



Missouri
Department of
Natural Resources

Use Attainability Analysis

for

WBID 2063 Little Bourbeuse River

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):	L. Bourbeuse River
Missouri Water Body Identification (WBID) Number:	2063
8-digit HUC:	County: Crawford
Upstream Legal Description (from Table H):	3, 39N, 4W
Downstream Legal Description (from Table H):	26, 40N, 4W
Number of sites evaluated	3
List all sites numbers, listed consecutively upstream to downstream:	

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

Discharger Facility Name(s):	Mobil Pump Handle
Discharger Permit Number(s):	MO0122611

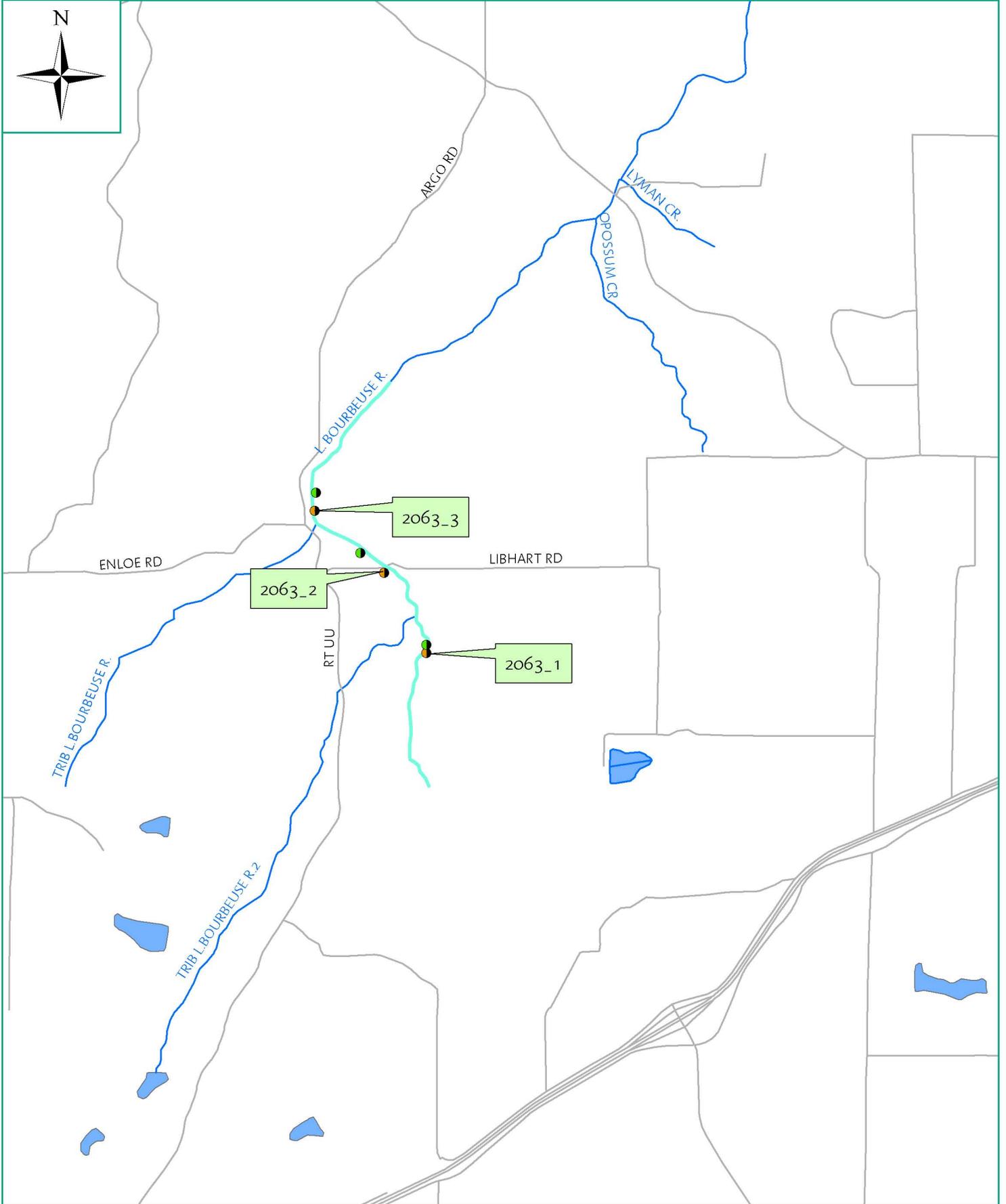
III. UAA Surveyor (please print legibly)

