



Missouri
Department of
Natural Resources

Use Attainability Analysis

for

WBID 1023 Perche 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):	Perche Creek
Missouri Water Body Identification (WBID) Number:	1023
8-digit HUC:	10300102
County:	Boone
Upstream Legal Description (from Table H):	19, 52N, 13W
Downstream Legal Description (from Table H):	59 5, 49N, 13W
Number of sites evaluated	13
List all sites numbers, listed consecutively upstream to downstream:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 <i>side 11 not completed</i>

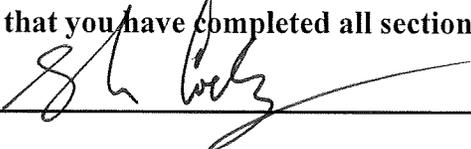
II. Discharger Facility Information (list all permitted dischargers on the stream)

Discharger Facility Name(s):	Harrisburg Waste Water Treatment Facility
Discharger Permit Number(s):	MO0104809

III. UAA Surveyor (please print legibly)

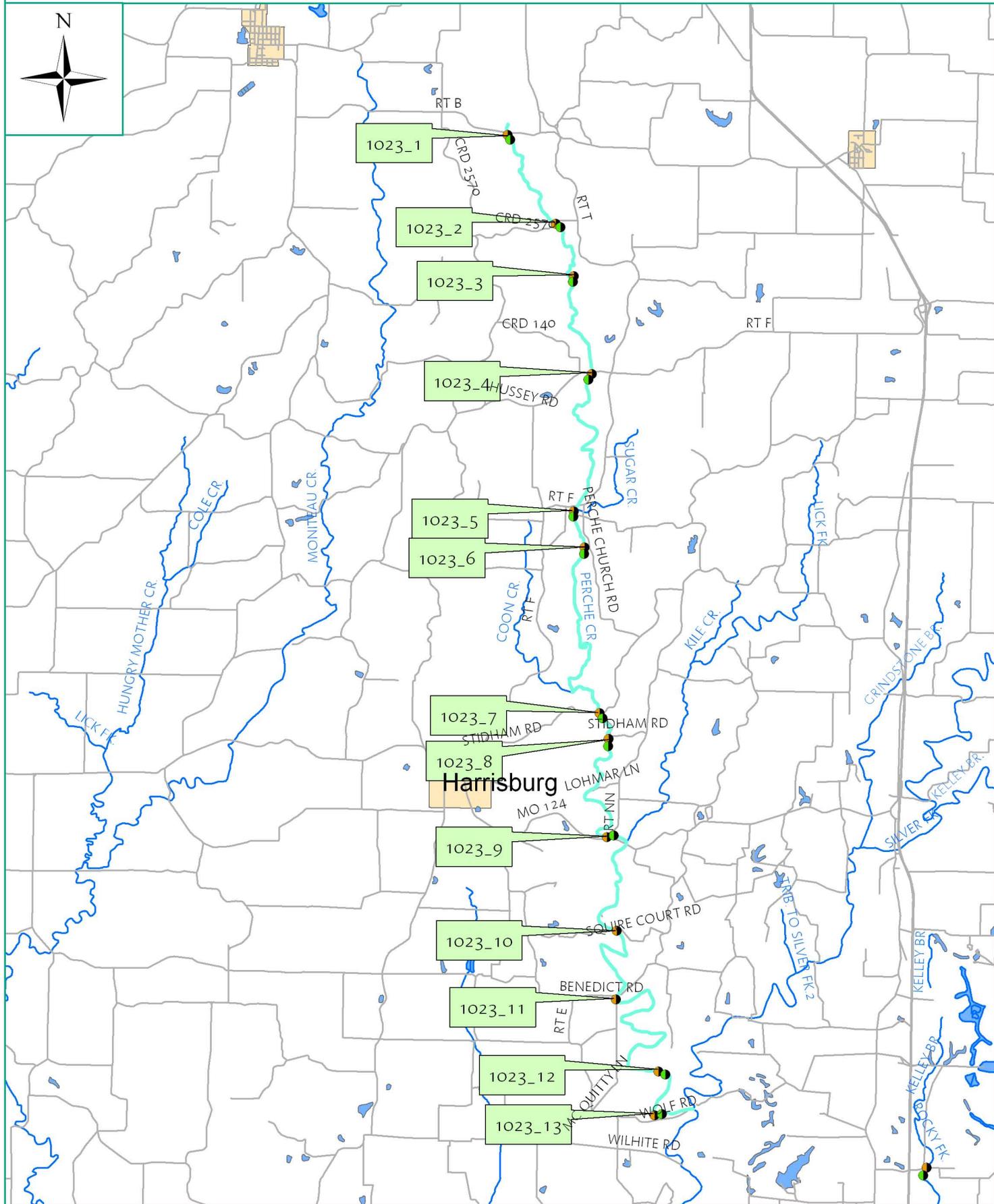
Name of Surveyor	TIM Albrether, Shawn Cookery	Telephone Number:	(573) 443-4100
Organization/Employer:	MEC - Water Resources		
Position:	Water Quality Scientist		

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

Signed:  Date: 10/31/07

QWC 11-8-07

Perche Creek (WBID 1023)



- Upstream Boundary
- Downstream Boundary

0 0.5 1 2 3 4 Miles

WBID # 1023

Site # 1

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization

(must be completed for each site)

Date & Time: <u>9/24/07 10:33a</u>	Site Location Description (e.g., road crossing):
Personnel (Data Collectors): <u>TA, SC</u>	<u>Route Pat bridge</u>
Current Weather Conditions: <u>Partly Cloudy</u>	Facility Name:
Weather Conditions for Past 10 days: <u>Sunny, clear, dry</u>	Permit Number:
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): <u>4348472</u>	Northing (UTM Y): <u>550548042</u>	Horizontal Accuracy: (EPE / FOM / PDOP) <u>7.4</u> Meters
Site 11	Easting (UTM X): <u>4348353</u>	Northing (UTM Y): <u>550548107</u>	Horizontal Accuracy: (EPE / FOM / PDOP) <u>8.1</u> Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
<u>1023-1-1099</u>	<u>US</u>	<u>1023-1-1100</u>	<u>DNS</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.)

None Observed

WBID # 1023

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 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: <i>Riparian Pasture</i>
Comments: <i>Cattle paths TA</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 checked="" type="checkbox"/> Livestock Watering
Comments / Other: <i>None observed TA Cattle paths</i>				

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

<i>5</i> % Cobble	<i>5</i> % Gravel	<i>80</i> % Sand	<i>5</i> % Silt	<i>5</i> % Mud/Clay	% Bedrock
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Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site)

Algae uncommon, Smart weed, Grasses

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.

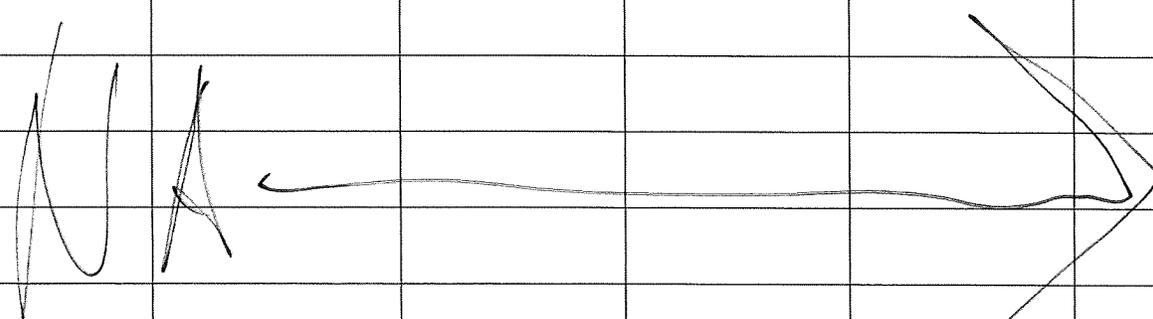
WBID # 1523

Site # 1

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (continued)

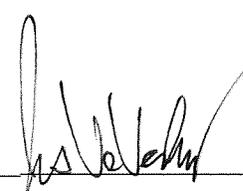
Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses)

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

Comments: (Please record any additional comments here.)

