

Use Attainability Analysis
for
Water Body Identification # 1698
Fiddle Creek

Conducted by:
Environmental Resources Coalition

To:
Missouri Department of Natural Resources
Water Protection Program

Submitted: November 3, 2005



Stream Description – WB ID: 1698 – Fiddle Creek

Fiddle Creek (WB# 1698) 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 Fiddle Creek classified stream reach (WB# 1698) begins just north of Highway T approximately 4 miles east of Labadie, Missouri and flows east to the confluence with Tavern Creek. Approximately one-mile of the two-mile stretch lies upstream of the village of St. Albans wastewater treatment facility outfall (WWTF) (MO0113395). The surrounding area includes forest and agricultural fields and a levee borders the entire length of the stream on the north side. This water body is primarily used to convey runoff from the surrounding uplands to the Missouri River.

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet A: Water Body Identification

Water Body Name: Fiddle Creek
8 – digit HUC: 10300200
Missouri WBID # 1698
County: Franklin
Upstream Legal Description: Sec. 16, T44N, R2E, Franklin County
Downstream Legal Description: Sec 1 T44N R2E, - Confluence with Tavern Creek
Upstream Coordinates: Latitude 38.5588663 ° N , Longitude 90.7905007 ° W
Downstream Coordinates: Latitude 38.5857030 ° N , Longitude 90.7681012 ° W
Discharger Facility Name(s): FCPWSD #3, St. Albans WWTP
Discharger Permit Number(s): MO0113395
Number of Sites Evaluated: 5
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