Name of Surveyor	Tim Altmeyer, James Keverka	Telephone Number:	573-443-4100
Organization/Employer:	MEC - Water Resources		
Position:	Water Quality Scientist		

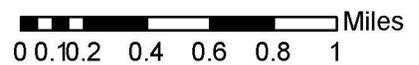
Please verify that you have completed all sections, checked all applicable boxes and that everything is complete.

Signed: Sh. [Signature] Date: 10/31/07

L. Bourbeuse River (WBID 2063)



- Upstream Boundary
- Downstream Boundary



WBID # 2063

Site # 1

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization

(must be completed for each site)

Date & Time: <u>10/23/07 12:21</u>	Site Location Description (e.g., road crossing): <u>South of Libhart Rd</u>
Personnel (Data Collectors): <u>JV/TA</u>	
Current Weather Conditions: <u>Pt. Clky, Breezy, 60°F</u>	Facility Name:
Weather Conditions for Past 10 days: <u>Spotty 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>4223223</u>	Northing (UTM Y): <u>1550645845</u>	Horizontal Accuracy: (EPE / FOM / PDOP) <u>10.6</u> Meters
Site 11	Easting (UTM X): <u>4223285</u>	Northing (UTM Y): <u>1550645845</u>	Horizontal Accuracy: (EPE / FOM / PDOP) <u>7.6</u> Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
<u>2063-1-1262</u>	<u>Up Stream</u>	<u>2063-1-1263</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 *Data Sheet D- Recreational Use Interview* when conducting interviews.)

WBID # 2065

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: <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 checked="" type="checkbox"/> Livestock Watering
Comments / Other:				

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

<u>5</u> % Cobble	<u>5</u> % Gravel	<u>80</u> % Sand	<u>10</u> % Silt	% Mud/Clay	% Bedrock
-------------------	-------------------	------------------	------------------	------------	-----------

Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site)

<u>grasses, smartweed, algal growth present in only wet transition</u>
--

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 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.

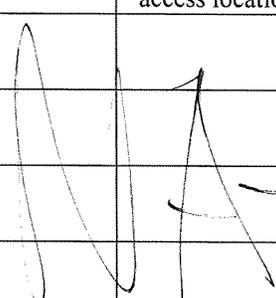
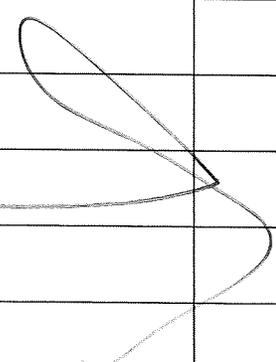
WBID # 2063

Site # 1

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (continued)

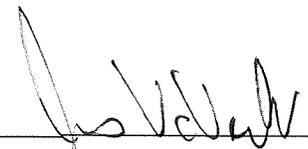
Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses)

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

Comments: (Please record any additional comments here.)

