



Missouri
Department of
Natural Resources

Use Attainability Analysis

for

WBID 3006 Fish Trap Slough

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): Fish Trap Slough
Missouri Water Body Identification (WBID) Number: 3006
8-digit HUC: 08020302
County(ies), Listed Upstream to Downstream: Butler
Upstream Legal Description (from Table H): 2, 23N, 8E
Downstream Legal Description (from Table H): State Line
Number of sites evaluated: 5
List all site numbers, <u>consecutively upstream to downstream</u> : 3006-1, 3006-2, 3006-3, 3006-4, 3006-5
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).

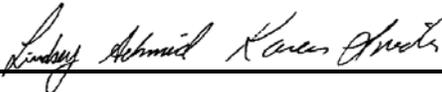
II. Facility Information (list all permitted discharges to this water body segment)

Facility Name(s) and Permit Number(s): Qulin WWTF MO 0094935
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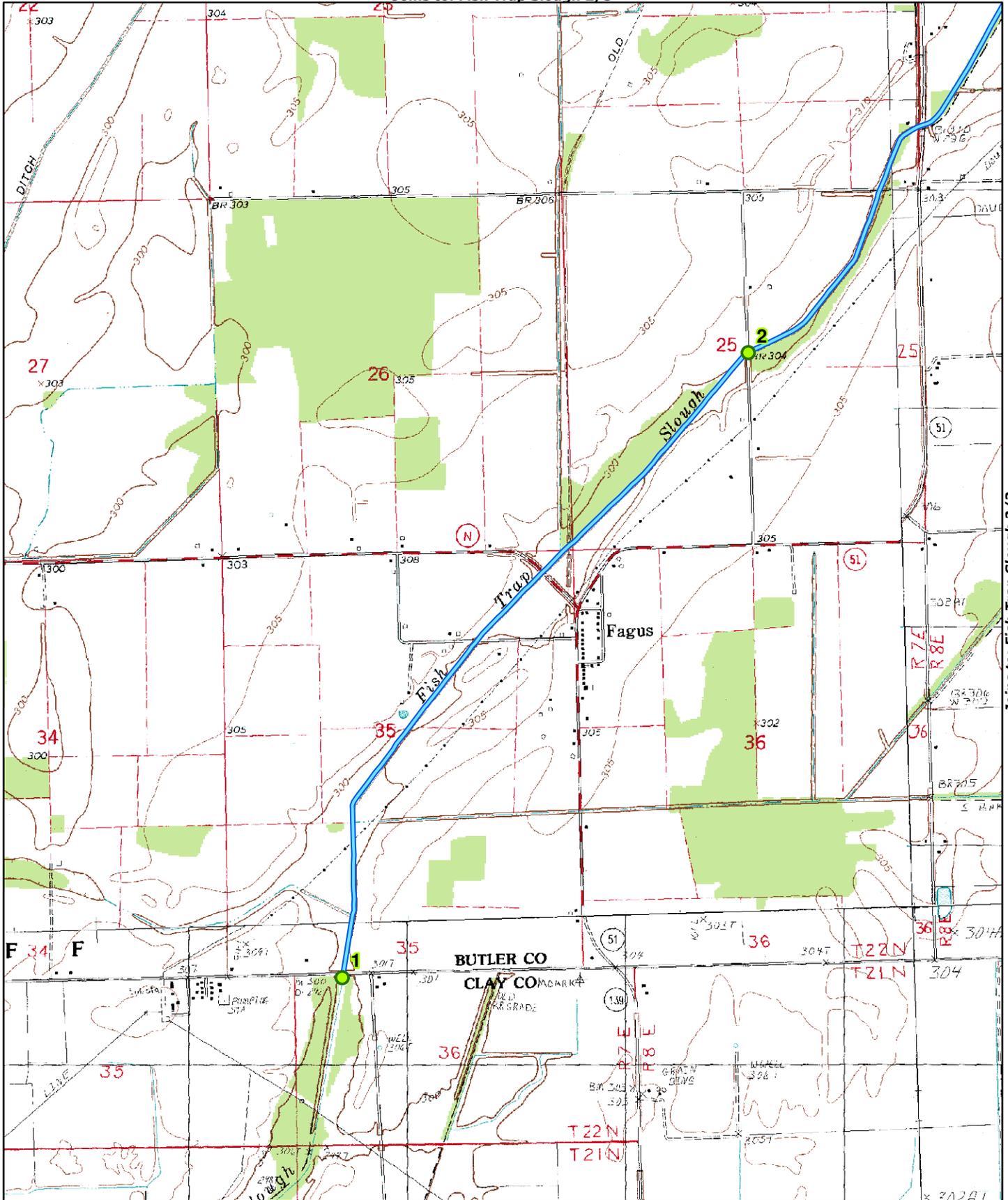
III. UAA Surveyor (please **PRINT** legibly)

Name of Surveyor: Lindsey Schmid/ Karen Snider	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: 09-10-08

Joins to: Fish Trap Slough 2/3



Joins to: Fish Trap Slough 2/3

MISSOURI RECREATIONAL USE ATTAINABILITY ANALYSIS



Feet
0 1,000 2,000
1 in. equals 2,000 ft.