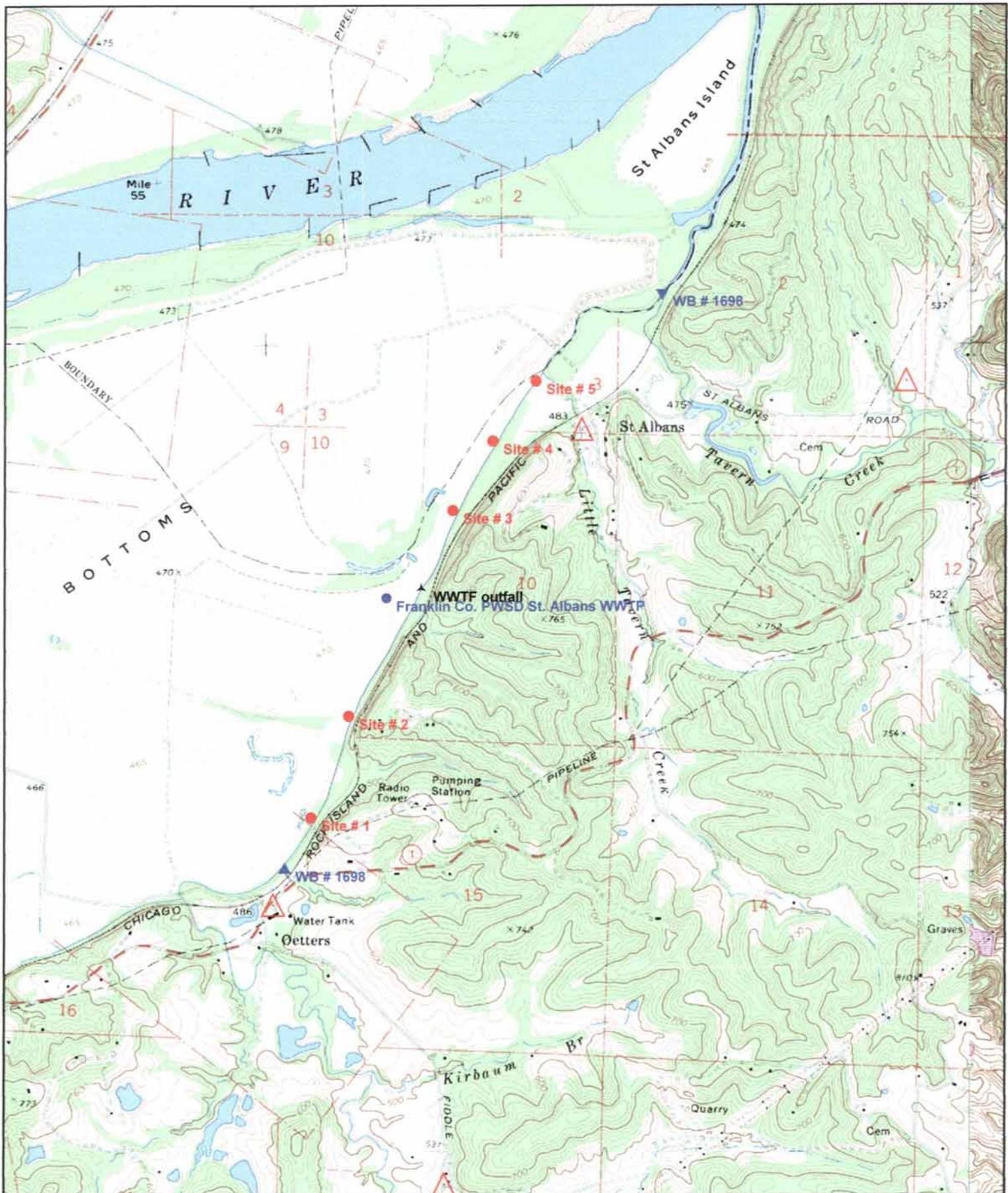
Date: Nov 3, 2005

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
Washington, Missouri - (Station ID: 238746)

Date	Precipitation (Inches)	Min. Temp (°F)	Max. Temp (°F)	Average Temp (°F)
08/22/2005	0	69	87	78
08/23/2005	0	66	78	72
08/24/2005	Trace	65	80	73
08/25/2005	0.06	66	79	73
08/26/2005	0.47	68	84	76
08/27/2005	0.51	68	89	79
08/28/2005	Trace	64	89	77
08/29/2005	0	63	87	75
08/30/2005	0.14	65	80	73
08/31/2005	0	63	86	75
09/01/2005	0	63	85	74



Name: LABADIE
 Date: 10/17/2005
 Scale: 1 inch equals 2000 feet

Location: 038.5714591° N 090.7775100° W

WB # 1698 – Fiddle Creek

Site # 1 - Levee entrance – Upstream of outfall

GPS Location	38.5612186 North 90.7889557 West
Elevation (feet)	478.2

Upstream View
09/01/05



Downstream View
09/01/05



Physical Dimensions – Site # 1

	09/01/05	09/01/05
Assessment Location	Upstream	Downstream
Time	1:06 PM	1:15 PM
Stream Type	Run	Run
Width (m)	6.10	2.44
Length (m)	60.96	60.96
Avg Depth (cm)	15.82	4.78
Maximum Depth (cm)*	26.0	9.0
Flow Present	Little to no flow	Little to no flow
Flow (cfs)	-	-

SUBSTRATE

Cobble	0%	0%
Gravel	20%	20%
Sand	20%	20%
Silt	60%	60%
Mud / Clay	0%	0%
Bedrock	0%	0%
	100%	100%

OTHER

Uses Observed	None	None
Evidence of Human Use (WBCR)	None	None
Aquatic Vegetation	None	None
<i>Water Characteristics</i>		
Odor	None	None
Color	Lightly turbid	Lightly turbid
Bottom Deposits	none	none
Surface Deposits	scum	scum

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

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

09/01/05 Assessors walked from site # 1 to just past site # 2 near the WWTF outfall

WB # 1698 – Fiddle Creek

Site # 2 - Levee entrance – upstream of WWTF outfall

GPS Location

**38.5659691 North
90.7867311 West**

**Upstream View
09/01/05**



**Downstream View
09/01/05**



Physical Dimensions – Site # 2

	09/01/05	09/01/05
Assessment Location	Upstream	Downstream
Time	1:29 PM	1:37 PM
Stream Type	Run	Run
Width (m)	7.32	7.47
Length (m)	60.96	60.96
Avg Depth (cm)	20.69	28.08
Maximum Depth (cm)*	35.0	41.0
Flow Present	Little to no flow	Little to no flow
Flow (cfs)	-	-