Cattle paths

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

Surveyor's Signature:  Date of Survey: 9/24/07

Organization: MEC Water Resources Position: Water Quality Scientist

AWC 11-8-07

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Waterbody ID: <u>1023</u> Site #: <u>1</u> Estimated Channel Incision: <u>0.25</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>4348472</u> UTM Y: <u>1550548042</u> +/- <u>7.4</u> (meters) 11 UTM X: <u>4348353</u> UTM Y: <u>1550548107</u> +/- <u>8.1</u> (meters) Average Stream Width: <u>74.5</u> <u>4</u> (meters) Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach) (20x average stream width) Field Staff: <u>TA, SC</u>	Dissolved Oxygen Date: <u>9/24/07</u> Time: <u>10:33a</u> Dissolved Oxygen: <u>1.22</u> (mg/L) Dissolved Oxygen: <u>13.9</u> (% sat) Specific Cond: <u>599</u> (µS/cm) Water Temperature: <u>21.8</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	0
1	0.65	0.19	1.19																			
2	1.30	0.24																				
3	1.95	0.25																				
4	2.60	0.19																				
5	3.25	0.17																				
6	3.90	0.13																				
7	4.55	0.07																				
8	5.20	0.09																				
9	5.85	0.06																				
Right Bank	6.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feature Type (riffle, run, or pool)	Run		Dry																			

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width
 GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.
 Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)
 Mark dry depth measurements as 0; record actual measurements to 0.01 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: 9/27/07

WBID # 1023

Site # 2

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization

(must be completed for each site)

Date & Time: <u>9/24/07 11:45</u>	Site Location Description (e.g., road crossing): <u>CR 2570 Bridge</u>
Personnel (Data Collectors): <u>TA, SC</u>	Facility Name:
Current Weather Conditions: <u>Clear, Dry, Warm</u>	Permit Number:
Weather Conditions for Past 10 days: <u>Clear, Dry</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>4346282</u>	Northing (UTM Y): ¹⁵⁵ <u>0549226</u>	Horizontal Accuracy: (EPE / FOM / PDOP) <u>7.7</u> Meters
Site 11	Easting (UTM X): <u>4346196</u>	Northing (UTM Y): ¹⁵⁵ <u>0549340</u>	Horizontal Accuracy: (EPE / FOM / PDOP) <u>5.9</u> Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
<u>1023-2-1101</u>	<u>US</u>	<u>1023-2-1102</u>	<u>DNS</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.)
None Observed

WBID # 1023

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 checked="" 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: <i>Riparian/Field</i>
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
Comments / Other: <i>None Observed</i>				

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

<i>5</i> % Cobble	<i>5</i> % Gravel	<i>85</i> % Sand	<i>5</i> % Silt	% Mud/Clay	% Bedrock
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Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site)

<i>Grasses, algae uncommon, Smart weed</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 checked="" type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input type="checkbox"/> None	<input type="checkbox"/> Other:

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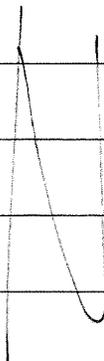
WBID # 1023

Site # 2

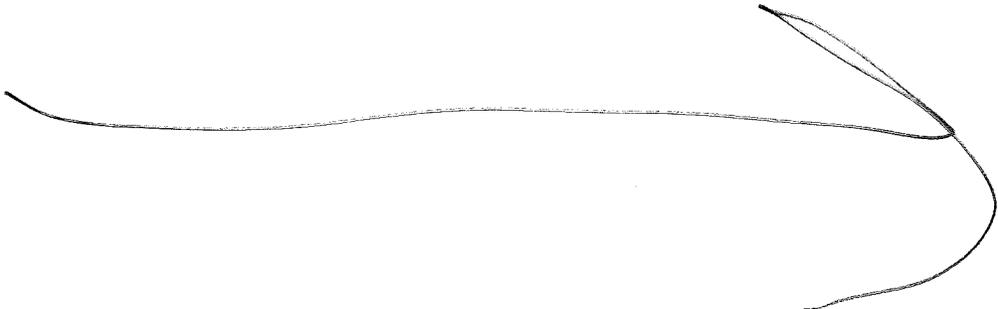
Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (continued)

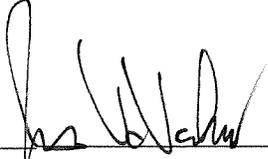
Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses)

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

Comments: (Please record any additional comments here.)

NA 

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

Surveyor's Signature:  Date of Survey: 9/24/07

Organization: MEC Water Resources Position: Water Quality Scientist

Buc 11-8-07

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Waterbody ID: <u>1023</u> Site #: <u>2</u> Estimated Channel Incision: <u>0.25</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>4346282</u> UTM Y: ¹⁵⁵ <u>0549226</u> +/- <u>7.7</u> (meters) 11 UTM X: <u>4346196</u> UTM Y: ¹⁵⁵ <u>0549340</u> +/- <u>5.9</u> (meters) Average Stream Width: <u>5</u> (meters) Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach) (20x average stream width) Field Staff: <u>TA, SC</u>	<h3 style="text-align: center; margin: 0;">Dissolved Oxygen</h3> Date: <u>9/24/07</u> Time: <u>11:45</u> Dissolved Oxygen: <u>3.97</u> (mg/L) Dissolved Oxygen: <u>41.1</u> (% sat) Specific Cond: <u>580</u> (µS/cm) Water Temperature: <u>21.1</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	0.62	0.08							0.10	0.01												
2	1.24	0.07							0.21	0.01												
3	1.86	0.07							0.315	0.01												
4	2.48	0.07							0.42	0.0												
5	3.10	0.09							6.525	0.01												
6	3.72	0.12							0.63	0.01												
7	4.34	0.10							0.735	0.0												
8	4.96	0.12							0.84	0.0												
9	5.58	0.08							1.05	0.01												
Right Bank	6.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feature Type <small>(riffle, run, or pool)</small>	Run	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Run	Dry	Dry	Dry										

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width
 GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.
 Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)
 Mark dry depth measurements as 0; record actual measurements to 0.01 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: 9/24/07

WBID # 10:23

Site # 3

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization

(must be completed for each site)

Date & Time: <u>9/24/07 12:38</u>	Site Location Description (e.g., road crossing): <u>Rt. 7 Bridge, accessed through tributary of Perche</u>
Personnel (Data Collectors): <u>TA, SC</u>	Facility Name:
Current Weather Conditions: <u>Clear, Dry, Warm</u>	Permit Number:
Weather Conditions for Past 10 days: <u>Clear, Dry</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>4344990</u>	Northing (UTM Y): ¹⁵³ <u>0549671</u>	Horizontal Accuracy: (EPE / FOM / PDOP) <u>5.4</u> Meters
Site 11	Easting (UTM X): <u>4344845</u>	Northing (UTM Y): ¹⁵³ <u>0549653</u>	Horizontal Accuracy: (EPE / FOM / PDOP) <u>5.9</u> Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
<u>1023-3-1103</u>	<u>US</u>	<u>1023-3-1104</u>	<u>DNS</u>	<u>1023-3-1105</u>	<u>"Access Trib."</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.)				
<u>None Observed</u>				

WBID # 1023

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 checked="" 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 checked="" type="checkbox"/> Steep slopes	<input checked="" type="checkbox"/> Other: <i>Riparian/Field</i>
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
Comments / Other: <i>None Observed</i>				

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

% Cobble	<i>5</i> % Gravel	<i>85</i> % Sand	<i>5</i> % Silt	<i>5</i> % Mud/Clay	% Bedrock
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Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site)

<i>Algae Uncommon, Grasses, Smart weed</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 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 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 # 1023

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.)

Accessed perche by way of one of its tributaries

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: 9/24/07

Organization: MEC Water Resources Position: Water Quality Scientist

awc 11-8-07

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Waterbody ID: <u>1023</u> Site #: <u>3</u> Estimated Channel Incision: <u>0.25</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>4344990</u> UTM Y: <u>550549671</u> +/- <u>5.4</u> (meters) 11 UTM X: <u>4344845</u> UTM Y: <u>550549653</u> +/- <u>5.9</u> (meters) Average Stream Width: <u>1</u> (meters) Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach) (20x average stream width) Field Staff: <u>TA, JETA SC</u>	<h3 style="text-align: center; margin: 0;">Dissolved Oxygen</h3> Date: <u>TA 9/24/07</u> Time: <u>12:38</u> Dissolved Oxygen: <u>1.47</u> (mg/L) Dissolved Oxygen: <u>17.1</u> (% sat) Specific Cond: <u>482</u> (µS/cm) Water Temperature: <u>22.6</u> (°C) <i>measured from transect 5</i>
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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								0.13	0.04	0.04	0.35	0.09											
2								0.26	0.04	0.04	0.70	0.26											
3								0.39	0.05	0.05	1.05	0.37											
4								0.52	0.05	0.05	1.40	0.44											
5								0.65	0.04	0.04	1.75	0.43											
6								0.78	0.05	0.05	2.10	0.0											
7								0.91	0.05	0.05	2.45	0.45											
8								1.04	0.04	0.04	2.80	0.0											
9								1.17	0.04	0.04	3.15	0.21											
Right Bank		0	0	0	0	0	0	1.3	0	3.5	0	0	0	0	0	0	0	0	0	0	0		
Feature Type <small>(riffle, run, or pool)</small>		Dry		Dry		Dry		Dry		Run		Pool		Dry									

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

09/24/07
unc 11-8-07

WBID # 1623
 Site # 4

Field Data Sheets for Recreational Use Stream Surveys

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

Date & Time: <u>8/24/07 13:45</u>	Site Location Description (e.g., road crossing): <u>Hussey Rd. Bridge</u>
Personnel (Data Collectors): <u>TA, SC</u>	
Current Weather Conditions: <u>Cloudy, Dry, Warm</u>	Facility Name:
Weather Conditions for Past 10 days: <u>Clear, Dry</u>	Permit Number:
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>4342569</u>	Northing (UTM Y): ⁵⁵ <u>0550115</u>	Horizontal Accuracy: (EPE / FOM / PDOP) <u>8.4</u> Meters
Site 11	Easting (UTM X): <u>4342439</u>	Northing (UTM Y): ⁵⁵ <u>0550033</u>	Horizontal Accuracy: (EPE / FOM / PDOP) <u>13.0</u> Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
<u>TA 1023-4-1104 1106</u>	<u>US</u>	<u>1023-4-1107</u>	<u>DNS</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.) <p align="center"><u>None Observed</u></p>				

WBID # 1023

Site # 4

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 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: <i>Field/Pasture</i>
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
Comments / Other: <i>None Observed</i>				

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

% Cobble	<i>5</i> % Gravel	<i>90</i> % Sand	<i>5</i> % Silt	% Mud/Clay	% Bedrock
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Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site)

Algae Common, Grasses, Smart weed

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 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 effect another use.

