

**LEE ROWE DITCH  
WBID 3137**

**Recreational Use Attainability Analysis**

May 2007

PREPARED FOR:  
RFP No: B3Z07134  
Water Quality Monitoring & Assessment Section  
Water Protection Program  
Division of Environmental Quality  
MISSOURI DEPARTMENT OF NATURAL RESOURCES  
301 West High Street  
Jefferson City, MO 65102

PREPARED BY:  
MEC WATER RESOURCES, INC.  
1123 Wilkes Blvd., Ste. 400  
Columbia, MO 65201

**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):	Lee Rowe Ditch
Missouri Water Body Identification (WBID) Number:	3137
8-digit HUC:	08020201
County:	Mississippi
Upstream Legal Description (from Table H):	30,24N,16E
Downstream Legal Description (from Table H):	30,25N,16E
Number of sites evaluated	3
List all sites numbers, listed consequently upstream to downstream:	Sites - 1, 2, 3

**II. Subsegmentation** (fill this section out only in cases where subsegmentation is being proposed)

<b>LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION, IN METERS)</b>			
Upstream Coordinates:		Downstream Coordinates:	
UTM X	Y	UTM X	Y
<b>HORIZONTAL COLLECTION METHOD (Indicate the method used to determine the locational data.)</b>			
Global Positioning System (GPS)		Interpolation	
Static Mode		Topographic Map or DRG	
Dynamic Mode (Kinematic)		Aerial Photograph or DOQQ	
Precise Positioning Service		Satellite Imagery	
Signal Averaging		Interpolation Other	
Real Time Differential Processing			
<b>HORIZONTAL ACCURACY ESTIMATE</b>			
GPS Data Quality		Interpolation Data Quality	
FOM	± _____ Meters	Source Map Scale: 1:24,000 1:100,000 Other	
EPE	± _____ Feet or ± _____ Meters		
PDOP		± _____ Feet or ± _____ Meters	

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

Discharger Facility Name(s):	East Prairie WWTP
Discharger Permit Number(s):	MO 0021750

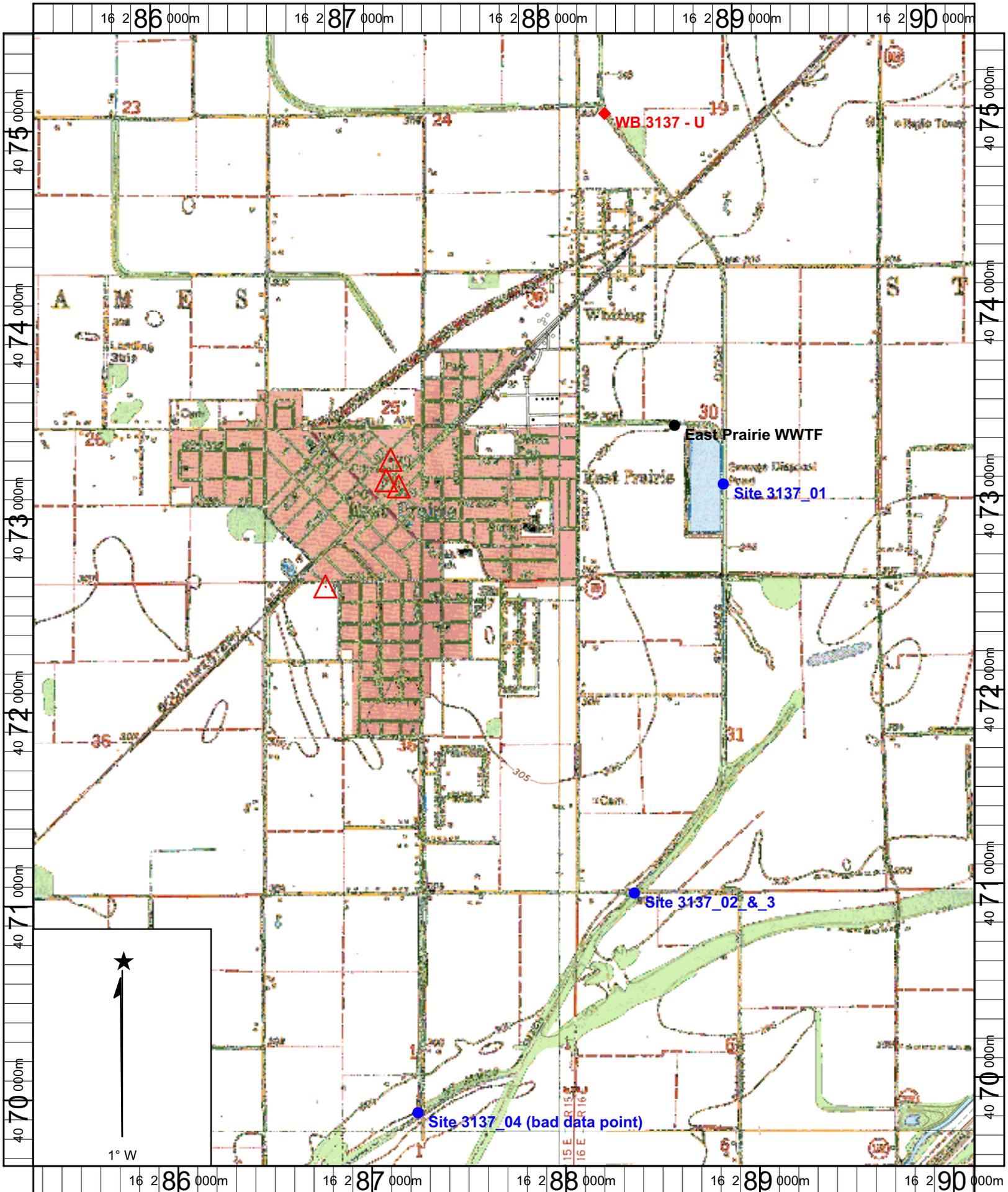
**IV. UAA Surveyor** (please print legibly)