SUBSTRATE

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

OTHER

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

Water Characteristics

Odor	None	None
Color	Turbid / humic color	Turbid / humic color
Bottom Deposits	None	None
Surface Deposits	Scum, duckweed, oil sheen	Scum, duckweed, oil sheen

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

NOTES: Site # 2 is upstream of lagoon outfall

**Areas of interest for WB 1698 – Fiddle Creek
09/01/05**



St. Albans treatment lagoon



St. Albans pumping station



Outfall pipe for St. Albans WWTF

GPS Location

38.5722984 North
90.7824825 West

WB # 1698 – Fiddle Creek

Site # 3 - Levee entrance – downstream of WWTF outfall

GPS Location

38.5755644 North

90.7805341 West

Upstream View

09/01/05



Downstream View

09/01/05



Physical Dimensions – Site # 3

	09/01/05	09/01/05
Assessment Location	Upstream	Downstream
Time	2:09 PM	2:15 PM
Stream Type	Run	Run
Width (m)	9.14	9.45
Length (m)	60.96	60.96
Avg Depth (cm)	38.38	33.25
Maximum Depth (cm)*	64.0	65.0
Flow Present	Little to no flow	Little to no flow
Flow (cfs)	-	-

SUBSTRATE

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

OTHER

Uses Observed	None	None
Evidence of Human Use (WBCR)	None	None
Aquatic Vegetation	100% duckweed	100% duckweed
<i>Water Characteristics</i>		
Odor	None	None
Color	Turbid	Turbid
Bottom Deposits	None	None
Surface Deposits	Heavy duckweed growth	Heavy duckweed growth

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

NOTES: Site # 3 is located approximately 1,500 feet down stream of the WWTF outfall.

WB # 1698 – Fiddle Creek

Site # 4 - Levee entrance – downstream of WWTF outfall

GPS Location

38.5788374 North

90.7781829 West

Upstream View

09/01/05



Downstream Views

09/01/05



Physical Dimensions – Site # 4

	09/01/05	09/01/05
Assessment Location	Upstream	Downstream
Time	2:33 PM	2:38 PM
Stream Type	Run	Run
Width (m)	8.53	4.27
Length (m)	30.48	30.48
Avg Depth (cm)	14.53	4.20
Maximum Depth (cm)*	25.0	8.0
Flow Present	Little to no flow	Little to no flow
Flow (cfs)	-	-

SUBSTRATE

Cobble	0%	0%
Gravel	0%	0%
Sand	0%	10%
Silt	60%	30%
Mud / Clay	40%	60%
Bedrock	0%	0%
	100%	100%

OTHER

Uses Observed	None	None
Evidence of Human Use (WBCR)	None	None
Aquatic Vegetation	20% plant growth	20% plant growth
<i>Water Characteristics</i>		
Odor	None	None
Color	Turbid	Turbid
Bottom Deposits	Green periphyton growth on sediment	Green periphyton growth on sediment
Surface Deposits	None	None

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

NOTES: Site # 4 is located approximately 2,900 feet down stream of the WWTF outfall.

09/01/05 – plants have grown up in the stream bed at this location

WB 1698 – Typical access to stream



Note: Approximately ninety percent of the stream access from the levee looks like the picture above, which makes getting to the stream very difficult. Assessors used machetes and deer paths when available to access stream. This brush is predominantly composed of dense eight to ten foot tall ragweed stands, which line the levee side of the creek.