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: 10/23/07

Organization: MEC Water Resource Position: Water Quality Scientist

REC 10-30-07

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Waterbody ID: <u>2063</u> Site #: <u>1</u> (wbid_site #) 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>4223223</u> UTM Y: <u>15 S 0649774</u> +/- <u>10.6</u> (meters) 11 UTM X: <u>4223285</u> UTM Y: <u>15. S. 0645845</u> +/- <u>7.6</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>JU/TA</u>	Dissolved Oxygen
	Date: <u>10/23/07</u> Time: <u>12:21</u> Dissolved Oxygen: <u>5.01</u> (mg/L) Dissolved Oxygen: <u>50.1</u> (% sat) Specific Cond: <u>765</u> (µS/cm) Water Temperature: <u>15.3</u> (°C)

Transect Cross-Section

		01		02		03		04		05		06		07		08		09		10		11	
Station		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		Dry	Dry	Dry	0.10	0.01																	
2																					0.20	0.03	
3																					0.30	0.00	
4																					0.40	0.00	
5																					0.50	0.00	
6																					0.60	0.00	
7																					0.70	0.00	
8																					0.80	0.00	
9																					0.90	0.06	
Right Bank		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.00	0	
Feature Type <small>(riffle, run, or pool)</small>		Dry	Dry	Run	Dry	Dry	Dry	Dry	Dry	Dry	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:

Date:

10/23/07

a/c 10-30-07

WBID # 2063

Site # 2

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization

(must be completed for each site)

Date & Time: <u>10/23/07 11:56</u>	Site Location Description (e.g., road crossing): <u>Bridge off of Libhart Rd.</u>
Personnel (Data Collectors): <u>SV/TA</u>	
Current Weather Conditions: <u>P.C. / 57°F</u>	Facility Name:
Weather Conditions for Past 10 days: <u>Spotty Shower/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>4223828</u>	Northing (UTM Y): <u>50645524</u>	Horizontal Accuracy: (EPE / FOM / PDOP) <u>18.2</u> Meters
Site 11	Easting (UTM X): <u>4223976</u>	Northing (UTM Y): <u>50645348</u>	Horizontal Accuracy: (EPE / FOM / PDOP) <u>7.7</u> Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
<u>2063-2-1260</u>	<u>Up stream</u>	<u>2063-2-1261</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 <i>Data Sheet D- Recreational Use Interview</i> when conducting interviews.)				

WBID # 2065

Site # 2

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (continued)

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

<input type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input 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>Pasture and Forest land</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%.)

<u>10</u> % Cobble	<u>20</u> % Gravel	<u>70</u> % Sand	% Silt	% Mud/Clay	% Bedrock
--------------------	--------------------	------------------	--------	------------	-----------

Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site)

<u>Willow, grasses, smartweed, no algal growth</u>
--

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

*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 # 2063

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)
NA					

Comments: (Please record any additional comments here.)

Complete transect stretch dry

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: 10/23/07

Organization: MEC Water Resources Position: Water Quality Scientist

auc 10-30-07

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Waterbody ID: <u>2063</u> Site #: <u>2</u> (wbid_site #) 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>4223868</u> UTM Y: <u>1550645524</u> +/- <u>18.2</u> (meters) 11 UTM X: <u>4223976</u> UTM Y: <u>1550645348</u> +/- <u>7.7</u> (meters) Average Stream Width: <u>6</u> (meters) Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach) (20x average stream width) Field Staff: <u>SSV</u>	<h3 style="text-align: center; margin: 0;">Dissolved Oxygen</h3> Date: <u>10/23/07</u> Time: <u>11:56</u> Dissolved Oxygen: <u>NA</u> (mg/L) Dissolved Oxygen: _____ (% sat) Specific Cond: _____ (µS/cm) Water Temperature: <u>Day</u> (°C)
---	--

Transect Cross-Section

Transect Cross-Section																							
		01		02		03		04		05		06		07		08		09		10		11	
Station		Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
Left Bank		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		<div style="display: flex; justify-content: space-between;"> <div style="width: 5%; text-align: right;">1</div> <div style="width: 5%; text-align: right;">2</div> <div style="width: 5%; text-align: right;">3</div> <div style="width: 5%; text-align: right;">4</div> <div style="width: 5%; text-align: right;">5</div> <div style="width: 5%; text-align: right;">6</div> <div style="width: 5%; text-align: right;">7</div> <div style="width: 5%; text-align: right;">8</div> <div style="width: 5%; text-align: right;">9</div> </div>																					
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		(riffle, run, or 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: [Signature] Date: 10/23/07

