



Missouri  
Department of  
Natural Resources

Use Attainability Analysis

for

WBID 1722 Cotter Creek

Submitted by

Pickett Ray and Silver

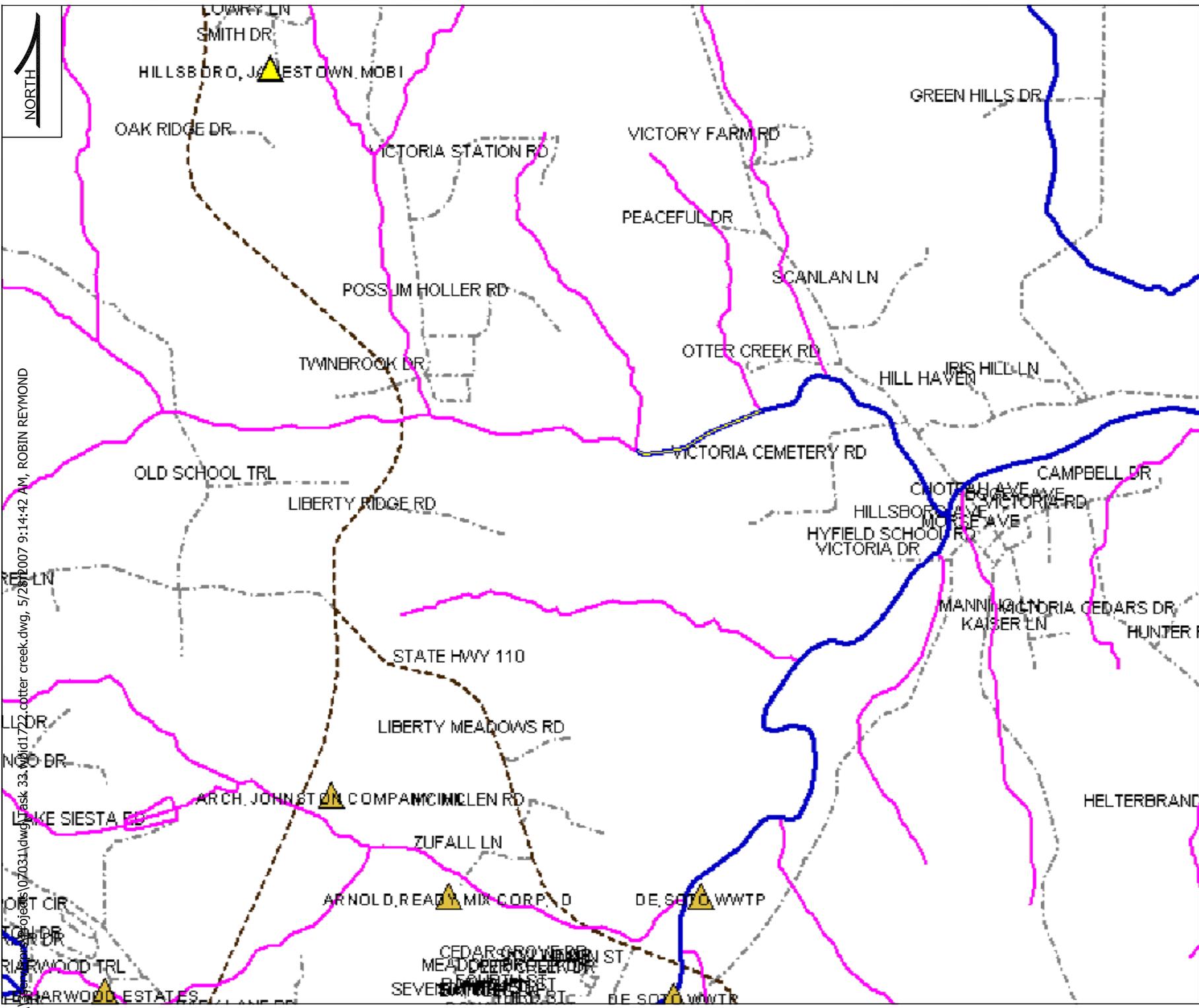
To

Missouri Department of Natural Resources

Water Protection Program

Date Received: June 5, 2007





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 Task 33, 5/28/2007 9:14:42 AM, ROBIN REYMOND  
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GRAPHIC SCALE  
Not to Scale

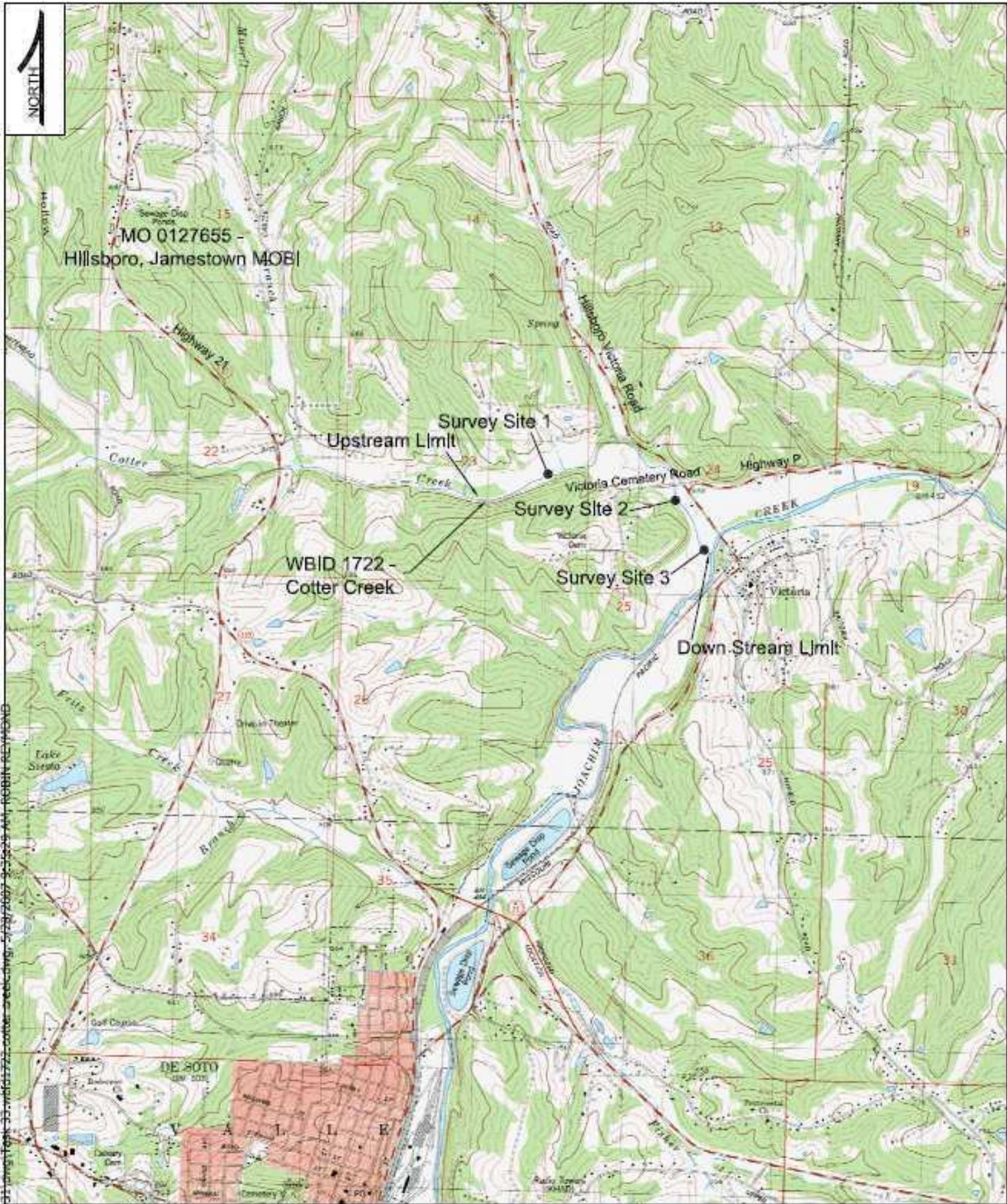
PRS Job Number: 07031.MODN.00E  
 Drawn By: RLR Date: 05-28-07  
 Checked By: JCV Date: 05-28-07

WBID #: 1722  
 Name: Cotter Creek  
 County: Jefferson  
 GIS Map

**PICKETT RAY & SILVER**  
 Civil Engineers Land Surveyors Natural Resources

Address: Phone: (636) 397-1211  
 333 Mid Rivers Mall Drive Fax: (636) 397-1104  
 St. Peters, Missouri 63376 Website: www.prs3.com

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WBID #: 1722  
 Name: Cotter Creek  
 County: Jefferson  
 USGS Location Map

**GRAPHIC SCALE**  
 Not to Scale

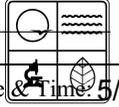
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 Drawn By: RLR Date: 05-28-07  
 Checked By: JCV Date: 05-28-07

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WBID# 1722

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

Site# 1



Missouri  
Department of  
Natural Resources

**Data Sheet B - Site Characterization**

(must be completed for each site)

Date & Time: 4/5/2015	Site Location Description (e.g., road crossing): upstream of Victoria Cemetery Road Bridge
Personnel (Data Collectors): PRS RR/MC	Facility Name: Hillsburo, Jamestown MOBI
Current Weather Conditions: cloudy 70°F	Permit Number: MO 0127655
Weather Conditions for Past 10 days: sun	

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: 715923.331m		Y: 4229216.405m	
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	3.1		

**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 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 checked="" 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:

\* Page Two – Data Sheet B for WBID # 1722-1 :

**Stream Morphology:**



Upstream View Department of Natural Resources: 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 15%					
RUN 75%					
POOL 10%					

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

20 % Cobble	20 % Gravel	10 % Sand	10 % Silt	20 % Mud/Clay	20 % Bedrock
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Aquatic Vegetation\*: (Note amount of vegetation or algal growth at the assessment site)

moderate moss/algae on rock substrate. 10-15% vegetation on gravel bars.

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

Odor:	<input checked="" type="checkbox"/> Sewage mild	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input 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:

Comments: Please attach any additional comments () to this form.

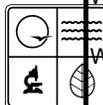
\*This information is not to be used solely for removal of a recreational use designation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions 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: 5/22/07

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

### Recreational Use Attainability Analysis Field Survey Sheet



Waterbody ID: 1722 Site #: 1  
 Missouri Department of Natural Resources  
 Weather: cloudy 73°F  
 GPS Location: 715923.331m UTM X: 4229216.405m UTM Y:  
 Horizontal Accuracy Estimate (GPS Data Quality): +/- N/A (feet) PDOP: 3.1  
 Average Stream Width: 13.2 (meters) Length of Survey Segment: 264 (meters)  
 Field Staff: PRS - RR/MC

Dissolved Oxygen	
Dissolved Oxygen:	<u>9.76</u> (mg/L)
Dissolved Oxygen:	_____ (% sat)
Specific Cond:	_____ (µS/cm)
Water Temperature:	<u>20.5</u> (°C)

#### Transect Cross-Section

	01		02		03		04		05		06		07		08		09		10		11	
	Distance (m)	Depth (m)																				
1	0.3	.10	0.3	.10	1.5	.10	0	.01	0	>1	2.0	.10	0.6	.10	1.0	.10	0.5	.10	0	>1	0.5	.10
2	1.07	.13	.83	.10	2.35	.10	2.8	.01	3.7	>1	2.42	.17	.98	.15	2.6	.26	1.0	.11	1.1	>1	1.65	.35
3	1.84	.21	1.36	.11	3.2	.10	5.6	.04	7.4	>1	2.84	.20	1.36	.23	4.2	.31	1.5	.21	2.2	>1	2.8	.62
4	2.61	.21	1.89	.10	4.05	.10	8.4	.06	11.1	>1	3.26	.23	1.74	.30	5.8	.25	2.0	.29	3.3	>1	3.95	.65
5	3.38	.18	2.42	.10	4.9	.11	11.2	.03	14.8	>1	3.68	.26	2.12	.36	7.4	.20	2.5	.25	4.4	>1	5.1	.64
6	4.15	.16	2.95	.12	5.75	.10	14	.09	18.5	>1	4.1	.25	2.5	.33	9.0	.10	3.0	.20	5.5	>1	6.25	.45
7	4.92	.14	3.48	.15	6.6	.09	16.8	.08	22.2	>1	4.52	.20	2.88	.20	10.6	.03	3.5	.15	6.6	>1	7.4	.33
8	5.69	.18	4.11	.10	7.45	.10	19.6	.04	25.9	>1	4.94	.20	3.26	.21	12.2	.10	4.0	.10	7.7	>1	8.55	.20
9	6.46	.20	4.54	.08	8.3	.08	22.4	.05	29.6	>1	5.36	.17	3.64	.15	13.8	.15	4.5	.10	8.8	>1	9.7	.15
10	7.23	.21	5.07	.06	9.15	.11	25.0	.05	33.0	>1	5.78	.13	4.02	.10	15.4	.17	5.0	.10	10.0	>1	10.85	.13
11	8.0	.10	5.6	.10	10.0	.10					6.2	.10	4.4	.10	17.0	.10	5.5	.10			12.0	.10
<b>Width/Median Depth</b>	10.0	.18	6.0	.10	12.0	.10	25.0	.05	33.0		6.3	.20	4.5	.20	18.0	.15	6.0	.10	10.0		14.4	.33
<b>Feature Type</b> (riffle, run, or pool)	Run		Run		Run		Riffle		Pool		Run											

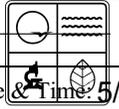
Notes: Transects will be measured beginning on left descending bank and finishing on right descending bank.  
 GPS location corresponds to Transect 01. Transects ordered in upstream to downstream order.

Signed: Robin Reymond Date: 5/22/07

WBID# 1722

Site# 2

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



Missouri  
Department of  
Natural Resources

**Data Sheet B - Site Characterization**

(must be completed for each site)

Date & Time: 4/5/2014	Site Location Description (e.g., road crossing):
Personnel (Data Collectors): PRS RR/MC	downstream of Victoria Cemetery Road Bridge
Current Weather Conditions: cloudy 70°F	Facility Name: Hillsburo, Jamestown MOBI
Weather Conditions for Past 10 days: sun	Permit Number: MO 0127655

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: 716238.209m	Y: 4228886.577m
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 <input type="checkbox"/> 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 5.6	

**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 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 type="checkbox"/> Other:	

Comments:

\* Page Two – Data Sheet B for WBID # 1722-2 :

**Stream Morphology:**



Missouri Department of Natural Resources

Upstream View: 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 10%					
RUN 60%					
POOL 30%					

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

20 % Cobble	55 % Gravel	% Sand	5 % Silt	10 % Mud/Clay	10 % Bedrock
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Aquatic Vegetation\*: (Note amount of vegetation or algal growth at the assessment site)

25-50% woody vegetation on gravel bars. 5-10% emergent vegetation along banks.

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:

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: 5/22/07

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

### Recreational Use Attainability Analysis Field Survey Sheet



Waterbody ID: 1722 Site #: 2  
 Missouri Department of Natural Resources  
 Weather: cloudy 72°F  
 GPS Location: 716238.209m UTM X: 4228886.577m UTM Y:  
 Horizontal Accuracy Estimate (GPS Data Quality): +/- N/A (feet) PDOP: 5.6  
 Average Stream Width: 12.2 (meters) Length of Survey Segment: 244 (meters)  
 Field Staff: PRS RR/MC

Dissolved Oxygen	
Dissolved Oxygen:	<u>9.51</u> (mg/L)
Dissolved Oxygen:	_____ (% sat)
Specific Cond:	_____ (µS/cm)
Water Temperature:	<u>17.8</u> (°C)

#### 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	0.5	.10	0	.20	0.5	.10	0	>1	0.5	.10	0.3	.10	0.3	.13	0	.10	0	>1	0.3	.10	0.3	.10
2	1.83	.16	1.45	.43	1.95	.25	1.56	>1	1.8	.14	1.57	.30	.52	.15	.63	.15	2.0	>1	2.05	.40	.6	.21
3	3.16	.23	2.9	.18	3.4	.34	3.12	>1	3.1	.34	2.84	.25	.74	.20	1.26	.24	4.0	>1	3.8	.45	.9	.31
4	4.49	.22	4.35	.30	4.85	.38	4.68	>1	4.4	.42	4.11	.34	.96	.25	1.89	.21	6.0	>1	5.55	.50	1.2	.33
5	5.82	.26	5.8	.32	6.3	.45	6.24	>1	5.7	.53	5.38	.47	1.18	.19	2.52	.35	8.0	>1	7.3	.56	1.5	.33
6	7.15	.25	7.25	.51	7.75	.51	7.8	>1	7	.62	6.65	.45	1.4	.18	3.15	.40	10.0	>1	9.05	.54	1.8	.30
7	8.48	.19	8.7	.50	9.2	.53	9.36	>1	8.3	.72	7.92	.55	1.62	.20	3.78	.43	12.0	>1	10.8	.45	2.1	.24
8	9.81	.17	10.15	.46	10.65	.50	10.92	>1	9.6	.82	9.19	.53	1.84	.20	4.41	.46	14.0	>1	12.55	.32	2.4	.23
9	11.14	.16	11.6	.42	12.1	.52	12.48	>1	10.9	.80	10.46	.50	2.06	.18	5.04	.46	16.0	>1	14.3	.30	2.7	.20
10	12.47	.23	13.05	.30	13.55	.13	14.0	>1	12.2	.70	11.73	.54	2.28	.15	5.67	.30	18.0	>1	16.03	.21	3.0	.15
11	13.8	.10	14.5	.10	15.0	.10			13.5	.20	13.0	.18	2.5	.10	6.3	.10			17.8	.10	3.3	.10
<b>Width/Median Depth</b>	<b>14.0</b>	<b>.19</b>	<b>15.0</b>	<b>.32</b>	<b>15.0</b>	<b>.38</b>	<b>14.0</b>		<b>13.5</b>	<b>.53</b>	<b>13.0</b>	<b>.45</b>	<b>3.0</b>	<b>.18</b>	<b>7.0</b>	<b>.30</b>	<b>18.0</b>		<b>18.0</b>	<b>.40</b>	<b>3.8</b>	<b>.23</b>
<b>Feature Type (riffle, run, or pool)</b>	<b>Run</b>		<b>Run</b>		<b>Run</b>		<b>Pool</b>		<b>Pool</b>		<b>Run</b>		<b>Riffle</b>		<b>Run</b>		<b>Pool</b>		<b>Run</b>		<b>Run</b>	

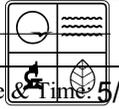
Notes: Transects will be measured beginning on left descending bank and finishing on right descending bank.  
 GPS location corresponds to Transect 01. Transects ordered in upstream to downstream order.

Signed: Robin Reymond Date: 5/22/07

WBID# 1722

Site# 3

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



Missouri  
Department of  
Natural Resources

**Data Sheet B - Site Characterization**

(must be completed for each site)

Date & Time: 4/5/2015	Site Location Description (e.g., road crossing): <b>just upstream of confluence with Joachim Creek</b>
Personnel (Data Collectors): PRS RR/MC	Facility Name: Hillsburo, Jamestown MOBI
Current Weather Conditions: cloudy 70°F	Permit Number: MO 0127655
Weather Conditions for Past 10 days: sun	

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: 716377.639m		Y: 4228616.445m	
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	2.7		

**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 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 checked="" 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 checked="" type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Other:	

Comments:

\* Page Two – Data Sheet B for WBID # 1722-3 :

**Stream Morphology:**



Upstream View Department of Natural Resources: 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 20%					
RUN 60%					
POOL 20%					

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

% Cobble	60	% Gravel	20	% Sand	% Silt	% Mud/Clay	10	% Bedrock
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Aquatic Vegetation\*: (Note amount of vegetation or algal growth at the assessment site)

20% woody vegetation on gravel bar - 5% emergent vegetation along banks.

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:

Comments: Please attach any additional comments () to this form.

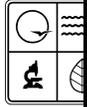
\*This information is not to be used solely for removal of a recreational use designation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions 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: 5/22/07

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

## Recreational Use Attainability Analysis Field Survey Sheet



Waterbody ID: 1722 Site #: 3  
 Missouri Department of Natural Resources  
 Weather: cloudy 70°F  
 GPS Location: 716377.639 UTM X: 4228616.445m UTM Y:             
 Horizontal Accuracy Estimate (GPS Data Quality): +/- N/A (feet) PDOP: 2.7  
 Average Stream Width: 6.3 (meters) Length of Survey Segment: 150 (meters)  
 Field Staff: PRS - RR/MC

Dissolved Oxygen	
Dissolved Oxygen:	<u>6.25</u> (mg/L)
Dissolved Oxygen:	_____ (% sat)
Specific Cond:	_____ (µS/cm)
Water Temperature:	<u>18.3</u> (°C)

### Transect Cross-Section

	01		02		03		04		05		06		07		08		09		10		11	
	Distance (m)	Depth (m)																				
1	0.6	.10	0.6	.13	0.3	.10	0.3	.10	0	.26	0	>1	0	.01	.1	.10	0	.00	0	>1	0.3	.10
2	1.7	.10	.94	.13	.77	.13	.82	.15	.55	.54	1.67	>1	.11	.02	.61	.22	.44	.01	.62	>1	.74	.10
3	2.8	.20	1.28	.13	1.24	.14	1.34	.19	1.1	.65	3.34	>1	.22	.03	1.12	.27	.88	.05	1.24	>1	1.18	.15
4	3.9	.24	1.62	.20	1.71	.18	1.86	.25	1.65	.67	5.01	>1	.33	.05	1.63	.30	1.32	.05	1.86	>1	1.62	.24
5	5.0	.31	1.96	.20	2.18	.20	2.38	.25	2.2	.73	6.68	>1	.44	.05	2.14	.31	1.76	.05	2.48	>1	2.06	.25
6	6.1	.40	2.3	.24	2.65	.20	2.9	.25	2.75	.74	8.35	>1	.55	.05	2.65	.29	2.2	.04	3.1	>1	2.5	.32
7	7.2	.44	2.64	.28	3.12	.20	3.42	.25	3.3	.62	10.02	>1	.66	.06	3.16	.27	2.64	.06	3.72	>1	2.94	.40
8	8.3	.49	2.98	.30	3.59	.13	3.94	.30	3.85	.34	11.69	>1	.77	.03	3.67	.22	3.08	.09	4.34	>1	3.38	.43
9	9.4	.53	3.32	.22	4.06	.13	4.46	.25	4.4	.21	13.36	>1	.88	.04	4.18	.20	3.52	.05	4.96	>1	3.82	.50
10	10.5	.60	3.66	.11	4.53	.10	4.98	.18	4.95	.10	15.0	>1	1.0	.03	4.69	.17	4.0	.02	5.6	>1	4.26	.50
11	11.6	.50	4.0	.10	5.0	.10	5.5	.10	5.5	.10					5.2	.13					4.7	.39
<b>Width/Median Depth</b>	12	.40	4.3	.20	6.0	.13	6.0	.25	6.0	.54	15.0		1.0	.04	5.2	.22	4.0	.05	5.6		4.7	.32
<b>Feature Type (riffle, run, or pool)</b>	Run		Pool		Riffle		Run		Riffle		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: 5/22/07

**WBID# 1722**



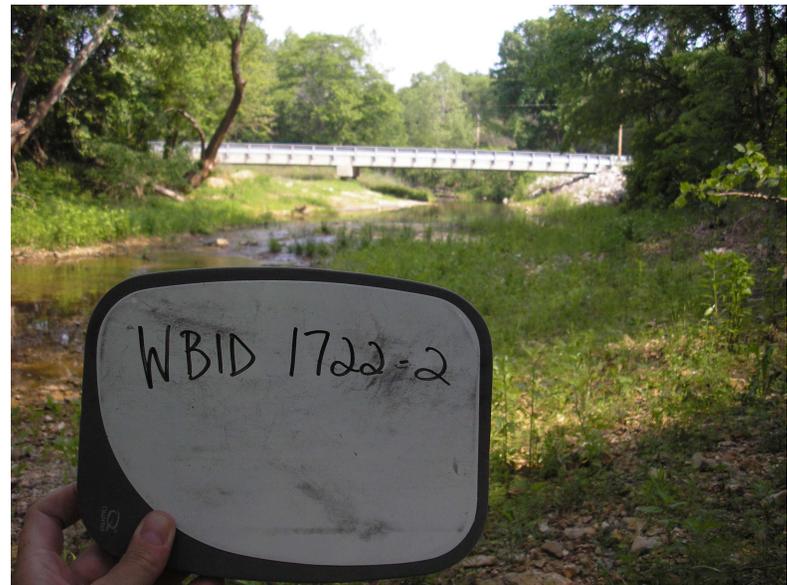
WBID 1722 – Site 1 – Transect 1 – facing upstream.



WBID 1722 – Site 1 – Transect 1 – facing downstream.



WBID 1722 – Site 1 - Near Transect 10 – road into creek bed.



WBID 1722 – Site 2 – Transect 1 – facing upstream.

**WBID# 1722**



WBID 1722 – Site 2 – Transect 1 – facing downstream.



WBID 1722 – Site 3 – Transect 1 – facing upstream.



WBID 1722 – Site 3 – Transect 1 – facing downstream.



WBID 1722 – Site 3 – Transect 11 – Evidence of fishing activity