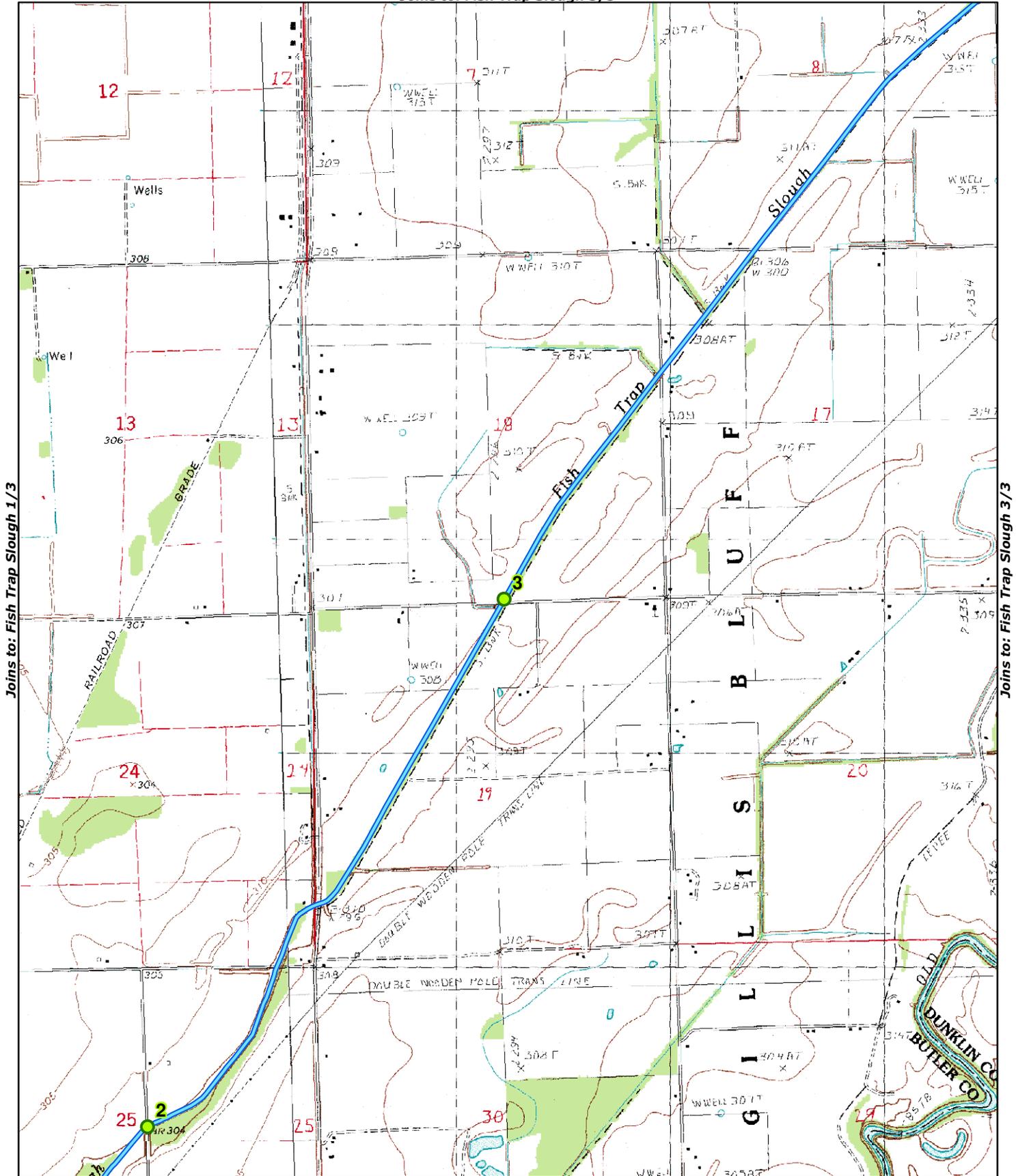
Stream: Fish Trap Slough
WBID: 3006

Map Sheet: 1/3
County: Butler



Project No. 008-1298

Joins to: Fish Trap Slough 3/3



Joins to: Fish Trap Slough 1/3

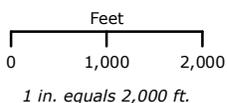
Joins to: Fish Trap Slough 3/3

Joins to: Fish Trap Slough 1/3

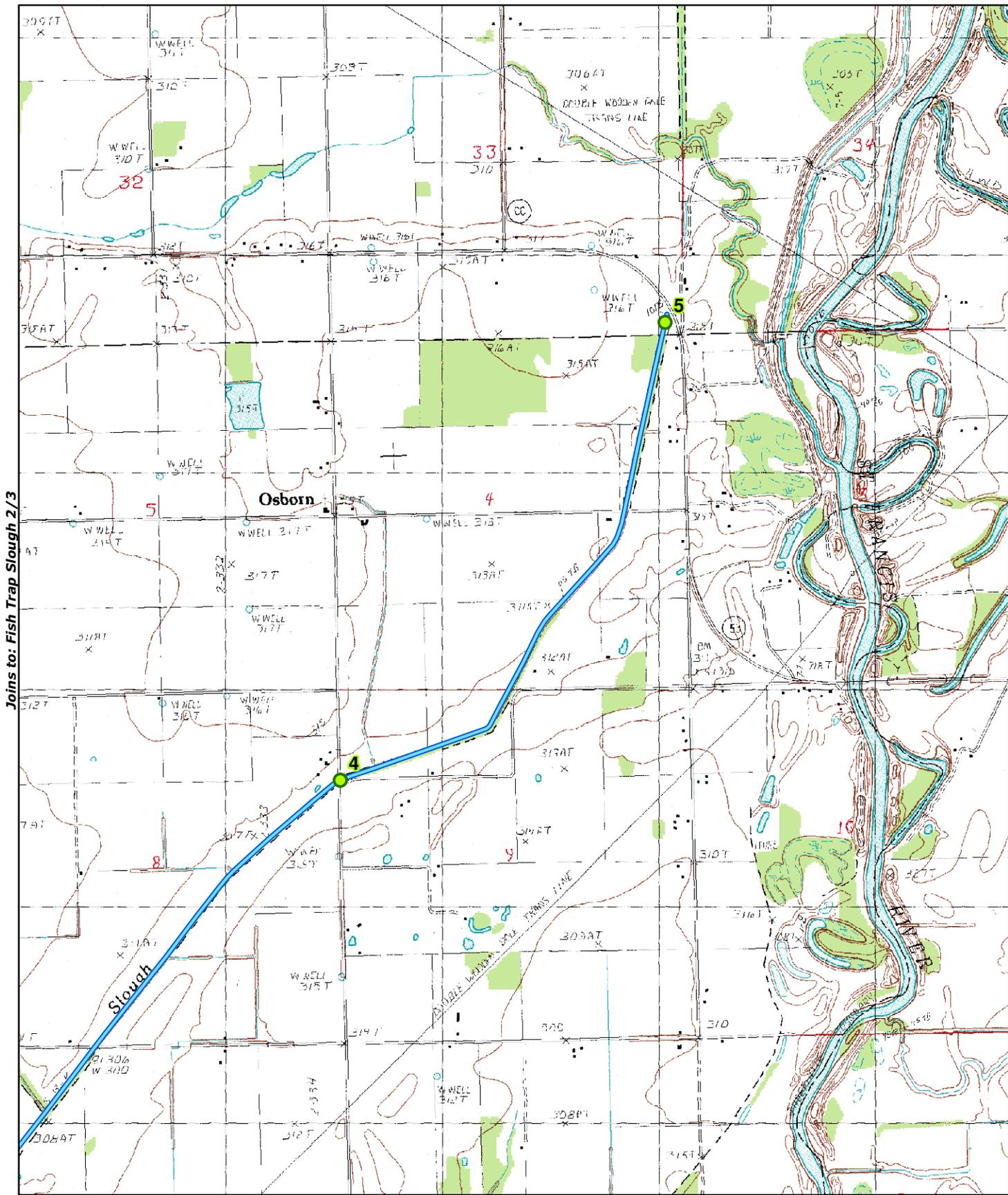
MISSOURI RECREATIONAL USE ATTAINABILITY ANALYSIS

Stream: Fish Trap Slough
WBID: 3006

Map Sheet: 2/3
County: Butler



Project No. 008-1298



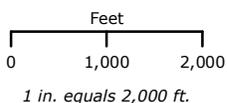
Joins to: Fish Trap Slough 2/3

Joins to: Fish Trap Slough 2/3

**MISSOURI RECREATIONAL
USE ATTAINABILITY ANALYSIS**

Stream: Fish Trap Slough
WBID: 3006

Map Sheet: 3/3
County: Butler



Project No. 008-1298

WBID # 3006

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: 09-10-08 5:30 p.m.	Location Description (e.g., road crossing): Road Crossing HWY 53
Stream Name: Fish Trap Slough	
Current Weather Conditions: Sunny/warm	Facility Name(s): Qulin WWTF
Weather Conditions for Past 10 days: 0.96 @ Poplar Bluff	Permit Number(s): MO 0094935
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): 751027	Northing (UTM Y): 4052965	Horizontal Accuracy: (EPE / FOM / PDOP) 37 ft. Meters
Site 11	Easting (UTM X): 750991	Northing (UTM Y): 4052759	Horizontal Accuracy: (EPE / FOM / PDOP) 20 ft. Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
3006-1-A	Upstream looking down	3006-1-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 # 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: Farm land
Comments:				

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

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

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

% Cobble	% Gravel	% Sand	% Silt	100% Mud/Clay	% Bedrock
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Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site.)

