6.00	0.00	4.08	0.00	3.76	0.00
9	5.13	0.00	3.42	0.00	3.51	0.00	5.13	0.00	5.31	0.00	4.41	0.00	3.60	0.00	4.86	0.00	6.75	0.00	4.59	0.00	4.23	0.00
Right Bank	5.70	0.00	3.80	0.00	3.90	0.00	5.70	0.00	5.90	0.00	4.90	0.00	4.00	0.00	5.40	0.00	7.50	0.00	5.10	0.00	4.70	0.00
Feature Type <small>(riffle, run, or pool)</small>	Dry																					

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.

MAXIMUM 0.05
 MEDIAN 0.00

Surveyor's Signature:



Date: 08-25-08

WBID # 2609

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: 08-25-08 5:30 p.m.	Location Description (e.g., road crossing): Private ATV trail, ends & creek
Stream Name: Middle Fk.	
Current Weather Conditions: Clear, sunny	Facility Name(s): Roadrunner RV Park
Weather Conditions for Past 10 days: 1.63" @ West Plains	Permit Number(s): MO 0132578
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): 617728	Northing (UTM Y): 4073681	Horizontal Accuracy: (EPE / FOM / PDOP)	68 ft. Meters	
Site 11	Easting (UTM X): 617894	Northing (UTM Y): 4073727	Horizontal Accuracy: (EPE / FOM / PDOP)	412 Meters	

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
2609-5-A	Upstream looking down	2609-5-B	Downstream looking up	2609-5-C	Bridge
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

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

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

Field Data Sheets for Recreational Use Stream Surveys

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

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

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

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

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

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

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

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Water Characteristics*: (Mark all that apply.)

Odor: N/A	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input type="checkbox"/> None	<input type="checkbox"/> Other:
Color: N/A	<input type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit: N/A	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit: N/A	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input 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)

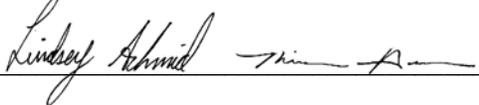
Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses.)

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: Lindsey Schmid / Micah Hamer

Surveyor's Signature:  Date of Survey: 08-25-08

Organization: Olsson Associates Position: Field Service

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: <u> Middle Fk. </u> Waterbody ID: <u> 2609 </u> Site #: <u> 3 </u> Estimated Channel Incision: <u> 1 </u> (m) (height between low bank width and water) GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM) 01 UTM X: <u> 617728 </u> UTM Y: <u> 4073681 </u> +/- <u> 68 ft. </u> (meters) 11 UTM X: <u> 617894 </u> UTM Y: <u> 4073727 </u> +/- <u> 412 ft. </u> (meters) Average Stream Width: <u> 5.5 </u> (meters) Length of Survey Segment: <u> </u> (meters) (To determine Length of Reach) (20x average stream width) Field Staff: <u> Lindsey Schmid / Micah Hamer </u>	<h4 style="text-align: center; margin: 0;">Dissolved Oxygen</h4> Date: <u> 08-25-08 </u> Time: <u> 5:30 p.m. </u> Dissolved Oxygen: <u> * </u> (mg/L) Dissolved Oxygen: <u> * </u> (% sat) Specific Cond: <u> * </u> (µS/cm) Water Temperature: <u> * </u> (°C) *DRY
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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	0.43	0.00	0.61	0.00	0.30	0.00	0.52	0.00	0.84	0.00	0.86	0.00	0.57	0.00	0.62	0.00	0.59	0.00	0.43	0.00	0.51	0.00
2	0.86	0.00	1.22	0.00	0.60	0.00	1.04	0.00	1.68	0.00	1.72	0.00	1.14	0.00	1.24	0.00	1.18	0.00	0.86	0.00	1.02	0.00
3	1.29	0.00	1.83	0.00	0.90	0.00	1.56	0.00	2.52	0.00	2.58	0.00	1.71	0.00	1.86	0.00	1.77	0.00	1.29	0.00	1.53	0.00
4	1.72	0.00	2.44	0.00	1.20	0.00	2.08	0.00	3.36	0.00	3.44	0.00	2.28	0.00	2.48	0.00	2.36	0.00	1.72	0.00	2.04	0.00
5	2.15	0.00	3.05	0.00	1.50	0.00	2.60	0.00	4.20	0.00	4.30	0.00	2.85	0.00	3.10	0.00	2.95	0.00	2.15	0.00	2.55	0.00
6	2.58	0.00	3.66	0.00	1.80	0.00	3.12	0.00	5.04	0.00	5.16	0.00	3.42	0.00	3.72	0.00	3.54	0.00	2.58	0.00	3.06	0.00
7	3.01	0.00	4.27	0.00	2.10	0.00	3.64	0.00	5.88	0.00	6.02	0.00	3.99	0.00	4.34	0.00	4.13	0.00	3.01	0.00	3.57	0.00
8	3.44	0.00	4.88	0.00	2.40	0.00	4.16	0.00	6.72	0.00	6.88	0.00	4.56	0.00	4.96	0.00	4.72	0.00	3.44	0.00	4.08	0.00
9	3.87	0.00	5.49	0.00	2.70	0.00	4.68	0.00	7.56	0.00	7.74	0.00	5.13	0.00	5.58	0.00	5.31	0.00	3.87	0.00	4.59	0.00
Right Bank	4.30	0.00	6.10	0.00	3.00	0.00	5.20	0.00	8.40	0.00	8.60	0.00	5.70	0.00	6.20	0.00	5.90	0.00	4.30	0.00	5.10	0.00
Feature Type <small>(riffle, run, or pool)</small>	Dry																					