WB # 1698 – Fiddle Creek

**Site # 5 - Levee entrance – near bridge
(downstream most site)**

GPS Location

38.5816072 North

90.7756162 West

Upstream View

09/01/05



Downstream View

09/01/05



Physical Dimensions – Site # 5

	09/01/05	09/01/05
Assessment Location	Upstream	Downstream
Time	2:44 PM	2:55 PM
Stream Type	Run	Run
Width (m)	4.88	5.18
Length (m)	30.48	30.48
Avg Depth (cm)	29.44	27.00
Maximum Depth (cm)*	45.0	39.0
Flow Present	No	No
Flow (cfs)	-	-

SUBSTRATE

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

OTHER

Uses Observed	None	None
Evidence of Human Use (WBCR)	None	None
Aquatic Vegetation	10% macrophytes & duckweed	10% macrophytes & duckweed
<i>Water Characteristics</i>		
Odor	None	None
Color	Turbid	Turbid
Bottom Deposits	None	None
Surface Deposits	Some duckweed	Some duckweed

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

NOTES: Site # 5 is the downstream most assessment site on Fiddle Creek.

WB 1698 – Access to Levee

09/01/05

Note: The levee is gated and signs line the roadside in order to keep people and unauthorized vehicles and people out of the area.



Site Descriptions

Site #1: Site #1 of Fiddle Creek is located upstream of the WWTF outflow, lagoons, and pumping station and is the uppermost site of the reach. The site is difficult to get to due to the dense eight to ten feet tall ragweed growth and brush, wooded areas, and steep stream banks.

Site #2: Site #2 of Fiddle Creek is located on upstream of the WWTF outflow, lagoons, and pumping station. The stream contained two truck tires that were embedded in the stream. The site is difficult to get to due to the dense eight to ten feet tall ragweed growth and brush, wooded areas, and steep stream banks.

Site #3: Site #3 of Fiddle Creek is located downstream of the WWTF outflow pipe, lagoons, and the pumping station. The stream is covered in duckweed around the outflow and also at site # 3. The site is difficult to get to due to the dense eight to ten feet tall ragweed growth and brush, and steep stream banks.

Site #4: Site #4 of Fiddle Creek is located approximately 1,400 feet downstream of site # 3. The stream bed at the site is grown up in weeds on the downstream side due to lack of consistent water in the stream. The site is difficult to get to due to the dense eight to ten feet tall ragweed growth and brush, and steep stream banks.

Site #5: Site #5 of Fiddle Creek is located just upstream of the bridge that is used for access to the levee and bottom ground. The site is difficult to get to due to the dense eight to ten feet tall ragweed growth and brush, and steep stream banks. Downstream of the site, several signs warn that passing beyond that point or using that stream for any activity without permission is prohibited.

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 D. Bacon

Date: Nov 3, 2005

Organization: Environmental Resources Coalition

Position: Dir of Aquatic Services

Summaries of Interviews

The following interviews were conducted by Abby Welschmeyer with landowners and creek users during the months of September and October. Questions were asked of the interviewee either in person or over the phone, and 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.)

Date: 09/12/05

Time: 10:58 AM

Name: Pete Bigford

Reason for Interview: works for St. Albans properties – phone interview

Pete Bigford has worked as the general manager for St. Albans (adjacent to Fiddle Creek) properties for 11 years. Pete stated that he does not use the stream for any recreational activities. Mr. Bigford commented that there is no reason to use the stream because there is a recreational lake that people can swim, fish, etc. in that is just south of the stream. Any form of use of the stream is strongly discouraged which can be seen by reading the signs before crossing the gated stream bridge.

Date: 09/19/05

Time: 2:40 PM

Name: Ken Meyer

Reason for Interview: works for St. Albans properties – phone interview

Ken Meyer has lived and worked in the St. Albans area for 34 years. He stated that he does not use Fiddle creek for recreational activities nor has he ever seen anyone do so. Mr. Meyer has also never been asked by anyone in the St. Albans area if they could use the stream. Ken commented that most of the time the stream is dry near the bridge unless the area has received rain.

Date: 10/24/05

Time: 4:55 PM

Name: Bobby Glenn Hathcock

Reason for Interview: works for Alliance Water Resources – manages the St. Albans' WWTF (phone interview)

Bob Hathcock has worked for Alliance Water Resources for 7 ½ years. He is the water and waste water manager for the St. Albans' Lagoon. Hathcock has never used the stream nor has he ever seen anyone using the stream. He commented that the stream, for the most part, is too shallow to use. No one has ever asked permission to use the stream in the 7 ½ years that Bob has worked for Alliance.