



Missouri  
Department of  
Natural Resources

## Use Attainability Analysis

for

WBID 1686 Tributary to Busch Creek

Submitted by

MEC Water Resources

To

Missouri Department of Natural Resources

Water Protection Program

On

December 1, 2007

**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):	TRIB TO BUSCH CREEK	
Missouri Water Body Identification (WBID) Number:	1080	
8-digit HUC:	20090127	County: FRANKLIN
Upstream Legal Description (from Table H):	34,44N, 1W	
Downstream Legal Description (from Table H):	MOUTH	
Number of sites evaluated	3	
List all sites numbers, listed consecutively upstream to downstream:	① HWY 47; ② WASHINGTON HEIGHTS RD; ③ HWY 100	

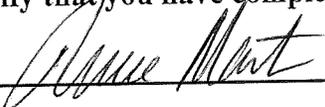
**II. Discharger Facility Information** (list all permitted dischargers on the stream)

Discharger Facility Name(s):	ALEXANDER ESTATES
Discharger Permit Number(s):	MO 0128554

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

Name of Surveyor	R MARTIN	Telephone Number:	875.7844
Organization/Employer:	AE SOLUTIONS		
Position:	ENV. SPECIALIST		

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

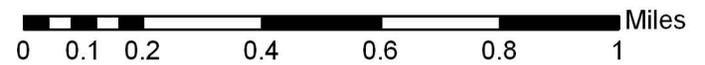
Signed:  Date: 10/11/07

RUC 10-17-07

# Trib. to Busch Cr. 2 (WBID 1686)



- Upstream Boundary
- Downstream Boundary



WBID # 1186

Site # 1

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B – Site Characterization**

(must be completed for each site)

Date & Time: <u>10/11/07 1145</u>	Site Location Description (e.g., road crossing): <u>HWY 47 BRIDGE</u>
Personnel (Data Collectors): <u>RM/JF</u>	
Current Weather Conditions: <u>CLEAR</u>	Facility Name: <u>ALEXANDER ESTATES</u>
Weather Conditions for Past 10 days: <u>CLEAR/RAINY</u>	Permit Number: <u>MO 0129554</u>
Drought Conditions?: 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): <u>4214966</u>	Northing (UTM Y): <u>6073029</u>	Horizontal Accuracy: (EPE / FOM / PDOP) <u>17</u> Meters <u>FT</u>
Site 11	Easting (UTM X): <u>4214917</u>	Northing (UTM Y): <u>6073954</u>	Horizontal Accuracy: (EPE / FOM / PDOP) <u>19</u> Meters <u>FT</u>

**Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
<u>100-36</u>	<u>DN Stream Site 1</u>	<u>100-37</u>	<u>Up Stream Site 1</u>	<u>100-38</u>	<u>Graffiti under T-14 bridge - Foot print</u>
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 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 Data Sheet D- Recreational Use Interview when conducting interviews.)

WBID # 1686  
 Site # 1

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B – Site Characterization (continued)**

**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 checked="" type="checkbox"/> Steep slopes	<input type="checkbox"/> Other:
Comments: <i>City Streets</i>				

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

<input type="checkbox"/> Roads	<input checked="" type="checkbox"/> Foot paths/prints <sup>①</sup>	<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
Comments / Other: <i>① photo # 38 - Transect # 11</i>				

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

<i>40</i> % Cobble	<i>10</i> % Gravel	<i>30</i> % Sand	% Silt	<i>5</i> % Mud/Clay	<i>15</i> % Bedrock
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**Aquatic Vegetation\*:** (Note amount of vegetation or algal growth at the assessment site)

*lots of benthic algae on substrate*

**Water Characteristics\*:** (Mark all that apply.)

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

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

WBID # 1686

Site # 1

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B – Site Characterization (continued)**