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.

MAXIMUM 0.00

MEDIAN 0.00

Surveyor's Signature:

Date: 08-25-08

WBID # 2609

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: 08-25-08 5:45 p.m.	Location Description (e.g., road crossing): Road crossing County Road 3850
Stream Name: Middle Fk.	
Current Weather Conditions: clear, warm	Facility Name(s): Roadrunner RV Park
Weather Conditions for Past 10 days 1.63” @ West Plains:	Permit Number(s): MO 0132578
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): 617692	Northing (UTM Y): 4074998	Horizontal Accuracy: (EPE / FOM / PDOP) 45 ft. Meters
Site 11	Easting (UTM X): 617881	Northing (UTM Y): 4075080	Horizontal Accuracy: (EPE / FOM / PDOP) 98 ft. Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
2609-4-A	Upstream looking down /road crossing	2609-4-B	Pool	2609-4-C	Downstream looking up
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 checked="" type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep slopes	<input type="checkbox"/> Other:
Comments:				

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

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

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

% Cobble	80% Gravel	20% Sand	% Silt	% Mud/Clay	% Bedrock
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Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site.)

Slick algae on rocks 60%

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 # 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.)

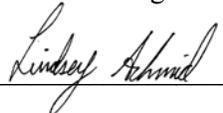
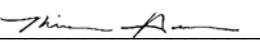
Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)
Pool	10m	12	50	.8	>1m

Comments: (Please record any additional comments here.)