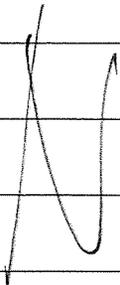
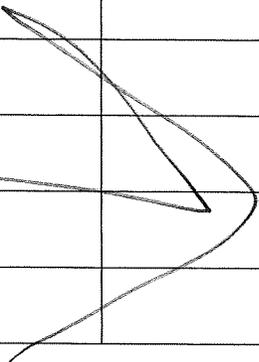
WBID # 1023

Site # 4

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:  Date of Survey: 9/24/07

Organization: MEL Water Resources Position: Water Quality Scientist

Bruc 11-8-07

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Waterbody ID: <u>1023</u> Site #: <u>4</u> Estimated Channel Incision: <u>0.25</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>4342569</u> UTM Y: <u>1550550115</u> +/- <u>8.4</u> (meters) 11 UTM X: <u>4342439</u> UTM Y: <u>1550550033</u> +/- <u>13.0</u> (meters) Average Stream Width: <u>1</u> (meters) Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach) (20x average stream width) Field Staff: <u>74, SC</u>	<h3 style="text-align: center; margin: 0;">Dissolved Oxygen</h3> Date: <u>9/24/07</u> Time: <u>13:45</u> Dissolved Oxygen: <u>1.82</u> (mg/L) Dissolved Oxygen: <u>21.5</u> (% sat) Specific Cond: <u>582</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	0.091	0.04							0.30	0.18	0.73	0.39	0.38	0.20	0.12	0.09	0.13	0.02				
	2	0.182	0.06							0.60	0.23	1.46	0.26	0.76	0.30	0.24	0.12	0.26	0.03				
	3	0.273	0.09							0.90	0.24	2.19	0.13	1.14	0.28	0.36	0.10	0.39	0.04				
	4	0.364	0.13							1.20	0.20	2.92	0.13	1.52	0.27	0.48	0.08	0.52	0.03				
	5	0.455	0.16							1.50	0.17	3.65	0.17	1.90	0.19	0.60	0.08	0.65	0.05				
	6	0.546	0.17							1.80	0.12	4.38	0.19	2.28	0.13	0.72	0.05	0.78	0.04				
	7	0.637	0.13							2.10	0.08	5.11	0.18	2.66	0.08	0.84	0.03	0.91	0.03				
	8	0.728	0.09							2.40	0.05	5.84	0.19	3.04	0.06	0.96	0.02	1.04	0.02				
	9	0.819	0.06							2.70	0.05	6.57	0.20	3.42	0.01	1.08	0.02	1.17	0.01				
Right Bank		0.91	0	0	0	0	0	0	0	3.0	0	7.3	0	3.8	0	1.20	0	1.30	0	0	0	0	0
Feature Type <small>(riffle, run, or pool)</small>		Run	Dry	Dry	Dry	Dry	Dry	Run	Run	Dry	Dry	Dry	Dry	Dry	Dry								

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width. GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order. Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten). Mark dry depth measurements as 0; record actual measurements to 0.01 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: 9/24/07

[Signature] 2007-09-24
 Date: 9/24/07

WBID # 1023

Site # 5

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization

(must be completed for each site)

Date & Time: <u>9/24/07 14:33</u>	Site Location Description (e.g., road crossing): <u>Rt. F Bridge</u>
Personnel (Data Collectors): <u>TA, SC</u>	
Current Weather Conditions: <u>Clear, Dry, Warm</u>	Facility Name:
Weather Conditions for Past 10 days: <u>Dry, Clear</u>	Permit Number:
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>4339189</u>	Northing (UTM Y): <u>549670⁵⁵</u>	Horizontal Accuracy: (EPE / FOM / PDOP) <u>4.5</u> Meters
Site 11	Easting (UTM X): <u>4339062</u>	Northing (UTM Y): <u>549660⁵⁵</u>	Horizontal Accuracy: (EPE / FOM / PDOP) <u>5.2</u> Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
<u>1023-5-1108</u>	<u>US</u>	<u>1023-5-1109</u>	<u>DNS</u>	<u>1023-5-1110</u>	<u>trans. a "ATV tracks"</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 type="checkbox"/> None of the above	<input checked="" type="checkbox"/> Other: <u>ATV TA</u>
Describe: (Include number of individuals recreating, photo-documentation of evidence of recreational uses, etc. Use Data Sheet D- Recreational Use Interview when conducting interviews.) <u>ATV tracks (see photo) TA</u>				

WBID # 1023

Site # 5

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 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: <i>Riparian/Field</i>
Comments:				

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

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input checked="" type="checkbox"/> RV / ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Livestock Watering
Comments / Other: <i>See photo</i>				

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

<i>2.5</i> % Cobble	<i>2.5</i> % Gravel	<i>90</i> % Sand	<i>5</i> % Silt	% Mud/Clay	% Bedrock
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Aquatic Vegetation:** (Note amount of vegetation or algal growth at the assessment site)

Smart weed, grasses, algae uncommon

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

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

*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.

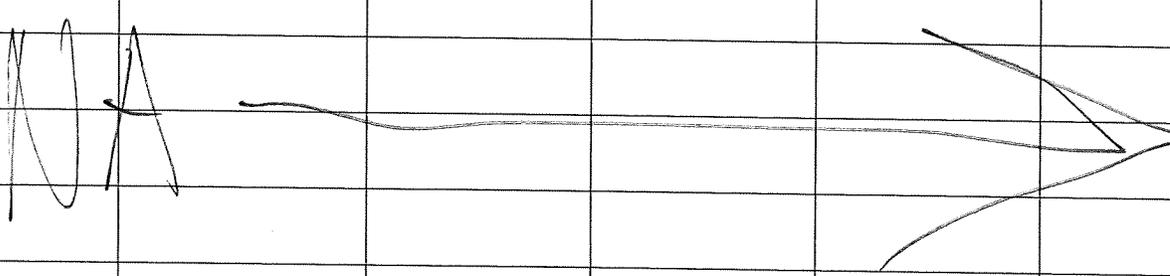
WBID # 1023

Site # 5

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (continued)

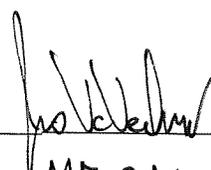
Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses)

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

Comments: (Please record any additional comments here.)

Absolutely no water at this site. Completely dry.

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

Surveyor's Signature:  Date of Survey: 9/24/07
Organization: MEC Water Resources Position: Water Quality Scientist

MEC 11-8-07

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Waterbody ID: <u>1023</u> Site #: <u>5</u> Estimated Channel Incision: <u>0.25</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>4339189</u> UTM Y: <u>1550549670</u> +/- <u>4.5</u> (meters) 11 UTM X: <u>4339062</u> UTM Y: <u>1550549660</u> +/- <u>5.2</u> (meters) Average Stream Width: <u>1</u> (meters) Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach) (20x average stream width) Field Staff: <u>JA, SC</u>	<h3 style="text-align: center; margin: 0;">Dissolved Oxygen</h3> Date: <u>9/24/07</u> Time: <u>14:33</u> Dissolved Oxygen: <u>N/A</u> (mg/L) Dissolved Oxygen: <u> </u> (% sat) Specific Cond: <u> </u> (µS/cm) Water Temperature: <u>V</u> (°C) <p style="text-align: center; font-style: italic;">No water to take measurements</p>
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Transect Cross-Section

Station		01		02		03		04		05		06		07		08		09		10		11	
		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	
	1																						
	2																						
	3																						
	4																						
	5																						
	6																						
	7																						
	8																						
	9																						
Right Bank		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Feature Type		Dry Dry																					

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.
 Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)
 Mark dry depth measurements as 0; record actual measurements to 0.01 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: 9/24/07

RWC 11-8-07

WBID # 1023
 Site # 6

Field Data Sheets for Recreational Use Stream Surveys

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

Date & Time: <u>10/19/07 13:02</u>	Site Location Description (e.g., road crossing): <u>Downstream of CRDF</u>
Personnel (Data Collectors): <u>SU/TA</u>	
Current Weather Conditions: <u>Clear, Breezy, 65°F</u>	Facility Name:
Weather Conditions for Past 10 days: <u>Spotty Showers, Clear</u>	Permit Number:
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): <u>4338293</u>	Northing (UTM Y): <u>0549934</u>	Horizontal Accuracy: (EPE / FOM / PDOP) <u>13.0</u> Meters
Site 11	Easting (UTM X): <u>4338135</u>	Northing (UTM Y): <u>0549928</u>	Horizontal Accuracy: (EPE / FOM / PDOP) <u>10.5</u> Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
<u>1023.6-1245</u>	<u>Up stream</u>	<u>1023.6-1246</u>	<u>Down stream</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 # 1023
 Site # 6

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 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 checked="" type="checkbox"/> Steep slopes	<input checked="" type="checkbox"/> Other: <u>Row Crop</u>
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
Comments / Other: <u>No observed</u>				

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

% Cobble	<u>10</u> % Gravel	<u>80</u> % Sand	<u>5</u> % Silt	<u>5</u> % Mud/Clay	% Bedrock
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Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site)

Smartweed, grasses, abundant algal growth

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 checked="" type="checkbox"/> Other: <u>Leaf mats</u>
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 # 1025
Site # 6

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (continued)

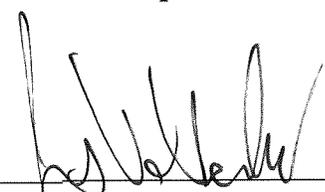
Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses)

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

Comments: (Please record any additional comments here.)

None

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

Surveyor's Signature:  Date of Survey: 10/19/07
Organization: MEC Water Resources Position: Water Quality Scientist

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Waterbody ID: <u>1023</u>	Site #: <u>6</u> <small>(wbid_site #)</small>	Dissolved Oxygen	
Estimated Channel Incision: <u>0.25</u> (m) (height between low bank width and water)	Date: <u>10/19/07</u>	Time: <u>13:02</u>	
GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM)		Dissolved Oxygen: <u>5.26</u> (mg/L)	
01 UTM X: <u>4338293</u>	UTM Y: <u>195 0549934</u>	Dissolved Oxygen: <u>33.3</u> (% sat)	
11 UTM X: <u>4338135</u>	UTM Y: <u>195 0549928</u>	Specific Cond: <u>420.4</u> (µS/cm)	
Average Stream Width: <u>7</u> (meters)	Length of Survey Segment: <u>150</u> (meters)	Water Temperature: <u>16.4</u> (°C)	
(To determine Length of Reach)			
Field Staff: <u>3U / TA</u>			

Transect Cross-Section

Station		01		02		03		04		05		06		07		08		09		10		11	
		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	0.33	0.44	0.60	0.27	0.52	0.24	0.39	0.89	0.12	0.02	0.40	0.01	0.49	0.07	0.55	0.03	0.26	0.00	0.15	0.02	0.44	0.06
	2	1.06	0.49	1.20	0.40	1.04	0.31	0.78	0.86	0.24	0.03	0.80	0.04	0.98	0.16	1.10	0.03	0.52	0.00	0.30	0.02	0.88	0.05
	3	1.59	0.42	2.40	0.38	1.56	0.27	1.17	0.71	0.36	0.03	1.20	0.05	1.47	0.14	1.65	0.03	0.78	0.01	0.45	0.00	1.32	0.05
	4	2.12	0.41	3.00	0.24	2.08	0.22	1.56	0.23	0.48	0.04	1.60	0.06	1.96	0.15	2.20	0.01	1.04	0.00	0.60	0.04	1.76	0.04
	5	2.65	0.33	3.60	0.30	2.60	0.17	1.95	0.46	0.60	0.04	2.00	0.10	2.45	0.15	2.75	0.01	1.30	0.00	0.75	0.04	2.20	0.00
	6	3.18	0.23	4.20	0.24	3.12	0.13	2.34	0.16	0.72	0.05	2.40	0.11	2.94	0.14	3.30	0.00	1.56	0.00	0.90	0.04	2.64	0.02
	7	3.71	0.17	4.80	0.17	3.64	0.09	2.73	0.15	0.84	0.03	2.80	0.12	3.43	0.13	3.85	0.02	1.82	0.01	1.05	0.04	3.08	0.02
	8	4.24	0.12	5.40	0.04	4.16	0.04	3.12	0.06	0.96	0.03	3.20	0.10	3.92	0.10	4.40	0.06	2.08	0.04	1.20	0.03	3.52	0.07
Right Bank	9	4.77	0.09	5.40	0.02	4.68	0.04	3.51	0.03	1.08	0.01	3.60	0.07	4.41	0.08	4.95	0.02	2.34	0.03	1.35	0.02	3.96	0.12
	10	5.30	0	6.00	0	5.20	0	3.96	0	1.26	0	4.00	0	4.90	0	5.50	0	2.60	0	1.50	0	4.46	0
Feature Type		Run		Run		Run		Pool		Run		Run											
(riffle, run, or 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 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 0.01 meter unless depth is too deep to measure (then record as > 1)
 All measurements to be taken to the nearest 0.01 meter.

Signed: [Signature] Date: 10/19/07

WBID # 1023
 Site # 7

Field Data Sheets for Recreational Use Stream Surveys

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

Date & Time: <u>9/24/07 15:45</u>	Site Location Description (e.g., road crossing): <u>Stidham Rd. Bridge</u>
Personnel (Data Collectors): <u>TA, SC</u>	
Current Weather Conditions: <u>Cloudy, Warm, Dry</u>	Facility Name:
Weather Conditions for Past 10 days: <u>Clear, Dry</u>	Permit Number:
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): <u>4334207</u>	Northing (UTM Y): <u>550307</u> ^{15 S}	Horizontal Accuracy: (EPE / FOM / PDOP) <u>4.6</u> Meters
Site 11	Easting (UTM X): <u>4334079</u>	Northing (UTM Y): <u>550377</u> ^{15 S}	Horizontal Accuracy: (EPE / FOM / PDOP) <u>4.8</u> Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
<u>1023-7-1111</u>	<u>US</u>	<u>1023-7-1112</u>	<u>DNS</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.) <p align="center"><u>None Observed</u></p>				

WBID # 1023

Site # 7

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 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: <u>Road/Field</u>
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
Comments / Other: <u>None observed</u>				

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

% Cobble	<u>2.5</u>	% Gravel	<u>95</u>	% Sand	<u>2.5</u>	% Silt	% Mud/Clay	% Bedrock
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Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site)

Algae common, smart weed, grasses

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: <u>leaf litter/woody debris</u>
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 # 1023

Site # 7

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)
NA					

Comments: (Please record any additional comments here.)

NA →

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: 9/24/07

Organization: MEC Water Resources Position: Water Quality Scientist

RWC 11-8-07

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Waterbody ID: <u>1023</u>	Site #: <u>7</u>	Dissolved Oxygen	
Estimated Channel Incision: <u>0.25</u> (m) (height between low bank width and water)		Date: <u>9/24/07</u>	Time: <u>15:45</u>
GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM)		Dissolved Oxygen: <u>3.92</u> (mg/L)	
01 UTM X: <u>4334207</u>	UTM Y: <u>1550550367</u>	Dissolved Oxygen: <u>48.6</u> (% sat)	
11 UTM X: <u>4334079</u>	UTM Y: <u>1550550377</u>	Specific Cond: <u>564</u> (µS/cm)	
Average Stream Width: <u>4</u> (meters)		Water Temperature: <u>24.7</u> (°C)	
(To determine Length of Reach)			
Length of Survey Segment: <u>150</u> (meters)			
Field Staff: <u>TA, SC</u>			

Transect Cross-Section

Station	01		02		03		04		05		06		07		08		09		10		11	
	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	0.31	0.05	0.55	0.09	0.07	0.02			0.78	0.06	0.71	0.44			0.76	0.04	0.13	0.02	0.10	0.02	0.10	0.05
2	0.62	0.09	1.16	0.13	0.14	0.02			0.96	0.0	1.42	0.67			1.42	0.12	0.26	0.03	0.20	0.02	0.20	0.05
3	0.93	0.12	1.65	0.12	0.21	0.04			1.44	0.0	2.13	0.76			2.13	0.06	0.39	0.04	0.30	0.02	0.30	0.06
4	1.24	0.13	2.26	0.06	0.28	0.04			1.92	0.0	2.84	0.74			2.84	0.13	0.52	0.04	0.40	0.02	0.40	0.08
5	1.55	0.13	2.75	0.08	0.35	0.04			2.40	0.09	3.55	0.62			3.55	0.0	0.65	0.04	0.50	0.03	0.50	0.09
6	1.86	0.12	3.36	0.17	0.42	0.02			2.88	0.23	4.26	0.40			4.26	0.46	0.78	0.05	0.60	0.03	0.60	0.07
7	2.17	0.10	3.85	0.27	0.49	0.02			3.86	0.29	4.97	0.27			4.97	0.26	0.91	0.06	0.70	0.02	0.70	0.05
8	2.48	0.08	4.46	0.27	0.56	0.03			3.84	0.31	5.68	0.23			5.68	0.10	1.04	0.07	0.80	0.02	0.80	0.02
9	2.79	0.04	4.95	0.26	0.63	0.01			4.52	0.17	6.39	0.13			6.39	0.17	1.17	0.07	0.90	0.02	0.90	0.02
Right Bank	3.1	0	5.5	0	0.77	0			4.8	0	7.1	0	7.6	0	7.6	0	1.3	0	1.0	0	1.0	0
Feature Type	Run	Run	Run	Run	Run	Run	Dry	Run	Pool	Dry	Run	Run	Run	Run	Run	Run	Run	Run	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 (riffle, run, or pool).
 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 0.01 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: 9/24/07

ANC 11-8-07

[Signature]

WBID # 1023
 Site # 8

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization

(must be completed for each site)

Date & Time: <u>10/19/07 11:46</u>	Site Location Description (e.g., road crossing): <u>South of St. James Rd.</u>
Personnel (Data Collectors): <u>SU/TA</u>	
Current Weather Conditions: <u>Pt. Cloudy, Breezy, 65°F</u>	Facility Name:
Weather Conditions for Past 10 days: <u>Spotty Showers/Clear</u>	Permit Number:
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): <u>4333576</u>	Northing (UTM Y): <u>0550532</u>	Horizontal Accuracy: (EPE / FOM / PDOP) <u>9.1</u> Meters
Site 11	Easting (UTM X): <u>4333589</u>	Northing (UTM Y): <u>0550518</u>	Horizontal Accuracy: (EPE / FOM / PDOP) <u>7.8</u> Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
<u>1023.8-1243</u>	<u>Up stream</u>	<u>1023.8-1244</u>	<u>Down 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 <i>Data Sheet D- Recreational Use Interview</i> when conducting interviews.)				

WBID # 1023
 Site # 8

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

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

% Cobble	<u>10</u>	% Gravel	<u>80</u>	% Sand	<u>5</u>	% Silt	<u>5</u>	% Mud/Clay	% Bedrock
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Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site)

Smartweed, grasses, algal growth abundant

Water Characteristics*: (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input type="checkbox"/> Clear	<input checked="" type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input checked="" type="checkbox"/> Other: <u>leaf mats</u>
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.

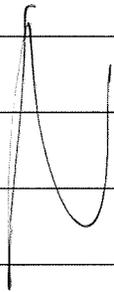
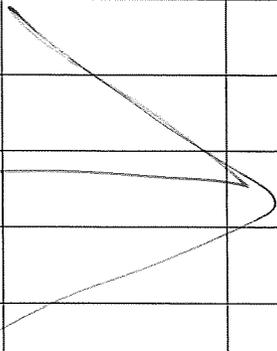
WBID # 1025

Site # 8

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (continued)

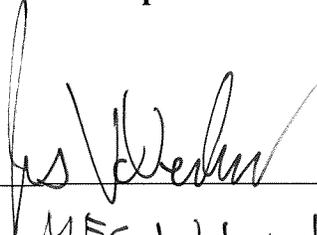
Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses)

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

Comments: (Please record any additional comments here.)

None

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

Surveyor's Signature:  Date of Survey: 10/19/07

Organization: MEC Water Resources Position: Water Quality Scientist

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Waterbody ID: <u>1023</u> Site #: <u>8</u> (wbid_site #)	Dissolved Oxygen
Estimated Channel Incision: <u>0.25</u> (m) (height between low bank width and water)	Date: <u>10/19/07</u> Time: <u>11:46</u>
GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM) 01 UTM X: <u>4333576</u> UTM Y: <u>155 0550532</u> +/- <u>9.1</u> (meters) 11 UTM X: <u>4333389</u> UTM Y: <u>155 0550518</u> +/- <u>7.8</u> (meters)	Dissolved Oxygen: <u>5.6-6.46</u> (mg/L)
Average Stream Width: <u>10</u> (meters) Length of Survey Segment: <u>200</u> (meters) (To determine Length of Reach) (20x average stream width)	Dissolved Oxygen: <u>67.5</u> (% sat)
Field Staff: <u>SU/TA</u>	Specific Cond: <u>463.7</u> (µS/cm)
	Water Temperature: <u>17.7</u> (°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	
1	0.91	0.04	0.45	0.07	0.48	0.11	0.64	0.14	1.37	0.40	0.95	0.02	0.50	0.02	0.52	0.03	0.47	0.02	0.63	0.02	0.74	0.29
2	1.88	0.10	0.90	0.03	0.96	0.11	1.28	0.18	2.74	0.18	1.90	0.00	1.00	0.02	1.04	0.02	0.94	0.04	1.26	0.03	1.48	0.25
3	2.73	0.10	1.35	0.00	1.44	0.14	1.92	0.19	4.11	0.00	2.85	0.00	1.50	0.03	1.56	0.00	1.41	0.05	1.89	0.03	2.22	0.18
4	3.64	0.07	1.80	0.15	1.92	0.16	2.56	0.21	5.48	0.00	3.80	0.02	2.00	0.04	2.08	0.00	1.88	0.03	2.52	0.00	2.96	0.06
5	4.55	0.02	2.25	0.14	2.40	0.15	3.20	0.19	6.85	0.00	4.75	0.00	2.50	0.02	2.60	0.00	2.35	0.04	3.15	0.00	3.70	0.00
6	5.46	0.02	2.70	0.14	2.88	0.11	3.84	0.16	8.22	0.00	5.70	0.00	3.00	0.00	3.12	0.00	2.82	0.02	3.78	0.00	4.44	0.13
7	6.37	0.09	3.15	0.13	3.56	0.08	4.48	0.14	9.59	0.00	6.65	0.00	3.50	0.00	3.64	0.03	3.29	0.02	4.41	0.03	5.18	0.17
8	7.28	0.24	3.60	0.16	3.84	0.07	5.12	0.09	10.96	0.03	7.60	0.00	4.00	0.01	4.16	0.03	3.76	0.04	5.04	0.15	5.92	0.14
9	8.19	0.20	4.05	0.06	4.32	0.01	5.76	0.05	12.33	0.07	8.55	0.04	4.50	0.03	4.68	0.07	4.25	0.01	5.67	0.11	6.66	0.09
Right Bank	9.10	0	4.50	0	4.80	0	6.40	0	3.70	0	9.50	0	5.00	0	5.20	0	4.70	0	6.30	0	7.40	0
Feature Type	Run		Riffle		Run		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 0.01 meter unless depth is too deep to measure (then record as > 1)
 All measurements to be taken to the nearest 0.01 meter.

Signed: [Signature] Date: 10/19/07

WBID # 1023

Site # 9

Field Data Sheets for Recreational Use Stream Surveys

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

Date & Time: <u>9/27/07 13:20</u>	Site Location Description (e.g., road crossing): <u>Hwy NN Bridge</u>
Personnel (Data Collectors): <u>TA, SC</u>	
Current Weather Conditions: <u>Clear, Dry</u>	Facility Name:
Weather Conditions for Past 10 days: <u>Rain, Clear</u>	Permit Number:
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): <u>4331153</u>	Northing (UTM Y): ¹⁵³ <u>0550481</u>	Horizontal Accuracy: (EPE / FOM / PDOP) <u>9.1</u> Meters
Site 11	Easting (UTM X): <u>4331192</u>	Northing (UTM Y): ¹⁵³ <u>0550656</u>	Horizontal Accuracy: (EPE / FOM / PDOP) <u>8.4</u> Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
<u>1023-9-1124</u>	<u>US</u>	<u>1023-9-1125</u>	<u>DNS</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.) <p align="center"><u>None Observed</u></p>				

WBID # ~~13~~ 1023
 Site # ~~9~~ 24

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 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: Road/Riparian
Comments: Stream borders Hwy 124				

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 Observed				

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

% Cobble	5 % Gravel	85 % Sand	5 % Silt	5 % Mud/Clay	% Bedrock
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Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site)

Algae common, Smartweed, grasses

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 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 effect another use.

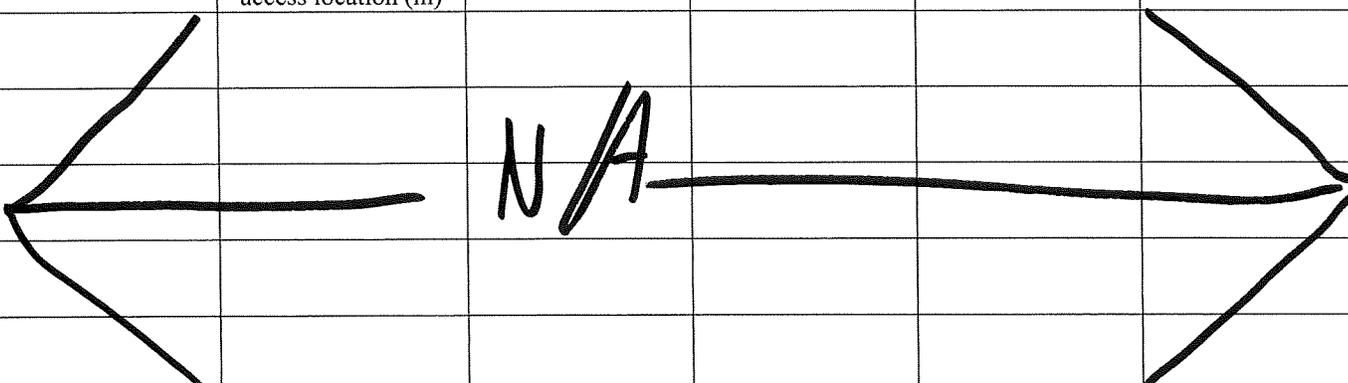
WBID # 1023

Site # 9

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (continued)

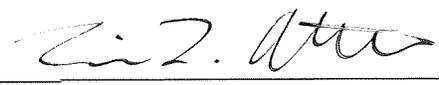
Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses)

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

Comments: (Please record any additional comments here.)

N/A

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

Surveyor's Signature:  Date of Survey: 9/27/07

Organization: MEC Water Resources Position: Water Quality Scientist

Anc 11-8-07

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Waterbody ID: <u>1023</u>	Site #: <u>9</u>	Dissolved Oxygen	
Estimated Channel Incision: <u>0-25</u> (m) (height between low bank width and water)		Date: <u>9/27/07</u>	Time: <u>13:20</u>
GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM)		Dissolved Oxygen: <u>3.53</u> (mg/L)	
01 UTM X: <u>4331153</u>	UTM Y: <u>1550550481</u>	Dissolved Oxygen: <u>38.7</u> (% sat)	
11 UTM X: <u>4331192</u>	UTM Y: <u>1550550656</u>	Specific Cond: <u>314.1</u> (µS/cm)	
Average Stream Width: <u>TA 8</u> (meters)	Length of Survey Segment: <u>156 160</u> (meters)	Water Temperature: <u>19.4</u> (°C)	
(To determine Length of Reach)			
Field Staff: <u>TA, SC</u>			

Transect Cross-Section

Station	01		02		03		04		05		06		07		08		09		10		11	
	Distance (m)	Depth (m)																				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Left Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1	0.69	0.09	0.79	0.08	1.33	0.42	0.93	0.21	0.78	0.24	1.5	0.26	0.89	0.15	1.5	0.0	0.71	0.19	0.87	0.25	0.76	0.30
2	1.38	0.16	1.58	0.06	2.66	0.42	1.86	0.31	1.56	0.28	3.0	0.26	1.78	0.15	3.0	0.0	1.42	0.22	1.74	0.24	1.52	0.42
3	2.07	0.23	2.37	0.13	3.99	0.39	2.79	0.30	2.34	0.27	4.5	0.12	2.67	0.21	4.5	0.03	2.13	0.23	2.61	0.22	2.28	0.39
4	2.76	0.36	3.16	0.27	5.32	0.32	3.72	0.28	3.12	0.27	6.0	0.10	3.56	0.27	6.0	0.04	2.84	0.23	3.48	0.24	3.04	0.39
5	3.45	0.34	3.95	0.26	6.65	0.26	4.65	0.21	3.9	0.29	7.5	0.13	4.45	0.30	7.5	0.07	3.55	0.19	4.35	0.18	3.8	0.31
6	4.14	0.36	4.74	0.15	7.98	0.12	5.58	0.19	4.68	0.21	9.0	0.13	5.34	0.32	9.0	0.08	4.26	0.10	5.22	0.08	4.56	0.27
7	4.83	0.34	5.53	0.31	9.31	0.0	6.51	0.19	5.46	0.18	10.5	0.26	6.23	0.32	10.5	0.10	4.97	0.09	6.09	0.08	5.32	0.27
8	5.52	0.21	6.32	0.23	10.64	0.0	7.44	0.17	6.24	0.19	12.0	0.33	7.12	0.28	12.0	0.20	5.68	0.07	6.96	0.08	6.08	0.16
9	6.21	0.07	7.11	0.17	11.97	0.09	8.37	0.12	7.02	0.08	13.5	0.28	8.01	0.0	13.5	0.23	6.39	0.06	7.83	0.02	6.84	0.10
Right Bank	6.9	0	7.9	0	13.3	0	9.3	0	7.8	0	15.0	0	8.9	0	15.0	0	7.1	0	8.7	0	7.6	0
Feature Type	Run	Run	Run	Run																		
(riffle, run, or 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 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 0.01 meter unless depth is too deep to measure (then record as > 1)
 All measurements to be taken to the nearest 0.01 meter.

RUC 11-5-07

Signed: [Signature] Date: 9/27/07

WBID # 1023

Site # 10

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization

(must be completed for each site)

Date & Time: <u>10/29/07</u>	Site Location Description (e.g., road crossing):
Personnel (Data Collectors): <u>DC/SC</u>	<u>Perche Cr @ Alspaw</u>
Current Weather Conditions: <u>Clear cool 55°</u>	Facility Name:
Weather Conditions for Past 10 days: <u>Rain/Clear</u>	Permit Number:
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>4328843</u>	Northing (UTM Y): <u>0550726</u>	Horizontal Accuracy: (EPE / FOM / PDOP) <u>4.5</u> Meters		
<u>DS</u> Site 11	Easting (UTM X): <u>432879</u>	Northing (UTM Y): <u>0550825</u>	Horizontal Accuracy: (EPE / FOM / PDOP) <u>5.5</u> Meters		

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
<u>1023_Site10-01</u>	<u>DS Reach</u>				
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
<u>1023_Site10-02</u>	<u>US Reach</u>				
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.)				
<u>None</u>				

WBID # 1023

Site # 10

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 type="checkbox"/> Other:
Comments: <i>private land</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%.)

<u>0</u> % Cobble	<u>5</u> % Gravel	<u>85</u> % Sand	<u>10</u> % Silt	<u>0</u> % Mud/Clay	<u>0</u> % Bedrock
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Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site)

<i>some periphyton ~ 20% coverage</i>

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 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 effect another use.

WBID # 1023

Site # 10

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (continued)

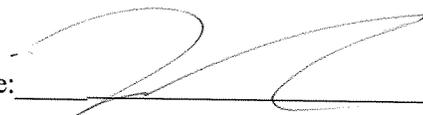
Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses)

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

Comments: (Please record any additional comments here.)

N/A

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

Surveyor's Signature:  Date of Survey: 10/24/07

Organization: MEC Water Resources, Inc. Position: WOS

AWC 11-8-07

MEC Recreational Use Attainability Analysis Field Survey Sheet

Waterbody ID: 1023 Site #: 10
 (WBID_Site#)

Estimated Channel Incision: 1.5 (m) (height between low bank width and water)

GPS Location (taken at transect 1):
 UTM X: 550726 UTM Y: 4328843
 Horizontal Accuracy Estimate (GPS Data Quality): +/- 4.5 meters (feet) 7A

GPS Location (taken at transect 11):
 UTM X: 550825 UTM Y: 432879
 Horizontal Accuracy Estimate (GPS Data Quality): +/- 5.5 meters (feet) 7A

Average Stream Width: 8 (meters) Length of Survey Segment: 150 (meters)
 (To determine Length of Reach) (20x average stream width)

Field Staff: DC & SC

Dissolved Oxygen

Date: 10/29/07 Time: 0930

Dissolved Oxygen: 6.43 (mg/L)

Dissolved Oxygen: 62.2 (% sat)

Specific Cond: 201 (µS/cm)

Water Temp.: 13.97 (°C)