Lots of algae, grass

Water Characteristics*: (Mark all that apply.)

Odor:	<input checked="" type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input type="checkbox"/> Clear	<input checked="" type="checkbox"/> Green	<input checked="" 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 checked="" 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.

Site # 1

Field Data Sheets for Recreational Use Stream Surveys

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

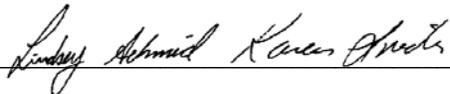
Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses.)

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: Lindsey Schmid / Karen Snider

Surveyor's Signature:  Date of Survey: 09-10-08

Organization: Olsson Associates Position: Field Service

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: <u>Fish Trap Slough</u> Waterbody ID: <u>3006</u> Site #: <u>1</u> Estimated Channel Incision: <u>0</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>751027</u> UTM Y: <u>4052965</u> +/- <u>37</u> ft. (meters) 11 UTM X: <u>750991</u> UTM Y: <u>4052759</u> +/- <u>20</u> ft. (meters) Average Stream Width: <u>2</u> (meters) Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach) (20x average stream width) Field Staff: <u>Lindsey Schmid / Karen Snider</u>	<p align="center">Dissolved Oxygen</p> Date: <u>09-10-08</u> Time: <u>5:30 p.m.</u> Dissolved Oxygen: <u>0.58</u> (mg/L) Dissolved Oxygen: <u>7</u> (% sat) Specific Cond: <u>297</u> (µS/cm) Water Temperature: <u>24.6</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	0.19	0.21	0.06	0.00	0.07	0.00	0.18	0.12	0.21	0.08	0.24	0.10	0.37	0.13	0.35	0.22	0.41	0.34	0.44	0.36	0.42	0.25
2	0.38	0.23	0.12	0.00	0.14	0.00	0.36	0.18	0.42	0.14	0.48	0.13	0.74	0.14	0.70	0.26	0.82	0.36	0.88	0.36	0.84	0.23
3	0.57	0.25	0.18	0.00	0.21	0.00	0.54	0.20	0.63	0.17	0.72	0.18	1.11	0.12	1.05	0.31	1.23	0.40	1.32	0.38	1.26	0.29
4	0.76	0.26	0.24	0.00	0.28	0.00	0.72	0.21	0.84	0.26	0.96	0.24	1.48	0.21	1.40	0.38	1.64	0.46	1.76	0.44	1.68	0.37
5	0.95	0.24	0.30	0.00	0.35	0.00	0.90	0.38	1.05	0.34	1.20	0.27	1.85	0.22	1.75	0.40	2.05	0.43	2.20	0.42	2.10	0.39
6	1.14	0.23	0.36	0.00	0.42	0.00	1.08	0.34	1.26	0.39	1.44	0.29	2.22	0.21	2.10	0.39	2.46	0.39	2.64	0.41	2.52	0.39
7	1.33	0.19	0.42	0.00	0.49	0.00	1.26	0.31	1.47	0.28	1.68	0.27	2.59	0.18	2.45	0.34	2.87	0.35	3.08	0.40	2.94	0.33
8	1.52	0.18	0.48	0.00	0.56	0.00	1.44	0.28	1.68	0.24	1.92	0.25	2.96	0.15	2.80	0.29	3.28	0.33	3.52	0.31	3.36	0.24
9	1.71	0.19	0.54	0.00	0.63	0.00	1.62	0.22	1.89	0.16	2.16	0.19	3.33	0.15	3.15	0.27	3.69	0.28	3.96	0.30	3.78	0.21
Right Bank	1.90	0.00	0.60	0.00	0.70	0.00	1.80	0.00	2.10	0.00	2.40	0.00	3.70	0.00	3.50	0.00	4.10	0.00	4.40	0.00	4.20	0.00
Feature Type <small>(riffle, run, or pool)</small>	Pool	Dry		Dry		Run																

MAXIMUM 0.46

MEDIAN 0.24

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:



WBID # 3006

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: 09-10-08 4:45 p.m.	Location Description (e.g., road crossing): Farm road crossing
Stream Name: Fish Trap Slough	
Current Weather Conditions: sunny/warm	Facility Name(s): Qulin WWTF
Weather Conditions for Past 10 days: 0.96" @ Poplar Bluff	Permit Number(s): MO 0094935
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): 749575	Northing (UTM Y): 4050813	Horizontal Accuracy: (EPE / FOM / PDOP) 21 ft. Meters
Site 11	Easting (UTM X): 749376	Northing (UTM Y): 4050697	Horizontal Accuracy: (EPE / FOM / PDOP) 33 ft. Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
3006-2-A	Upstream looking down	3006-2-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.)				