Pool created by road crossing

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

Printed Names of Personnel Collecting Data: Lindsey Schmid / Micah Hamer

Surveyor's Signature:   Date of Survey: 08-25-08

Organization: Olsson Associates Position: Field Service

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: <u> Middle Fk. </u> Waterbody ID: <u> 2609 </u> Site #: <u> 4 </u> Estimated Channel Incision: <u> 1.5-2 </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> 617692 </u> UTM Y: <u> 4074998 </u> +/- <u> 45 ft. </u> (meters) 11 UTM X: <u> 617881 </u> UTM Y: <u> 4075080 </u> +/- <u> 98 ft. </u> (meters) Average Stream Width: <u> 6.5 </u> (meters) Length of Survey Segment: <u> 150 </u> (meters) (To determine Length of Reach) (20x average stream width) Field Staff: <u> Lindsey Schmid / Micah Hamer </u>	<h4 style="text-align: center; margin: 0;">Dissolved Oxygen</h4> Date: <u> 08-26-08 </u> Time: <u> 5:45 p.m. </u> Dissolved Oxygen: <u> 7.68 </u> (mg/L) Dissolved Oxygen: <u> 95.5 </u> (% sat) Specific Cond: <u> 252 </u> (µS/cm) Water Temperature: <u> 26.9 </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	1.86	0.48	1.89	0.59	0.40	0.00	0.26	0.00	0.23	0.05	0.29	0.00	0.44	0.00	0.40	0.11	0.51	0.08	0.34	0.51	0.48	0.05
2	3.72	0.62	3.78	0.52	0.80	0.00	0.52	0.00	0.46	0.09	0.58	0.00	0.88	0.00	0.80	0.14	1.02	0.10	0.68	0.54	0.96	0.07
3	5.58	1.00	5.67	0.43	1.20	0.00	0.78	0.00	0.69	0.09	0.87	0.00	1.32	0.00	1.20	0.18	1.53	0.20	1.02	0.49	1.44	0.12
4	7.44	1.00	7.56	0.36	1.60	0.00	1.04	0.00	0.97	0.08	1.16	0.00	1.76	0.00	1.60	0.21	2.04	0.33	1.36	0.43	1.92	0.18
5	9.30	1.00	9.45	0.32	2.00	0.00	1.30	0.00	1.15	0.09	1.45	0.00	2.20	0.00	2.00	0.26	2.55	0.36	1.70	0.29	2.40	0.18
6	11.16	1.00	11.34	0.34	2.40	0.00	1.56	0.00	1.38	0.08	1.74	0.00	2.64	0.00	2.40	0.25	3.06	0.37	2.04	0.18	2.88	0.21
7	13.02	1.00	13.23	0.45	2.80	0.00	1.82	0.00	1.61	0.07	2.03	0.00	3.08	0.00	2.80	0.18	3.57	0.34	2.38	0.16	3.36	0.25
8	14.88	0.79	15.12	0.37	3.20	0.00	2.08	0.00	1.84	0.08	2.32	0.00	3.52	0.00	3.20	0.22	4.08	0.27	2.72	0.12	3.84	0.19
9	16.74	0.57	17.01	0.40	3.60	0.00	2.34	0.00	2.07	0.06	2.61	0.00	3.96	0.00	3.60	0.14	4.59	0.19	3.06	0.05	4.32	0.20
Right Bank	18.60	0.00	18.90	0.00	4.00	0.00	2.60	0.00	2.30	0.00	2.90	0.00	4.40	0.00	4.00	0.00	5.10	0.00	3.40	0.00	4.80	0.00
Feature Type <small>(riffle, run, or pool)</small>	Pool	Pool	Pool	Pool	Dry	Dry	Dry	Dry	Pool	Dry	Dry	Dry	Run	Run								

<--- assuming 0.57 not 57 meters

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.

MAXIMUM 1.00
 MEDIAN 0.08

Surveyor's Signature: Date: 08-25-08

WBID # 2609

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: 08-26-08	9:30 a.m.	Location Description (e.g., road crossing): Private property ATV trail
Stream Name: Middle Fk.		
Current Weather Conditions: sunny, warm		Facility Name(s): Roadrunner RV Park
Weather Conditions for Past 10 days: 1.63" @ West Plains		Permit Number(s): MO 132578
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): 618896	Northing (UTM Y): 4075454	Horizontal Accuracy: (EPE / FOM / PDOP) 67 ft. Meters
Site 11	Easting (UTM X): 618860	Northing (UTM Y): 4075643	Horizontal Accuracy: (EPE / FOM / PDOP) 75 ft. Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
2609-3-A	Upstream looking down	2609-3-B	Downstream looking up		
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 # 5

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

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

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

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

% Cobble	80% Gravel	20% Sand	% Silt	% Mud/Clay	% Bedrock
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Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site.)

N/A

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: N/A	<input 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 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 # 5

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: Lindsey Schmid / Micah Hamer

Surveyor's Signature:  Date of Survey: 08-26-08

Organization: Olsson Associates Position: Field Service

Field Data Sheets for Recreational Use Stream Surveys
Data Sheet C - Field Survey Results

