



Missouri  
Department of  
Natural Resources

Use Attainability Analysis

for

WBID 3359 Tributary to Red Oak Creek

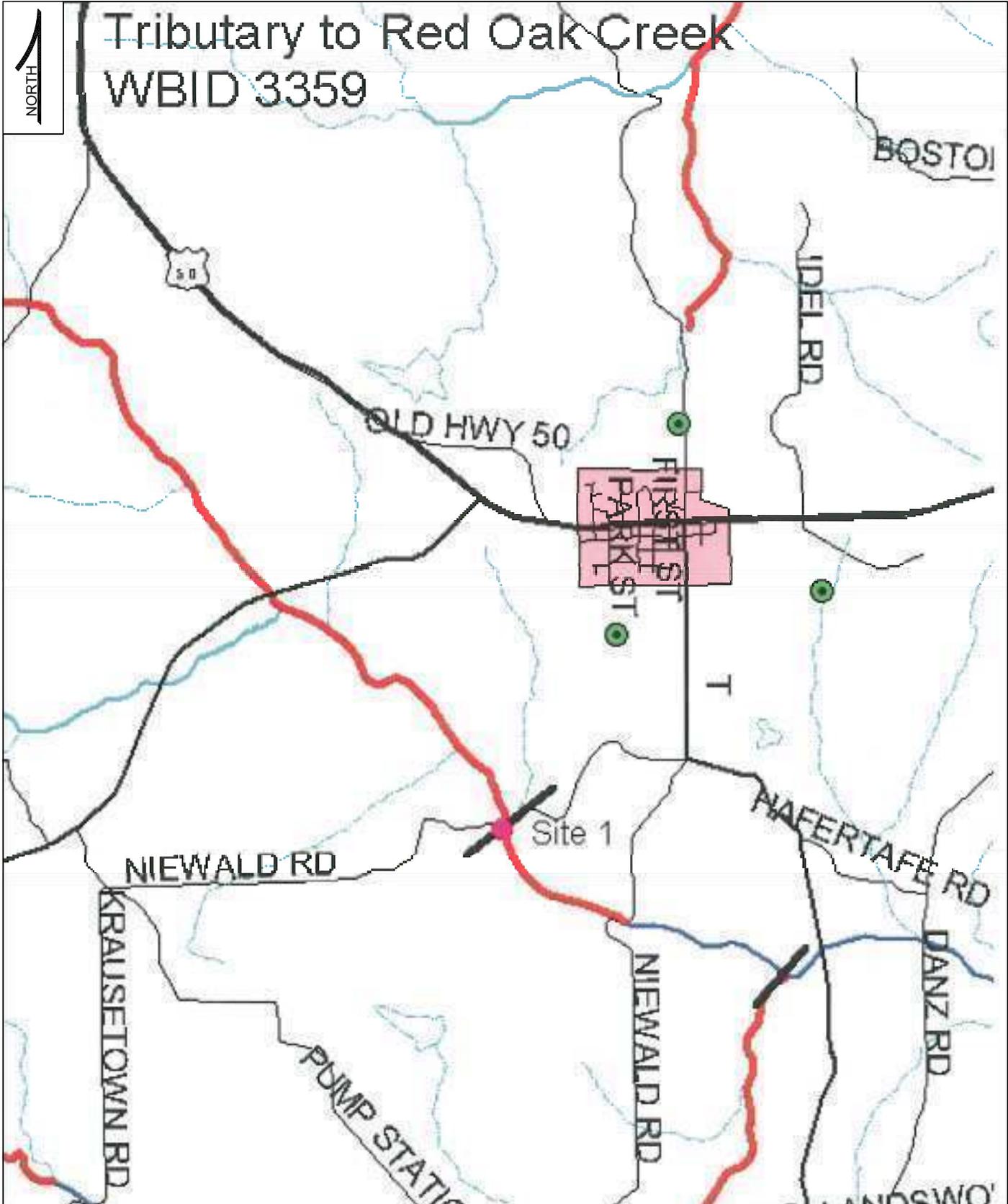
Submitted by  
Pickett Ray & Silver

to  
Missouri Department of Natural Resources  
Water Protection Program

Date received: May 15, 2007



