



Missouri
Department of
Natural Resources

Use Attainability Analysis

for

WBID 1178 Jones Creek

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): Jones Cr.
Missouri Water Body Identification (WBID) Number: 1178
8-digit HUC: 10290110
County(ies), Listed Upstream to Downstream: Dallas
Upstream Legal Description (from Table H): 8, 32N,18W
Downstream Legal Description (from Table H): Mouth
Number of sites evaluated: 3
List all site numbers, <u>consecutively upstream to downstream</u> :
1, 2, 3
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).

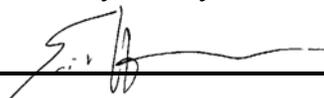
II. Facility Information (list all permitted discharges to this water body segment)

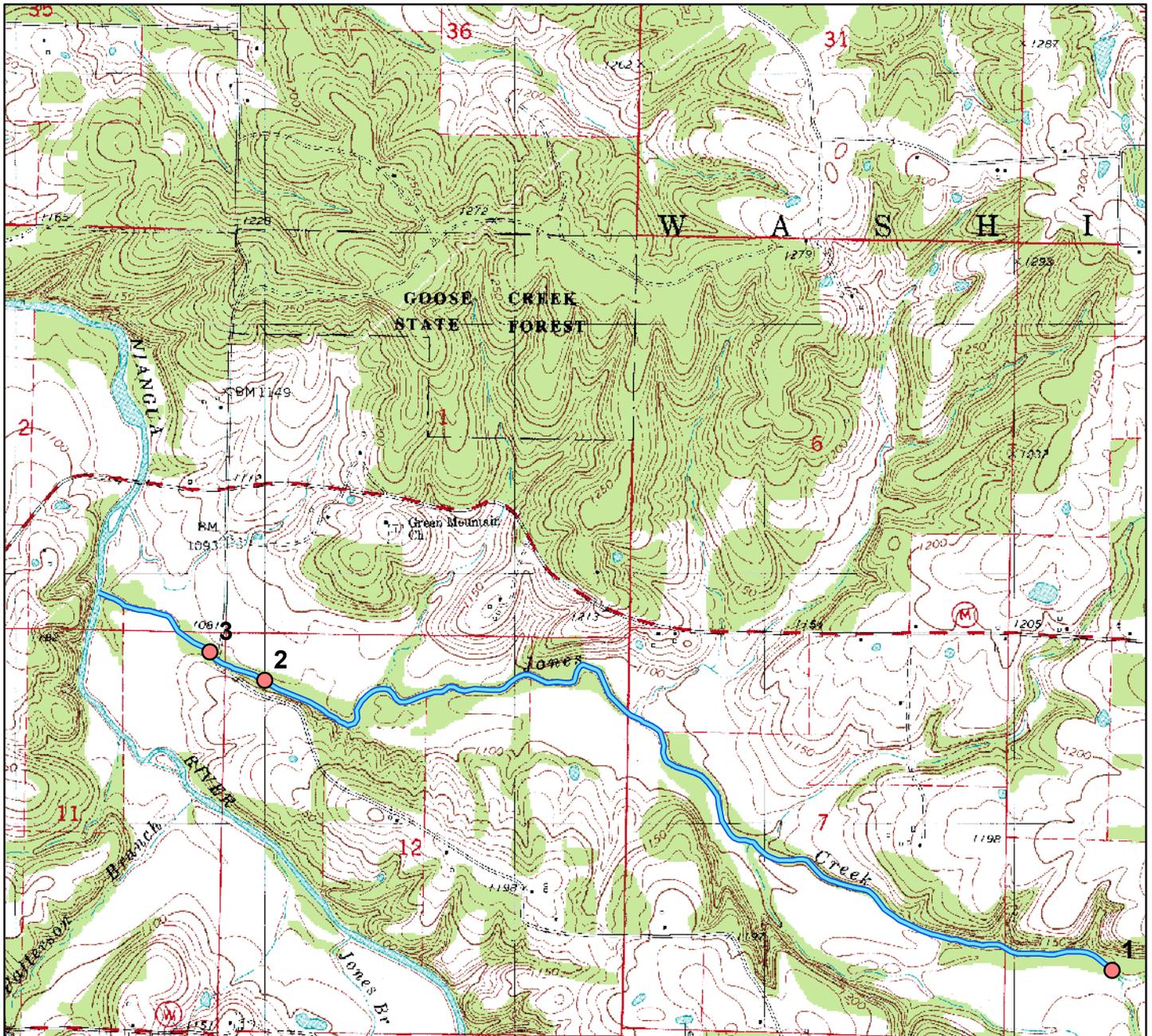
Facility Name(s) and Permit Number(s):
Conway Municipal WWTF - 10290110
0031674