Stream Name: <u> Middle Fk. </u> Waterbody ID: <u> 2609 </u> Site #: <u> 5 </u> Estimated Channel Incision: <u> 1 </u> (m) (height between low bank width and water) GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM) 01 UTM X: <u> 618896 </u> UTM Y: <u> 4075454 </u> +/- <u> 67 ft. </u> (meters) 11 UTM X: <u> 618860 </u> UTM Y: <u> 4075643 </u> +/- <u> 75 ft. </u> (meters) Average Stream Width: <u> 1.3 </u> (meters) Length of Survey Segment: <u> 150 </u> (meters) (To determine Length of Reach) (20x average stream width) Field Staff: <u> Lindsey Schmid / Micah Hamer </u>	<p align="center">Dissolved Oxygen</p> Date: <u> 08-26-08 </u> Time: <u> 9:30 a.m. </u> Dissolved Oxygen: <u> * </u> (mg/L) Dissolved Oxygen: <u> * </u> (% sat) Specific Cond: <u> * </u> (µS/cm) Water Temperature: <u> * </u> (°C) *DRY
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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	0.30	0.00	0.37	0.00	0.32	0.00	0.36	0.00	0.46	0.00	0.46	0.00	0.39	0.00	0.35	0.00	0.44	0.00	0.58	0.00	0.47	0.00
2	0.60	0.00	0.74	0.00	0.64	0.00	0.72	0.00	0.92	0.00	0.92	0.00	0.78	0.00	0.70	0.00	0.88	0.00	1.16	0.00	0.94	0.00
3	0.90	0.00	1.11	0.00	0.96	0.00	1.08	0.00	1.38	0.00	1.38	0.00	1.17	0.00	1.05	0.00	1.32	0.00	1.74	0.00	1.41	0.00
4	1.20	0.00	1.48	0.00	1.28	0.00	1.44	0.00	1.84	0.00	1.84	0.00	1.56	0.00	1.40	0.00	1.76	0.00	2.32	0.00	1.88	0.00
5	1.50	0.00	1.85	0.00	1.60	0.00	1.80	0.00	2.30	0.00	2.30	0.00	1.95	0.00	1.75	0.00	2.20	0.00	2.90	0.00	2.35	0.00
6	1.80	0.00	2.22	0.00	1.92	0.00	2.16	0.00	2.76	0.00	2.76	0.00	2.34	0.00	2.10	0.00	2.64	0.00	3.48	0.00	2.82	0.00
7	2.10	0.00	2.59	0.00	2.24	0.00	2.52	0.00	3.22	0.00	3.22	0.00	2.73	0.00	2.45	0.00	3.08	0.00	4.06	0.00	3.29	0.00
8	2.40	0.00	2.96	0.00	2.56	0.00	2.88	0.00	3.68	0.00	3.68	0.00	3.12	0.00	2.80	0.00	3.52	0.00	4.64	0.00	3.76	0.00
9	2.70	0.00	3.33	0.00	2.88	0.00	3.24	0.00	4.14	0.00	4.14	0.00	3.51	0.00	3.15	0.00	3.96	0.00	5.22	0.00	4.23	0.00
Right Bank	3.00	0.00	3.70	0.00	3.20	0.00	3.60	0.00	4.60	0.00	4.60	0.00	3.90	0.00	3.50	0.00	4.40	0.00	5.80	0.00	4.70	0.00
Feature Type <small>(riffle, run, or pool)</small>	Dry																					

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.

MAXIMUM 0.00
 MEDIAN 0.00

Surveyor's Signature:



Date: 08-26-08

WBID # 2609

Site # 6

Field Data Sheets for Recreational Use Stream Surveys

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

(must be completed for each site)

Date & Time: 08-26-08 12:30 p.m.	Location Description (e.g., road crossing):
Stream Name: Middle Fk.	Upstream from private land road
Current Weather Conditions: sunny, warm	Facility Name(s): Roadrunner RV Park
Weather Conditions for Past 10 days: 1.63" @ West Plains	Permit Number(s): MO 0132578
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): 621130	Northing (UTM Y): 4075069	Horizontal Accuracy: (EPE / FOM / PDOP) 53 ft. Meters
Site 11	Easting (UTM X): 621145	Northing (UTM Y): 4074900	Horizontal Accuracy: (EPE / FOM / PDOP) 59 ft. Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
2609-2-A	Upstream looking down	2609-2-B	Downstream looking up		
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 # 6

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 checked="" type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep slopes	<input type="checkbox"/> Other:
Comments: Private property				

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 checked="" type="checkbox"/> RV / ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Livestock Watering
<input type="checkbox"/> None of the above	Comments / Other:			

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

% Cobble	80% Gravel	20% Sand	% Silt	% Mud/Clay	% Bedrock
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Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site.)

Big bright green globs of algae

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 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 # 6

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.)

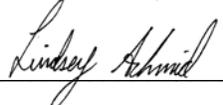
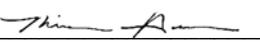
Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

Comments: (Please record any additional comments here.)

Spring fed – very cold!

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

Printed Names of Personnel Collecting Data: Lindsey Schmid / Micah Hamer

Surveyor's Signature:   Date of Survey: 08-26-08

Organization: Olsson Associates Position: Field Service

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: <u> <iddle Fk. </u> Waterbody ID: <u> 2609 </u> Site #: <u> 6 </u> Estimated Channel Incision: <u> 0.2 </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> 621130 </u> UTM Y: <u> 4075069 </u> +/- <u> 53 ft. </u> (meters) 11 UTM X: <u> 621145 </u> UTM Y: <u> 4074900 </u> +/- <u> 59 ft. </u> (meters) Average Stream Width: <u> 7.5 </u> (meters) Length of Survey Segment: <u> 150 </u> (meters) (To determine Length of Reach) (20x average stream width) Field Staff: <u> Lindsey Schmid / Micah Hamer </u>	Dissolved Oxygen Date: <u> 08-26-08 </u> Time: <u> 12:30 p.m. </u> Dissolved Oxygen: <u> 10.3 </u> (mg/L) Dissolved Oxygen: <u> 105.9 </u> (% sat) Specific Cond: <u> 335 </u> (µS/cm) Water Temperature: <u> 16.9 </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	0.44
	1	0.76	0.08	0.43	0.12	0.57	0.09	0.62	0.19	0.69	0.25	0.84	0.29	0.76	0.10	1.48	0.05	0.78	0.22	0.57	0.32	0.98	0.42
	2	1.52	0.10	0.86	0.14	1.14	0.16	1.24	0.20	1.38	0.23	1.68	0.49	1.52	0.23	2.96	0.05	1.56	0.31	1.14	0.31	1.96	0.42
	3	2.28	0.05	1.29	0.26	1.71	0.19	1.86	0.20	2.07	0.23	2.52	0.52	2.28	0.11	4.44	0.07	2.34	0.22	1.71	0.47	2.94	0.50
	4	3.04	0.05	1.72	0.30	2.28	0.23	2.48	0.21	2.76	0.29	3.36	0.46	3.04	0.20	5.92	0.05	3.12	0.25	2.28	0.36	3.92	0.54
	5	3.80	0.12	2.15	0.32	2.85	0.12	3.10	0.18	3.45	0.26	4.20	0.42	3.80	0.18	7.40	0.05	3.90	0.08	2.85	0.33	4.90	0.41
	6	4.56	0.18	2.58	0.34	3.42	0.07	3.72	0.11	4.14	0.28	5.04	0.47	4.56	0.10	8.88	0.15	4.68	0.11	3.42	0.30	5.88	0.27
	7	5.32	0.20	3.01	0.26	3.99	0.05	4.34	0.18	4.83	0.32	5.88	0.40	5.32	0.13	10.36	0.23	5.46	0.20	3.99	0.25	6.86	0.25
	8	6.08	0.12	3.44	0.27	4.56	0.05	4.96	0.14	5.52	0.22	6.72	0.34	6.08	0.11	11.84	0.18	6.24	0.13	4.56	0.19	7.84	0.27
9	6.84	0.14	3.87	0.22	5.13	0.12	5.58	0.05	6.21	0.14	7.56	0.21	6.84	0.12	13.32	0.22	7.02	0.15	5.13	0.11	8.82	0.29	
Right Bank		7.60	0.00	4.30	0.00	5.70	0.00	6.20	0.00	6.90	0.00	8.40	0.00	7.60	0.00	14.80	0.00	7.80	0.00	5.70	0.00	9.80	0.00
Feature Type <small>(riffle, run, or pool)</small>		Riffle		Run		Riffle		Riffle		Run		Run		Riffle		Riffle		Riffle		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.

MAXIMUM 0.54
 MEDIAN 0.19

Surveyor's Signature:

Date: 08-26-08

WBID # 2609

Site # 7

Field Data Sheets for Recreational Use Stream Surveys

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

(must be completed for each site)

Date & Time: 08-26-08 11:20 a.m.	Location Description (e.g., road crossing): Private road crossing
Stream Name: Middle Fk.	
Current Weather Conditions: sunny and warm	Facility Name(s): Roadrunner RV Park
Weather Conditions for Past 10 days: 1.63" @ West Plains	Permit Number(s): MO 0132578
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): 622076	Northing (UTM Y): 4074471	Horizontal Accuracy: (EPE / FOM / PDOP)	50 ft. Meters
Site 11	Easting (UTM X): 621939	Northing (UTM Y): 4074371	Horizontal Accuracy: (EPE / FOM / PDOP)	116 ft. Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
2609-1-A	Upstream looking down	2609-1-B	Road	2609-1-C	Boat
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
2609-1-D	Downstream looking up				
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 checked="" type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep slopes	<input type="checkbox"/> Other:
Comments: Private property				

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 checked="" type="checkbox"/> RV / ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Livestock Watering
<input type="checkbox"/> None of the above	Comments / Other:			

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

% Cobble	80% Gravel	20% Sand	% Silt	% Mud/Clay	% Bedrock
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Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site.)

