Use Attainability Analysis

for

Water Body Identification # 0187

Coon Creek

Conducted by:

Environmental Resources Coalition

To:

Missouri Department of Natural Resources
Water Protection Program

Submitted: July 14, 2005

Environmental Resources Coalition

Stream Description – WB ID: 0187 – Coon Creek

Coon Creek (WB 0187) is a 13 mile Class C stream. The water body is located in northern Montgomery County in the Eastern Section of the Glaciated Plains physiographic region (Thom and Wilson 1980). The Glaciated Plains physiographic region covers the northern third of Missouri and is characterized by soils and topography that resulted from the influence of the Kansasan stage of the Pleistocene glaciation. However, the Eastern Section of the Glaciated Plains physiographic region is distinguished by regions of flat, claypan soils and rugged river breaks and the upland soils are primarily of glacial till derivation. The streams in this section flow eastward to the Mississippi River or southward to the lower Missouri River.

Coon Creek is the receiving water body for the Middletown City Lagoon (MO0055387). The classified reach runs from approximately 1 1/2 miles upstream of Morgan School Road (site # 1) and flows east to the confluence with the West Fork of the Cuivre River. The effluent from the Middletown City Lagoon enters Coon Creek between site # 5 and site # 6. Six sites of the stream were assessed for physical characteristics. During this assessment, the surveyor did not find sufficient depth to support whole body contact recreation (maximum depth of at least one meter or average depth of at least ½ meter.) Primary surroundings include farm fields, large wooded areas, and small rural residential sites.

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: Coon Creek
8 – digit HUC: 07110008
Missouri WBID # 0187
County: Montgomery
Upstream Legal Description: Sec. 10 T50 R6W, Montgomery County
Downstream Legal Description: Sec. 8, T50N, R4W, Montgomery County
Upstream Coordinates: Latitude 39.1163985° N , Longitude 91.5567596° W
Downstream Coordinates: Latitude 39.1196557 ° N , Longitude 91.3783170 ° W
Discharger Facility Name(s): Middletown City Lagoon
Discharger Permit Number(s): MO0055387
Number of Sites Evaluated: 6
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