**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.**

Surveyor's Signature: *[Signature]* Date of Survey: 10/11/07

Organization: AE Solutions Position: Env. Specialist

*AUC 10-17-07*

## Recreational Use Attainability Analysis Field Survey Sheet

Waterbody ID: <u>1686</u> Site #: <u>1686-01</u> (WBID_Site#) Estimated Channel Incision: <u>2.0</u> (m) (height between low bank width and water) GPS Location (taken at transect 1): UTM X: <u>4266866</u> UTM Y: <u>673829</u> Horizontal Accuracy Estimate (GPS Data Quality): <u>+/- 17</u> (feet)  GPS Location (taken at transect 11): UTM X: <u>4266917</u> UTM Y: <u>673954</u> Horizontal Accuracy Estimate (GPS Data Quality): <u>+/- 19</u> (feet)  Average Stream Width: <u>6.50</u> (meters)      Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach)      (20x average stream width)  Field Staff: <u>R. Martin &amp; J. Foth</u>	<h3 style="text-align: center; margin: 0;">Dissolved Oxygen</h3> Date: <u>10/11/07</u> Time: <u>1145</u>  Dissolved Oxygen: <u>6.67</u> (mg/L) Dissolved Oxygen: <u>44.0</u> (% sat)  Specific Cond: <u>270.7</u> (µS/cm)  Water Temp.: <u>13.2</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)																				
<b>Left Bank</b>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1		0.53	0.02	0.65	0.15	0.68	0.18	0.69	0.15	0.72	0.25	0.99	0.15	0.65	0.04	0.68	0.19	0.64	0.23	0.95	DRY	0.39	0.01
2		1.06	0.08	1.31	0.20	1.37	0.22	1.38	0.18	1.44	0.30	1.18	0.26	1.34	0.09	1.30	0.43	1.28	0.28	1.10	/	0.78	0.01
3		1.59	0.04	1.97	0.23	2.04	0.15	2.07	0.20	2.16	0.33	1.77	0.29	2.01	0.26	2.04	0.40	1.92	0.23	1.65	/	1.17	0.21
4		2.12	0.01	2.62	0.29	2.74	0.09	2.76	0.24	2.88	0.34	2.36	0.40	2.68	0.41	2.72	0.65	2.56	0.30	2.20	/	1.56	0.27
5		2.65	0.01	3.28	0.30	3.43	0.09	3.45	0.24	3.60	0.31	2.95	0.46	3.35	0.49	3.40	0.74	3.20	0.30	2.75	/	1.95	0.25
6		3.18	0.01	3.93	0.30	4.11	0.07	4.14	0.20	4.32	0.35	3.94	0.54	4.02	0.81	4.08	0.70	3.84	0.31	3.30	/	2.34	0.22
7		3.71	0.01	4.59	0.27	4.80	0.11	4.83	0.21	5.04	0.40	4.13	0.60	4.69	0.94	4.76	0.68	4.48	0.32	3.85	/	2.73	0.21
8		4.24	0.01	5.24	0.25	5.48	0.12	5.52	0.25	5.76	0.40	4.72	0.26	5.36	0.80	5.44	0.65	5.12	0.24	4.40	/	3.12	0.12
9		4.77	0.01	5.90	0.07	6.17	0.14	6.21	0.10	6.48	0.30	5.31	0.18	6.03	0.59	6.12	0.42	5.76	0.15	4.95	↓	3.51	0.07
<b>Right Bank</b>		5.30	0	6.55	0	6.85	0	6.90	0	7.20	0	6.90	0	6.70	0	6.80	0.20	6.40	0	5.50	0	3.90	0
<b>Feature Type (riffle, run, or pool)</b>		Riffle		Pool		Run		Pool		DRY		Pool											

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

GPS location corresponds to Transect 01 and Transect 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 0.01 meter unless depth is too deep to measure (then record as > 1).

All measurements to be taken to the nearest 0.01 meter.

Signed: \_\_\_\_\_

Date: 10/11/07

RWC 10-17-07

R. Martin

WBID # 1682

Site # 2

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B – Site Characterization**

(must be completed for each site)

Date & Time: <u>10/11/07 1235</u>	Site Location Description (e.g., road crossing):
Personnel (Data Collectors): <u>RM/JF</u>	<u>WASHINGTON HEIGHTS RD</u>
Current Weather Conditions: <u>Clear</u>	Facility Name: <u>ALEXANDER ESTATES</u>
Weather Conditions for Past 10 days: <u>CLEAR/RAIN</u>	Permit Number: <u>MO 012854</u>
Drought Conditions?: 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): <u>4267242</u>	Northing (UTM Y): <u>0674481</u>	Horizontal Accuracy: (EPE / FOM / PDOP) <u>16</u> Meters <u>JF</u>
Site 11	Easting (UTM X): <u>4267321</u>	Northing (UTM Y): <u>0674582</u>	Horizontal Accuracy: (EPE / FOM / PDOP) <u>21</u> Meters <u>JF</u>

**Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
<u>100-39</u>	<u>Upstream site 2</u>	<u>100-40</u>	<u>DN Stream site 2</u>		
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 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 Data Sheet D- Recreational Use Interview when conducting interviews.)

WBID # 1686

Site # 2

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B – Site Characterization (continued)**

**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 checked="" type="checkbox"/> Steep slopes	<input checked="" type="checkbox"/> Other:
Comments: <i>Residential Neighborhood, city streets</i>				

**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
Comments / Other: <i>None</i>				

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

<i>5</i> % Cobble	<i>30</i> % Gravel	<i>50</i> % Sand	% Silt	<i>5</i> % Mud/Clay	<i>10</i> % Bedrock
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**Aquatic Vegetation\*:** (Note amount of vegetation or algal growth at the assessment site)

<i>grass on gravel bars</i> <i>Benthic algae - a lot</i>
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**Water Characteristics\*:** (Mark all that apply.)

