

**Use Attainability Analysis**  
**for**  
**Waterbody Identification # 2208**  
**Cane Creek**

**Conducted by:**  
**Environmental Resources Coalition**

**To:**  
**Missouri Department of Natural Resources**  
**Water Protection Program**

**Submitted: December 21, 2005**



## Stream Description – WB ID: 2208 – Cane Creek

Cane Creek (WB# 2208) is located in the River Hills (Level IV region 72f) of the Interior River Valleys and Hills eco-region. Chapman et al. (2002) characterized the region as the following:

*Smooth to moderately dissected, forested river side-slopes and bluffs, some loess-covered hills, and areas with karst features are characteristic of the River Hills region. This region, which lies along the Missouri River as well as the Mississippi River, is a transition zone between the loess-covered and till-covered plains to the north by the Central Irregular Plains eco-region and the rocky soils of the more dissected interior Ozark Highlands regions. The River Hills are less forested than interior areas in the Ozarks. Ridges and valleys have a deep soil mantle but the steep slopes are stony with frequent rock outcrops. Loess, which can be thick in some areas, mantles the ridges and uplands. Deep, sandy and silty, moderately to poorly drained alluvium covers the river valleys. Paleozoic bedrock is relatively resistant to erosion along the Missouri River, and consequently the Missouri River alluvial valley is relatively narrow in this region, a contrast to the wide plain of neighboring 47d. Land cover throughout this region is varied, with row crops, improved pasture, woodland, and oak and mesic mixed hardwood forests.*

The Cane Creek (WB# 2208) is a four mile class C stream reach located in central Cape Girardeau County. The classified stream segment begins just west of Interstate 55 approximately one mile north of Jackson, Missouri and flows southwest to Highway D. The entire classified segment lies downstream of the Westbridge Place Subdivision waste water treatment facility outfall (WWTF) (MO0100277). The area surrounding the creek is composed of woodlands and farm pastures with several rural residences dotting the landscape.

Chapman, S.S., Omernik, J.M., Griffith, G.E., Schroeder, W.A., Nigh, T.A., and Wilton, T.F., 2002, Ecoregions of Iowa and Missouri (color poster with map, descriptive text, summary tables, and photographs): Reston, Virginia, U.S. Geological Survey (map scale 1:1,800,000).

**Note: During the first visit to each site, ERC selected an assessment location (either upstream or downstream) based on which side appeared deepest or most likely for whole body contact recreation.**

## Field Data Sheets for Recreational Use Stream Surveys

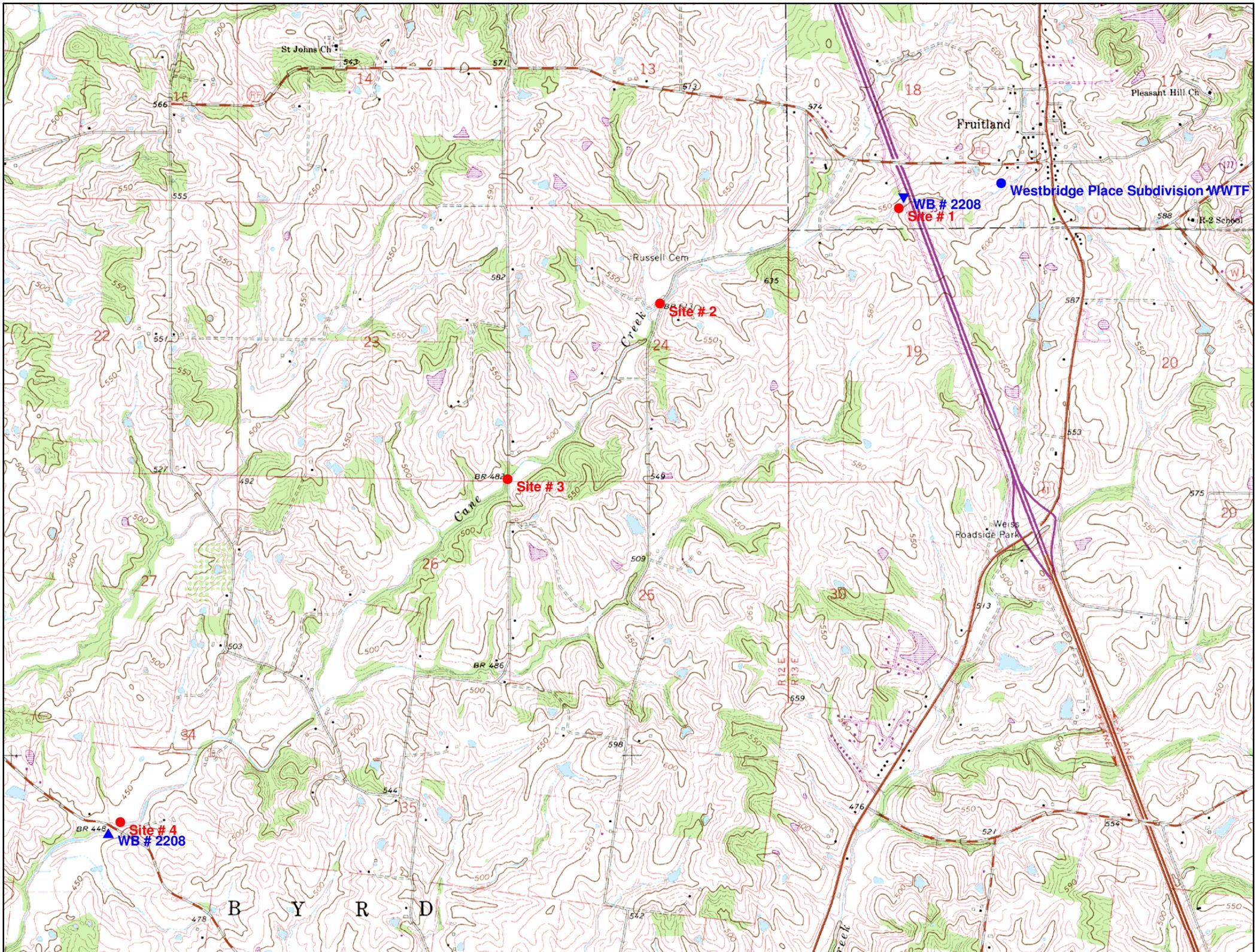
### Data Sheet A: Waterbody Identification

<b>Waterbody Name:</b> Cane Creek
<b>8 – digit HUC:</b> 07140107
<b>Missouri WBID #</b> 2208
<b>County:</b> Cape Girardeau
<b>Upstream Legal Description:</b> Sec. 18, T32N, R13E, Cape Girardeau County
<b>Downstream Legal Description:</b> Sur 3146, T32N, R12E, Cape Girardeau County
<b>Upstream Coordinates:</b> Latitude 37.4462565 ° N , Longitude 89.6480670 ° W
<b>Downstream Coordinates:</b> Latitude 37.4127787 ° N , Longitude 89.7013157 ° W
<b>Discharger Facility Name(s):</b> Westbridge Place Subdivision
<b>Discharger Permit Number(s):</b> MO0100277
<b>Number of Sites Evaluated:</b> 4
<b>Name of Surveyor and Telephone Number:</b> Robert R. Bacon, (573) 634-7078
<b>Organization:</b> Environmental Resources Coalition (ERC)
<b>Position:</b> Director of Aquatic Services

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA sheet is true and accurate.

Signed: Robert R. Bacon

Date: 12-21-2005



## Weather Conditions

Weather conditions for the field surveys and the previous ten days are listed in the tables below.

Data from the MU Commercial Agriculture Automated Weather Station Network  
Jackson, Missouri - Station ID: 234226

<b>Date</b>	<b>Precipitation (Inches)</b>	<b>Min. Temp (°F)</b>	<b>Max. Temp (°F)</b>	<b>Avg. Temp (°F)</b>
04/06/2005	0	58	75	67
04/07/2005	0.52	55	63	59
04/08/2005	0.06	49	61	55
04/09/2005	0	41	76	59
04/10/2005	0	47	75	61
04/11/2005	0	47	71	59
04/12/2005	0.96	58	68	63
04/13/2005	2.20	47	59	53
04/14/2005	0	40	68	54
04/15/2005	0	39	73	56
04/16/2005	0	39	76	58

<b>Date</b>	<b>Precipitation (Inches)</b>	<b>Min. Temp (°F)</b>	<b>Max. Temp (°F)</b>	<b>Avg. Temp (°F)</b>
05/24/2005	0	55	88	72
05/25/2005	0	51	77	64
05/26/2005	0	51	77	64
05/27/2005	0	51	81	66
05/28/2005	0	50	84	67
05/29/2005	0	51	85	68
05/30/2005	0	55	84	70
05/31/2005	0	56	86	71
06/01/2005	0	64	86	75
06/02/2005	0.06	64	86	75
06/03/2005	0	61	70	66

# **WB # 2208 – Cane Creek**

## **Site # 1 - West Outer Road I-55**

**GPS Location**

**37.4463547 North**

**89.6487342 West**

### **Upstream Views**

**04/16/05**

**06/03/05**

**Upstream views were out of the classified reach**

### **Downstream Views**

**04/16/05**

**06/03/05**



## Physical Dimensions – Site # 1

	<b>04/16/05</b>	<b>06/03/05</b>
<b>Assessment Location</b>	Downstream	Downstream
<b>Time</b>	1:35 PM	3:45 PM
<b>Stream Type</b>	Run	Run
<b>Width (m)</b>	9.14	14.63
<b>Length (m)</b>	22.86	15.24
<b>Avg. Depth (cm)</b>	6.00	15.25
<b>Maximum Depth (cm)*</b>	6.0	18.0
<b>Flow Present</b>	Yes	Yes
<b>Flow (cfs)</b>	-	-

### **SUBSTRATE**

<b>Cobble</b>	0%	0%
<b>Gravel</b>	5%	10%
<b>Sand</b>	0%	0%
<b>Silt</b>	0%	0%
<b>Mud / Clay</b>	95%	90%
<b>Bedrock</b>	0%	0%
	100%	100%

### **OTHER**

<b>Uses Observed</b>	None	None
<b>Evidence of Human Use (WBCR)</b>	None	None
<b>Aquatic Vegetation</b>	Some filamentous algae	None
<i>Water Characteristics</i>		
<b>Odor</b>	None	None
<b>Color</b>	Cloudy	Clear
<b>Bottom Deposits</b>	None	None
<b>Surface Deposits</b>	None	None

\* Maximum depth is the maximum measured depth within the stream cross-section.

**NOTES: Site # 1 is the uppermost site on Cane Creek.**

# WB # 2208 – Cane Creek

## Site # 2 - County Road 435

**GPS Location**

**37.4408871 North  
89.6647789 West**

### Upstream Views

**04/16/05**



**06/03/05**



### Downstream Views

**04/16/05**



**06/03/05**



## Physical Dimensions – Site # 2

	<b>04/16/05</b>	<b>06/03/05</b>
<b>Assessment Location</b>	Downstream	Downstream
<b>Time</b>	1:42 PM	5:10 PM
<b>Stream Type</b>	Riffle	Riffle
<b>Width (m)</b>	7.16	8.38
<b>Length (m)</b>	15.24	15/24
<b>Avg. Depth (cm)</b>	9.00	3.73
<b>Maximum Depth (cm)*</b>	9.0	9.0
<b>Flow Present</b>	Yes	Yes
<b>Flow (cfs)</b>	-	-

### **SUBSTRATE**

<b>Cobble</b>	10%	10%
<b>Gravel</b>	10%	10%
<b>Sand</b>	0%	0%
<b>Silt</b>	0%	0%
<b>Mud / Clay</b>	0%	0%
<b>Bedrock</b>	80%	80%
	100%	100%

### **OTHER**

<b>Uses Observed</b>	Livestock watering	Livestock watering
<b>Evidence of Human Use (WBCR)</b>	None	None
<b>Aquatic Vegetation</b>	10% filamentous algae coverage	30% filamentous algae coverage
<b><i>Water Characteristics</i></b>		
<b>Odor</b>	None	None
<b>Color</b>	Cloudy	Clear
<b>Bottom Deposits</b>	Benthic algae	Benthic algae
<b>Surface Deposits</b>	None	None

\* Maximum depth is the maximum measured depth within the stream cross-section.

# WB # 2208 – Cane Creek

## Site # 3 - County Road 436

**GPS Location**

**37.4315277 North  
89.6750347 West**

### Upstream Views

**04/16/05**

**06/03/05**



### Downstream Views

**04/16/05**

**06/03/05**



## Physical Dimensions – Site # 3

	<b>04/16/05</b>	<b>06/03/05</b>
<b>Assessment Location</b>	Downstream	Downstream
<b>Time</b>	2:00 PM	4:20 PM
<b>Stream Type</b>	Riffle	Riffle
<b>Width (m)</b>	5.38	4.88
<b>Length (m)</b>	152.4	152.4
<b>Avg. Depth (cm)</b>	5.17	2.88
<b>Maximum Depth (cm)*</b>	8.0	5.0
<b>Flow Present</b>	Yes	Yes
<b>Flow (cfs)</b>	-	-

### **SUBSTRATE**

<b>Cobble</b>	15%	15%
<b>Gravel</b>	10%	10%
<b>Sand</b>	0%	0%
<b>Silt</b>	0%	0%
<b>Mud / Clay</b>	0%	0%
<b>Bedrock</b>	75%	75%
	100%	100%

### **OTHER**

<b>Uses Observed</b>	Livestock watering	Livestock watering
<b>Evidence of Human Use (WBCR)</b>	None	None
<b>Aquatic Vegetation</b>	10% filamentous algae coverage	15% filamentous algae coverage
<b><i>Water Characteristics</i></b>		
<b>Odor</b>	None	None
<b>Color</b>	Cloudy	Clear
<b>Bottom Deposits</b>	Benthic algae	Benthic algae
<b>Surface Deposits</b>	None	None

\* Maximum depth is the maximum measured depth within the stream cross-section.

# WB # 2208 – Cane Creek

## Site # 4 - Highway D

**GPS Location**

**37.412929 North  
89.7012655 West**

### Upstream Views

**04/16/05**



**06/03/05**



### Downstream Views

**04/16/05**



**06/03/05**



## Physical Dimensions – Site # 4

	<b>04/16/05</b>	<b>06/03/05</b>
<b>Assessment Location</b>	Upstream	Upstream
<b>Time</b>	2:20 PM	4:20 PM
<b>Stream Type</b>	Riffle	Riffle
<b>Width (m)</b>	7.92	6.71
<b>Length (m)</b>	121.92	121.92
<b>Avg. Depth (cm)</b>	20.07	8.00
<b>Maximum Depth (cm)*</b>	30.0	22.0
<b>Flow Present</b>	Yes	Yes
<b>Flow (cfs)</b>	-	-
 <b><u>SUBSTRATE</u></b>		
<b>Cobble</b>	40%	40%
<b>Gravel</b>	50%	50%
<b>Sand</b>	0%	0%
<b>Silt</b>	0%	0%
<b>Mud / Clay</b>	0%	0%
<b>Bedrock</b>	10%	10%
	100%	100%
 <b><u>OTHER</u></b>		
<b>Uses Observed</b>	None	None
<b>Evidence of Human Use (WBCR)</b>	None	None
<b>Aquatic Vegetation</b>	10% filamentous algae coverage	15-20% filamentous algae coverage
<i>Water Characteristics</i>		
<b>Odor</b>	None	None
<b>Color</b>	Cloudy	Clear
<b>Bottom Deposits</b>	Benthic algae	Benthic algae
<b>Surface Deposits</b>	None	None

\* Maximum depth is the maximum measured depth within the stream cross-section.

## Site Descriptions

**Site #1:** Site # 1 of Cane Creek is located at the west outer road of Interstate – 55 just north of Jackson, Missouri. This location is the uppermost assessment site, and is located downstream of the Westbridge Place Subdivision Waste Water Treatment Facility. The site is surrounded by Interstate 55 and a wooded area. The stream is easily accessible from the outer road. However, there are thick patches of poison ivy around the creek making the site uninviting or very itchy to the unwary.

**Site #2:** Site # 2 of Cane Creek is located at County Road 435. The site is entirely fenced off for livestock watering; therefore, stream assessment was taken from bridge. Wooded areas, farm pastures, and few residences surround the stream at this location.

**Site #3:** Site # 3 of Cane Creek is located at County Road 441. The upstream location of this site is entirely fenced off for livestock watering, while the downstream location is accessible. Wooded areas, farm pastures, and few residences surround the stream at this location.

**Site #4:** Site #4 of Cane Creek is located Highway D northwest of Jackson, Missouri. Wooded areas, farm pastures, and few residences surround the stream at this location. The banks of the stream are steep and wooded.

**I, the undersigned, hereby affirm to the best of my knowledge that all information reported on the UAA datasheets, are true and accurate.**

Signed: Robert R. Beaman

Date: 12-21-2005

Organization: ERC

Position: Dir of Aquatic Services

## Summaries of Interviews

The following interviews were conducted by Abby Welschmeyer (ERC, Field Manager) with adjacent landowners and potential creek users. The interviews were conducted in-person, or over the phone. Some of the questions asked are as follows:

- How long have you lived near this body of water?
- Do you or your family use this body of water for recreational activities?
  - If not used, why?
  - If used, what type of activities, how many times per year, and under what flow conditions (low, medium, or high)?
- Have you seen other people using the waterbody? (If so, many of the same aforementioned questions apply.)

To assist in the collection of interviews, letters were developed detailing the water quality rule, our affiliation with the Department of Natural Resources, and our contact information. These letters were left at residences near the waterbody when no one answered the door. This turned out to be a very effective way of quickly collecting key interviews with people most familiar with the resource.

**Date:** 06/03/05

**Time:** 4:45 PM

**Name:** Scott Fritsche

**Reason for Interview:** lives near Site # 2

Scott Fritsche has lived near Cane Creek for seven years and owns approximately 200 yards along the stream segment. He stated that he and his family use the stream for wading and swimming several times a year in ‘the swimming hole’ located near Site # 2. Mr. Fritsche stated that many people still use ‘the swimming hole’, which reaches approximately 10 feet in depth (during higher flow conditions).

**Date:** 11/17/05

**Time:** 2:59 PM

**Name:** John Dickerson

**Reason for Interview:** owns property along creek near Site # 3 – property where swimming hole is located - (phone interview)

John W. Dickerson has lived or owned land along Cane Creek for 76 years. Dickerson currently doesn’t live along the stream but visits daily in order to do his daily farm chores. Dickerson doesn’t use the stream but will allow people to hunt and wade with permission. He did say that people do still use ‘the old swimming hole’ with his permission but it isn’t six feet deep like it was when he was a kid.

## **Summaries of Interviews (continued)**

**Date:** 11/17/05

**Time:** 6:40 PM

**Name:** Lawrence McBryde

**Reason for Interview:** owns property along creek near Site # 3 - (phone interview)

Lawrence McBryde has lived near Cane Creek for 55 years. McBryde stated that he only uses the stream as a water source for his livestock. McBryde did acknowledge that people used to swim and wade in the creek, especially at 'the old swimming hole' but he doesn't know of anyone doing so in the last five years.

**Date:** 06/03/05

**Time:** 4:20 PM

**Name:** Mike Rampley

**Reason for Interview:** mowing hay near Site # 4 also owns land along creek

Mike Rampley has lived near Cane Creek for 20 years and owns one-half of a mile along the waterbody. He stated that he uses the stream for wading with his grandchildren several times during the summer months. Mr. Rampley stated that he has not seen anyone else using the creek for recreation because the majority of it is privately owned.

**Note: The assessment team did not verify and assess the physical characteristics of the 'swimming hole' mentioned above, because several different individuals referred specifically to its location and depth.**