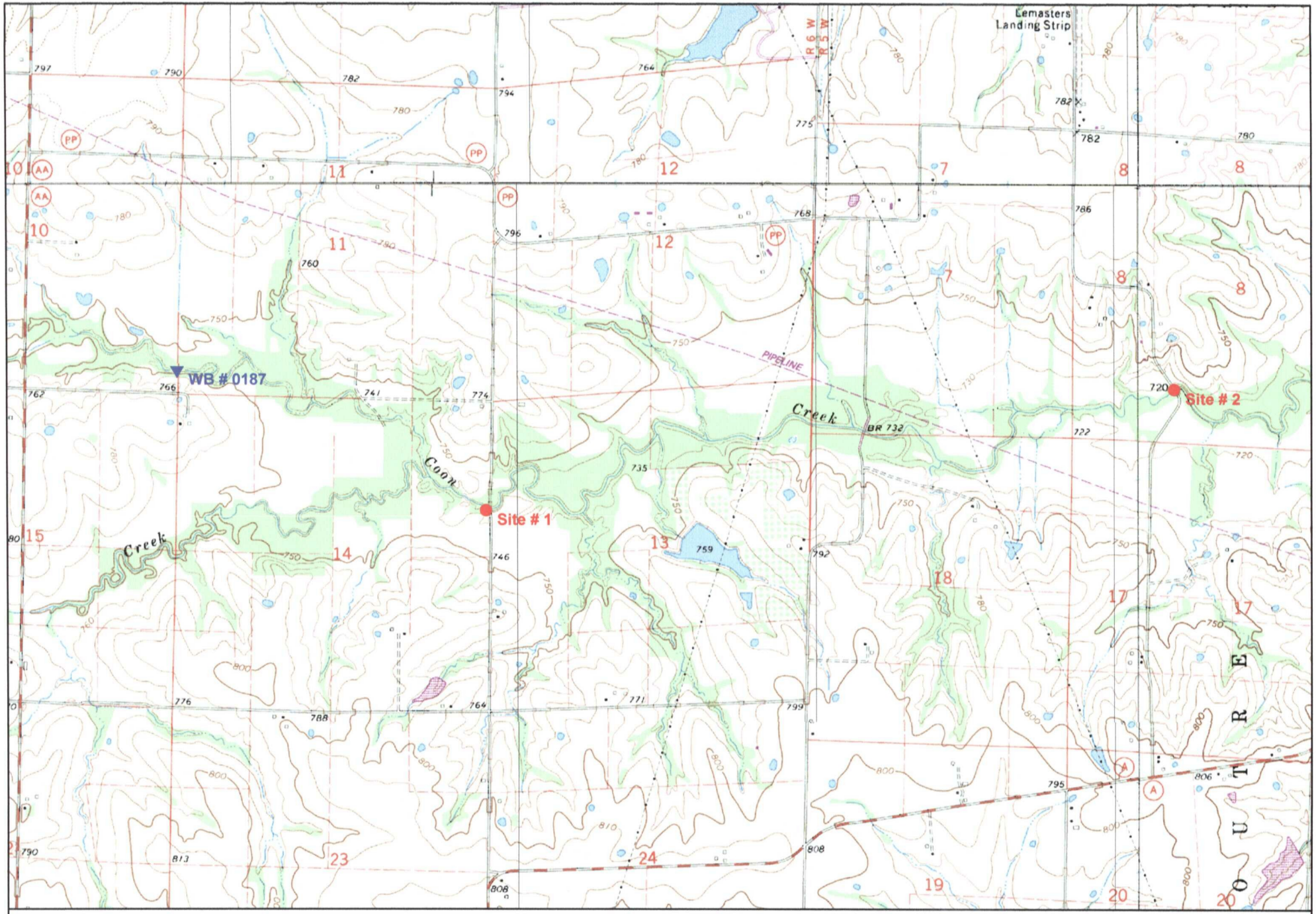
Weather conditions for the field surveys and the previous ten days are listed in the tables below.

Data from the Midwestern Regional Climate Center
Middletown, MO, Station ID: 235207

Date	Precipitation (Inches)	Min. Temp (°F)	Max. Temp (°F)	Average Temp (°F)
04/15/2005	0	39	73	56
04/16/2005	0	43	77	60
04/17/2005	0	47	80	64
04/18/2005	Missing	52	80	66
04/19/2005	0	55	81	68
04/20/2005	0	57	78	68
04/21/2005	0.3	54	71	63
04/22/2005	0.5	52	61	57
04/23/2005	0	38	53	46
04/24/2005	Missing	33	59	46
04/25/2005	Missing	36	61	49

Date	Precipitation (Inches)	Min. Temp (°F)	Max. Temp (°F)	Average Temp (°F)
05/28/2005	0	51	78	65
05/29/2005	0	53	77	65
05/30/2005	0.08	58	78	68
05/31/2005	0	60	81	71
06/01/2005	0	56	81	69
06/02/2005	0	57	82	70
06/03/2005	0	58	83	71
06/04/2005	0	61	91	76
06/05/2005	Missing	64	87	76
06/06/2005	0	62	85	74
06/07/2005	0	64	90	77

* Missing indicates that data was not available from the Midwestern Regional Climate Center.



Name: WELLSVILLE
Date: 7/13/2005
Scale: 1 inch equals 2000 feet

Location: 039.1124230° N 091.5283802° W

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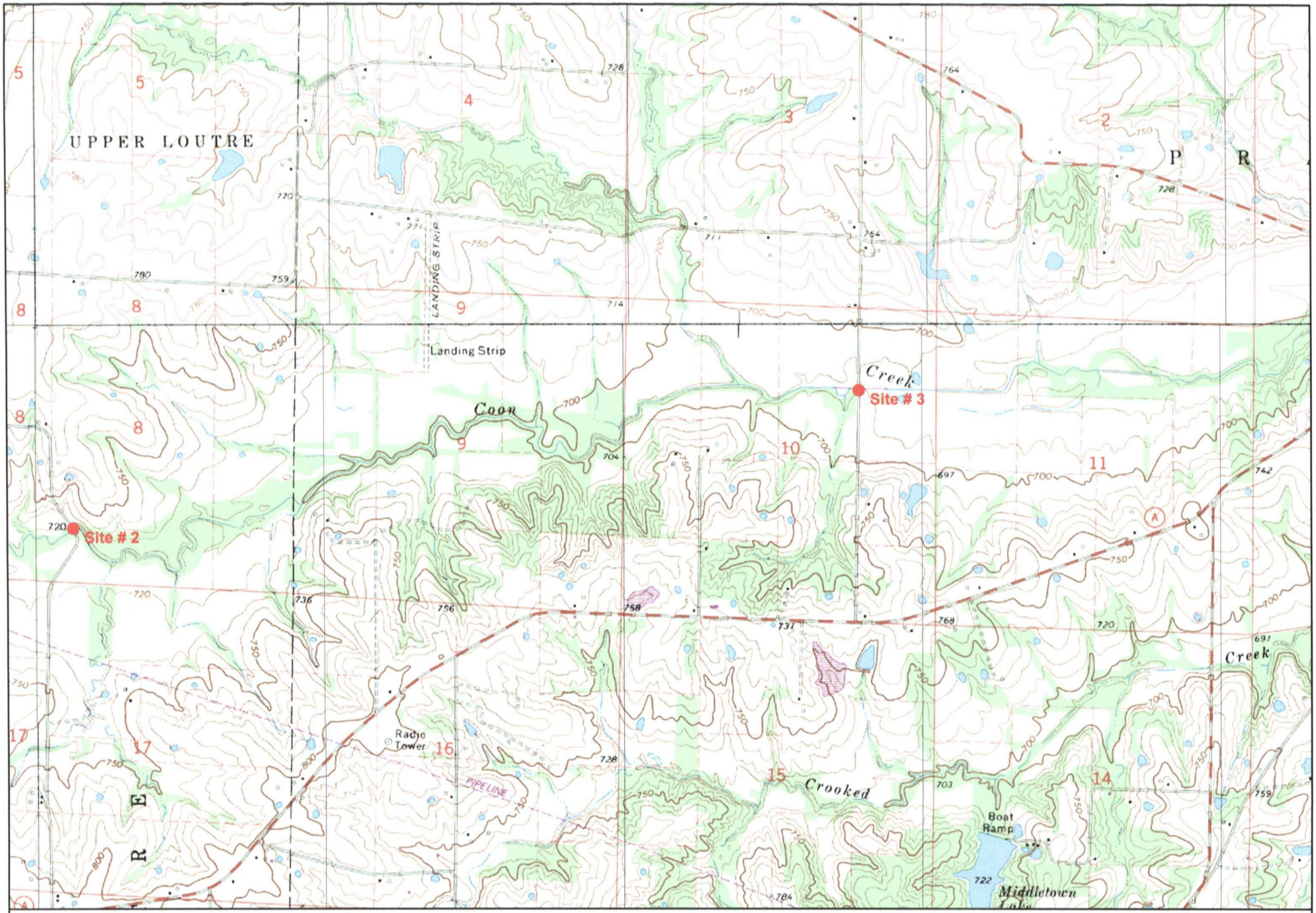

Name: BUELL
Date: 7/13/2005
Scale: 1 inch equals 2000 feet

Location: 039.1188683° N 091.4631667° W

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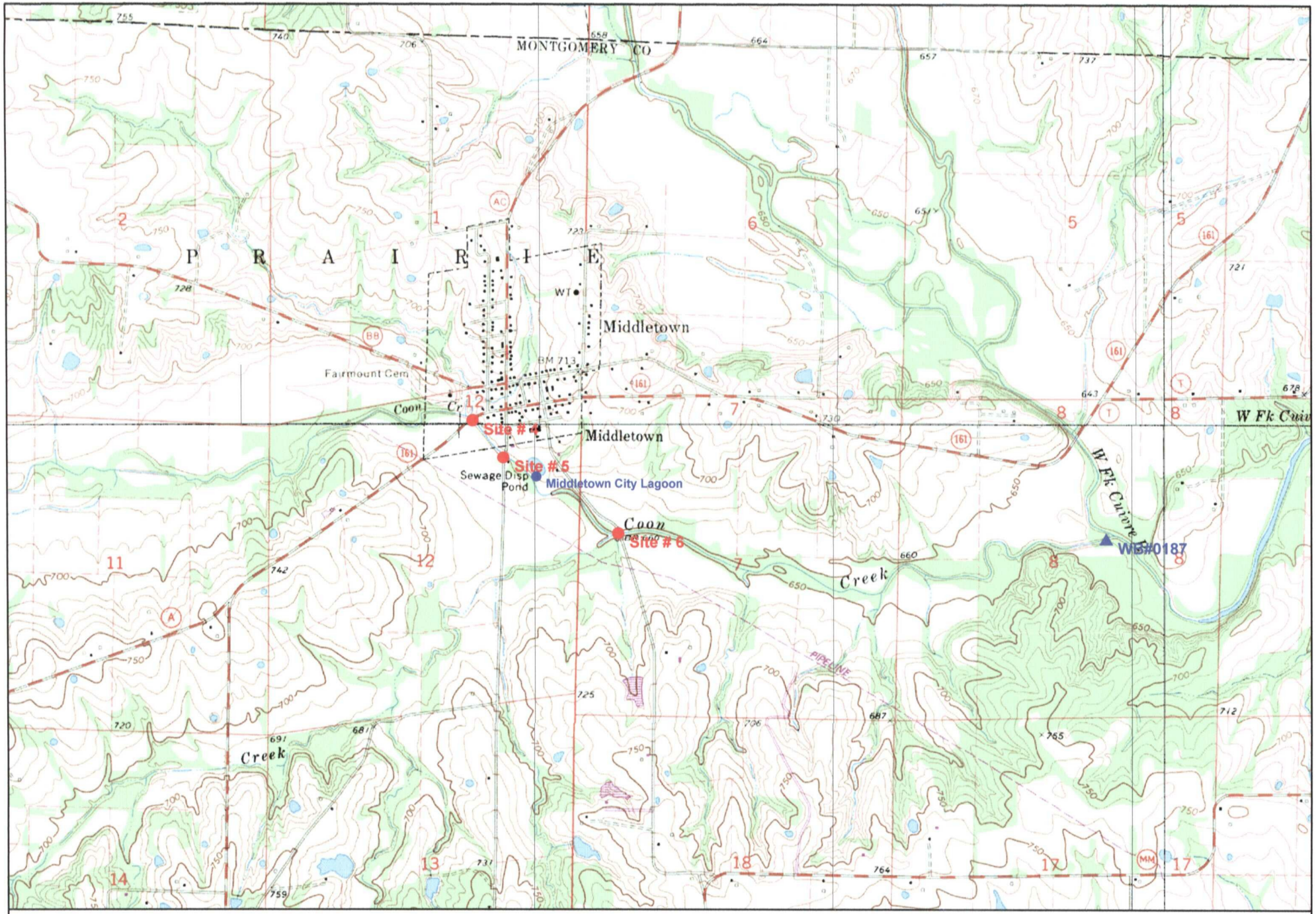