QA Cal 0851 20.84 0.5/cm
 Baro 751.3 98.9% 8.85mg
 LL = 1.065

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	0.15	0.02	0.15	0.02	0.2	0.03	0.1	0.01	0.13	0.01	0.35	0.03	0.45	0.05	0.63	0.07	0.48	0.03	0.45	0.02	0.7	0.07
2	0.30	0.02	0.30	0.02	0.4	0.03	0.2	0.01	0.26	0.01	0.70	0	1.3	0.07	1.26	0.33	0.96	0.02	0.90	0.01	1.4	0.25
3	0.45	0.01	0.45	0.03	0.6	0.02	0.3	0.02	0.39	0.01	1.05	0.02	1.95	0.22	1.89	0.41	1.44	0.04	1.35	0.02	2.1	0.27
4	0.60	0.02	0.60	0.03	0.8	0.01	0.4	0.03	0.52	0.04	1.40	0.04	2.6	0.31	2.52	0.35	1.92	0.09	1.80	0.03	2.8	0.30
5	0.75	0.03	0.75	0.05	1.0	0.03	0.5	0.05	0.65	0.01	1.75	0.05	3.25	0.33	3.15	0.23	2.4	0.08	2.25	0.04	3.5	0.30
6	0.90	0.03	0.90	0.03	1.2	0.02	0.6	0.02	0.78	0	2.1	0.05	3.90	0.28	3.78	0.17	2.86	0.09	2.70	0.21	4.2	0.24
7	1.05	0.05	1.05	0.02	1.4	0.02	0.7	0.01	0.91	0	2.45	0.12	4.55	0.24	4.41	0.15	3.36	0.11	3.15	0.30	4.9	0.24
8	1.20	0.02	1.2	0.02	1.6	0.01	0.8	0.01	1.04	0.01	2.8	0.06	5.2	0.14	5.04	0.15	3.84	0.12	3.6	0.35	5.6	0.15
9	1.35	0.02	1.35	0.01	1.8	0.01	0.9	0.01	1.17	0	3.15	0.02	5.85	0.03	5.67	0.12	4.32	0.12	4.05	0.22	4.3	0.17
Right Bank	1.5	0	1.5	0	2.0	0	1.0	0	1.3	0	3.5	0	6.5	0	6.3	0	4.8	0	4.5	0	7.0	0
Feature Type (riffle, run, or pool)	run	run	pool	pool	run	run	run	run	run	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 (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: [Signature] Date: 10/29/07

WBID # 1023

Site # 11

Field Data Sheets for Recreational Use Stream Surveys

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

Date & Time: <u>9/27/07 11:40</u>	Site Location Description (e.g., road crossing): <u>Benedict Rd. Bridge</u>
Personnel (Data Collectors): <u>TA, SC</u>	
Current Weather Conditions: <u>Clear, Dry</u>	Facility Name:
Weather Conditions for Past 10 days: <u>Rain, Clear</u>	Permit Number:
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>4327144</u>	Northing (UTM Y): <u>556707</u> ¹⁵³	Horizontal Accuracy: (EPE / FOM / PDOP) <u>7.7</u> Meters
Site 11	Easting (UTM X): <u>N/A</u>	Northing (UTM Y): <u>N/A</u>	Horizontal Accuracy: (EPE / FOM / PDOP) <u>N/A</u> Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
<u>1023-11-1122</u>	<u>US</u>	<u>1023-11-1123</u>	<u>DNS</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 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.)
None observed at transects completed.

WBID # 1023

Site # 11

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 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: <i>Pasture</i>
Comments: <i>Estimated after completing 4 transects</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 checked="" type="checkbox"/> Livestock Watering
Comments / Other: <i>Estimated after completing 4 transects. Unable to photo-document.</i>				

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

% Cobble	<i>5</i>	% Gravel	<i>90</i>	% Sand	<i>5</i>	% Silt	% Mud/Clay	% Bedrock
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Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site)

Algae common

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>Brown/Turbid</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 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 effect another use.

WBID # 1023

Site # 11

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)
		N/A			

Comments: (Please record any additional comments here.)

Could not complete due to landowner. Only able to complete 4 transects. Landowner upset and did not want to talk. Would not accept, at the best, a business card.

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

Surveyor's Signature: *Tim J. Allen* Date of Survey: 9/27/07

Organization: MEC Water Resources Position: Water Quality Scientist

MWC 11-8-07

Recreational Use Attainability Analysis Field Survey Sheet

Waterbody ID: 1023 Site #: 11
(WBID_Site#)

Estimated Channel Incision: 0.25 (m) (height between low bank width and water)

GPS Location (taken at transect 1):
 UTM X: 4327144 UTM Y: 1550550707 meters
 Horizontal Accuracy Estimate (GPS Data Quality): +/- 7.7 (feet)

GPS Location (taken at transect 11):
 UTM X: N/A UTM Y: N/A meters
 Horizontal Accuracy Estimate (GPS Data Quality): +/- N/A (feet)

Average Stream Width: 12.0 (meters) Length of Survey Segment: 180240 (meters)
(To determine Length of Reach) (20x average stream width)

Field Staff: TA, SC

Dissolved Oxygen

Date: 9/27/07 Time: 11:40

Dissolved Oxygen: 3.86 (mg/L)

Dissolved Oxygen: 718.4 ~~43.8~~ (% sat)

Specific Cond: 7473 ~~418.4~~ (µS/cm)

Water Temp.: 21.5 (°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	1.25	0.24	1.30	0.07	1.33	0.07	1.34	0.14														
2	2.5	0.44	2.6	0.21	2.66	0.28	2.68	0.29														
3	3.75	0.62	3.9	0.40	3.99	0.47	4.02	0.42														
4	5.0	0.81	5.2	0.52	5.32	0.59	5.36	0.60														
5	6.25	>1.0	6.5	0.63	6.65	0.69	6.7	0.61														
6	7.5	>1.0	7.8	0.76	7.98	0.73	8.04	0.52														
7	8.75	0.73	9.1	0.60	9.31	0.56	9.38	0.44														
8	10.0	0.50	10.4	0.58	10.64	0.44	10.72	0.27														
9	11.25	0.39	11.7	0.37	11.97	0.17	12.06	0.31														
Right Bank	12.5	0	13.0	0	13.3	0	13.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Feature Type (riffle, run, or pool)	Pool		Run		Run		Run															

← Unable to complete due to landowner →

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.

AUC 11-8-07

Signed: Z. J. Allen Date: 9/27/07

WBID # 1025

Site # 12

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization

(must be completed for each site)

Date & Time: <u>10/19/07 9:22</u>	Site Location Description (e.g., road crossing): <u>Upstream from Wolfe Rd</u>
Personnel (Data Collectors): <u>SU/TA</u>	
Current Weather Conditions: <u>Clear, breezy, 60F</u>	Facility Name:
Weather Conditions for Past 10 days: <u>Spotty showers, Clear</u>	Permit Number:
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): <u>4325374</u>	Northing (UTM Y): ¹⁵⁸ <u>0551755</u>	Horizontal Accuracy: ^{9.4} <u>15.6</u> Meters (EPE / FOM / PDOP) <u>SU</u>
Site 11	Easting (UTM X): <u>4325300</u>	Northing (UTM Y): ¹⁵⁸ <u>0551926</u>	Horizontal Accuracy: <u>46.0</u> Meters (EPE / FOM / PDOP)

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
<u>1025_12_1257</u>	<u>Up Stream</u>	<u>1025_12_1258</u>	<u>Dwn. Stream</u>	<u>1025_12_1259</u>	<u>ATV tracks</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 # 1023
 Site # 12

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 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 checked="" type="checkbox"/> Steep slopes	<input checked="" type="checkbox"/> Other: <u>Ag structure</u>
Comments:				

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

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input checked="" type="checkbox"/> RV / ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Livestock Watering
Comments / Other: <u>Photo taken of tracks</u>				

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

% Cobble	<u>16</u>	% Gravel	<u>80</u>	% Sand	<u>5</u>	% Silt	<u>5</u>	% Mud/Clay	% Bedrock
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Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site)

Smartweed, grasses, algal growth abundant

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 checked="" type="checkbox"/> Other: <u>leaf mats</u>
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

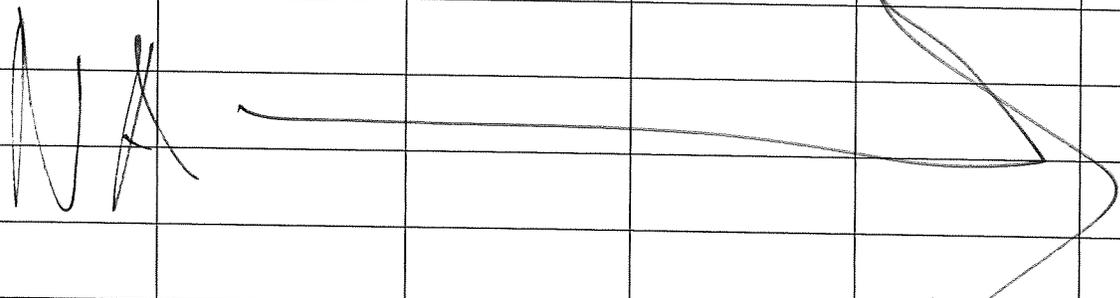
*This information is not to be used solely for removal of a recreational use designation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions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

WBID # 1025
Site # 12

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (continued)

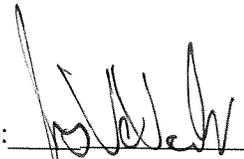
Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses)

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

Comments: (Please record any additional comments here.)