Name of Surveyor	Robert Brunon	Telephone Number:	(573) 634-7078
Organization/Employer:	ERC		
Position:	Field Manager		

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

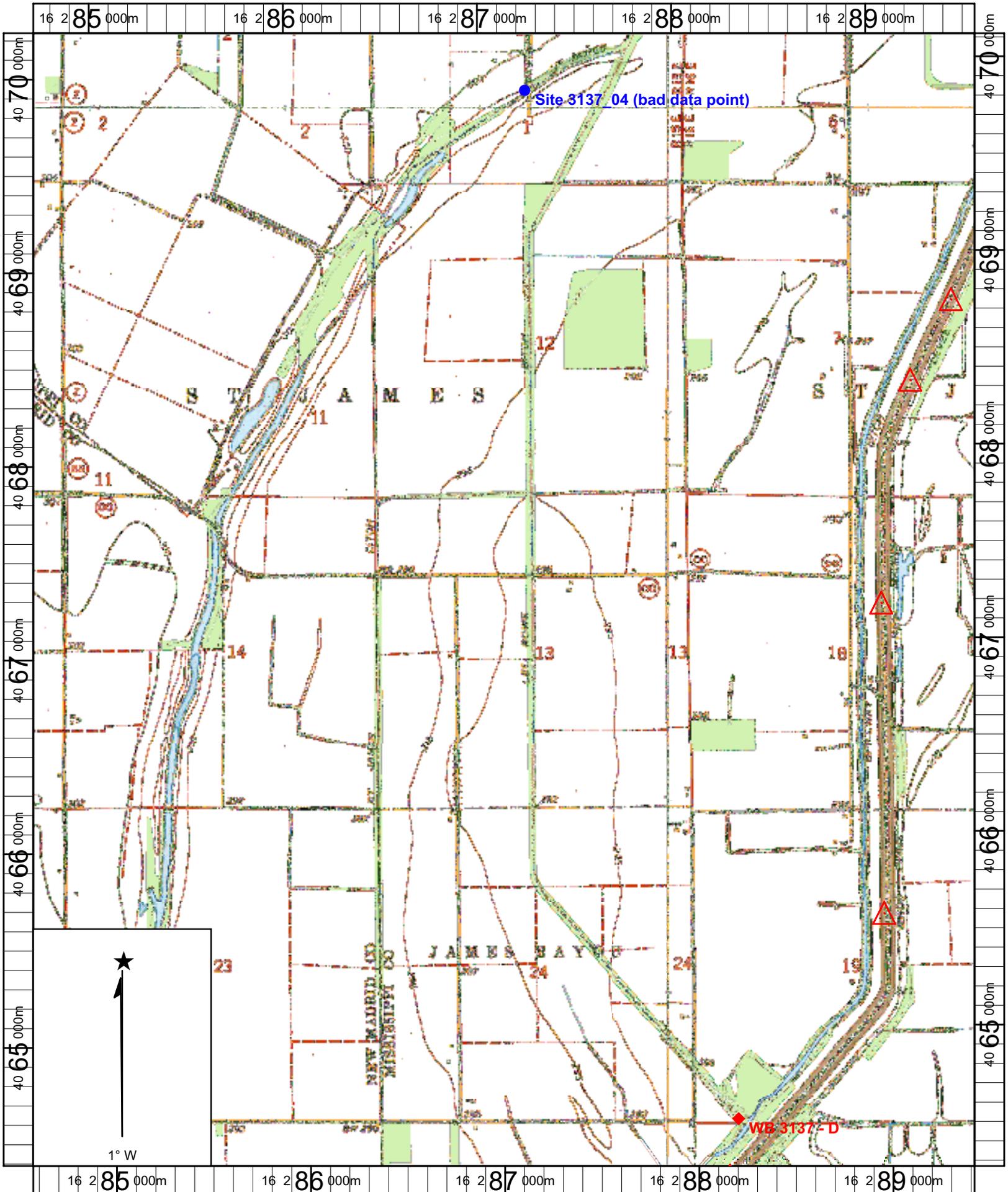
Signed: Robert Brunon Date: 5-11-2007

RUC 5-29-07



Name: ANNISTON  
Date: 5/28/2007  
Scale: 1 inch equals 2000 feet

Location: 16 0287751 E 4072524 N



Name: HENDERSON MOUND  
Date: 5/28/2007  
Scale: 1 inch equals 2000 feet

Location: 16 0287065 E 4067254 N

WBID# 3137  
 Site# 1

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

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

Date & Time: <u>05/10/07 17:40</u>	Site Location Description (e.g., road crossing): <u>upstream of Hwy 80 bridge</u>
Personnel (Data Collectors): <u>Abby + Bob</u>	Facility Name: <u>East Prairie WWTP</u>
Current Weather Conditions: <u>overcast ~ 78°F</u>	Permit Number: <u>MO 0021790</u>
Weather Conditions for Past 10 days:	
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 Locations:**

<b>LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION, IN METERS):</b>	
Site GPS Coordinates: UTM X: <u>165 0288909</u>	Y: <u>4073089</u>
<b>HORIZONTAL COLLECTION METHOD (Indicate the method used to determine the locational data.)</b>	
Global Positioning System (GPS)	
Static Mode	Interpolation
Dynamic Mode (Kinematic)	Topographic Map or DRG
Precise Positioning Service	Aerial Photograph or DOQQ
Signal Averaging	Satellite Imagery
Real Time Differential Processing	Interpolation Other
<b>HORIZONTAL ACCURACY ESTIMATE</b>	
GPS Data Quality	
FOM ± _____ Meters	Interpolation Data Quality
EPE ± <u>16</u> Feet or ± _____ Meters	
PDOP _____	
Source Map Scale: 1:24,000 1:100,000 Other _____	
± _____ Feet or ± _____ Meters	

**Photos:**

Photo ID# (WBID Site# ##)	Photo Purpose and Direction (upstream, downstream, other)	Photo ID# (WBID Site# ##)	Photo Purpose and Direction (upstream, downstream, other)
<u>A63</u>	<u>Upstream T11</u>	<u>A64</u>	<u>Downstream T1</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.)