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: Farm land
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	% Gravel	% Sand	% Silt	100% Mud/Clay	% Bedrock
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Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site.)

Cattails, grass, etc. cover majority of creek. Lots of algae.
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Water Characteristics*: (Mark all that apply.)

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

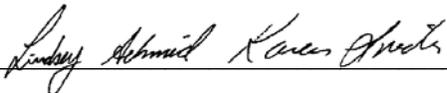
Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses.)

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: Lindsey Schmid / Karen Snider

Surveyor's Signature:  Date of Survey: 09-10-08

Organization: Olsson Associates Position: Field Service

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: <u>Fish Trap Slough</u> Waterbody ID: <u>3006</u> Site #: <u>2</u> Estimated Channel Incision: <u>0.1</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>749575</u> UTM Y: <u>4050813</u> +/- <u>21</u> ft. (meters) 11 UTM X: <u>7499376</u> UTM Y: <u>4050697</u> +/- <u>33</u> ft. (meters) Average Stream Width: <u>1.5</u> (meters) Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach) (20x average stream width) Field Staff: <u>Lindsey Schmid / Karen Snider</u>	<p align="center">Dissolved Oxygen</p> Date: <u>9/10/2008</u> Time: <u>4:45 p.m.</u> Dissolved Oxygen: <u>3.56</u> (mg/L) Dissolved Oxygen: <u>45.8</u> (% sat) Specific Cond: <u>363</u> (µS/cm) Water Temperature: <u>29.1</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	0.12	0.05	0.11	0.05	0.24	0.05	0.08	0.05	0.26	0.19	0.73	0.38	0.45	0.25	0.07	0.05	0.08	0.05	0.01	0.05	0.01	0.05
2	0.24	0.05	0.22	0.05	0.48	0.05	0.16	0.05	0.52	0.21	1.46	0.40	0.90	0.26	0.14	0.05	0.16	0.05	0.01	0.05	0.01	0.05
3	0.36	0.05	0.33	0.05	0.72	0.07	0.24	0.08	0.78	0.31	2.19	0.42	1.35	0.28	0.21	0.05	0.24	0.05	0.02	0.05	0.02	0.05
4	0.48	0.06	0.44	0.05	0.96	0.07	0.32	0.10	1.04	0.32	2.92	0.39	1.80	0.34	0.28	0.05	0.32	0.05	0.02	0.05	0.02	0.05
5	0.60	0.07	0.55	0.08	1.20	0.06	0.40	0.12	1.30	0.28	3.65	0.40	2.25	0.36	0.35	0.05	0.40	0.07	0.03	0.05	0.03	0.05
6	0.72	0.05	0.66	0.05	1.44	0.05	0.48	0.09	1.56	0.27	4.38	0.38	2.70	0.33	0.42	0.05	0.48	0.06	0.04	0.05	0.04	0.05
7	0.84	0.05	0.77	0.05	1.68	0.05	0.56	0.08	1.82	0.22	5.11	0.37	3.15	0.33	0.49	0.05	0.56	0.05	0.04	0.05	0.04	0.05
8	0.96	0.05	0.88	0.05	1.92	0.05	0.64	0.05	2.08	0.15	5.84	0.36	3.60	0.31	0.56	0.05	0.64	0.05	0.05	0.05	0.05	0.05
9	1.08	0.05	0.99	0.05	2.16	0.05	0.72	0.05	2.34	0.13	6.57	0.29	4.05	0.27	0.63	0.05	0.72	0.05	0.05	0.05	0.05	0.05
Right Bank	1.20	0.00	1.10	0.00	2.40	0.00	0.80	0.00	2.60	0.00	7.30	0.00	4.50	0.00	0.70	0.00	0.80	0.00	0.06	0.00	0.06	0.00
Feature Type <small>(riffle, run, or pool)</small>	Run																					

MAXIMUM 0.42
 MEDIAN 0.05

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:



WBID # 3006

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: 09-10-08 3:50 p.m.	Location Description (e.g., road crossing): County Rd. 224
Stream Name: Fish Trap Slough	
Current Weather Conditions: sunny/warm	Facility Name(s): Quin WWTF
Weather Conditions for Past 10 days: 0.96" @ Poplar Bluff	Permit Number(s): MO 0094935
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): 747213	Northing (UTM Y): 4047910	Horizontal Accuracy: (EPE / FOM / PDOP) 42 ft. Meters
Site 11	Easting (UTM X): 747159	Northing (UTM Y): 4047619	Horizontal Accuracy: (EPE / FOM / PDOP) 73 ft. Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
3006-3-A	Upstream looking down	3006-3-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.)				

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: Farm land
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	40% Gravel	30% Sand	30% Silt	% Mud/Clay	% Bedrock
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Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site.)

Trace amounts of algae

Water Characteristics*: (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input checked="" type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input 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 checked="" type="checkbox"/> Other: Brown
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input checked="" 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 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)

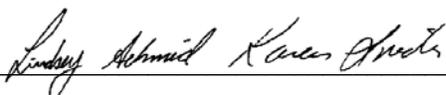
Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses.)