None

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

Surveyor's Signature:  Date of Survey: 10/19/07
Organization: MFC Water Resources Position: Water Quality Scientist

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Waterbody ID: <u>1023</u> Site #: <u>12</u> (wbid_site #) Estimated Channel Incision: <u>0.50</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>4325374</u> UTM Y: <u>1590551758</u> +/- <u>9.4</u> (meters) 11 UTM X: <u>4325300</u> UTM Y: <u>1550551926</u> +/- <u>46.0</u> (meters) Average Stream Width: <u>10</u> (meters) Length of Survey Segment: <u>200</u> (meters) (To determine Length of Reach) (20x average stream width) Field Staff: <u>SV/TA</u>	<h3 style="text-align: center; margin: 0;">Dissolved Oxygen</h3> Date: <u>10/19/07</u> Time: <u>9:22</u> Dissolved Oxygen: <u>47.9</u> ^{0/0.5ml} (mg/L) _{(% sat) 36} Dissolved Oxygen: <u>4.95</u> mg/L _{(% sat) 50} Specific Cond: <u>131.4</u> (µS/cm) Water Temperature: <u>14.1</u> (°C)
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Transect Cross-Section

Station	Transect Cross-Section																					
	01		02		03		04		05		06		07		08		09		10		11	
	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	
1	1.24	0.14	1.10	0.28	1.06	0.42	1.07	0.60	0.91	0.41	1.06	0.60	1.08	0.50	0.94	0.19	0.60	0.30	0.57	0.16	0.59	0.04
2	2.48	0.17	2.20	0.23	2.12	0.59	2.14	0.68	1.82	0.55	2.12	0.50	2.16	0.45	1.88	0.21	0.20	0.49	1.14	0.25	1.18	0.05
3	3.72	0.15	3.30	0.37	3.18	0.72	3.28	0.63	2.73	0.54	3.18	0.48	3.24	0.45	2.82	0.25	1.80	0.59	1.71	0.26	1.77	0.03
4	4.96	0.19	4.40	0.12	4.24	0.63	4.28	0.54	3.64	0.42	4.24	0.39	4.52	0.38	3.76	0.28	2.40	0.59	2.28	0.23	2.36	0.03
5	6.20	0.16	5.50	0.02	5.30	0.54	5.35	0.44	4.55	0.25	5.30	0.28	5.40	0.31	4.70	0.27	3.00	0.53	2.85	0.23	2.95	0.01
6	7.44	0.18	6.60	0.02	6.36	0.44	6.42	0.28	5.46	0.26	6.36	0.23	6.48	0.24	5.64	0.20	3.60	0.41	3.42	0.30	3.54	0.04
7	8.68	0.22	7.70	0.03	7.42	0.37	7.49	0.16	6.37	0.20	7.42	0.18	7.56	0.15	6.58	0.19	4.20	0.23	3.99	0.20	4.13	0.03
8	9.92	0.50	8.80	0.00	8.48	0.25	8.56	0.11	7.28	0.16	8.48	0.10	8.64	0.10	7.52	0.14	4.80	0.14	4.56	0.13	4.72	0.05
9	11.16	0.59	9.90	0.01	9.54	0.13	9.63	0.07	8.19	0.09	9.54	0.04	9.72	0.02	8.46	0.07	5.40	0.06	5.13	0.04	5.31	0.04
Right Bank	12.40	0	11.00	0	10.60	0	10.70	0	9.10	0	10.60	0	10.50	0	9.40	0	6.00	0	5.70	0	5.90	0
Feature Type	Run	Run	Run	Run	Run	Run	Run	Run	Run	Run	Run	Run	Run	Run	Run	Run	Pool	Run	Run	Riffle	Run	Riffle

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 0.01 meter unless depth is too deep to measure (then record as > 1)
 All measurements to be taken to the nearest 0.01 meter.

Signed: [Signature] Date: 10/19/07

WBID # 1023
 Site # 13

Field Data Sheets for Recreational Use Stream Surveys

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

Date & Time: <u>10/19/07 10:18</u>	Site Location Description (e.g., road crossing): <u>off of Wolf Rd</u>
Personnel (Data Collectors): <u>JV/TA</u>	
Current Weather Conditions: <u>Clear, Breezy 63°F</u>	Facility Name:
Weather Conditions for Past 10 days: <u>Spotty Showers/Clear</u>	Permit Number:
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): <u>4324293</u>	Northing (UTM Y): <u>551657¹³⁶</u>	Horizontal Accuracy: (EPE / FOM / PDOP) <u>10.6</u> Meters
Site 11	Easting (UTM X): <u>4324526</u>	Northing (UTM Y): <u>551845¹³⁵</u>	Horizontal Accuracy: (EPE / FOM / PDOP) <u>6.4</u> Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
<u>1023-13-1240</u>	<u>Dip stream</u>	<u>1023-13-1241</u>	<u>Down Stream.</u>	<u>1023-13-1242</u>	<u>ATV Tracks</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 # 1023

Site # 13

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 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 checked="" type="checkbox"/> Steep slopes	<input checked="" type="checkbox"/> Other: <u>Pasture</u>
Comments:				

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

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input checked="" type="checkbox"/> RV / ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Livestock Watering
Comments / Other: <u>Photos taken of ATV tracks</u>				

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

% Cobble	<u>10</u> % Gravel	<u>80</u> % Sand	<u>5</u> % Silt	<u>5</u> % Mud/Clay	% Bedrock
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Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site)

<u>Smartweed, grasses, algal growth abundant</u>
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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 checked="" type="checkbox"/> Other: <u>Leaf mats</u>
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 # 1025

Site # 13

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)
Pool	500m	15	50	1.25	1.50

Comments: (Please record any additional comments here.)

Pool upstream of transect #1 approx. ^{50m} 20m
30

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: 10/19/07

Organization: MEC Water Resources Position: Water Quality Scientist

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Waterbody ID: <u>1023</u> Site #: <u>13</u> (wbid_site #) Estimated Channel Incision: <u>0.50</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>4324293</u> UTM Y: <u>195 0551657</u> +/- <u>10.6</u> (meters) 11 UTM X: <u>4324326</u> UTM Y: <u>195 0551845</u> +/- <u>6.4</u> (meters) Average Stream Width: <u>10</u> (meters) Length of Survey Segment: <u>200</u> (meters) (To determine Length of Reach) (20x average stream width) Field Staff: <u>SU/JA</u>	Dissolved Oxygen Date: <u>10/19/07</u> Time: <u>10:18</u> Dissolved Oxygen: <u>27.2</u> ^{0.654} (mg/L) _{3U} Dissolved Oxygen: <u>2.77</u> ^{mg/L} _{3U} Specific Cond: <u>424.8</u> (µS/cm) Water Temperature: <u>14.8</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)	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	0.93	0.05	1.31	0.22	0.98	0.10	0.29	0.11	0.53	0.07	0.94	0.08	1.14	0.15	1.00	0.04	0.42	0.01	0.55	0.21	0.84	0.19
2	1.86	0.08	2.62	0.24	1.90	0.06	0.58	0.13	1.06	0.10	1.88	0.06	2.28	0.10	2.00	0.06	0.84	0.00	1.10	0.17	1.68	0.17
3	2.79	0.14	3.93	0.15	2.85	0.02	0.87	0.00	1.59	0.00	2.82	0.06	3.42	0.06	3.00	0.07	1.26	0.00	1.65	0.15	2.52	0.12
4	3.72	0.24	5.24	0.10	3.80	0.14	1.16	0.17	2.12	0.60	3.76	0.00	4.56	0.04	4.00	0.00	1.68	0.02	2.20	0.13	3.36	0.07
5	4.65	0.44	6.55	0.06	4.75	0.19	1.45	0.19	2.65	0.63	4.70	0.09	5.70	0.00	5.00	0.00	2.10	0.03	2.75	0.12	4.20	0.05
6	5.58	0.53	7.86	0.10	5.70	0.20	1.74	0.25	3.18	0.69	5.64	0.16	6.84	0.01	6.00	0.00	2.52	0.03	3.30	0.10	5.04	0.03
7	6.51	0.53	9.17	0.04	6.65	0.19	2.03	0.00	3.71	0.41	6.58	0.19	7.98	0.06	7.00	0.00	2.94	0.03	3.85	0.06	5.88	0.00
8	7.44	0.41	10.48	0.02	7.60	0.18	2.32	^{0.18} 0.0	4.24	0.20	7.52	0.07	9.12	0.10	8.00	0.01	3.36	0.01	4.40	0.05	6.72	0.00
9	8.37	0.22	11.79	0.10	8.55	0.10	2.61	0.07	4.77	0.01	8.46	0.04	10.26	0.07	9.00	0.14	3.78	0.01	4.95	0.07	7.90	0.01
Right Bank	9.30	0	13.10	0	9.50	0	2.90	0	5.30	0	9.40	0	11.40	0	10.60	0	4.20	0	5.50	0	8.40	0
Feature Type	Run		Run		Run		Run		Run		Run		Run		Riffle		Riffle		Run		Run	

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

Signed: [Signature] Date: 10/19/07