**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"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Fence	<input checked="" type="checkbox"/> Steep slopes	<input type="checkbox"/> None of the above	<input type="checkbox"/> Other:

Comments: Farm fields

WBID# 3137  
 Site# 1

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

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

**Indications of Human Use\*:** (attach photos)

<input type="checkbox"/> Roads	<input type="checkbox"/> Rope swings	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input type="checkbox"/> RV / ATV Tracks
<input type="checkbox"/> Camping Sites		<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Other:
Comments: <u>NONE</u>					

**Stream Morphology:**

**Upstream View's Physical Descriptions:** Is there any water present at this view?  Yes  No  
 If so, is there an obvious current?  Yes  No

**Select one of the following channel features:**

Channel Feature	Transect (#)	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE						
RUN						
POOL						

**Downstream View's Physical Descriptions:** Is there any water present at this view?  Yes  No  
 If so, is there an obvious current?  Yes  No

**Select one of the following channel features:**

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE					
RUN					
POOL					

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

% Cobble	<u>10</u>	% Gravel	<u>50</u>	% Sand	<u>40</u>	% Silt	% Mud/Clay	% Bedrock
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**Aquatic Vegetation\*:** (Note amount of vegetation or algal growth at the assessment site.)

~40% macrophyte coverage w/ brown filamentous algae in macrophytes

**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:
WATER SURFACE DEPOSITION:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input checked="" type="checkbox"/> Foam	<input type="checkbox"/> None	<input checked="" type="checkbox"/> Other: <u>brown solids</u>

**Comments:** Please attach any additional comments to this form.

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

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

Surveyor's Signature: [Signature] Date of Survey: 05/10/07  
 Organization: ERC Position: Field Manager  
ERC 5-29-07

# ERC Recreational Use Attainability Analysis Field Survey Sheet

Pic  
CD-A 062 up (01-11)  
063 Down (01-01)

Waterbody ID: 3137 Site #: 01 channel incision a/c not measured

Weather Conditions: cloudy (chance of rain) way pt #031

GPS Location:  
UTM X: 16 S 0288909 UTM Y: 4073089  
Horizontal Accuracy Estimate (GPS Data Quality): +/- 1.0 (feet)

Average Stream Width: 8.5 (meters) Length of Survey Segment: 170 (meters)

Field Staff: Abbey + Bob

**Water Quality Parameters**

Dissolved Oxygen: 13.0 (mg/L)

Dissolved Oxygen: 160.3 (% sat)

Specific Cond: 302 (µS/cm)

Water Temperature: 26.01 (°C)

Time: 17:46

## Transect Cross-Section

	01		02		03		04		05		06		07		08		09		10		11		
	Distance (m)	Depth (m)																					
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	.43	.37	.5	.35	.49	.30	.56	.29	.47	.35	.63	.37	.72	.5	.67	.39	.79	.34	.83	.39	.85	.27	
3	.86	.63	1.0	.76	.98	.51	1.12	.42	.94	.50	1.26	.49	1.44	.62	1.34	.48	1.58	.46	1.66	.41	1.7	.13	
4	1.29	.72	1.5	.77	1.47	.72	1.68	.73	1.41	.59	1.89	.52	2.16	.58	2.01	.56	2.37	.44	2.49	.32	2.55	.36	
5	1.72	.80	2.0	.87	1.96	.81	2.24	.69	1.88	.65	2.52	.65	2.88	.56	2.68	.55	3.16	.43	3.32	.41	3.4	.37	
6	2.15	.80	2.5	.83	2.45	.84	2.8	.73	2.35	.70	3.15	.61	3.6	.56	3.35	.42	3.95	.33	4.15	.49	4.25	.44	
7	2.58	.95	3.0	.80	2.94	.83	3.36	.78	2.82	.66	3.78	.61	4.32	.55	4.02	.51	4.74	.34	4.98	.37	5.1	.49	
8	3.01	.72	3.5	.75	3.13	.69	3.92	.65	3.29	.57	4.41	.59	5.04	.56	4.69	.60	5.53	.43	5.81	.49	5.95	.47	
9	3.44	.75	4.0	.68	3.92	.51	4.48	.40	3.76	.39	5.04	.35	5.76	.45	5.36	.36	6.32	.43	6.64	.40	6.8	.34	
10	3.87	.22	4.5	.25	4.41	.30	5.04	.22	4.23	.28	5.64	.27	6.48	.17	6.03	.30	7.11	.33	7.47	.31	7.65	.33	
11	4.3	.03	5.0	.02	4.9	.01	5.6	.07	4.7	.03	6.3	.01	7.2	.02	6.7	.01	7.9	.02	8.3	.02	8.5	.02	
12	4.5	0	5.2	0	5.0	0	5.9	0	4.8	0	6.4	0	7.5	0	7.0	0	8.0	0	8.6	0	8.6	0	
Feature Type (riffle, run, or pool)	run (a/c)																						

Notes: Transects will be measured beginning on left descending bank and finishing on right descending bank.