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 / Karen Snider

Surveyor's Signature:  Date of Survey: 09-10-08

Organization: Olsson Associates Position: Field Service

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

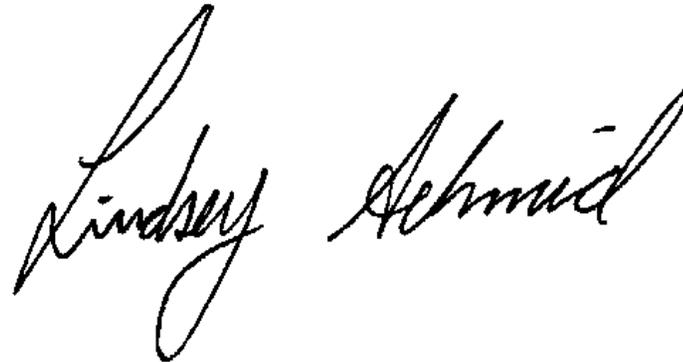
Stream Name: <u>Fish Trap Slough</u> Waterbody ID: <u>3006</u> Site #: <u>3</u> Estimated Channel Incision: <u>0.1</u> (m) (height between low bank width and water) GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM) 01 UTM X: <u>747213</u> UTM Y: <u>4047910</u> +/- <u>42</u> ft. (meters) 11 UTM X: <u>747159</u> UTM Y: <u>4047619</u> +/- <u>73</u> ft. (meters) Average Stream Width: <u>2</u> (meters) Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach) (20x average stream width) Field Staff: <u>Lindsey Schmid / Karen Snider</u>	<p align="center">Dissolved Oxygen</p> Date: <u>9/10/2008</u> Time: <u>3:50 p.m.</u> Dissolved Oxygen: <u>7.88</u> (mg/L) Dissolved Oxygen: <u>94.2</u> (% sat) Specific Cond: <u>416</u> (µS/cm) Water Temperature: <u>24.8</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	0.41	0.05	0.17	0.11	0.16	0.09	0.21	0.05	0.17	0.16	0.14	0.14	0.17	0.24	0.23	0.20	0.21	0.08	0.28	0.08	0.18	0.14
2	0.82	0.06	0.34	0.10	0.32	0.10	0.42	0.14	0.34	0.19	0.28	0.19	0.34	0.27	0.46	0.24	0.42	0.08	0.56	0.09	0.36	0.15
3	1.23	0.09	0.51	0.14	0.48	0.08	0.63	0.21	0.51	0.19	0.42	0.20	0.51	0.28	0.69	0.24	0.63	0.14	0.84	0.10	0.54	0.16
4	1.64	0.19	0.68	0.18	0.64	0.07	0.84	0.23	0.68	0.19	0.56	0.21	0.68	0.28	0.92	0.23	0.84	0.14	1.12	0.16	0.72	0.22
5	2.05	0.23	0.85	0.20	0.80	0.07	1.05	0.24	0.85	0.21	0.70	0.20	0.85	0.26	1.15	0.22	1.05	0.15	1.40	0.15	0.90	0.23
6	2.46	0.25	1.02	0.28	0.96	0.07	1.26	0.23	1.02	0.22	0.84	0.19	1.02	0.25	1.38	0.19	1.26	0.15	1.68	0.18	1.08	0.21
7	2.87	0.24	1.19	0.30	1.12	0.08	1.47	0.25	1.19	0.23	0.98	0.19	1.19	0.18	1.61	0.17	1.47	0.14	1.96	0.20	1.26	0.07
8	3.28	0.22	1.36	0.29	1.28	0.08	1.68	0.26	1.36	0.21	1.12	0.17	1.36	0.09	1.84	0.16	1.68	0.13	2.24	0.22	1.44	0.07
9	3.69	0.18	1.53	0.29	1.44	0.08	1.89	0.24	1.53	0.19	1.26	0.15	1.53	0.06	2.07	0.16	1.89	0.07	2.52	0.20	1.62	0.06
Right Bank	4.10	0.00	1.70	0.00	1.60	0.00	2.10	0.22	1.70	0.00	1.40	0.00	1.70	0.00	2.30	0.00	2.10	0.00	2.80	0.00	1.80	0.00
Feature Type <small>(riffle, run, or pool)</small>	Run	Run	Run	Run																		

MAXIMUM 0.30
 MEDIAN 0.19

Surveyor's Signature:



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.

