



Missouri  
Department of  
Natural Resources

Use Attainability Analysis

for

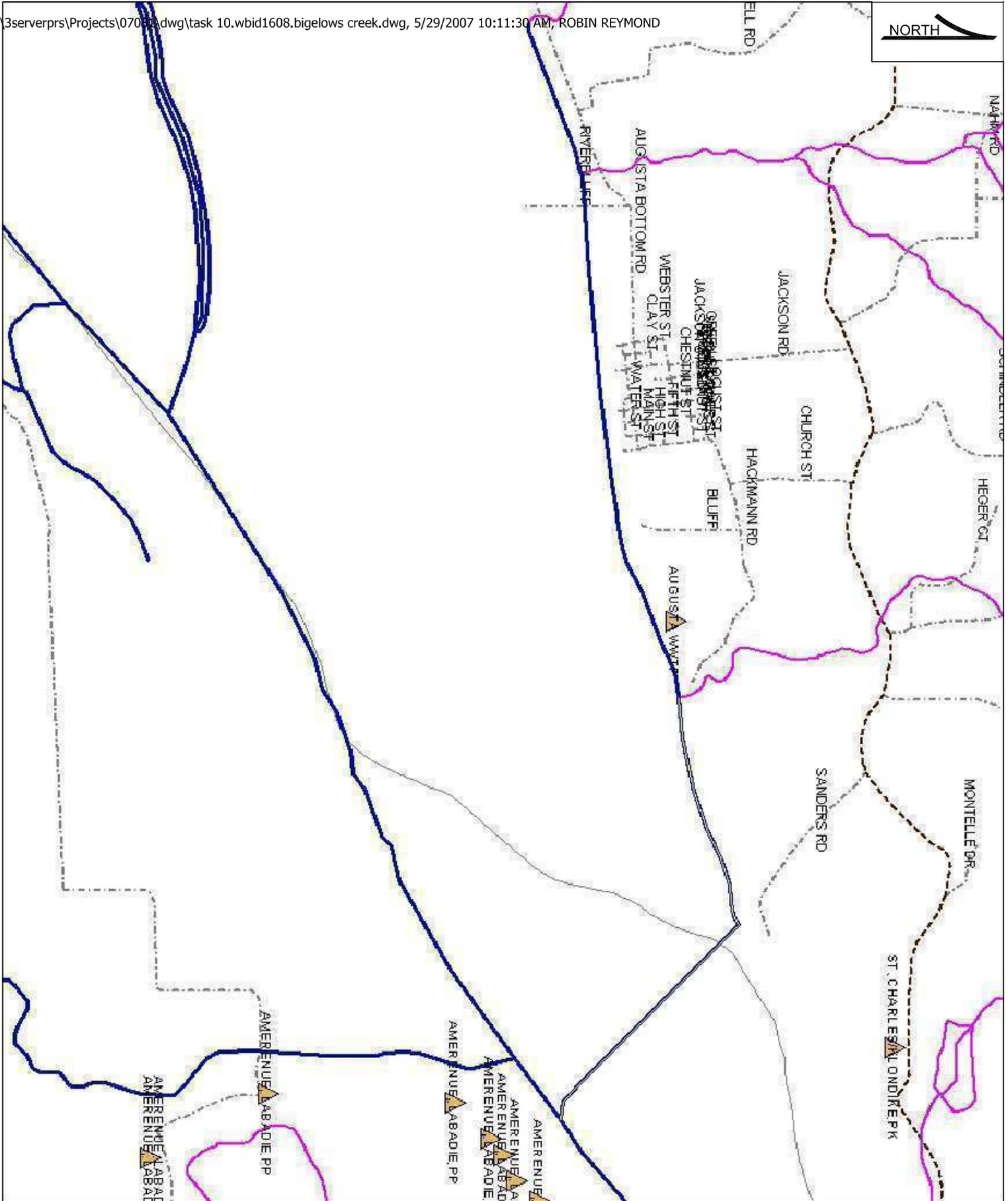
WBID 1608 Bigelow's Creek

Submitted by  
Pickett Ray & Silver

to  
Missouri Department of Natural Resources  
Water Protection Program

Date received: June 5, 2007





# PICKETT RAY & SILVER

Civil Engineers Land Surveyors Natural Resources

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WBID #: 1608  
Name: Bigelow's Creek  
County: St. Charles  
GIS Map



GRAPHIC SCALE  
Not to Scale

PRS Job Number: 07031.MODN.00E  
Drawn By: RLR Date: 05-29-07  
Checked By: JCV Date: 05-29-07

WBID# 1608  
 Site# 1

**Field Data Sheets for Recreational Use Stream Surveys**  
**Data Sheet B - Site Characterization**  
 (must be completed for each site)

Date & Time: 5/5/07 10:00 a.m.	Site Location Description (e.g., road crossing):
Personnel (Data Collectors): PRS - RR/MC	Downstream of confluence of effluent discharge point and survey stream
Current Weather Conditions: cloudy 65°F	Facility Name: Augusta WWTP
Weather Conditions for Past 10 days: rain	Permit Number: MO 0121363
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: 685595.223m		Y: 4271390.044m	
HORIZONTAL COLLECTION METHOD (Indicate the method used to determine the locational 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 Correction with	X
Real Time Differential Processing		Post Processing	
HORIZONTAL ACCURACY ESTIMATE			
GPS Data Quality		Interpolation Data Quality	
FOM	± _____ Meters	Source Map Scale: 1:24,000 1:100,000 Other _____ ± _____ Feet or ± _____ Meters	
EPE	± _____ Feet or ± _____ Meters		
PDOP	1.90		

**Photos:**

Upstream Photos		Downstream Photos		Other Photos	
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
<b>See Attached Photos</b>					

**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 checked="" type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input checked="" type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input checked="" type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input checked="" type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Fence	<input type="checkbox"/> Steep slopes	<input type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Comments:				

**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 checked="" type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input checked="" type="checkbox"/> Other: <small>Levee District Rd. ag. field adjacent</small>	
Comments:					

**Stream Morphology:**

Upstream View's Physical Dimensions: 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					

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

Approximate percentage of channel features for entire segment site  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 100%					
POOL					

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

% Cobble	% Gravel	% Sand	100	% Silt	% Mud/Clay	% Bedrock
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Aquatic Vegetation\*: (Note amount of vegetation or algal growth at the assessment site)

Small patches of smartweed

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: livestock waste
Color:	<input type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input checked="" type="checkbox"/> Other: murky brown
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 checked="" 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 effect another use.

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

Surveyor's Signature: Robin Reymond Date of Survey: 5/5/07

Organization: Pickett, Ray & Silver, Inc. Position: \_\_\_\_\_

### Recreational Use Attainability Analysis Field Survey Sheet

Waterbody ID: <u>1608</u> Site #: <u>1</u> Weather Conditions: <u>cloudy 65°F</u> GPS Location: _____ UTM X: <u>685595.223m</u> UTM Y: <u>4271390.044m</u> Horizontal Accuracy Estimate (GPS Data Quality): <u>+/-</u> _____ (feet)      PDOP: <u>1.90</u> Average Stream Width: <u>4.45</u> (meters)      Length of Survey Segment: <u>150</u> (meters) Field Staff: <u>PRS - RR/MC</u>	<b>Dissolved Oxygen</b> Dissolved Oxygen: <u>5.16</u> (mg/L) Dissolved Oxygen: _____ (% sat) Specific Cond: _____ (µS/cm) Water Temperature: <u>18.6</u> (°C)
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Transect Cross-Section																						
	01		02		03		04		05		06		07		08		09		10		11	
	Distance (m)	Depth (m)																				
1	0	.10	0	.19	0	.10	0	.18	0	.10	2.0	.12	0	.10	0	.15	0	.23	0	.21	0	.28
2	.45	.34	.4	.34	.45	.15	.45	.31	.5	.19	2.3	.16	.45	.21	0.5	.22	.4	.28	.45	.32	.45	.30
3	.90	.36	.8	.42	.90	.30	.90	.42	1.0	.29	2.6	.20	.90	.24	1.0	.26	.8	.36	.90	.35	.90	.33
4	1.35	.40	1.2	.36	1.35	.40	1.35	.43	1.5	.29	2.9	.22	1.35	.30	1.5	.26	1.2	.37	1.35	.34	1.35	.41
5	1.8	.41	1.6	.39	1.8	.37	1.8	.43	2.0	.30	3.1	.24	1.8	.31	2.0	.30	1.6	.34	1.8	.40	1.8	.35
6	2.25	.38	2.0	.40	2.25	.41	2.25	.38	2.5	.25	3.4	.16	2.25	.34	2.5	.32	2.0	.40	2.25	.43	2.25	.35
7	2.7	.37	2.4	.40	2.7	.45	2.7	.27	3.0	.23	3.7	.24	2.7	.34	3.0	.33	2.4	.40	2.7	.44	2.7	.32
8	3.15	.34	2.8	.29	3.15	.51	3.15	.24	3.5	.21	4.0	.33	3.15	.30	3.5	.34	2.8	.34	3.15	.33	3.15	.25
9	3.6	.33	3.2	.28	3.6	.49	3.6	.25	4.0	.18	4.3	.38	3.6	.29	4.0	.34	3.2	.23	3.6	.30	3.6	.24
10	4.05	.26	3.6	.18	4.05	.32	4.05	.18	4.5	.10	4.6	.40	4.05	.20	4.5	.30	3.6	.20	4.05	.15	4.05	.15
11	4.25	.23	4	.10	4.25	.14	4.50	.10	4.75	.14	5.0	.25	4.5	.10	5.0	.18	4.0	.10	4.25	.10	4.5	.10
<b>Width/Median Depth</b>	4.25	0.34	4	0.34	4.25	0.37	4.5	0.27	4.75	0.21	5.0	0.24	4.5	0.29	5.0	0.30	4.0	0.34	4.25	0.33	4.5	0.30
<b>Feature Type</b> (riffle, run, or pool)	Run																					

**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.

Signed: Robin Reymond      Date: 5/5/07

WBID# 1608  
 Site# 2

**Field Data Sheets for Recreational Use Stream Surveys**  
**Data Sheet B - Site Characterization**  
 (must be completed for each site)

Date & Time: 5/5/07 12:00 p.m.	Site Location Description (e.g., road crossing):
Personnel (Data Collectors): PRS - RR/MC	Levee road crossing (bridge span)
Current Weather Conditions: p. cloudy 70°F	Facility Name: Augusta WWTP
Weather Conditions for Past 10 days: light rain	Permit Number: MO 0121363
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: 687065.082m		Y: 4271779.732m	
HORIZONTAL COLLECTION METHOD (Indicate the method used to determine the locational 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 Correction with	X
Real Time Differential Processing		Post Processing	
HORIZONTAL ACCURACY ESTIMATE			
GPS Data Quality		Interpolation Data Quality	
FOM	± _____ Meters	Source Map Scale: 1:24,000 1:100,000 Other _____ ± _____ Feet or ± _____ Meters	
EPE	± _____ Feet or ± _____ Meters		
PDOP	2.2		

**Photos:**

Upstream Photos		Downstream Photos		Other Photos	
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
<b>See Attached Photos</b>					

**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 type="checkbox"/> Steep slopes	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Comments:				

**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: Levee Road/Ag. fields	
Comments:					

**Stream Morphology:**

Upstream View's Physical Dimensions: 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					

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

Approximate percentage of channel features for entire segment site

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 100%					
POOL					

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

% Cobble	% Gravel	% Sand	100	% Silt	% Mud/Clay	% Bedrock
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Aquatic Vegetation\*: (Note amount of vegetation or algal growth at the assessment site)

Small patches of smartweed

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: livestock waste
Color:	<input type="checkbox"/> Clear	<input checked="" type="checkbox"/> Green murky	<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 checked="" 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 effect another use.

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

Surveyor's Signature: Robin Reymond Date of Survey: 5/5/07

Organization: Pickett, Ray & Silver, Inc. Position: \_\_\_\_\_

### Recreational Use Attainability Analysis Field Survey Sheet

Waterbody ID: <u>1608</u> Site #: <u>2</u> Weather Conditions: <u>p. cloudy 70°F</u> GPS Location: _____ UTM X: <u>687065.082m</u> UTM Y: <u>4271779.732m</u> Horizontal Accuracy Estimate (GPS Data Quality): <u>+/-</u> _____ (feet)      PDOP: <u>2.2</u>	<b>Dissolved Oxygen</b> Dissolved Oxygen: <u>4.59</u> (mg/L) Dissolved Oxygen: _____ (% sat) Specific Cond: _____ (µS/cm) Water Temperature: <u>21.6</u> (°C)
Average Stream Width: <u>4.75</u> (meters)      Length of Survey Segment: <u>150</u> (meters)	
Field Staff: <u>RR/MC</u>	

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)	Distance (m)	Depth (m)	
1	0	.13	0	.13	0	.10	0	.10	0	.10	0	.10	0	.10	0	.10	1.5	.14	1.0	.14	0	.20
2	.45	.21	.55	.20	.55	.20	.65	.19	.4	.10	.45	.10	.45	.10	.4	.15	2.0	.18	1.3	.36	.3	.28
3	.9	.32	1.1	.18	1.1	.18	1.3	.10	.8	.28	.9	.19	.9	.11	.8	.23	2.4	.20	1.6	.32	.9	.43
4	1.35	.35	1.65	.10	1.65	.00	1.95	.00	1.2	.36	1.35	.38	1.35	.12	1.2	.42	2.8	.30	1.9	.42	1.2	.49
5	1.8	.35	2.2	.32	2.2	.02	2.6	.00	1.6	.42	1.8	.41	1.8	.34	1.6	.43	3.2	.36	2.1	.45	1.5	.48
6	2.25	.34	2.75	.45	2.75	.10	3.25	.05	2.0	.40	2.25	.35	2.25	.45	2.0	.43	3.6	.48	2.4	.43	1.8	.48
7	2.7	.35	3.3	.48	3.3	.37	3.9	.24	2.4	.38	2.7	.28	2.7	.45	2.4	.43	4.0	.49	2.7	.45	2.1	.42
8	3.15	.31	3.85	.42	3.85	.40	4.55	.30	2.8	.38	3.15	.33	3.15	.42	2.8	.42	4.4	.51	3.0	.42	2.4	.45
9	4.05	.29	4.4	.25	4.4	.40	5.2	.31	3.2	.39	4.05	.30	4.05	.38	3.2	.42	4.8	.51	3.3	.42	2.7	.35
10	4.25	.25	4.95	.17	4.95	.30	5.85	.30	3.6	.20	4.25	.15	4.25	.34	3.6	.35	5.0	.51	3.5	.32	3.0	.25
11	4.75	.20	5.5	.15	5.5	.14	6.5	.20	4.0	.10	4.75	.11	4.75	.22	4.25	.22	5.5	.30	4.0	.13	3.3	.14
Width/Median Depth	4.25	.31	5.5	.20	5.5	.18	6.5	.19	4.0	.36	4.75	.28	4.75	.34	4.25	.42	5.5	.36	4.0	.42	3.3	.42
Feature Type (riffle, run, or pool)	Run		Run																			

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.

Signed: Robin Reymond      Date: \_\_\_\_\_

WBID# 1608  
 Site# 3

**Field Data Sheets for Recreational Use Stream Surveys**  
**Data Sheet B - Site Characterization**  
 (must be completed for each site)

Date & Time: 5/5/07 3:00 p.m.	Site Location Description (e.g., road crossing):
Personnel (Data Collectors): PRS - RR/MC	along levee - upstream of confluence with Missouri River
Current Weather Conditions: p. cloudy 80°F	Facility Name: Augusta WWTP
Weather Conditions for Past 10 days: rain	Permit Number: MO 0121363

Drought Conditions?: No drought ; Phase I ; Phase II ; Phase III ; Phase IV ; Unknown

**Site Locations:**

LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION, IN METERS)			
Site GPS Coordinates: UTM X: 688064.490m		Y: 4272074.420m	
HORIZONTAL COLLECTION METHOD (Indicate the method used to determine the locational 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 Correction with	X
Real Time Differential Processing		Post Processing	
HORIZONTAL ACCURACY ESTIMATE			
GPS Data Quality		Interpolation Data Quality	
FOM	± _____ Meters	Source Map Scale: 1:24,000 1:100,000 Other _____ ± _____ Feet or ± _____ Meters	
EPE	± _____ Feet or ± _____ Meters		
PDOP	1.9		

**Photos:**

Upstream Photos		Downstream Photos		Other Photos	
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
<b>See Attached Photos</b>					

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

Comments:

**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: Levee Road/Ag. fields	

Comments:

**Stream Morphology:**

Upstream View's Physical Dimensions: 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					

Downstream View's Physical Dimensions: Is there any water present at this view?  Yes  No  
 Approximate percentage of channel features for entire segment site  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 100%					
POOL					

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

% Cobble	% Gravel	% Sand	100	% Silt	% Mud/Clay	% Bedrock
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Aquatic Vegetation\*: (Note amount of vegetation or algal growth at the assessment site)

Small patches of smartweed

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: livestock waste
Color:	<input type="checkbox"/> Clear	<input checked="" type="checkbox"/> Green murky	<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:

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 effect another use.

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

Surveyor's Signature: Robin Reymond Date of Survey: 5/5/07

Organization: Pickett, Ray & Silver, Inc. Position: \_\_\_\_\_

### Recreational Use Attainability Analysis Field Survey Sheet

Waterbody ID: <u>1608</u> Site #: <u>3</u> Weather Conditions: <u>p. cloudy 80°F</u> GPS Location: _____ UTM X: <u>688064.490m</u> UTM Y: <u>4272074.420m</u> Horizontal Accuracy Estimate (GPS Data Quality): <u>+/-</u> _____ (feet)      PDOP: <u>1.9</u> Average Stream Width: <u>8</u> (meters)      Length of Survey Segment: <u>160</u> (meters) Field Staff: <u>PRS-RR/MC</u>	<b>Dissolved Oxygen</b> Dissolved Oxygen: <u>4.11</u> (mg/L) Dissolved Oxygen: _____ (% sat) Specific Cond: _____ (µS/cm) Water Temperature: <u>28.7</u> (°C)
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#### Transect Cross-Section

	01		02		03		04		05		06		07		08		09		10		11	
	Distance (m)	Depth (m)																				
1		>1		>1		>1		>1		>1		>1		>1		>1		>1		>1		>1
2		>1		>1		>1		>1		>1		>1		>1		>1		>1		>1		>1
3		>1		>1		>1		>1		>1		>1		>1		>1		>1		>1		>1
4		>1		>1		>1		>1		>1		>1		>1		>1		>1		>1		>1
5		>1		>1		>1		>1		>1		>1		>1		>1		>1		>1		>1
6		>1		>1		>1		>1		>1		>1		>1		>1		>1		>1		>1
7		>1		>1		>1		>1		>1		>1		>1		>1		>1		>1		>1
8		>1		>1		>1		>1		>1		>1		>1		>1		>1		>1		>1
9		>1		>1		>1		>1		>1		>1		>1		>1		>1		>1		>1
10		>1		>1		>1		>1		>1		>1		>1		>1		>1		>1		>1
11																						
Width/Median Depth	7.5	-	7.5	-	7.5	-	7.5	-	7.5	-	7.5	-	9	-	9	-	9	-	9	-	9	-
Feature Type (riffle, run, or pool)	Run																					

**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.

Signed: Robin Reymond      Date: 5/5/07

**WBID# 1608**



**Site# 1 Photo ID# Transect 1, Downstream**



**Site# 1 Photo ID# Transect 1, Downstream**



**Site# 2 Photo ID# Transect 1, Upstream**



**Site# 2 Photo ID# Transect 1, Upstream**

**WBID# 1608**



**Site# 2 Photo ID# Transect 1, Downstream**



**Site#3 Photo ID# Transect 11, Downstream**