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

WBID # 11086  
Site # 2

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B – Site Characterization (continued)**

**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.**

Surveyor's Signature: *Steve Mart* Date of Survey: 10/11/07

Organization: AE Solutions Position: Env. Specialist

*one 10-17-07*



WBID # 1686  
 Site # 3

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B – Site Characterization**  
 (must be completed for each site)

Date & Time: <u>10/11/07 1320</u>	Site Location Description (e.g., road crossing): <u>HWY 100</u>
Personnel (Data Collectors): <u>RIM/JF</u>	
Current Weather Conditions: <u>CLEAR</u>	Facility Name: <u>ALEXANDER ESTATES</u>
Weather Conditions for Past 10 days: <u>CLEAR/RAIN</u>	Permit Number: <u>MO 0128554</u>
Drought Conditions?: No drought <input 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):	Northing (UTM Y):	Horizontal Accuracy: (EPE / FOM / PDOP) Meters
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy: (EPE / FOM / PDOP) Meters

**Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
<u>41</u>	<u>upstream of New Bridge work site 3</u>	<u>42</u>	<u>DN Stream site 3</u>		
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 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 Data Sheet D- Recreational Use Interview when conducting interviews.)				

WBID # 1686  
 Site # 3

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B – Site Characterization (continued)**

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

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

**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
Comments / Other: <i>None</i>				

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

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

<i>vast amts of benthic algae</i>
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**Water Characteristics\*:** (Mark all that apply.)

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

WBID # 1686

Site # 3

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B – Site Characterization (continued)**

**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.**

Surveyor's Signature: *Dave Maut* Date of Survey: 10/11/07

Organization: AE Solutions Position: Env. Specialist

## Recreational Use Attainability Analysis Field Survey Sheet

Waterbody ID: 1686 Site #: 1686-3  
 (WBID\_Site#)

Estimated Channel Incision: 3.0 (m) (height between low bank width and water)

GPS Location (taken at transect 1):  
 UTM X: 4267556 UTM Y: 675332  
 Horizontal Accuracy Estimate (GPS Data Quality): +/- 24 (feet)

GPS Location (taken at transect 11):  
 UTM X: 4267700 UTM Y: 675354  
 Horizontal Accuracy Estimate (GPS Data Quality): +/- 15 (feet)

Average Stream Width: 3.5 (meters) Length of Survey Segment: 150 (meters)  
 (To determine Length of Reach) (20x average stream width)

Field Staff: R. Martin & J. Foth

**Dissolved Oxygen**

Date: 10/11/07 Time: 1320

Dissolved Oxygen: 10.05 (mg/L)

Dissolved Oxygen: 100.4 (% sat)

Specific Cond: 437.7 (µS/cm)

Water Temp.: 19.0 (°C)

### 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	0
1	0.24	0.05	0.35	0.42	0.15	0.01	0.55	0.11	0.83	0.22	0.51	0.30	0.41	0.19	0.39	0.09	0.35	0.15	0.16	0.04	0.40	0.05	
2	0.48	0.01	0.70	0.55	0.30	0.02	1.10	0.19	1.66	0.23	1.02	0.30	0.82	0.36	0.78	0.11	0.76	0.20	0.32	0.03	0.80	0.15	
3	0.72	0.05	1.05	0.49	0.45	0.06	1.05	0.20	2.49	0.31	1.53	0.29	1.23	0.52	1.17	0.20	1.05	0.15	0.48	0.04	1.20	0.16	
4	0.96	0.06	1.40	0.50	0.40	0.08	2.20	0.08	3.32	0.24	2.04	0.25	1.64	0.60	1.56	0.23	1.40	0.18	0.64	0.04	1.60	0.18	
5	1.20	0.04	1.75	0.46	0.75	0.08	2.75	dry	4.15	0.20	2.55	0.21	2.05	0.49	1.95	0.30	1.75	0.20	0.80	0.03	1.00	0.15	
6	1.44	0.04	2.10	0.39	0.90	0.07	3.30	0.03	4.98	0.22	3.06	0.27	2.46	0.45	2.34	0.34	2.10	0.15	0.96	0.05	2.40	0.16	
7	1.68	0.08	2.45	0.28	1.05	0.05	3.85	0.08	5.81	0.16	3.57	0.15	2.87	0.36	2.73	0.32	2.45	0.11	1.12	0.02	2.80	0.14	
8	1.92	0.06	2.80	0.15	1.20	0.04	4.40	0.04	6.44	0.08	4.08	0.11	3.26	0.35	3.12	0.40	2.80	0.02	1.28	0.03	3.20	0.11	
9	2.16	0.10	3.15	0.09	1.35	0.01	4.95	0.02	7.47	dry	4.59	0.09	3.69	0.20	3.51	0.30	3.15	0.01	1.44	0.01	3.60	0.10	
Right Bank	2.40	0	3.50	0	1.50	0	5.50	0	3.80	0	5.10	0	4.10	0	3.90	0	3.50	0	1.60	0	4.00	0	
Feature Type (riffle, run, or pool)	RUN		POOL		RUN		RUN		RUN		RUN		POOL		RUN		RUN		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 location corresponds to Transect 01 and Transect 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 0.01 meter unless depth is too deep to measure (then record as > 1).  
 All measurements to be taken to the nearest 0.01 meter.

RWC 10-17-07

Signed: [Signature] Date: 10/11/07



