

Use Attainability Analysis
for
Water Body Identification # 2058
Pleasant Valley Creek

Conducted by:
Environmental Resources Coalition

To:
Missouri Department of Natural Resources
Water Protection Program

Submitted: July 14, 2005



Stream Description – WB ID: 2058 – Pleasant Valley

Pleasant Valley Creek (WB 2058) is a one mile long class C stream and is a tributary to the Brush Creek Branch of the Bourbeuse River. The creek is located in the northeastern most portion of the Ozark Highlands physiographic region (Thom and Wilson 1980). The Ozark Highland physiographic region is characterized by thin, often stony, residual soils, with loess being very thin or absent. The topography of the region is steep to moderately rolling hills. The streams in this region generally flow northward with occasional bedrock outcrops.

Pleasant Valley Creek is located in northern Crawford County just north of Cuba, Missouri. The entire classified reach is located approximately one mile downstream of Cuba wastewater treatment facility (WWTF) (MO0094919). The upstream most portion of the classified reach is located at a low water crossing on Glassey Road, which has approximately 160 feet of stream access within the road easement. The remaining section of the classified stream segment flows through fenced private property and is primarily used for livestock watering and hunting.

Thom, R. H. and J. H. Wilson. 1980. The Natural Divisions of Missouri. Trans. Mo. Acad. Sci. 14: 9-23.

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

Field Data Sheets for Recreational. Use Stream Surveys

Data Sheet A: Water Body Identification

Water Body Name: Pleasant Valley Creek
8 – digit HUC: 07140103
Missouri WBID # 2058
County: Crawford
Upstream Legal Description: Sec. 24, T39N, R5W, Crawford County
Downstream Legal Description: Sec. 14, T39N, R5W, Crawford County
Upstream Coordinates: Latitude 38.0930256 ° N , Longitude 91.4221992 ° W
Downstream Coordinates: Latitude 38.1030255 ° N , Longitude 91.4305102 ° W
Discharger Facility Name(s): Cuba WWTF
Discharger Permit Number(s): MO0094919
Number of Sites Evaluated: 3
Name of Surveyor and Telephone Number: Robert R. Bacon, (573) 634-7078
Organization: Environmental Resources Coalition (ERC)
Position: 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: 7-14-2005