GPS location corresponds to Transect 01. Transects ordered in upstream to downstream order.

a/c 5-29-07

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

Abbey + Bob

Date: 05/0/07

WBID# 3137  
 Site# 02

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

**Data Sheet B - Site Characterization**

(must be completed for each site)

Date & Time: <u>5-10-2007</u> <u>18:30</u>	Site Location Description (e.g., road crossing): <u>upstream at road crossing on Co. Rd 525</u>
Personnel (Data Collectors): <u>Bob and Abby</u>	Facility Name: <u>East Prairie WWTF</u>
Current Weather Conditions: <u>Sunny, Partly Cloudy</u>	Permit Number: <u>MO 0021750</u>
Weather Conditions for Past 10 days:	
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 Locations:**

LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION, IN METERS)			
Site GPS Coordinates: UTM X: <u>16 S 0288387</u>		Y: <u>4071013</u>	
HORIZONTAL COLLECTION METHOD (Indicate the method used to determine the location data.)			
Global Positioning System (GPS)		Interpolation	
Static Mode		Topographic Map or DRG	
Dynamic Mode (Kinematic)		Aerial Photograph or DOQQ	
Precise Positioning Service		Satellite Imagery	
Signal Averaging		Interpolation Other	
Real Time Differential Processing			
HORIZONTAL ACCURACY ESTIMATE			
GPS Data Quality		Interpolation Data Quality	
FOM	± _____ Meters	Source Map Scale: 1:24,000 1:100,000 Other _____	
EPE	± <u>24</u> Feet or ± _____ Meters	± _____ Feet or ± _____ Meters	
PDOP			

**Photos:**

Photo ID# (WBID Site# ##)	Photo Purpose and Direction (upstream, downstream, other)	Photo ID# (WBID Site# ##)	Photo Purpose and Direction (upstream, downstream, other)
<u>A 059</u>	<u>upstream view</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.)				

**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"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Fence	<input checked="" type="checkbox"/> Steep slopes	<input type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Comments: <u>farm fields</u>				

WBID# 3137  
 Site# 02

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

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

**Indications of Human Use\*: (attach photos)**

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

**Stream Morphology:**

**Upstream View's Physical Descriptions:** Is there any water present at this view?  Yes  No  
 If so, is there an obvious current?  Yes  No

**Select one of the following channel features:**

Channel Feature	Transect (#)	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE						
RUN						
POOL						

**Downstream View's Physical Descriptions:** Is there any water present at this view?  Yes  No  
 If so, is there an obvious current?  Yes  No

**Select one of the following channel features:**

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE					
RUN					
POOL					

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

% Cobble	<u>10</u>	% Gravel	<u>50</u>	% Sand	<u>40</u>	% Silt	% Mud/Clay	% Bedrock
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**Aquatic Vegetation\*:** (Note amount of vegetation or algal growth at the assessment site.)

both emergent + submersed macrophytes covering 20-30% of the channel  
 filamentous algae on both macrophytes and debris

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

ODOR:	<input type="checkbox"/> Sewage	<input checked="" type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input type="checkbox"/> None	<input type="checkbox"/> Other:
COLOR:	<input type="checkbox"/> Clear	<input checked="" type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
BOTTOM DEPOSIT:	<input type="checkbox"/> Sludge	<input checked="" type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other:
WATER SURFACE DEPOSITION:	<input type="checkbox"/> Oil	<input checked="" type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input type="checkbox"/> None	<input type="checkbox"/> Other:

**Comments:** Please attach any additional comments to this form.

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

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

Surveyor's Signature: [Signature] Date of Survey: 5-10-2007

Organization: [Signature] Position: Field Manager

up A 059

### ERC Recreational Use Attainability Analysis Field Survey Sheet

Waterbody ID: 3137 Site #: 02

Weather Conditions: sunny w/ cloud cover

GPS Location:  
 UTM X: 1650288387 UTM Y: 4071013  
 Horizontal Accuracy Estimate (GPS Data Quality): +/- 28 (feet)