RUC 10-30-07

WBID # 2063
 Site # 3

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization

(must be completed for each site)

Date & Time: <u>10/23/07 12:52</u>	Site Location Description (e.g., road crossing): <u>Just East of Argo Rd.</u>
Personnel (Data Collectors): <u>SV/TA</u>	
Current Weather Conditions: <u>P. Ch, Breezy, 60°F</u>	Facility Name:
Weather Conditions for Past 10 days: <u>Spotty Showers, 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>4224294</u>	Northing (UTM Y): <u>155 0645001</u>	Horizontal Accuracy: (EPE / FOM / PDOP) <u>8.1</u> Meters
Site 11	Easting (UTM X): <u>4224431</u>	Northing (UTM Y): <u>155 0645012</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>2063.3-1264</u>	<u>Up Stream</u>	<u>2063.3-1265</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 <i>Data Sheet D- Recreational Use Interview</i> when conducting interviews.)				

WBID # 2065

Site # 3

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (continued)

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

<input type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input 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 and forest land</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</u>				

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

<u>20</u> % Cobble	<u>20</u> % Gravel	<u>55</u> % Sand	% Silt	% Mud/Clay	<u>5</u> % Bedrock
--------------------	--------------------	------------------	--------	------------	--------------------

Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site)

<u>Grasses, algal growth common in wet transects</u>
--

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 matts</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.

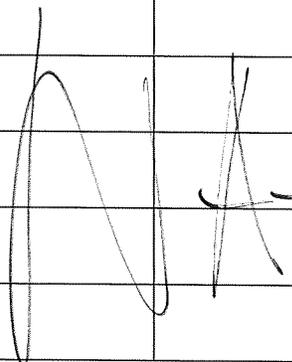
WBID # 2065

Site # 5

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (continued)

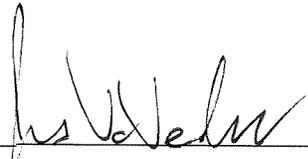
Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses)

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

Comments: (Please record any additional comments here.)

Majority of the transects were 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: 10/25/07

Organization: MEC Water Resources Position: Water Quality Scientist

QUC 10-30-07

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Waterbody ID: 2065 Site #: 3
 Estimated Channel Incision: 0.25 ^{2w} (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: 4224294 UTM Y: 153 0645001 +/- 8.1 (meters)
 11 UTM X: 4224431 UTM Y: 153 0645012 +/- 16.5 (meters)
 Average Stream Width: 6 (meters) Length of Survey Segment: 150 (meters)
 (To determine Length of Reach) (20x average stream width)
 Field Staff: JU/TA

Dissolved Oxygen	
Date: <u>10/23/07</u>	Time: <u>12:52</u>
Dissolved Oxygen: <u>6.26</u> (mg/L)	
Dissolved Oxygen: <u>63.2</u> (% sat)	
Specific Cond: <u>199.5</u> ^{202.2} (µS/cm)	
Water Temperature: <u>15.4</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	0.17	0.06	Dry		0.23	0.04	Dry		Dry													
2	0.34	0.08			0.46	0.07																
3	0.51	0.08			0.69	0.07																
4	0.68	0.15			0.92	0.04																
5	0.85	0.17			1.15	0.00																
6	1.02	0.15			1.38	0.00																
7	1.19	0.09			1.61	0.01																
8	1.36	0.01			1.84	0.02																
9	1.53	0.00			2.07	0.00																
Right Bank	1.70	0			2.30	0																
Feature Type	Run		Dry		Run		Dry		Dry													
(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: 10/23/07

2w c 10-30-07