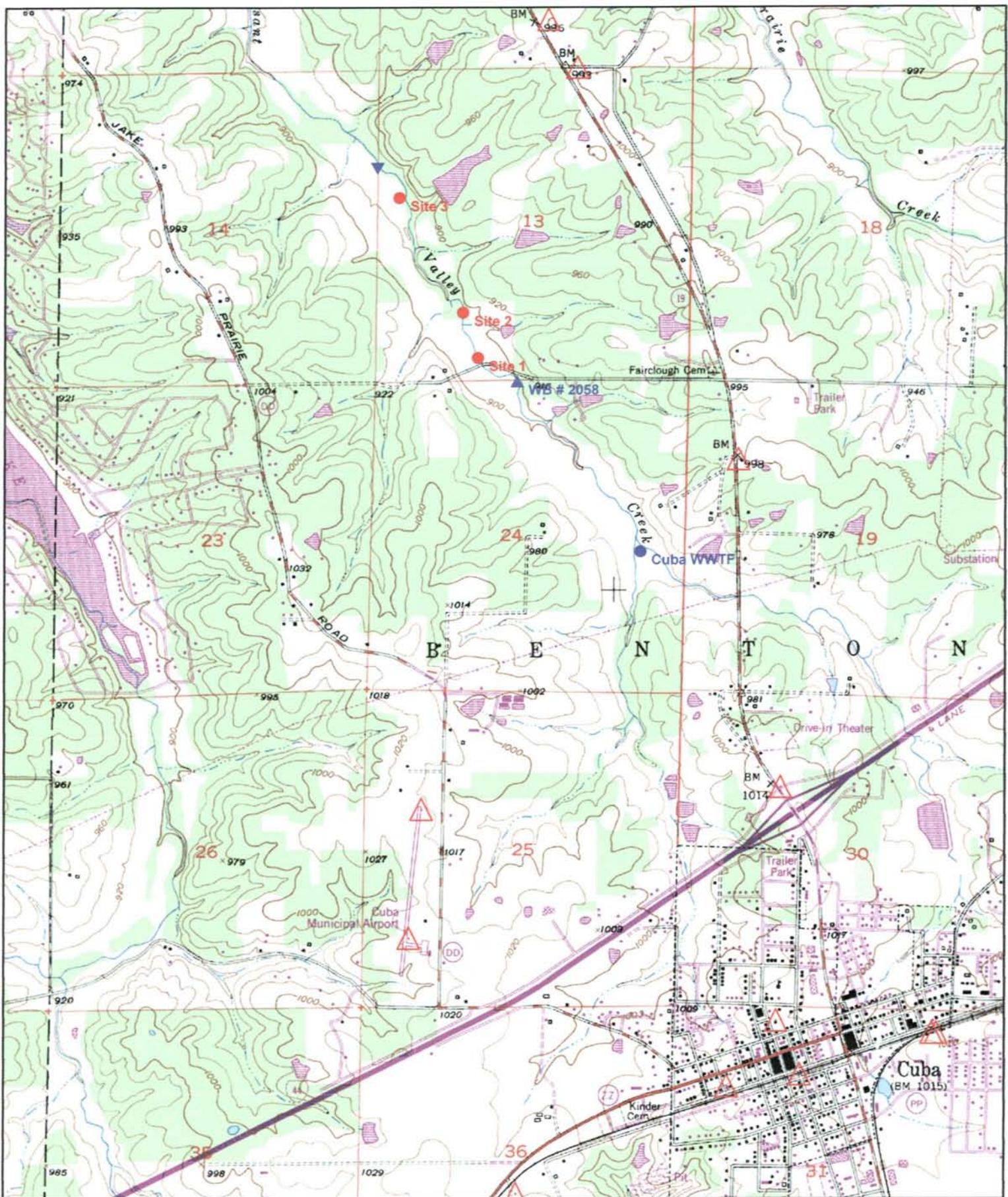
Weather Conditions

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

Data from the Midwestern Regional Climate Center
Vichy Airport FAA, Station ID: 238614

Date	Precipitation (Inches)	Min. Temp (°F)	Max. Temp (°F)	Average Temp (°F)
04/04/2005	0	52	78	65
04/05/2005	0	54	72	63
04/06/2005	0.32	55	73	64
04/07/2005	0.19	43	61	52
04/08/2005	0	39	72	56
04/09/2005	0	48	77	63
04/10/2005	0	59	80	70
04/11/2005	0.81	55	66	61
04/12/2005	0.21	47	63	55
04/13/2005	0.06	45	60	53
04/14/2005	0	35	66	51

Date	Precipitation (Inches)	Min. Temp (°F)	Max. Temp (°F)	Average Temp (°F)
05/07/2005	0	-	-	-
05/08/2005	0	-	-	-
05/09/2005	0	-	-	-
05/10/2005	0	-	-	-
05/11/2005	0	-	-	-
05/12/2005	0	-	-	-
05/13/2005	0	-	-	-
05/14/2005	0.60	-	-	-
05/15/2005	0	-	-	-
05/16/2005	0	-	-	-
05/17/2005	0	-	-	-



Name: CUBA
Date: 7/4/2005
Scale: 1 inch equals 2000 feet

Location: 038.0828078° N 091.4230466° W

WB # 2058 – Pleasant Valley Creek

Site # 1 - Glassey Road – at small bridge

GPS Location **38.0941707 North**
 91.4247567 West

Elevation (feet) **931.6**

Upstream View **04/14/05**



Downstream View **04/14/05**



- Did not take pictures on 05/17/05 visit to the stream but did a physical assessment

Physical Dimensions – Site # 1

	04/14/05	05/17/05
Assessment Location	Downstream	Downstream
Time	1:30 PM	1:19 PM
Stream Type	Run	Riffle
Width (m)	5.97	5.18
Length (m)	7.62	30.48
Ave Depth (cm)	12.14	5.63
Maximum Depth (cm)*	23.5	12.0
Flow Present	Yes	Yes
Flow (cfs)	3.94	-

SUBSTRATE

Cobble	0%	0%
Gravel	100%	100%
Sand	0%	0%
Silt	0%	0%
Mud / Clay	0%	0%
Bedrock	0%	0%
	100%	100%

OTHER

Uses Observed	None	None
Evidence of Human Use (WBCR)	None	None
Aquatic Vegetation	Periphyton	Algae and Periphyton
<i>Water Characteristics</i>		
Odor	None	None
Color	Clear	Clear
Bottom Deposits	Periphyton	Periphyton
Surface Deposits	None	None

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

NOTES: Site # 1 uppermost point on Pleasant Valley Creek 05/17/05

- Steam level lower than 1st visit

WB # 2058 – Pleasant Valley Creek

Site # 2 - Martin/Munro property line – on private land

GPS Location

38.096535 North
91.4258082 West

Upstream View
05/17/05



Downstream View
05/17/05



- Visited Site # 2 only once

Physical Dimensions – Site # 2

05/17/05

Assessment Location	Downstream
Time	12:05 PM
Stream Type	Run
Width (m)	4.88
Length (m)	91.44
Ave Depth (cm)	30.47
Maximum Depth (cm)*	62.0
Flow Present	Yes
Flow (cfs)	-