WBID # 3006

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: 09-10-08 2:45 p.m.	Location Description (e.g., road crossing):
Stream Name: Fish Trap Slough	County Rd. 235
Current Weather Conditions: sunny, warm	Facility Name(s): Qulin WWTF
Weather Conditions for Past 10 days: 0.96" @ Poplar Bluff	Permit Number(s): MO 0094935
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): 745576	Northing (UTM Y): 4045477	Horizontal Accuracy: (EPE / FOM / PDOP) 57 ft. Meters
Site 11	Easting (UTM X): 745410	Northing (UTM Y): 4045318	Horizontal Accuracy: (EPE / FOM / PDOP) 37 ft. Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
3006-4-A	Upstream looking down	3006-4-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 type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep slopes	<input checked="" type="checkbox"/> Other: Farm land
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	% Gravel	% Sand	% Silt	100% Mud/Clay	% Bedrock
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Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site.)

Trace amounts of algae on bottom with occasional groups, lots of side grasses and foliage.
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Water Characteristics*: (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input checked="" type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input 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 checked="" type="checkbox"/> Other: BROWN
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)

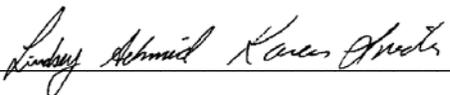
Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses.)

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: Lindsey Schmid / Karen Snider

Surveyor's Signature:  Date of Survey: 09-10-08

Organization: Olsson Associates Position: Field Service

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: <u>Fish Trap Slough</u> Waterbody ID: <u>3006</u> Site #: <u>4</u> Estimated Channel Incision: <u>0</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>745576</u> UTM Y: <u>4045477</u> +/- <u>57</u> ft. (meters) 11 UTM X: <u>745410</u> UTM Y: <u>4045318</u> +/- <u>37</u> ft. (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>Lindsey Schmid / Karen Snider</u>	<p align="center">Dissolved Oxygen</p> Date: <u>9/10/2008</u> Time: <u>2:45 p.m.</u> Dissolved Oxygen: <u>6.32</u> (mg/L) Dissolved Oxygen: <u>75.8</u> (% sat) Specific Cond: <u>401</u> (µS/cm) Water Temperature: <u>23.2</u> (°C)
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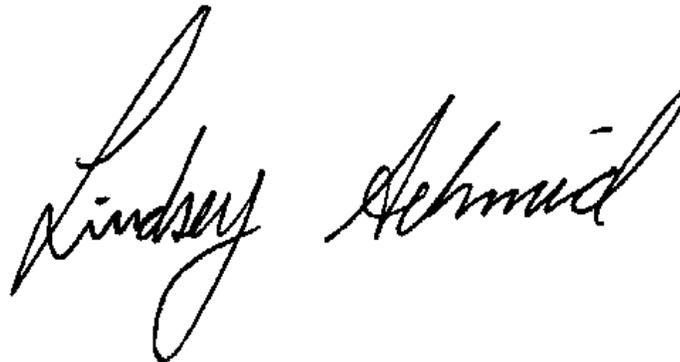
Transect Cross-Section

Station	01		02		03		04		05		06		07		08		09		10		11	
	Distance (m)	Depth (m)																				
Left Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1	1.03	0.32	0.86	0.52	0.66	0.31	0.82	1.00	0.74	1.00	0.69	0.69	0.67	0.83	0.63	0.72	0.74	1.00	0.84	1.00	0.81	0.42
2	2.06	0.45	1.72	1.00	1.32	0.35	1.64	1.00	1.48	1.00	1.38	0.74	1.34	1.00	1.26	1.00	1.48	1.00	1.68	1.00	1.62	0.00
3	3.09	1.00	2.58	1.00	1.98	0.35	2.46	1.00	2.22	1.00	2.07	1.00	2.01	1.00	1.89	1.00	2.22	1.00	2.52	1.00	2.43	0.00
4	4.12	1.00	3.44	1.00	2.64	0.40	3.28	1.00	2.96	1.00	2.76	1.00	2.68	1.00	2.52	1.00	2.96	1.00	3.36	1.00	3.24	0.00
5	5.15	1.00	4.30	1.00	3.30	0.65	4.10	1.00	3.70	1.00	3.45	1.00	3.35	1.00	3.15	1.00	3.70	1.00	4.20	1.00	4.05	0.00
6	6.18	1.00	5.16	1.00	3.96	0.62	4.92	1.00	4.44	1.00	4.14	1.00	4.02	1.00	3.78	1.00	4.44	1.00	5.04	1.00	4.86	0.00
7	7.21	0.74	6.02	1.00	4.62	0.59	5.74	1.00	5.18	1.00	4.83	1.00	4.69	1.00	4.41	1.00	5.18	1.00	5.88	1.00	5.67	0.00
8	8.24	0.62	6.88	1.00	5.28	0.56	6.56	1.00	5.92	1.00	5.52	1.00	5.36	1.00	5.04	1.00	5.92	1.00	6.72	1.00	6.48	0.00
9	9.27	0.68	7.74	0.63	5.94	0.44	7.38	1.00	6.66	1.00	6.21	1.00	6.03	0.71	5.67	0.68	6.66	0.57	7.56	0.70	7.29	0.36
Right Bank	10.30	0.00	8.60	0.00	6.60	0.00	8.20	0.00	7.40	0.00	6.90	0.00	6.70	0.00	6.30	0.00	7.40	0.00	8.40	0.00	8.10	0.00
Feature Type <small>(riffle, run, or pool)</small>	Run	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 1.00
 MEDIAN 1.00