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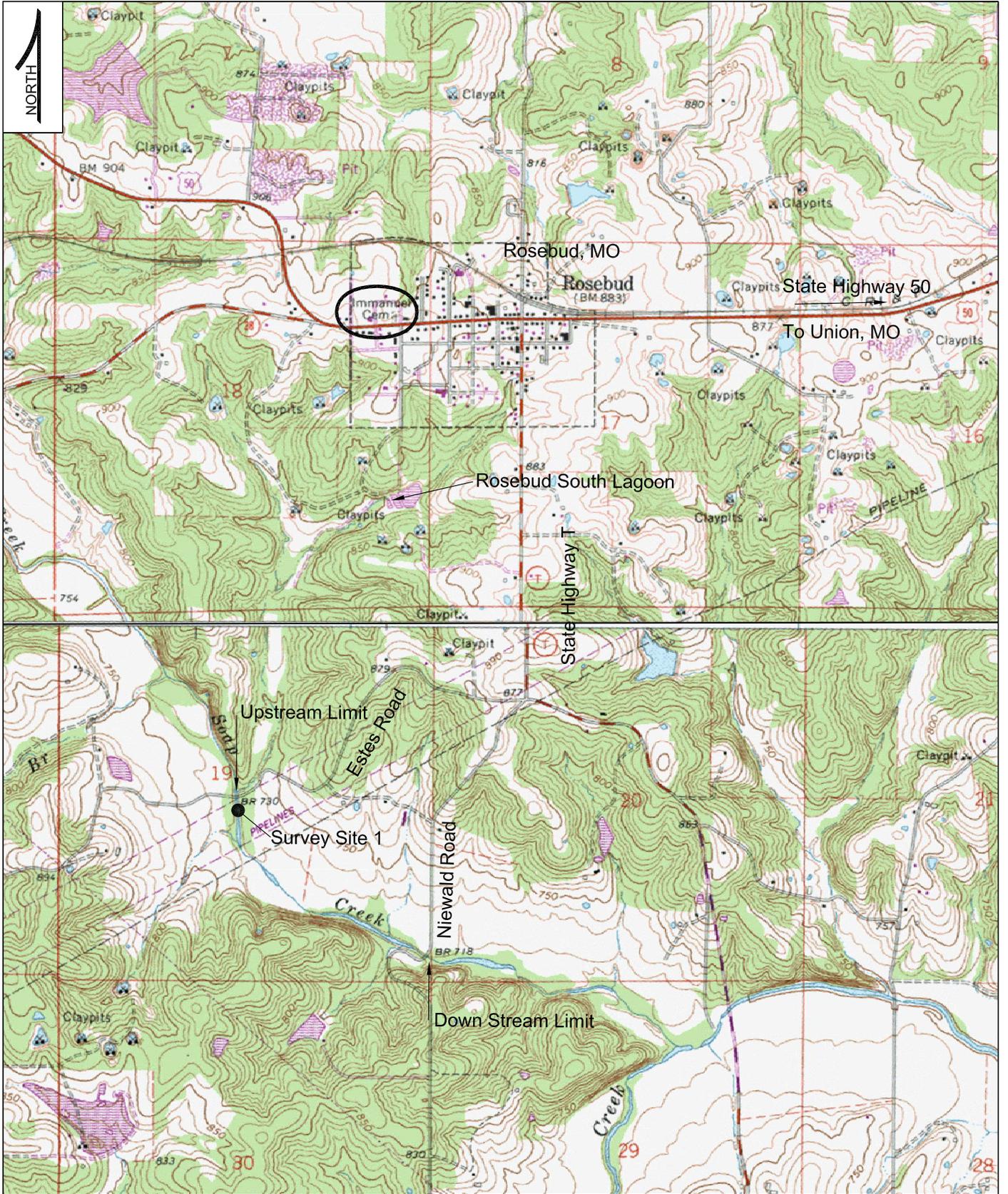
WBID #: 3359  
 Name: Tributary to Red Oak  
 Creek  
 GIS MAP

0 0 0 0

NOT TO SCALE

PRS Job Number: 07031.MODN.00E  
 Drawn By: M.C. Date: 05-29-07  
 Checked By: J.V. Date: 05-29-07

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WBID #: 3359  
 Name: Tributary to Red Oak Creek  
 County: Gasconade  
 USGS Location Map

0 1000 2000 4000

**GRAPHIC SCALE**  
 1 inch = 2000 ft.

PRS Job Number: 07031.MODN.00E  
 Drawn By: M.C. Date: 05-29-07  
 Checked By: J.V. Date: 05-29-07

WBID# 3359  
 Site# 1

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

Date & Time: 05/15/07	Site Location Description (e.g., road crossing): <b>Niewald Rd.</b>
Personnel (Data Collectors): R. Martin & J. Hrabik	
Current Weather Conditions: Cloudy	Facility Name: Rosebud South Lagoon
Weather Conditions for Past 10 days: Unknown	Permit Number: MO 0091375
Drought Conditions?: No drought <input type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input checked="" type="checkbox"/>	

**Site Locations:**

LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION, IN METERS)			
Site GPS Coordinates: UTM X: <b>0638472</b>		Y: <b>4247841</b>	
HORIZONTAL COLLECTION METHOD (Indicate the method used to determine the locational data.)			
Global Positioning System (GPS)		Interpolation	
Static Mode	x	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	
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 _____	
EPE	± 15 _____ Feet or ± _____ Meters	± _____ Feet or ± _____ Meters	
PDOP			

**Photos:**

Upstream Photos		Downstream Photos		Other Photos	
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
<b>See Attached Photos</b>		3359-1-121 3359-1-122 3359-1-123	Upstream Site #1, Transect #1 Downstream Site #1, Transect #1 End of Transect #11, Concrete Bags		

**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:	
Comments: <b>Low Water Crossing @ Transect</b>					

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

Algae on substrate

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: Renee Martin Date of Survey: 5/15/07

Organization: AE Solutions Position: Env. Specialist

### Recreational Use Attainability Analysis Field Survey Sheet

Waterbody ID: <u>3359</u> Site #: <u>3359-01</u> Estimated Channel Incision: <u>&lt;1.0</u> (m) (height between low bank width and water) GPS Location: <u>0638472</u> UTM Y: <u>4247841</u> UTM X: <u>0638472</u> UTM Y: <u>4247841</u> Horizontal Accuracy Estimate (GPS Data Quality): <u>+/- 15</u> (feet)      PDOP: _____ Average Stream Width: <u>11</u> (meters)      Length of Survey Segment: <u>220</u> (meters) (20x average stream width) Field Staff: <u>Renee Martin</u>	<b>Dissolved Oxygen</b> Dissolved Oxygen: <u>7.75</u> (mg/L) Dissolved Oxygen: <u>86.9</u> (% sat) Specific Cond: <u>252.9</u> (µS/cm) Water Temperature: <u>21.2</u> (°C)
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#### Transect Cross-Section