SUBSTRATE

Cobble	30%
Gravel	30%
Sand	0%
Silt	0%
Mud / Clay	0%
Bedrock	40%
	100%

OTHER

Uses Observed	None
Evidence of Human Use (WBCR)	None
Aquatic Vegetation	Algae and Periphyton

Water Characteristics

Odor	None
Color	Clear
Bottom Deposits	None
Surface Deposits	Small amounts of foam

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

NOTES:

WB # 2058 – Pleasant Valley Creek

Site # 3 - On Martin property

GPS Location

38.10164 North
91.4294072 West

Upstream View
05/17/05



Downstream View
05/17/05



- Visited Site # 3 only once

Physical Dimensions – Site # 3

05/17/05

Assessment Location	Downstream
Time	11:25 AM
Stream Type	Run
Width (m)	3.66
Length (m)	60.96
Ave Depth (cm)	10.85
Maximum Depth (cm)*	23.0
Flow Present	Yes
Flow (cfs)	-

SUBSTRATE

Cobble	20%
Gravel	80%
Sand	0%
Silt	0%
Mud / Clay	0%
Bedrock	0%
	100%

OTHER

Uses Observed	None
Evidence of Human Use (WBCR)	None
Aquatic Vegetation	Algae and Periphyton

Water Characteristics

Odor	None
Color	Clear
Bottom Deposits	None
Surface Deposits	Small amounts of foam

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

NOTES:

Site Descriptions

Site #1: Site #1 of Pleasant Valley Creek is located at a small bridge on Glassey Road and is the uppermost site of the stream. The entire classified stream has approximately 160 feet that is accessible due to fences located both upstream and downstream. The Cuba WWTF is upstream approximately one mile from this location.

Site #2: Site #2 of Pleasant Valley Creek is located at the Martin/Munro property line, and access is available only with permission to enter private property. The surrounding area is primarily wooded areas and farm pastures. At this location the stream is used for livestock watering.

Site #3: Site #3 of Pleasant Valley Creek is located on the Martin property, and access is available only with permission to enter private property. The surrounding area is wooded.

Over 60 percent of the classified stream segment was assessed. This includes a short reach at site 1 and the entire reach between site 2 and site 3. During these assessments, the water depth was found not to be of sufficient depth to support whole body contact recreation as per the Missouri Department of Natural Resources Recreational Use Attainability Analysis Protocol.

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

Signed: Robert D. Bacon

Date: 7-14-2005

Organization: ERC

Position: Dir. of Aquatic Services

Summaries of Interviews

The following interviews were conducted by Abby Welschmeyer and Anna Welschmeyer with landowners and creek users during the months of May and June of 2005. Questions were asked of the interviewee either in person or over the phone. Survey sheets were completed based on the information acquired by the interviewer. The questions asked are as follows:

- How long have you lived near this body of water?
- Do you or your family utilize this body of water for recreational activities?
- If not used, why?
- If used, what types of activities, what seasons, how many times per period, and what flow conditions (low, medium, or high)?
- Have you witnessed other people utilizing the water body? (If so, the aforementioned questions apply.)

To assist in the collection of interviews letters were developed detailing the water quality rule, our affiliation with the Missouri Department of Natural Resources and our contact information. These letters were left at residences nearby the water body where nobody answered the door. This turned out to be a very effective way of quickly collecting key interviews of people most familiar with the resource.

Date: 06/27/05

Time: 10:59 AM

Name: Andrew M. Munro

Reason for Interview: owns land along water body – phone interview

Andrew Munro has lived near Pleasant Valley Creek for 40 years and owns the remaining stretch of the water body not owned by Mr. Martin. Mr. Munro stated that he does not use the stream for recreational activities because he does not have the desire or the need to do so. Mr. Martin also stated that he does use the stream to water his livestock, and does so because the WWTF in Cuba has improved in the last twenty years. He commented that he has seen children wading and playing in the water body weekly during the summer months.

Summaries of Interviews (cont'd)

Date: 06/27/05

Time: 7:58 PM

Name: Thomas Martin

Reason for Interview: owns land along water body – phone interview

Thomas Martin has lived near Pleasant Valley Creek for 23 years and owns land approximately three-quarters of one mile along it. Mr. Martin said he and his family use the water body for wading during the summer months, and also enjoy looking for various types of animals in and along the stream. He also commented that he has seen people wading in Pleasant Valley Creek once or twice during the summer months. (During the first visit to the Martin home, Mrs. Martin commented on the status of the stream, but declined a formal interview.)

Date: 06/27/05

Time: 10:35 AM

Name: Steve Black

Reason for Interview: WWTF Operator – phone interview

Steve Black has worked at the Cuba WWTF for 20 years. He stated that he does not use the water body for recreation because it is not large enough and would hardly exist if the WWTF wasn't discharging into it. Mr. Black said he has not seen anyone using the stream for recreation on account of its minute size.