Surveyor's Signature:



WBID # 3006

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: 09-10-08 1:20 p.m.	Location Description (e.g., road crossing): Road crossing CR 234
Stream Name: Fish Trap Slough	
Current Weather Conditions: sunny, warm	Facility Name(s): Quin WWTF
Weather Conditions for Past 10 days: 0.96" @ Poplar Bluff	Permit Number(s): MO 0094935
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): 743693	Northing (UTM Y): 4042649	Horizontal Accuracy: (EPE / FOM / PDOP) 83 ft. Meters
Site 11	Easting (UTM X): 743719	Northing (UTM Y): 4042759	Horizontal Accuracy: (EPE / FOM / PDOP) 40 ft. Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
3006-5-A	Upstream looking down	3006-5-B	Downstream looking up	3006-5-C	@ road crossing
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 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: Farm land
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	% Gravel	% Sand	20% Silt	80% Mud/Clay	% Bedrock
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Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site.)

Small groups of underwater plant life

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 checked="" type="checkbox"/> Other: BROWN
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 # 5

Field Data Sheets for Recreational Use Stream Surveys

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

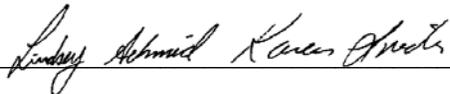
Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses.)

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 / Karen Snider

Surveyor's Signature:  Date of Survey: 09-10-08

Organization: Olsson Associates Position: Field Service

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: <u>Fish Trap Slough</u> Waterbody ID: <u>3006</u> Site #: <u>5</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>743693</u> UTM Y: <u>4042649</u> +/- <u>83</u> ft. (meters) 11 UTM X: <u>743719</u> UTM Y: <u>4042759</u> +/- <u>40</u> ft. (meters) Average Stream Width: <u>3.5</u> (meters) Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach) (20x average stream width) Field Staff: <u>Lindsey Schmid / Karen Snider</u>	<p align="center">Dissolved Oxygen</p> Date: <u>9/10/2008</u> Time: <u>1:20 p.m.</u> Dissolved Oxygen: <u>7.38</u> (mg/L) Dissolved Oxygen: <u>85.7</u> (% sat) Specific Cond: <u>383</u> (µS/cm) Water Temperature: <u>22.4</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	0.41	0.35	0.39	0.42	0.48	0.49	0.56	0.32	0.48	0.34	0.51	0.39	0.42	0.33	0.38	0.39	0.27	0.50	0.29	0.46	0.32	0.39
2	0.82	0.41	0.78	0.45	0.96	0.40	1.12	0.36	0.96	0.35	1.02	0.42	0.84	0.37	0.76	0.41	0.54	0.59	0.58	0.51	0.64	0.46
3	1.23	0.38	1.17	0.54	1.44	0.36	1.68	0.37	1.44	0.33	1.53	0.43	1.26	0.49	1.14	0.68	0.81	0.63	0.87	0.54	0.96	0.51
4	1.64	0.35	1.56	0.53	1.92	0.29	2.24	0.38	1.92	0.30	2.04	0.43	1.68	0.52	1.52	0.65	1.08	0.59	1.16	0.58	1.28	0.56
5	2.05	0.36	1.95	0.44	2.40	0.29	2.80	0.37	2.40	0.29	2.55	0.45	2.10	0.53	1.90	0.58	1.35	0.59	1.45	0.57	1.60	0.56
6	2.46	0.35	2.34	0.43	2.88	0.32	3.36	0.33	2.88	0.31	3.06	0.35	2.52	0.41	2.28	0.48	1.62	0.61	1.74	0.51	1.92	0.59
7	2.87	0.37	2.73	0.35	3.36	0.40	3.92	0.39	3.36	0.32	3.57	0.37	2.94	0.42	2.66	0.43	1.89	0.58	2.03	0.45	2.24	0.58
8	3.28	0.36	3.12	0.39	3.84	0.35	4.48	0.41	3.84	0.40	4.08	0.31	3.36	0.43	3.04	0.34	2.16	0.52	2.32	0.40	2.56	0.48
9	3.69	0.33	3.51	0.29	4.32	0.36	5.04	0.36	4.32	0.34	4.59	0.29	3.78	0.38	3.42	0.30	2.43	0.41	2.61	0.39	2.88	0.39
Right Bank	4.10	0.00	3.90	0.00	4.80	0.00	5.60	0.00	4.80	0.00	5.10	0.00	4.20	0.00	3.80	0.00	2.70	0.00	2.90	0.00	3.20	0.00
Feature Type <small>(riffle, run, or pool)</small>	Run	Run																				

MAXIMUM 0.68

MEDIAN 0.39

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:

