



Missouri  
Department of  
Natural Resources

Use Attainability Analysis

for

WBID 1668 Cedar Fork

Submitted by

Pickett Ray and Silver

To

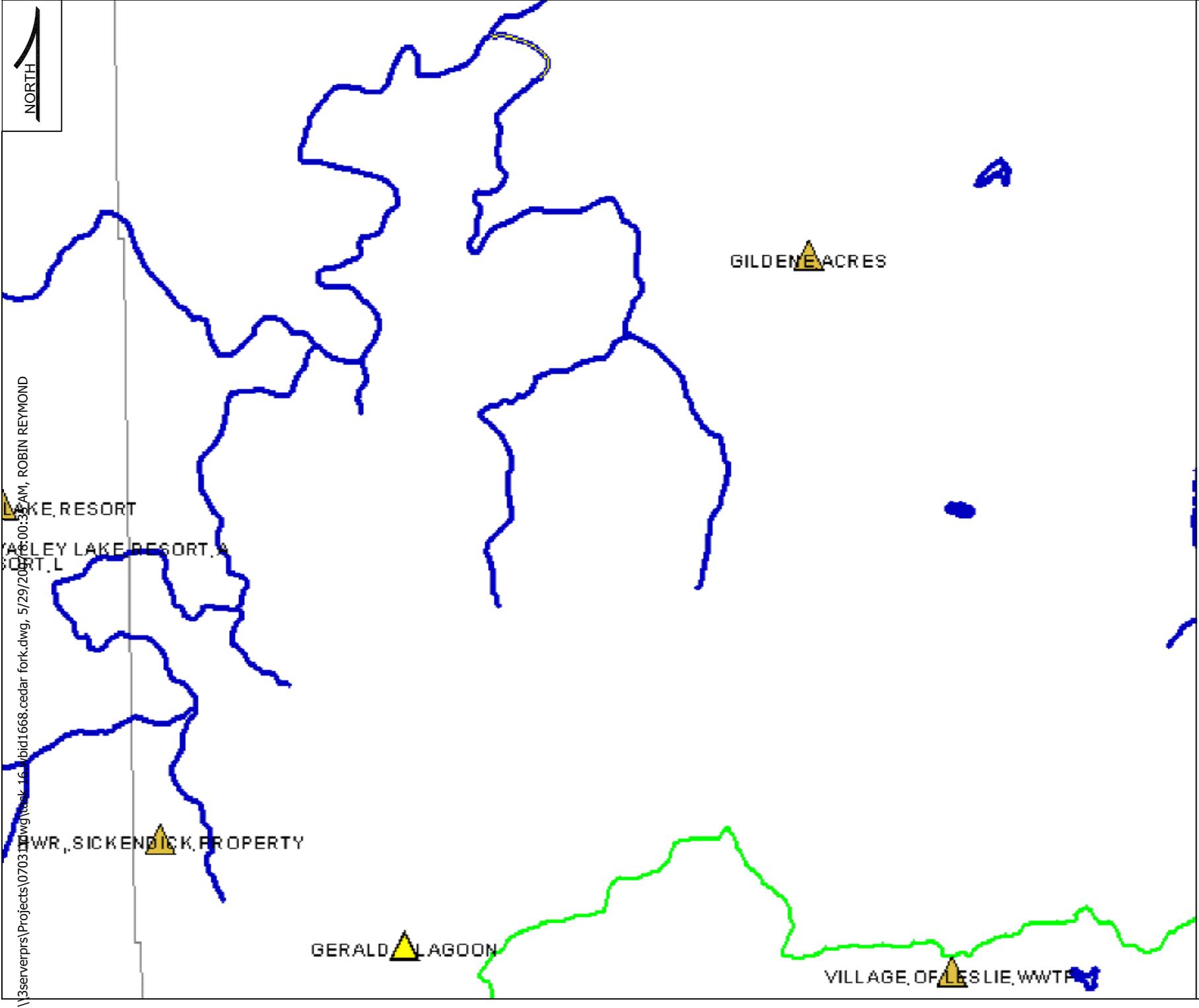
Missouri Department of Natural Resources

Water Protection Program

Date Received: June 5, 2007



\\3serverprts\Projects\07031\Task-16\Task-16\bid1668.cedar.fork.dwg, 5/29/2007 10:00:35 AM, ROBIN REYMOND



LAKE RESORT

LALEY LAKE RESORT, LA  
SCOTT, L

WR, SICKENDICK PROPERTY

GERALD LAGOON

GILDENACRES

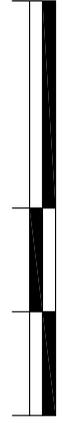
VILLAGE OF LESLIE, WWTP

**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

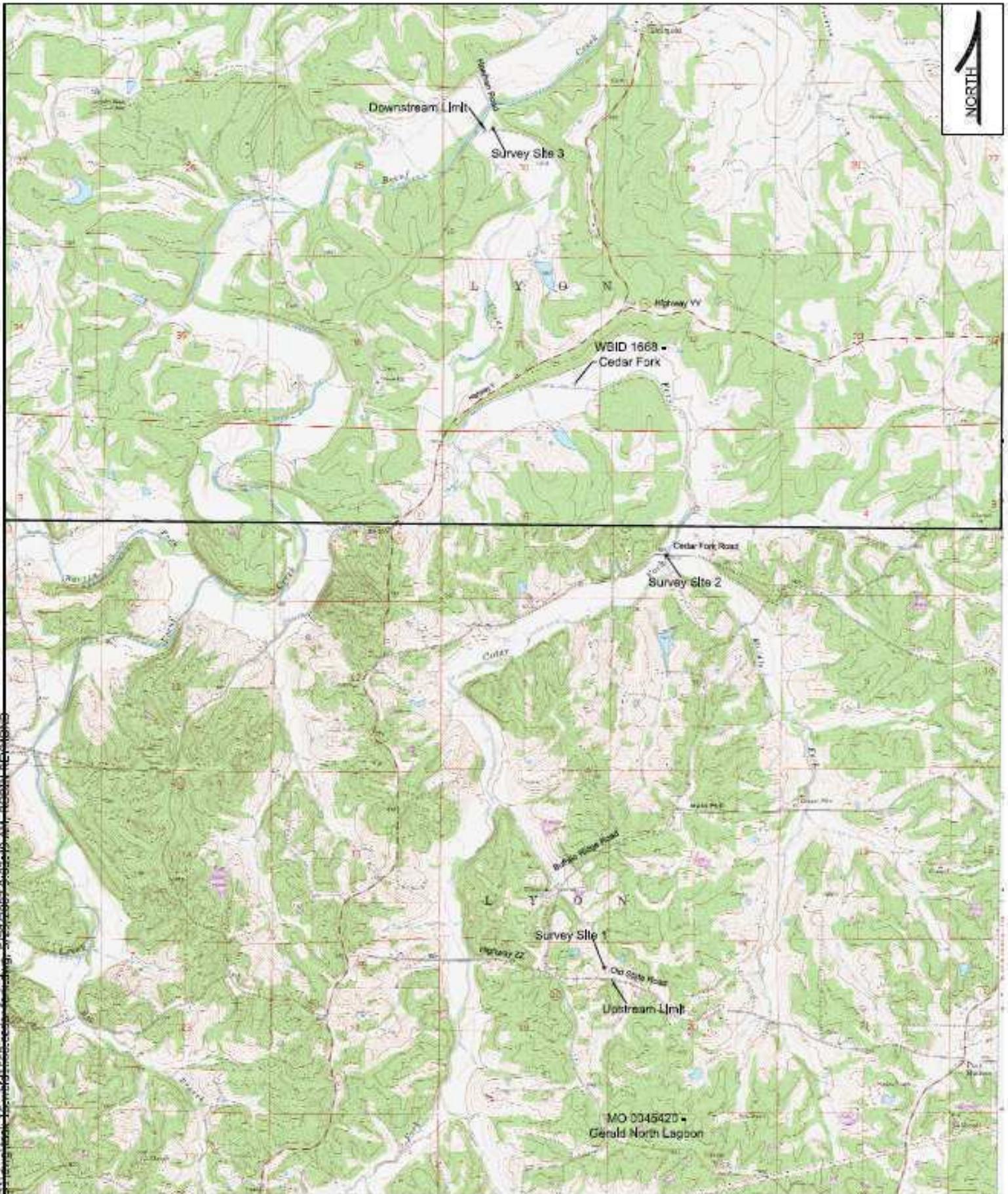
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WBID #: 1668  
Name: Cedar Fork  
County: Franklin  
GIS Map



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



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WBID #: 1668  
 Name: Cedar Fork  
 County: Franklin  
 USGS Location Map

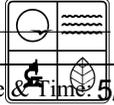


GRAPHIC SCALE  
 Not to Scale

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

WBID# 1668

Site# 1



Missouri  
Department of  
Natural Resources

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

**Data Sheet B - Site Characterization**

(must be completed for each site)

Date & Time: 4/5/2013	Site Location Description (e.g., road crossing):
Personnel (Data Collectors): RLR/MGC - PRS	Downstream of bridge across Old State Rd.
Current Weather Conditions: Sunny 75°	Facility Name: Gerald N. Lagoon
Weather Conditions for Past 10 days: rain/sun	Permit Number: MO 0045420
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: 648973.485m		Y: 4258320.318m	
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	4.2		

**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 type="checkbox"/> Other:	
Comments:					

\* Page Two – Data Sheet B for WBID # 1668-1 :

**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 30%					
RUN 50%					
POOL 20%					

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

33 % Cobble	34 % Gravel	% Sand	% Silt	33 % Mud/Clay	% Bedrock
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Aquatic Vegetation\*: (Note amount of vegetation or algal growth at the assessment site)

50% vegetated - river birch, panic grass, cottonwood, willow

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 type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

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: 5/7/07

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

### Recreational Use Attainability Analysis Field Survey Sheet



Waterbody ID: 1668 Site #: 1  
 Missouri Sunny 75°F  
 Department of Natural Resources  
 GPS Location: 648973.485m UTM X: 4258320.318m UTM Y:           
 Horizontal Accuracy Estimate (GPS Data Quality): +/- N/A (feet) PDOP: 4.2  
 Average Stream Width: 3.5 (meters) Length of Survey Segment: 150 (meters)  
 Field Staff: PRS - RR/MC

Dissolved Oxygen	
Dissolved Oxygen:	<u>9.01</u> (mg/L)
Dissolved Oxygen:	<u>        </u> (% sat)
Specific Cond:	<u>        </u> (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)	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	.3	.10	.3	.01	.2	.19	0	.10	.4	.09	0	.11	0	.10	.45	.09	0	.10	0	.19	0	.24
2	.6	.09	.6	.03	.4	.20	.25	.10	.8	.02	.3	.11	.1	.10	.9	.03	.1	.14	.4	.19	.45	.41
3	.9	.03	.9	.05	.6	.18	.50	.10	1.2	.02	.6	.14	.2	.10	1.35	.04	.2	.16	.8	.19	.9	.51
4	1.2	.02	1.2	.04	.8	.15	.75	.10	1.6	.04	.9	.25	.3	.10	1.8	.03	.4	.17	1.2	.20	1.35	.56
5	1.5	.00	1.5	.02	1.0	.16	1.0	.10	2.0	.01	1.2	.36	.4	.11	2.25	.00	.6	.20	1.6	.38	1.8	.48
6	1.8	.02	1.8	.04	1.2	.16	1.25	.10	2.4	.00	1.5	.41	.5	.12	2.7	.00	.8	.18	2.0	.47	2.25	.33
7	2.1	.02	2.1	.01	1.4	.15	1.5	.07	2.8	.00	1.8	.35	.6	.12	3.15	.00	1.0	.18	2.4	.69	2.7	.35
8	2.4	.02	2.4	.02	1.6	.15	1.75	.10	3.2	.00	2.1	.31	.7	.11	3.6	.03	1.2	.17	2.8	.74	3.15	.40
9	2.7	.03	2.7	.04	1.8	.12	2.0	.09	3.6	.00	2.4	.23	.8	.11	4	.02	1.4	.10	3.2	.68	3.6	.42
10	3	.01	3	.05	2	.13	2.25	.10	4.0	.02	2.7	.18	.9	.11	4.5	.08	1.6	.10	3.6	.44	4	.40
11							2.5	.10			3	.10	1.0	.11			1.8	.10	4.0	.38	4.5	.23
<b>Width/Median Depth</b>	<b>3</b>	<b>&lt;0.10</b>	<b>3</b>	<b>&lt;0.10</b>	<b>3</b>	<b>&lt;0.10</b>	<b>3.6</b>	<b>&lt;0.10</b>	<b>4</b>	<b>&lt;0.10</b>	<b>3</b>	<b>0.23</b>	<b>3.5</b>	<b>0.11</b>	<b>4.5</b>	<b>&lt;0.10</b>	<b>2</b>	<b>0.16</b>	<b>4</b>	<b>0.38</b>	<b>4.5</b>	<b>0.35</b>
<b>Feature Type (riffle, run, or pool)</b>	<b>Run</b>		<b>Run</b>		<b>Riffle</b>		<b>Riffle</b>		<b>Riffle</b>		<b>Pool</b>		<b>Pool</b>									

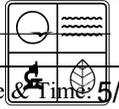
Notes: Transects will be measured beginning on left descending bank and finishing on right descending bank.  
 GPS location corresponds to Transect 01. Transects ordered in upstream to downstream order.

Signed: Robin Reymond Date: 5/7/07

WBID# 1668

Site# 2

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



**Missouri Data Sheet B - Site Characterization**

Department of Natural Resources (must be completed for each site)

Date & Time: 4/5/2013	Site Location Description (e.g., road crossing):
Personnel (Data Collectors): RLR/MGC - PRS	Just downstream of conf. with middle fork at bridge and Cedar Fork Rd.
Current Weather Conditions: Sunny 75°F	Facility Name: Gerald North Lagoon
Weather Conditions for Past 10 days: rain/sun	Permit Number: MO 0045420
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: 649391.303m		Y: 4262411.406m	
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	4.4		

**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 type="checkbox"/> Other:	
Comments:					

\* Page Two – Data Sheet B for WBID # 1668-2 :

**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 20%					
RUN 80%					
POOL					

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

33 % Cobble	34 % Gravel	33 % Sand	% Silt	33 % Mud/Clay	% Bedrock
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Aquatic Vegetation\*: (Note amount of vegetation or algal growth at the assessment site)

25% of creek vegetated

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 type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

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

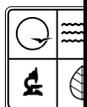
\*This information is not to be used solely for removal of a recreational use designation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions 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: 5/7/07

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

### Recreational Use Attainability Analysis Field Survey Sheet



Waterbody ID: 1668 Site #: 2  
 Missouri Sunny 80°F  
 Department of Natural Resources  
 GPS Location: 649391.303m UTM X: 4262411.406m UTM Y:  
 Horizontal Accuracy Estimate (GPS Data Quality): +/- N/A (feet) PDOP: 4.4  
 Average Stream Width: 9.0 (meters) Length of Survey Segment: 180 (meters)  
 Field Staff: PRS - RR/MC

Dissolved Oxygen	
Dissolved Oxygen:	<u>11.11</u> (mg/L)
Dissolved Oxygen:	_____ (% sat)
Specific Cond:	_____ (µS/cm)
Water Temperature:	<u>21.0</u> (°C)

#### Transect Cross-Section

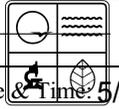
	01		02		03		04		05		06		07		08		09		10		11	
	Distance (m)	Depth (m)																				
1	0	.12	0	.11	0	.10	0	.36	.10	.36	0	.10	1.0	.10	0	.14	0	.12	0	.11	0	.10
2	1.2	.14	1.0	.25	.65	.15	.8	.60	.9	.52	1.5	.18	1.5	.09	.8	.20	.8	.22	.9	.21	.9	.15
3	2.4	.20	2.0	.33	1.3	.31	1.6	.70	1.7	.45	3.0	.15	2.0	.10	1.6	.28	1.6	.34	1.8	.29	1.8	.24
4	3.6	.22	3.0	.34	1.95	.38	2.4	.72	2.5	.30	4.5	.10	2.5	.19	2.4	.35	2.4	.42	2.7	.29	2.7	.24
5	4.8	.22	4.0	.34	2.6	.41	3.2	.70	3.3	.34	6.0	.14	3.0	.19	3.2	.34	3.2	.50	3.6	.30	3.6	.33
6	6.0	.18	5.0	.30	3.25	.38	4.0	.53	4.1	.30	7.5	.26	3.5	.20	4.0	.33	4.0	.48	4.2	.33	4.2	.31
7	7.2	.14	6.0	.22	3.9	.38	4.8	.45	4.9	.33	9.0	.23	4.0	.25	4.8	.33	4.8	.43	5.4	.34	5.4	.30
8	8.4	.04	7.0	.14	4.55	.40	5.6	.30	5.7	.28	10.5	.20	4.5	.30	5.6	.41	5.6	.44	6.3	.30	6.3	.30
9	9.6	.06	8.0	.17	5.2	.40	6.4	.24	6.5	.12	12.0	.20	5.0	.35	6.4	.34	6.4	.30	7.2	.30	7.2	.22
10	10.8	.12	8.5	.19	5.85	.32	7.2	.19	7.3	.12	13.5	.20	5.5	.22	7.2	.40	7.2	.23	8.1	.30	8.1	.23
11	12	.24	9.5	.20	6.5	.20	8	.11	8.0	.10	15	.22	6	.10	8	.30	8	.21	9	.25	9	.19
<b>Width/Median Depth</b>	12	0.14	10	0.22	7.3	.38	8	0.45	8.5	0.33	15	0.20	6	0.22	8	.33	8	0.34	9	0.30	9	0.24
<b>Feature Type</b> (riffle, run, or pool)	Run		Riffle		Riffle		Run		Run		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: 5/7/07

WBID# 1668

Site# 3



Missouri  
Department of  
Natural Resources

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

**Data Sheet B - Site Characterization**

(must be completed for each site)

Date & Time: 4/5/2013	Site Location Description (e.g., road crossing):
Personnel (Data Collectors): RLR/MGC - PRS	end at conf. with Boeuf Creek Bridge - Hoeman Rd.
Current Weather Conditions: Sunny 80°F	Facility Name: Gerald North Lagoon
Weather Conditions for Past 10 days: rain/sun	Permit Number: MO 0045420
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: 647733.380m		Y: 4266461.116m	
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	3.7		

**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 <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 type="checkbox"/> Other:	
Comments:					

\* Page Two – Data Sheet B for WBID # 1668-3 :

**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 25%					
RUN 70%					
POOL 5					

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

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

40% vegetated - grasses/forbs

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 type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

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: 5/7/07

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

### Recreational Use Attainability Analysis Field Survey Sheet



Waterbody ID: 1668 Site #: 3  
 Missouri Sunny 80°F  
 Department of Natural Resources  
 GPS Location: 647733.380m UTM X: 4266461.116m UTM Y:  
 Horizontal Accuracy Estimate (GPS Data Quality): +/- N/A (feet) PDOP: 3.7  
 Average Stream Width: 15 (meters) Length of Survey Segment: 300 (meters)  
 Field Staff: PRS - RR/MC

Dissolved Oxygen	
Dissolved Oxygen:	<u>12.5</u> (mg/L)
Dissolved Oxygen:	_____ (% sat)
Specific Cond:	_____ (µS/cm)
Water Temperature:	<u>23.2</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	.10	0	.13	0	.39	0	.10	0	.12	0	.35	0	.12	>1	0	.30	0	.10	0	.10			
2	2.1	.13	2.1	.20	2.1	.14	2	.10	2	.33	.30	.37	.6	.14	>1	1.7	.35	.8	.25	0.9	.61			
3	4.2	.20	4.2	.10	4.2	.15	4	.14	4	.42	.60	.40	1.2	.15	>1	3.4	.45	1.6	4.2	1.8	.82			
4	6.3	.15	6.3	.03	6.3	.17	6	.14	6	.10	.90	.40	1.8	.42	>1	5.1	.20	2.4	.61	2.7	.72			
5	8.4	.22	8.4	.10	8.4	.25	8	.21	8	.10	1.2	.37	2.4	.64	>1	6.8	.25	3.2	.65	3.6	.64			
6	10.5	.22	10.5	.13	10.5	.25	10	.25	10	.12	1.5	.34	3.0	.65	>1	8.5	.31	4.0	.64	4.5	.54			
7	12.6	.23	12.6	.14	12.6	.17	12	.32	12	.15	1.8	.31	3.6	.65	>1	10.2	.20	4.8	.63	5.4	.50			
8	14.7	.25	14.7	.21	14.7	.13	14	.30	14	.17	2.1	.25	4.2	.62	>1	11.9	.23	5.4	.42	6.3	.45			
9	16.8	.30	16.8	.21	16.8	.11	16	.39	16	.19	2.4	.20	4.8	.22	>1	13.6	.18	6.4	.28	7.2	.22			
10	18.9	.40	18.9	.22	18.9	.09	18	.42	18	.15	2.7	.10	5.4	.14	>1	15.3	.24	7.2	.16	8.1	.20			
11	21	.33	21	.25	21	.20	20	.45	20	.11	3	.10	6	.10	>1	17	.23	8	.10	9	.10			
<b>Width/Median Depth</b>	<b>21</b>	<b>0.22</b>	<b>21</b>	<b>0.14</b>	<b>21</b>	<b>0.17</b>	<b>20</b>	<b>0.25</b>	<b>20</b>	<b>0.15</b>	<b>9</b>	<b>0.34</b>	<b>6</b>	<b>0.22</b>	<b>15</b>	<b>-</b>	<b>17</b>	<b>0.24</b>	<b>8</b>	<b>0.42</b>	<b>9</b>	<b>0.50</b>		
<b>Feature Type (riffle, run, or pool)</b>	<b>Run</b>		<b>Riffle</b>		<b>Run</b>		<b>Run</b>		<b>Run</b>		<b>Run</b>		<b>Riffle</b>		<b>Pool</b>		<b>Riffle</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: 5/7/07



1. WBID 1668 – Site 1 – Transect 1 – facing downstream.



2. WBID 1-668 – Site 1 – Transect 11 – facing downstream.



3. WBID – 1668 – Site 1 Transect 11 – Debris in stream.



4. WBID 1668 – Site 2 – Transect 1 – Facing upstream.



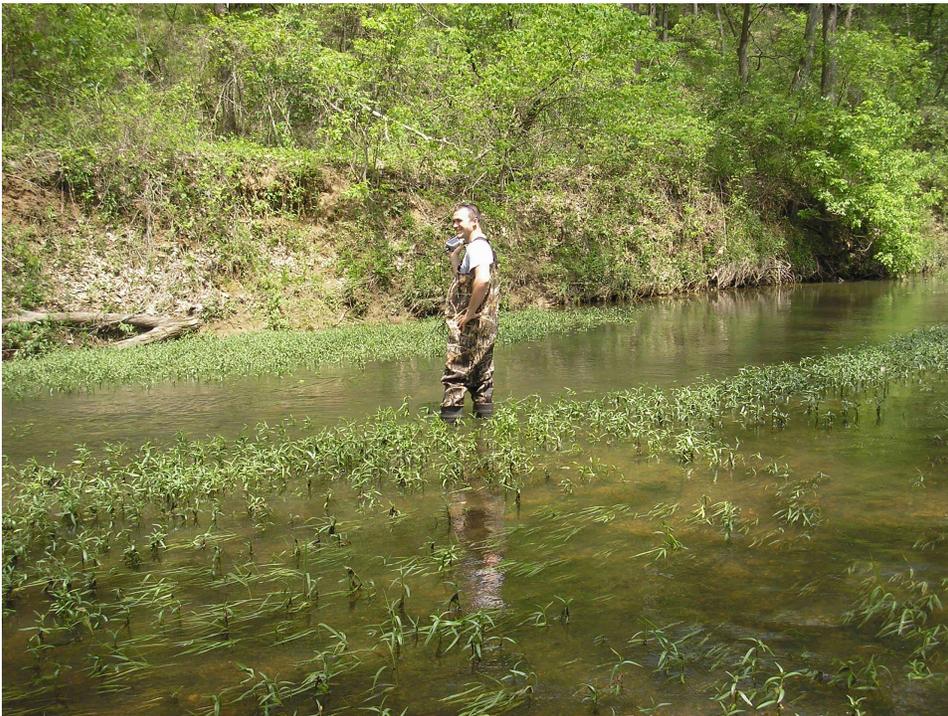
5. WBID 1668 – Site 2 – Transect 1 – facing downstream.



6. WBID 1668 – Site 3 – Transect 1 – facing upstream.



7. WBID 1668 – Site 3 Transect 1 – facing upstream.



8. WBID 1668 – Site 3 – Transect 1 facing left descending bank.