III. UAA Surveyor (please **PRINT** legibly)

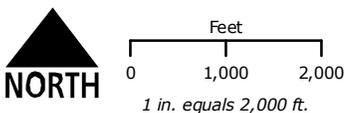
Name of Surveyor: Eric Hertzler	Telephone Number: 417-890-8802
Organization/Employer: Olsson Associates	

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:** 08-12-08



**MISSOURI RECREATIONAL
USE ATTAINABILITY ANALYSIS**



Stream: Jones Cr.
WBID: 1178

Map Sheet: 1/1
County: Dallas

WBID #1178 _____

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: 08-12-08 9:18 a.m.	Location Description (e.g., road crossing): Across farm field off of WW-150 Rd.
Stream Name: Jones Cr.	
Current Weather Conditions: sunny	Facility Name(s):10290110 Conway Municipal WWTF
Weather Conditions for Past 10 days: 0.96" @ Buffalo	Permit Number(s): 0031674
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): 505387	Northing (UTM Y): 4150609	Horizontal Accuracy: (EPE / FOM / PDOP) 52 ft. Meters
Site 11	Easting (UTM X): 505311	Northing (UTM Y): 4150672	Horizontal Accuracy: (EPE / FOM / PDOP) 30 ft. Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
1178-1-A	Upstream looking down				
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
1178-1-B	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.)				

Site # 1

Field Data Sheets for Recreational Use Stream Surveys

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

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

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

Moss and algae 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:	<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 # 1

Field Data Sheets for Recreational Use Stream Surveys

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

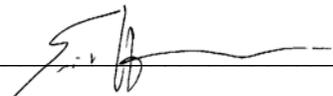
Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses.)

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: Eric Hertzler

Surveyor's Signature:  Date of Survey: 08-12-08

Organization: Olsson Associates Position: Field Service

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: <u> Jones Cr. </u> Waterbody ID: <u> 1178 </u> Site #: <u> 1 </u> Estimated Channel Incision: <u> 0.5 </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> 505387 </u> UTM Y: <u> 4150609 </u> +/- <u> 52 ft. </u> (meters) 11 UTM X: <u> 505311 </u> UTM Y: <u> 4150672 </u> +/- <u> 30 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> Eric Hertzler / Austin Lohkamp </u>	<h4 style="text-align: center; margin: 0;">Dissolved Oxygen</h4> Date: <u> 08-12-08 </u> Time: <u> 9:25 a.m. </u> Dissolved Oxygen: <u> 5.77 </u> (mg/L) Dissolved Oxygen: <u> 64.5 </u> (% sat) Specific Cond: <u> 343 </u> (µS/cm) Water Temperature: <u> 20.4 </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	
	1	1.11	0.15	1.22	0.43	1.38	0.16	0.63	0.05	0.25	0.08	0.28	0.05	0.46	0.08	0.35	0.05	0.38	0.05	0.34	0.05	0.75	0.05
	2	2.22	0.21	2.44	0.52	2.76	0.19	1.26	0.05	0.50	0.09	0.56	0.16	0.92	0.23	0.70	0.08	0.76	0.18	0.68	0.08	1.50	0.08
	3	3.33	0.42	3.66	0.64	4.14	0.24	1.89	0.05	0.75	0.13	0.84	0.11	1.38	0.31	1.05	0.11	1.14	0.24	1.02	0.13	2.25	0.16
	4	4.44	0.41	4.88	0.50	5.52	0.28	2.52	0.05	1.00	0.29	1.12	0.09	1.84	0.44	1.40	0.12	1.52	0.30	1.36	0.14	3.00	0.19
	5	5.55	0.69	6.10	0.73	6.90	0.13	3.15	0.05	1.25	0.20	1.40	0.12	2.30	0.48	1.75	0.05	1.90	0.29	1.70	0.16	3.75	0.21
	6	6.66	0.53	7.32	0.76	8.28	0.07	3.78	0.05	1.50	0.17	1.68	0.11	2.76	0.43	2.10	0.13	2.28	0.24	2.04	0.09	4.50	0.19
	7	7.77	0.38	8.54	0.62	9.66	0.05	4.41	0.08	1.75	0.14	1.96	0.08	3.22	0.31	2.45	0.11	2.66	0.22	2.38	0.11	5.25	0.20
	8	8.88	0.28	9.76	0.39	11.04	0.05	5.04	0.11	2.00	0.08	2.24	0.05	3.68	0.24	2.80	0.05	3.04	0.17	2.72	0.05	6.00	0.05
9	9.99	0.17	10.98	0.13	12.42	0.09	5.67	0.07	2.25	0.06	2.52	0.05	4.14	0.16	3.15	0.05	3.42	0.07	3.06	0.05	6.75	0.14	
Right Bank		11.10	0.00	12.20	0.00	13.80	0.00	6.30	0.00	2.50	0.00	2.80	0.00	4.60	0.00	3.50	0.00	3.80	0.00	3.40	0.00	7.50	0.00
Feature Type <small>(riffle, run, or pool)</small>		Pool		Pool		Pool		Riffle		Riffle		Riffle		Run		Riffle		Riffle		Riffle		Run	

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width
 GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.
 Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)
 Mark dry depth measurements as 0; record actual measurements to 0.1 meter unless depth is too deep to measure (then record as > 1)
 All measurements to be taken to the nearest 0.01 meter.

MAXIMUM 0.76

MEDIAN 0.13

Surveyor's Signature: _____



Date: 08-12-08

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: 08-13-08 8:17 a.m.	Location Description (e.g., road crossing): Just upstream of County Rd M-120 Bridge crossing
Stream Name: Jones Cr.	
Current Weather Conditions: foggy	Facility Name(s): Conway Municipal WWTF
Weather Conditions for Past 10 days: 0.96" @ Buffalo	Permit Number(s): 0031674
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): 501975	Northing (UTM Y): 4151776	Horizontal Accuracy: (EPE / FOM / PDOP) 56 ft. Meters
Site 11	Easting (UTM X): 501859	Northing (UTM Y): 4151816	Horizontal Accuracy: (EPE / FOM / PDOP) 49 ft. Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
1178-2-A	Upstream looking down				
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
1178-2-B	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 type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep slopes	<input type="checkbox"/> Other:
Comments: NONE				

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.)

Moss and algae 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:	<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.

Field Data Sheets for Recreational Use Stream Surveys

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

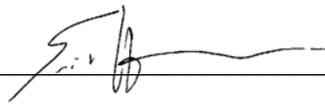
Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses.)