Average Stream Width: 10 (meters) Length of Survey Segment: - (meters)

Field Staff: Bob and Abby

*no channel incision BAC measurement taken*

**Water Quality Parameters**

Dissolved Oxygen: 9.17 (mg/L)

Dissolved Oxygen: 110.9 (% sat)

Specific Cond: 308 (µS/cm)

Water Temperature: 25.4 (°C)

Time: 18:30

#### Transect Cross-Section

	01		02		03		04		05		06		07		08		09		10		11	
	Distance (m)	Depth (m)																				
1	0	.01																				
2	1.04	.55																				
3	2.09	.79																				
4	3.14	.80																				
5	4.18	1.08																				
6	5.23	1.23																				
7	6.27	1.12																				
8	7.32	.92																				
9	8.36	.75																				
10	9.40	.48																				
11	10.45	.01																				
12	-	-																				
Feature Type (riffle, run, or pool)	run →																					

Feature Type (riffle, run, or pool)

Notes: Transects will be measured beginning on left descending bank and finishing on right descending bank.

GPS location corresponds to Transect 01. Transects ordered in upstream to downstream order.

*BAC 5-29-07*

Signed: [Signature]

Date: 05-10-07

WBID# 3137  
 Site# 3

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

**Data Sheet B - Site Characterization**

(must be completed for each site)

Date & Time: <u>05/10/07 18:30</u>	Site Location Description (e.g., road crossing): <u>downstream at road crossing on Co. Rd. 525</u>
Personnel (Data Collectors): <u>Ally + Bob</u>	Facility Name: <u>East Prairie WWTP</u>
Current Weather Conditions: <u>overcast ~85°F</u>	Permit Number: <u>MO 0021750</u>
Weather Conditions for Past 10 days:	
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 Locations:**

<b>LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION, IN METERS)</b>			
Site GPS Coordinates: UTM X: <u>1650288392</u>		Y: <u>4071018</u>	
<b>HORIZONTAL COLLECTION METHOD (Indicate the method used to determine the locational data.)</b>			
Global Positioning System (GPS)		Interpolation	
Static Mode		Topographic Map or DRG	
Dynamic Mode (Kinematic)		Aerial Photograph or DOQQ	
Precise Positioning Service		Satellite Imagery	
Signal Averaging		Interpolation Other	
Real Time Differential Processing			
<b>HORIZONTAL ACCURACY ESTIMATE</b>			
GPS Data Quality		Interpolation Data Quality	
FOM	± _____ Meters	Source Map Scale: 1:24,000 1:100,000 Other _____	
EPE	± <u>17</u> Feet or ± _____ Meters	± _____ Feet or ± _____ Meters	
PDOP			

**Photos:**

Photo ID# (WBID Site# ##)	Photo Purpose and Direction (upstream, downstream, other)	Photo ID# (WBID Site# ##)	Photo Purpose and Direction (upstream, downstream, other)
<u>A61</u>	<u>Downstream T1</u>		
<u>A62</u>	<u>trash in 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.)

**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"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Fence	<input checked="" type="checkbox"/> Steep slopes	<input type="checkbox"/> None of the above	<input type="checkbox"/> Other:

Comments: Farm fields

WBID# 3137  
 Site# 3

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

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

**Indications of Human Use\*:** (attach photos)

<input type="checkbox"/> Roads	<input type="checkbox"/> Rope swings	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input type="checkbox"/> RV / ATV Tracks
<input type="checkbox"/> Camping Sites		<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Other:
Comments: <i>Name - locals use stream to dump trash</i>					

**Stream Morphology:**

**Upstream View's Physical Descriptions:** Is there any water present at this view?  Yes  No  
 If so, is there an obvious current?  Yes  No

**Select one of the following channel features:**

Channel Feature	Transect (#)	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE						
RUN						
POOL						

**Downstream View's Physical Descriptions:** Is there any water present at this view?  Yes  No  
 If so, is there an obvious current?  Yes  No

**Select one of the following channel features:**

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE					
RUN					
POOL					

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

% Cobble	10	% Gravel	50	% Sand	40	% Silt	% Mud/Clay	% Bedrock
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**Aquatic Vegetation\*:** (Note amount of vegetation or algal growth at the assessment site.)