N/A

Water Characteristics*: (Mark all that apply.)

Odor: N/A	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input type="checkbox"/> None	<input type="checkbox"/> Other:
Color: N/A	<input 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 type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit: N/A	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input 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.)

Moved 0.9 miles upstream to access point.

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

Printed Names of Personnel Collecting Data: Lindsey Schmid / Micah Hamer

Surveyor's Signature:  Date of Survey: 08-26-08

Organization: Olsson Associates Position: Field Service

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: <u> Middle Fk. </u> Waterbody ID: <u> 2609 </u> Site #: <u> 7 </u> Estimated Channel Incision: <u> 0.8 </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> 622076 </u> UTM Y: <u> 4074471 </u> +/- <u> 50 ft. </u> (meters) 11 UTM X: <u> 621939 </u> UTM Y: <u> 4074371 </u> +/- <u> (meters) </u> Average Stream Width: <u> 6.5 </u> (meters) Length of Survey Segment: <u> 116 </u> (meters) (To determine Length of Reach) (20x average stream width) Field Staff: <u> Lindsey Schmid / Micah Hamer </u>	<h4 style="text-align: center; margin: 0;">Dissolved Oxygen</h4> Date: <u> 08-26-08 </u> Time: <u> 11:20 a.m. </u> Dissolved Oxygen: <u> * </u> (mg/L) Dissolved Oxygen: <u> * </u> (% sat) Specific Cond: <u> * </u> (µS/cm) Water Temperature: <u> * </u> (°C) *Dry
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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	0.68	0.00	0.64	0.00	1.29	0.00	0.63	0.00	0.78	0.00	0.88	0.00	0.41	0.00	0.39	0.00	0.43	0.00	0.54	0.00	0.67	0.00
	2	1.36	0.00	1.28	0.00	2.58	0.00	1.26	0.00	1.56	0.00	1.76	0.00	0.82	0.00	0.78	0.00	0.86	0.00	1.08	0.00	1.34	0.00
	3	2.04	0.00	1.92	0.00	3.87	0.00	1.89	0.00	2.34	0.00	2.64	0.00	1.23	0.00	1.17	0.00	1.29	0.00	1.62	0.00	2.01	0.00
	4	2.72	0.00	2.56	0.00	5.16	0.00	2.52	0.00	3.12	0.00	3.52	0.00	1.64	0.00	1.56	0.00	1.72	0.00	2.16	0.00	2.68	0.00
	5	3.40	0.00	3.20	0.00	6.45	0.00	3.15	0.00	3.90	0.00	4.40	0.00	2.05	0.00	1.95	0.00	2.15	0.00	2.70	0.00	3.35	0.00
	6	4.08	0.00	3.84	0.00	7.74	0.00	3.78	0.00	4.68	0.00	5.28	0.00	2.46	0.00	2.34	0.00	2.58	0.00	3.24	0.00	4.02	0.00
	7	4.76	0.00	4.48	0.00	9.03	0.00	4.41	0.00	5.46	0.00	6.16	0.00	2.87	0.00	2.73	0.00	3.01	0.00	3.78	0.00	4.69	0.00
	8	5.44	0.00	5.12	0.00	10.32	0.00	5.04	0.00	6.24	0.00	7.04	0.00	3.28	0.00	3.12	0.00	3.44	0.00	4.32	0.00	5.36	0.00
9	6.12	0.00	5.76	0.00	11.61	0.00	5.67	0.00	7.02	0.00	7.92	0.00	3.69	0.00	3.51	0.00	3.87	0.00	4.86	0.00	6.03	0.00	
Right Bank		6.80	0.00	6.40	0.00	12.90	0.00	6.30	0.00	7.80	0.00	8.80	0.00	4.10	0.00	3.90	0.00	4.30	0.00	5.40	0.00	6.70	0.00
Feature Type <small>(riffle, run, or pool)</small>		Dry		Dry		Dry		Dry		Dry		Dry		Dry		Dry		Dry		Dry		Dry	

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.

MAXIMUM 0.00
 MEDIAN 0.00

Surveyor's Signature:

Date: 08-26-08









