



Use Attainability Analysis

for

WBID 1701 Bonhomme 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):	Bonhomme Cr.		
Missouri Water Body Identification (WBID) Number:	1701		
8-digit HUC:	20080320	County:	St. Louis
Upstream Legal Description (from Table H):	1 mi. above Hwy 70		
Downstream Legal Description (from Table H):	Mouth		
Number of sites evaluated	3		
List all sites numbers, listed consecutively upstream to downstream:	Site 1: old olive Blvd behind mall      Site 3: interstate Hwy 40/64		
	Site 2: Chesterfield airport Rd.		

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

Discharger Facility Name(s):	Oaks at Wildwood
Discharger Permit Number(s):	MO 0127221

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

Name of Surveyor	Renee Martin	Telephone Number:	573-875-7844
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: Renee Martin Date: 10/4/07

10-23-07

# Bonhomme Creek (WBID 1701)



- Upstream Boundary
- Downstream Boundary



WBID # 1701

Site # 1

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

**Data Sheet B – Site Characterization**

(must be completed for each site)

Date & Time: <u>10/4/07 1300</u>	Site Location Description (e.g., road crossing):
Personnel (Data Collectors): <u>RM/JF</u>	<u>Old Olive Blvd, behind Mall</u>
Current Weather Conditions: <u>clear</u>	Facility Name: <u>Oaks at Wildwood</u>
Weather Conditions for Past 10 days: <u>Rain/clear</u>	Permit Number: <u>MO 0127221</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>4282260</u>	Northing (UTM Y): <u>0709501</u>	Horizontal Accuracy: (EPE / FOM / PDOP)	<u>18</u> Meters	<u>57ft</u> ft
Site 11	Easting (UTM X): <u>4282284</u>	Northing (UTM Y): <u>0709709</u>	Horizontal Accuracy: (EPE / FOM / PDOP)	<u>17</u> Meters	<u>56ft</u> ft

**Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
<u>1701-1-98</u>	<u>Upstream site 1</u>	<u>1701-1-99</u>	<u>DN Stream site 1</u>		

**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 # 1701

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 type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input checked="" type="checkbox"/> Steep slopes	<input checked="" type="checkbox"/> Other:
Comments: <i>Home developments, shopping center</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	<i>20</i> % Gravel	% Sand	% Silt	<i>80</i> % Mud/Clay	% Bedrock
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**Aquatic Vegetation\*:** (Note amount of vegetation or algal growth at the assessment site)

<i>None in stream</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 # 1701

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: *Rene Meert* Date of Survey: 10/4/07

Organization: AE Solutions Position: Env. Specialist

*RUC 10-23-07*

## Recreational Use Attainability Analysis Field Survey Sheet

Waterbody ID: <u>1701</u> Site #: <u>1701-01</u> (WBID_Site#) Estimated Channel Incision: <u>2</u> (m) (height between low bank width and water) GPS Location (taken at transect 1): UTM X: <u>4282260</u> UTM Y: <u>709501</u> Horizontal Accuracy Estimate (GPS Data Quality): <u>+/- 18</u> (feet)  GPS Location (taken at transect 11): UTM X: <u>4282284</u> UTM Y: <u>709709</u> Horizontal Accuracy Estimate (GPS Data Quality): <u>+/- 17</u> (feet)  Average Stream Width: <u>9.0</u> (meters)      Length of Survey Segment: <u>180</u> (meters) (To determine Length of Reach)      (20x average stream width)  Field Staff: <u>P. Martin ; J. Eth</u>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: center;">Dissolved Oxygen</th> </tr> <tr> <td>Date: <u>10/3/07</u></td> <td>Time: <u>1300</u></td> </tr> <tr> <td colspan="2">Dissolved Oxygen: <u>127.5</u> (mg/L)</td> </tr> <tr> <td colspan="2">Dissolved Oxygen: <u>11.96</u> (% sat)</td> </tr> <tr> <td colspan="2">Specific Cond: <u>525</u> (µS/cm)</td> </tr> <tr> <td colspan="2">Water Temp.: <u>19.0</u> (°C)</td> </tr> </table>	Dissolved Oxygen		Date: <u>10/3/07</u>	Time: <u>1300</u>	Dissolved Oxygen: <u>127.5</u> (mg/L)		Dissolved Oxygen: <u>11.96</u> (% sat)		Specific Cond: <u>525</u> (µS/cm)		Water Temp.: <u>19.0</u> (°C)	
Dissolved Oxygen													
Date: <u>10/3/07</u>	Time: <u>1300</u>												
Dissolved Oxygen: <u>127.5</u> (mg/L)													
Dissolved Oxygen: <u>11.96</u> (% sat)													
Specific Cond: <u>525</u> (µS/cm)													
Water Temp.: <u>19.0</u> (°C)													

		Transect/Cross Section																					
		01		02		03		04		05		06		07		08		09		10		11	
Station		Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
Left Bank		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1	1.20	0.29	1.20	0.41	1.20	0.42	1.20	0.53	0.90	0.73	1.00	0.14	0.80	0.14	0.70	0.25	0.93	0.29	0.94	0.80	0.88	0.46
	2	2.40	0.41	2.40	0.76	2.40	0.86	2.40	0.84	1.80	0.34	2.00	0.32	1.60	0.24	1.80	0.14	1.86	0.50	1.82	0.89	1.76	>1.0
	3	3.60	0.64	3.60	0.92	3.60	>1.0	3.60	>1.0	2.70	0.52	3.00	0.38	2.40	0.19	2.90	0.31	2.79	0.54	2.73	0.85	2.64	>1.0
	4	4.80	0.78	4.80	0.99	4.80	>1.0	4.80	>1.0	3.60	0.63	4.00	0.45	3.20	0.16	3.60	0.30	3.72	0.50	3.64	0.85	3.52	>1.0
	5	6.00	0.80	6.00	>1.0	6.00	>1.0	6.00	>1.0	4.50	0.72	5.00	0.44	4.00	0.20	4.50	0.35	4.65	0.45	4.55	0.83	4.40	>1.0
	6	7.20	0.65	7.20	0.78	7.20	>1.0	7.20	>1.0	5.40	0.80	6.00	0.50	4.80	0.18	5.40	0.70	5.58	0.36	5.46	0.75	5.28	>1.0
	7	8.40	0.40	8.40	0.54	8.40	>1.0	8.40	>1.0	6.30	0.80	7.00	0.52	5.60	0.23	6.30	0.80	6.51	0.29	6.37	0.70	6.16	>1.0
	8	9.60	0.31	9.60	0.30	9.60	0.85	9.60	0.75	7.20	0.65	8.00	0.54	6.40	0.17	7.20	0.93	7.44	0.31	7.29	0.63	7.04	>1.0
	9	10.80	0.15	10.80	0.22	10.80	0.59	10.80	0.45	8.10	0.15	9.00	0.24	7.20	0.15	8.10	0.61	8.37	0.26	8.19	0.60	7.92	0.84
Right Bank		12.00	0	12.00	0	12.00	0	12.00	0	9.00	0	10.00	0	8.00	0	9.00	0	9.30	0	9.10	0	8.80	0
Feature Type (riffle, run, or pool)		Pool		RUN		RIFPLE		RUN		RUN		RUN		RUN									

Notes: Transects will be measured beginning on left descending bank (0 depth) and ending on right descending bank (MaxDp). 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.

PUC 10-23-07

Signed: *P. Martin*      Date: 10/4/07

WBID # 1701

Site # 2

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

**Data Sheet B – Site Characterization**

(must be completed for each site)

Date & Time: <u>10/4/07 1400</u>	Site Location Description (e.g., road crossing): <u>Chesterfield Airport Rd.</u>
Personnel (Data Collectors): <u>RM/JF</u>	Facility Name: <u>Dicks at Wildwood.</u>
Current Weather Conditions: <u>Clear</u>	Permit Number: <u>MO 0127221</u>
Weather Conditions for Past 10 days: <u>rain/clear</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>428238</u>	Northing (UTM Y): <u>0710583</u>	Horizontal Accuracy: (EPE / FOM / PDOP) <u>24</u> <sup>JRH</sup> Meters <u>f+</u>
Site 11	Easting (UTM X): <u>428238</u>	Northing (UTM Y): <u>0710824</u>	Horizontal Accuracy: (EPE / FOM / PDOP) <u>18</u> <sup>JRH</sup> Meters <u>f+</u>

**Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
<u>1701-2-101</u>	<u>upstream site 2</u>	<u>1701-2-102</u>	<u>Storm water pipe site 2 dn stream</u>		

**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 # 1701Site # 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 checked="" type="checkbox"/> Stairs/walkway ①
<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:

① on top of levee, walking trail

**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:

None

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

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

H2O primrose, Smartweed, Duckweed, Algae on rocks along shoreline

**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 checked="" type="checkbox"/> Other: <u>brown also</u>
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 # 1701  
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: *[Signature]* Date of Survey: 10/4/07  
Organization: AE Solutions Position: Env. Specialist

*unc 10-23-07*

### Recreational Use Attainability Analysis Field Survey Sheet

Waterbody ID: 1701 Site #: 1701-2  
(WBID\_Site#)

Estimated Channel Incision: 2 (m) (height between low bank width and water)

GPS Location (taken at transect 1):  
 UTM X: 4282387 UTM Y: 710583  
 Horizontal Accuracy Estimate (GPS Data Quality): +/- 24 (feet)

GPS Location (taken at transect 11):  
 UTM X: 4282385 UTM Y: 710824  
 Horizontal Accuracy Estimate (GPS Data Quality): +/- 18 (feet)

Average Stream Width: 10.0 (meters) Length of Survey Segment: 200 (meters)  
(To determine Length of Reach) (20x average stream width)

Field Staff: R. Martin & J. Foltz

**Dissolved Oxygen**

Date: 10/4/07 Time: 1400

Dissolved Oxygen: 10.04 (mg/L)

Dissolved Oxygen: 108.3 (% sat)

Specific Cond: 489.0 ( $\mu$ S/cm)

Water Temp.: 18.9 ( $^{\circ}$ C)

**Transect Cross-Section**

Station	01		02		03		04		05		06		07		<sup>run</sup> 08 9		<sup>run</sup> 09 08		10		11	
	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)												
Left Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	1.13	0.04	1.02	0.20	0.65	0.18	1.00	0.21	1.00	0.23	1.00	0.27	1.05	0.55	0.94	0.30	1.05	0.50	1.00	0.31	1.00	0.21
2	2.26	0.16	2.04	0.28	1.30	0.20	2.00	0.87	2.00	0.82	2.00	0.64	2.10	7.10	1.98	0.36	2.10	>1.0	2.00	0.52	2.00	0.31
3	3.39	0.20	3.06	0.40	1.95	0.18	3.00	>1.0	3.00	>1.0	3.00	>1.0	3.15	>1.0	2.82	0.60	3.15	>1.0	3.00	>1.0	3.00	0.40
4	4.52	0.17	4.08	0.50	2.60	0.23	4.00	>1.0	4.00	>1.0	4.00	>1.0	4.20	>1.0	3.76	0.64	4.20	>1.0	4.00	>1.0	4.00	0.48
5	5.65	0.14	5.10	0.52	3.25	0.53	5.00	>1.0	5.00	>1.0	5.00	>1.0	5.25	>1.0	4.70	0.64	5.25	>1.0	5.00	>1.0	5.00	>1.0
6	6.78	0.13	6.12	0.64	3.90	0.06	6.00	>1.0	6.00	>1.0	6.00	>1.0	6.30	>1.0	5.64	0.78	6.30	>1.0	6.00	>1.0	6.00	>1.0
7	7.91	0.19	7.14	0.58	4.95	0.18	7.00	>1.0	7.00	>1.0	7.00	>1.0	7.35	>1.0	6.98	0.90	7.35	0.95	7.00	>1.0	7.00	0.60
8	9.04	0.14	8.16	0.39	5.20	0.24	8.00	0.90	8.00	0.80	8.00	0.75	8.40	>1.0	7.52	0.75	8.40	0.73	8.00	0.83	8.00	0.52
9	10.17	0.13	9.18	0.18	5.85	0.11	9.00	0.05	9.00	0.45	9.00	0.41	9.45	0.63	8.46	0.43	9.45	0.60	9.00	0.50	9.00	0.20
Right Bank	11.30	0	10.20	0	6.50	0	10.00	0	10.00	0	10.05	0	10.50	0	9.40	0	10.50	0	10.00	0	10.00	0
Feature Type (riffle, run, or pool)	RIFPLE		RIFPLE		RIFPLE		POOL		POOL		POOL		RUN		RUN		RUN		RUN		RUN	

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (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 (determined 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: R. Martin Date: 10/4/07

UNC 10-23-07

WBID # 1701

Site # 3

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

**Data Sheet B – Site Characterization**

(must be completed for each site)

Date & Time: <u>10/4/07 1430</u>	Site Location Description (e.g., road crossing):
Personnel (Data Collectors): <u>BM/JF</u>	<u>Interstate Hwy <sup>on</sup> 64 40/64</u>
Current Weather Conditions: <u>clear</u>	Facility Name: <u>Oaks at Wildwood</u>
Weather Conditions for Past 10 days: <u>rain/clear</u>	Permit Number: <u>MO 0127 221</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>4782355</u>	Northing (UTM Y): <u>0711045</u>	Horizontal Accuracy: (EPE / FOM / PDOP) <u>19</u> <sup>JKH</sup> Meters <u>f-1</u>
Site 11	Easting (UTM X): <u>4782410</u>	Northing (UTM Y): <u>0711252</u>	Horizontal Accuracy: (EPE / FOM / PDOP) <u>15</u> <sup>JKH</sup> Meters <u>f-1</u>

**Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
<u>1701-3-103</u>	<u>Site 3 T-1 UP Stream</u>	<u>1701-3-104</u>	<u>Site 3 T-1 DN Stream</u>		

**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 # 1701Site # 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 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 checked="" type="checkbox"/> Steep slopes	<input checked="" type="checkbox"/> Other:
Comments: <i>Hay</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	<i>10</i>	% Gravel	% Sand	% Silt	<i>90</i>	% Mud/Clay	% Bedrock
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**Aquatic Vegetation\***: (Note amount of vegetation or algal growth at the assessment site)

<i>Some benthic algae along shoreline, duckweed, Smartweed</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 checked="" type="checkbox"/> Other: <i>Murky</i>
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 # 1701  
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: *Anna Mait* Date of Survey: 10/4/07  
Organization: AE Solutions Position: Env. Specialist  
*QMC 10-23-07*

## Recreational Use Attainability Analysis Field Survey Sheet

Waterbody ID: 1701 Site #: 1701-3  
 (WBID\_Site#)  
 Estimated Channel Incision: 2 (m) (height between low bank width and water)  
 GPS Location (taken at transect 1):  
 UTM X: 4282355 UTM Y: 711045  
 Horizontal Accuracy Estimate (GPS Data Quality): +/- 19 (feet)  
 GPS Location (taken at transect 11):  
 UTM X: 4282467 UTM Y: 711252  
 Horizontal Accuracy Estimate (GPS Data Quality): +/- 15 (feet)  
 Average Stream Width: 11.0 (meters) Length of Survey Segment: 220 (meters)  
 (To determine Length of Reach) (20x average stream width)  
 Field Staff: R. Martin ; J. Fath

**Dissolved Oxygen**

Date: 10/4/07 Time: 12:33  
 Dissolved Oxygen: 14.93 (mg/L)  
 Dissolved Oxygen: 162.7 (% sat)  
 Specific Cond: 491 (µS/cm)  
 Water Temp.: 19.2 (°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
1	1.54	0.6	1.50	0.65	0.85	0.29	0.78	0.35	1.38	0.18	1.38	0.24	0.75	0.14	0.75	0.25	0.65	0.18	0.65	0.18	0.60	0.14
2	3.02	>1.0	3.00	>1.0	1.70	0.18	1.50	0.55	2.76	0.21	2.76	0.09	1.50	0.08	1.50	0.30	1.32	0.48	1.30	0.30	1.20	0.25
3	4.53	>1.0	4.50	>1.0	2.55	0.27	2.34	0.56	4.14	0.06	4.14	0.08	2.25	0.20	2.25	0.39	1.98	0.45	1.95	0.45	1.80	0.35
4	6.04	>1.0	6.00	>1.0	3.40	0.27	3.12	0.64	5.52	0.34	5.52	0.07	3.00	0.20	3.00	0.51	2.64	0.44	2.60	0.60	2.40	0.18
5	7.55	>1.0	7.50	>1.0	4.25	0.34	3.90	0.75	6.90	0.10	6.90	0.09	3.75	0.16	3.75	0.54	3.30	0.41	3.25	0.70	3.00	0.00
6	9.06	>1.0	9.00	>1.0	5.10	0.42	4.68	0.55	8.28	0.21	8.28	0.15	4.50	0.30	4.50	0.48	3.96	0.35	3.90	0.56	3.60	0.00
7	10.57	0.95	10.50	>1.0	5.95	0.38	5.26	0.31	9.66	0.23	9.66	0.10	5.25	0.29	5.25	0.35	4.62	0.32	4.55	0.61	4.20	0.14
8	12.08	0.70	12.00	0.80	6.80	0.45	6.24	0.30	11.04	0.20	11.04	0.17	6.00	0.24	6.00	0.32	5.28	0.21	5.20	0.65	4.80	0.21
9	13.59	0.60	13.50	0.57	7.65	0.33	7.02	0.15	12.42	0.11	12.42	0.08	6.75	0.13	6.75	0.24	5.94	0.09	5.85	0.34	5.40	0.23
Right Bank	15.10	0	15.00	0	8.50	0	7.80	0	13.80	0	13.80	0	7.50	0	7.50	0	6.60	0	6.50	0	6.00	0
Feature Type (riffle, run, or pool)	RUN		RUN		RUN		RUN		RIFFLE		RIFFLE		RIFFLE		RIFFLE		RUN		RUN		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 (distances 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.

RUC 10-23-07

Signed: [Signature] Date: 10/4/07