*both emergent & submergent macrophytes covering 20-30% of the channel  
 filamentous algae on both macrophytes & debris*

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

ODOR:	<input type="checkbox"/> Sewage	<input checked="" type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input type="checkbox"/> None	<input type="checkbox"/> Other:
COLOR:	<input type="checkbox"/> Clear	<input checked="" type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
BOTTOM DEPOSIT:	<input type="checkbox"/> Sludge	<input checked="" type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other:
WATER SURFACE DEPOSITION:	<input type="checkbox"/> Oil	<input checked="" type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input type="checkbox"/> None	<input type="checkbox"/> Other:

**Comments:** Please attach any additional comments to this form.

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

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

Surveyor's Signature: *Dale A. Bacon* Date of Survey: 05/10/07

Organization: ERC Position: Field Manager

*ERC 5-29-07*

ERC Recreational Use Attainability Analysis Field Survey Sheet

CO-A Pics Down 060  
Trash 061

Waterbody ID: 3137 Site #: 03

Weather Conditions: Sunny w/ cloud cover

GPS Location:  
UTM X: 16S 0288392 UTM Y: 4071018  
Horizontal Accuracy Estimate (GPS Data Quality): +/- 17 (feet)

Average Stream Width: 10 (meters) Length of Survey Segment: — (meters)

Field Staff: Abley + Bob

channel incision ruc  
not measuring  
way pt  
#30

**Water Quality Parameters**

Dissolved Oxygen: 9.01 (mg/L)

Dissolved Oxygen: 110.0 (% sat)

Specific Cond: 308 (µS/cm)

Water Temperature: 25.38 (°C)

Time: 18:30

**Transect Cross-Section**

	01		02		03		04		05		06		07		08		09		10		11	
	Distance (m)	Depth (m)																				
1																	0	.01				
2																	1.04	.60				
3																	2.07	.82				
4																	3.10	1.04				
5																	4.14	1.26				
6																	5.18	1.43				
7																	6.21	1.10				
8																	7.24	.93				
9																	8.28	.85				
10																	9.32	.48				
11																	10.35	.01				
12																	—	—				
Feature Type (riffle, run, or pool)																		run				

Depth would exceed 1 meter  
stream is too hazardous to enter  
due to trash

riffle

Notes: Transects will be measured beginning on left descending bank and finishing on right descending bank.  
GPS location corresponds to Transect 01. Transects ordered in upstream to downstream order.

RUC 5-29-07

Signed: Stacy Z Wolz Date: 09/10/07

WBID# 3137  
 Site# 04

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

**Data Sheet B - Site Characterization**

(must be completed for each site)

Date & Time: <u>5-10-2007</u> <u>19:15</u>	Site Location Description (e.g., road crossing): <u>downstream unnamed county road</u>
Personnel (Data Collectors): <u>Bob and Abby</u>	Facility Name: <u>East Prairie WWTF</u>
Current Weather Conditions: <u>Sunny P.M. Cloudy</u>	Permit Number: <u>MO 0021750</u>
Weather Conditions for Past 10 days:	
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 Locations:**

LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION, IN METERS)			
Site GPS Coordinates: UTM X: <u>16 S 0287249</u>		Y: <u>4069881</u>	
HORIZONTAL COLLECTION METHOD (Indicate the method used to determine the location data.)			
Global Positioning System (GPS)		Interpolation	
Static Mode		Topographic Map or DRG	
Dynamic Mode (Kinematic)		Aerial Photograph or DOQQ	
Precise Positioning Service		Satellite Imagery	
Signal Averaging		Interpolation Other	
Real Time Differential Processing			
HORIZONTAL ACCURACY ESTIMATE			
GPS Data Quality		Interpolation Data Quality	
FOM	± _____ Meters	Source Map Scale: 1:24,000 1:100,000 Other _____	
EPE	± <u>22</u> Feet or ± _____ Meters	± _____ Feet or ± _____ Meters	
PDOP			

**Photos:**

Photo ID# (WBID Site# ##)	Photo Purpose and Direction (upstream, downstream, other)	Photo ID# (WBID Site# ##)	Photo Purpose and Direction (upstream, downstream, other)
<u>P057</u>	<u>downstream view</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.)				