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: Eric Hertzler

Surveyor's Signature:  Date of Survey: 08-13-08

Organization: Olsson Associates Position: Field Service

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: <u> Jones Cr. </u> Waterbody ID: <u> 1178 </u> Site #: <u> 2 </u> Estimated Channel Incision: <u> 0.3 </u> (m) (height between low bank width and water) GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM) 01 UTM X: <u> 501975 </u> UTM Y: <u> 4151776 </u> +/- <u> 56 </u> ft. (meters) 11 UTM X: <u> 501859 </u> UTM Y: <u> 4151816 </u> +/- <u> 49 </u> ft. (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> Eric Hertzler / Austin Lohkamp </u>	Dissolved Oxygen Date: <u> 08-13-08 </u> Time: <u> 8:27 a.m. </u> Dissolved Oxygen: <u> 4.61 </u> (mg/L) Dissolved Oxygen: <u> 53.6 </u> (% sat) Specific Cond: <u> 334 </u> (µS/cm) Water Temperature: <u> 22.7 </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	0
1	0.93	0.05	0.70	0.05	0.50	0.05	0.51	0.05	0.18	0.05	0.41	0.05	0.28	0.05	0.34	0.05	0.50	0.05	0.37	0.29	0.48	0.11
2	1.86	0.12	1.40	0.05	1.00	0.05	1.02	0.07	0.36	0.06	0.82	0.06	0.56	0.06	0.68	0.10	1.00	0.08	0.74	0.21	0.96	0.25
3	2.79	0.07	2.10	0.05	1.50	0.05	1.53	0.06	0.54	0.09	1.23	0.05	0.84	0.10	1.02	0.09	1.50	0.11	1.11	0.16	1.44	0.33
4	3.72	0.14	2.80	0.08	2.00	0.05	2.04	0.08	0.72	0.10	1.64	0.05	1.12	0.12	1.36	0.08	2.00	0.12	1.48	0.16	1.92	0.42
5	4.65	0.13	3.50	0.11	2.50	0.07	2.55	0.09	0.90	0.11	2.05	0.05	1.40	0.13	1.70	0.06	2.50	0.07	1.85	0.29	2.40	0.39
6	5.58	0.10	4.20	0.05	3.00	0.12	3.06	0.07	1.08	0.10	2.46	0.05	1.68	0.09	2.04	0.08	3.00	0.05	2.22	0.27	2.88	0.37
7	6.51	0.12	4.90	0.05	3.50	0.13	3.57	0.05	1.26	0.05	2.87	0.06	1.96	0.08	2.38	0.07	3.50	0.05	2.59	0.24	3.36	0.36
8	7.44	0.11	5.60	0.05	4.00	0.11	4.08	0.05	1.44	0.05	3.28	0.05	2.24	0.06	2.72	0.09	4.00	0.15	2.96	0.25	3.84	0.27
9	8.37	0.08	6.30	0.05	4.50	0.08	4.59	0.05	1.62	0.05	3.69	0.05	2.52	0.05	3.06	0.05	4.50	0.19	3.33	0.24	4.32	0.15
Right Bank	9.30	0.00	7.00	0.00	5.00	0.00	5.10	0.00	1.80	0.00	4.10	0.00	2.80	0.00	3.40	0.00	5.00	0.00	3.70	0.00	4.80	0.00
Feature Type <small>(riffle, run, or pool)</small>	Run		Riffle		Run		Run		Riffle		Run		Run									

<-- assumed measurement of 10.00 is re

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 0.42
 MEDIAN 0.08

Surveyor's Signature: _____



Date: 8/13/2008

WBID # 1178

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: 08-12-08 10:20 a.m.	Location Description (e.g., road crossing):
Stream Name: Jones Cr.	County Rd. M-120 Bridge crossing
Current Weather Conditions: sunny	Facility Name(s):10290110 Conway Municipal WWTF
Weather Conditions for Past 10 days: 0.96" @ Buffalo	Permit Number(s):0031674
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): 501816	Northing (UTM Y): 4151795	Horizontal Accuracy: (EPE / FOM / PDOP)	95 ft. Meters
Site 11	Easting (UTM X): 501714	Northing (UTM Y): 4151930	Horizontal Accuracy: (EPE / FOM / PDOP)	65 ft. Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
1178-3-A	Upstream looking down	1178-3-D	Human use item -squirt gun		
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
1178-3-B	Pool and bridge				
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
1178-3-C	Downstream looking up				

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

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

Site # 3

Field Data Sheets for Recreational Use Stream Surveys

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

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

<input type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep slopes	<input type="checkbox"/> Other:
Comments: NONE				

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: Squirt gun – see photo 1178-3-D			

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.)

Moss and algae on rocks

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 checked="" type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

*This information is not to be used solely for removal of a recreational use designation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that affect another use.

Site # 3

Field Data Sheets for Recreational Use Stream Surveys

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

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

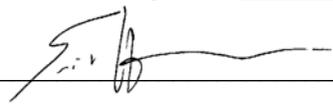
Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)
Pool and bridge	1	16	15	.40	.80

Comments: (Please record any additional comments here.)

County Rd. M-120 @ the top of our transect. Bridge provides easy access to pool below that is .80meters @ its deepest point – see photo 1178-3-B

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

Printed Names of Personnel Collecting Data: Eric Hertzler

Surveyor's Signature:  Date of Survey: 08-12-08

Organization: Olsson Associates Position: Field Service

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: <u> Jones Cr. </u> Waterbody ID: <u> 1178 </u> Site #: <u> 3 </u> Estimated Channel Incision: <u> 0.19 </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> 501816 </u> UTM Y: <u> 4151795 </u> +/- <u> 95 ft. </u> (meters) 11 UTM X: <u> 501714 </u> UTM Y: <u> 4151930 </u> +/- <u> 65 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> Eric Hertzler / Austin Lohkamp </u>	<h4 style="text-align: center; margin: 0;">Dissolved Oxygen</h4> Date: <u> 08-12-08 </u> Time: <u> 10:27 a.m. </u> Dissolved Oxygen: <u> 6.8 </u> (mg/L) Dissolved Oxygen: <u> 82.5 </u> (% sat) Specific Cond: <u> 336 </u> (µS/cm) Water Temperature: <u> 25.2 </u> (°C)
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Transect Cross-Section

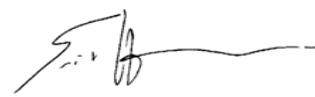
Station		01		02		03		04		05		06		07		08		09		10		11	
		Distance (m)	Depth (m)																				
Left Bank		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1	0.23	0.06	0.15	0.05	0.74	0.28	0.77	0.21	0.90	0.27	0.79	0.33	0.68	0.18	0.43	0.05	0.40	0.08	0.53	0.08	0.62	0.12
	2	0.46	0.06	0.30	0.05	1.48	0.23	1.54	0.32	1.80	0.43	1.58	0.26	1.36	0.19	0.86	0.09	0.80	0.21	1.06	0.14	1.24	0.19
	3	0.69	0.11	0.45	0.05	2.22	0.18	2.31	0.29	2.70	0.47	2.37	0.14	2.04	0.07	1.29	0.07	1.20	0.27	1.59	0.28	1.86	0.33
	4	0.92	0.12	0.60	0.05	2.96	0.21	3.08	0.31	3.60	0.43	3.16	0.17	2.72	0.11	1.72	0.06	1.60	0.40	2.12	0.34	2.48	0.36
	5	1.15	0.12	0.75	0.05	3.70	0.23	3.85	0.34	4.50	0.37	3.95	0.14	3.40	0.06	2.15	0.11	2.00	0.51	2.65	0.41	3.10	0.41
	6	1.38	0.08	0.90	0.05	4.44	0.22	4.62	0.41	5.40	0.31	4.74	0.19	4.08	0.07	2.58	0.19	2.40	0.56	3.18	0.46	3.72	0.45
	7	1.61	0.05	1.05	0.05	5.18	0.31	5.39	0.37	6.30	0.22	5.53	0.07	4.76	0.08	3.01	0.25	2.80	0.54	3.71	0.55	4.34	0.41
	8	1.84	0.05	1.20	0.05	5.92	0.39	6.16	0.34	7.20	0.07	6.32	0.14	5.44	0.09	3.44	0.19	3.20	0.50	4.24	0.56	4.96	0.39
9	2.07	0.05	1.35	0.05	6.66	0.31	6.93	0.29	8.10	0.06	7.11	0.05	6.12	0.05	3.87	0.11	3.60	0.41	4.77	0.53	5.58	0.31	
Right Bank		2.30	0.00	1.50	0.00	7.40	0.00	7.70	0.00	9.00	0.00	7.90	0.00	6.80	0.00	4.30	0.00	4.00	0.00	5.30	0.00	6.20	0.00
Feature Type		Riffle		Riffle		Run																	

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width
 GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.
 Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)
 Mark dry depth measurements as 0; record actual measurements to 0.1 meter unless depth is too deep to measure (then record as > 1)
 All measurements to be taken to the nearest 0.01 meter.

MAXIMUM 0.56

MEDIAN 0.18

Surveyor's Signature: _____



Date: 08-12-08