Measurement		01		02		03		04		05		06		07		08		09		10		11	
		Distance (m)	Depth (m)																				
1	0.0	0.1	1.2	0.1	1.3	0.1	1.0	0.1	0.4	0.1	0.0	<0.1	3.2	0.1	0.5	0.1	0.6	0.1	0.2	0.1	0.4	0.1	
2	1.6	0.4	2.4	0.3	2.1	0.1	1.65	0.1	1.15	0.2	1.5	<0.1	3.6	0.1	1.5	0.1	1.6	0.3	0.8	0.2	1.2	0.3	
3	3.2	0.6	3.6	0.3	2.9	0.2	2.3	0.2	1.9	0.2	3.0	<0.1	4.0	0.1	2.5	0.2	2.6	0.3	1.4	0.2	2.0	0.3	
4	4.8	0.5	4.8	0.4	3.7	0.2	2.95	0.3	2.65	0.2	4.5	<0.1	4.4	0.1	3.5	0.1	3.6	0.2	2.0	0.3	2.8	0.4	
5	6.4	0.3	6.0	0.4	4.5	0.2	3.6	0.3	3.4	0.1	6.0	<0.1	4.8	0.1	4.5	0.2	4.6	0.2	2.6	0.4	3.6	0.5	
6	8.0	0.3	7.2	0.2	5.3	0.1	4.25	0.3	4.15	0.1	7.5	0.1	5.2	0.1	5.5	0.2	5.6	0.2	3.2	0.4	4.4	0.5	
7	9.6	0.4	8.4	0.2	6.1	0.2	4.9	0.2	4.9	<0.1	9.0	0.0	5.6	0.1	6.5	0.2	6.6	0.2	3.8	0.3	5.2	0.4	
8	11.2	0.3	9.6	0.3	6.9	0.2	5.55	0.1	5.65	0.1	10.5	0.0	6.0	0.1	7.5	0.2	7.6	0.2	4.4	0.4	6.0	0.3	
9	12.8	0.3	10.8	0.3	7.7	0.2	6.2	0.1	6.4	0.2	12.0	<0.1	6.4	0.1	8.5	0.2	8.6	0.3	5.0	0.3	6.8	0.3	
10	14.4	0.2	12.0	0.3	8.5	0.15	6.85	0.1	7.15	0.2	13.5	0.0	6.8	0.1	9.5	0.1	9.6	0.2	5.6	0.1	7.6	0.2	
11	16.0	0.1	13.2	0.1	9.3	0.1	7.5	0.1	7.9	<0.1	15.0	0.0	7.2	0.1	10.5	0.1	10.6	0.1	6.2	0.1	8.4	0.1	
12	16.4	0.0	13.4	0.0	9.6	0.0	9	0.0	8.9	0.0	15.3	0.0	7.4	0.0	13.8	0.0	10.8	0.0	7.8	0.0	9.3	0.0	
Feature Type (riffle, run, or pool)		Pool		Pool		Run		Run		Riffle		Riffle		Riffle		Run		Ruh		Pool		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.

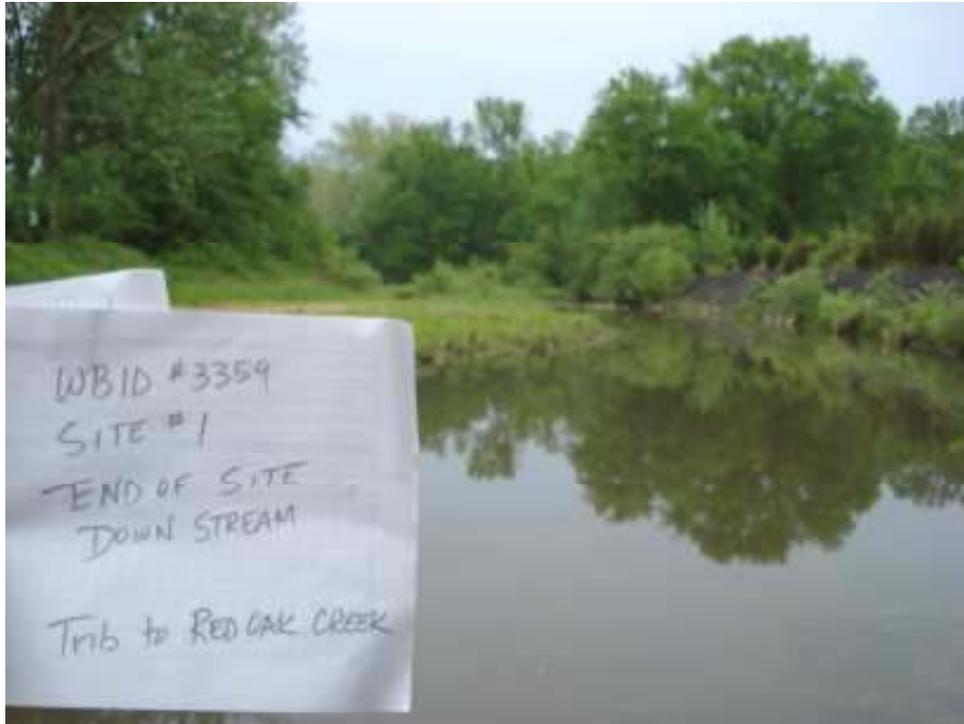
Signed: Renee Martin      Date: 5/15/07



1. Upstream Site 1, Transect 1



2. Downstream Site 1, Transect 1



3. End of Transect 11, Concrete Bags