**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"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Fence	<input checked="" type="checkbox"/> Steep slopes	<input type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Comments: <u>fern fields</u>				

WBID# 3177  
Site# 04

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B - Site Characterization

(must be completed for each site)

Indications of Human Use\*: (attach photos)

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

Stream Morphology:

Upstream View's Physical Descriptions: Is there any water present at this view?  Yes  No

If so, is there an obvious current?  Yes  No

Select one of the following channel features:

Channel Feature	Transect (#)	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE						
RUN						
POOL						

Downstream View's Physical Descriptions: Is there any water present at this view?  Yes  No

If so, is there an obvious current?  Yes  No

Select one of the following channel features:

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE					
RUN					
POOL					

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

<input type="checkbox"/> % Cobble	<u>10</u> % Gravel	<input type="checkbox"/> % Sand	<u>50</u> % Silt	<input type="checkbox"/> % Mud/Clay	<input type="checkbox"/> % Bedrock
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Aquatic Vegetation\*: (Note amount of vegetation or algal growth at the assessment site.)

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

ODOR:	<input type="checkbox"/> Sewage	<input checked="" type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input type="checkbox"/> None	<input type="checkbox"/> Other:
COLOR:	<input type="checkbox"/> Clear	<input checked="" type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
BOTTOM DEPOSIT:	<input type="checkbox"/> Sludge	<input checked="" type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other:
WATER SURFACE DEPOSITION:	<input type="checkbox"/> Oil	<input checked="" type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input type="checkbox"/> None	<input type="checkbox"/> Other:

Comments: Please attach any additional comments to this form.

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

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

Surveyor's Signature: [Signature] Date of Survey: 5-10-2007

Organization: ERI Position: Field Manager

### MEC Recreational Use Attainability Analysis Field Survey Sheet

Waterbody ID: 3137 Site #: 04  
 (WBID\_Site#)

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

GPS Location (taken at transect 1):  
 UTM X: 16 S 0287249 UTM Y: 4069881  
 Horizontal Accuracy Estimate (GPS Data Quality): +/- 22 (feet)

Average Stream Width: 10. (meters) Length of Survey Segment: 200 (meters)  
 (20x average stream width)

Field Staff: Bob and Abby

**Dissolved Oxygen**

Dissolved Oxygen: 2.65 (mg/L)

Dissolved Oxygen: 31.2 (% sat)

Specific Cond: 325 (µS/cm)

Water Temperature: 23.7 (°C)

19:15

**Transect Cross-Section**

Measurement	01		02		03		04		05		06		07		08		09		10		11		
	Distance (m)	Depth (m)																					
1	0	.01																					
2	1.09	.36																					
3	2.18	.61																					
4	3.27	.85																					
5	4.36	1.01																					
6	5.45	1.28																					
7	6.54	1.56																					
8	7.63	1.10																					
9	8.72	.98																					
10	9.81	.43																					
11	10.9	.01																					
12	-	-																					
Feature Type (riffle, run, or pool)	slide pool																						

Notes: Transects will be measured beginning on left descending bank and finishing on right descending bank.  
 GPS location corresponds to Transect 01. Transects ordered in upstream to downstream order.  
 Transects in order of up to downstream.  
 Mark dry depth measurements as 0; measurements less than 0.1m as <0.1; and greater than 1m as >1  
 Measurement 1 depth = 0.1m (unless depth is insufficient); Measurement 11 depth = 0.1m (unless depth is insufficient); Measurement 12 distance = entire wetted width distance and depth = 0m.

Signed: Robert R Bacon Date: 5-10-2007

ARC 5-29-07

**WBID# 3137**



**Site# 1 Photo ID# A63, Upstream T11**



**Site# 1 Photo ID# A64, Downstream T1**



**Site# 2 Photo ID# A59, Upstream**



**Site# 3 Photo ID# A61, Downstream T1**

**WBID# 3137**



**Site# 3 Photo ID# A62, Trash in stream**



**Site# 4 Photo ID# D57, Downstream**