Name: BUELL
Date: 7/13/2005
Scale: 1 inch equals 2000 feet

Location: 039.1234548° N 091.4049282° W

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WB # 0187 – Coon Creek

Site # 1 - Morgan School Road

GPS Location	**1099738 North** **387163 West**
Elevation (feet)	**883.5**

Upstream Views

04/25/05 **06/07/05**

Downstream Views

04/25/05 **06/07/05**

Physical Dimensions – Site # 1

	04/25/05	06/07/05
Assessment Location	Upstream	Upstream
Time	11:30 AM	10:55 AM
Stream Type	Pool	Pool
Width (m)	5.79	6.55
Length (m)	15.24	15.24
Ave Depth (cm)	41.25	46.58
Maximum Depth (cm)*	68.0	73.0
Flow Present	No	No
Flow (cfs)	-	-
SUBSTRATE		
Cobble	60%	40%
Gravel	0%	0%
Sand	0%	0%
Silt	0%	0%
Mud / Clay	40%	60%
Bedrock	0%	0%
	100%	100%
OTHER		
Uses Observed	None	None
Evidence of Human Use (WBCR)	None	None
Aquatic Vegetation	None	Algae
Water Characteristics		
Odor	None	None
Color	Turbid, tea colored	Turbid, tea colored
Bottom Deposits	None	None
Surface Deposits	None	None

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

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

WB # 0187 – Coon Creek

Site # 2 - Swoop School Road

GPS Location 39.1155708 North
91.4979331 West

Upstream Views

04/25/05

06/07/05

Downstream Views

04/25/05

06/07/05

Physical Dimensions – Site # 2

	04/25/05	06/07/05
Assessment Location	Upstream	Upstream
Time	11:52 AM	11:10 AM
Stream Type	Run	Run
Width (m)	9.45	10.36
Length (m)	30.48	30.48
Ave Depth (cm)	32.17	25.94
Maximum Depth (cm)*	57.0	41.0
Flow Present	Yes (very slow)	Yes (very slow)
Flow (cfs)	-	-

SUBSTRATE

Cobble	0%	0%
Gravel	80%	20%
Sand	20%	80%
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	None	None
Water Characteristics		
Odor	None	None
Color	Turbid	Turbid / tea colored
Bottom Deposits	None	None
Surface Deposits	None	Oily film

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

NOTES:

WB # 0187 – Coon Creek

Site # 3 - Coon Creek Road

GPS Location **39.1220032 North**
91.451338 West

Upstream Views

04/25/05

06/07/05

Downstream Views

04/25/05

06/07/05

Physical Dimensions – Site # 3

	04/25/05	06/07/05
Assessment Location	Downstream	Downstream
Time	12:10 PM	11:24 AM
Stream Type	Run	Run
Width (m)	13.72	17.69
Length (m)	60.96	60.96
Ave Depth (cm)	21.75	15.23
Maximum Depth (cm)*	32.0	40.0
Flow Present	Yes	Yes
Flow (cfs)	-	-
SUBSTRATE		
Cobble	0%	0%
Gravel	20%	60%
Sand	0%	20%
Silt	80%	20%
Mud / Clay	0%	0%
Bedrock	0%	0%
	100%	100%
OTHER		
Uses Observed	None	None
Evidence of Human Use (WBCR)	None	None
Aquatic Vegetation	None	Floating mats of algae, algae on rocks
Water Characteristics		
Odor	None	None
Color	Turbid	Turbid
Bottom Deposits	None	None
Surface Deposits	None	None

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

NOTES:

WB # 0187 – Coon Creek

Site # 4 - Highway 161

GPS Location 39.1252518 North
91.4159993 West

Upstream Views

04/25/05

06/07/05

Downstream Views

04/25/05

06/07/05

Physical Dimensions – Site # 4

	04/25/05	06/07/05
Assessment Location	Upstream	Upstream
Time	12:25 PM	11:34 AM
Stream Type	Run	Run
Width (m)	11.89	10.06
Length (m)	45.72	45.72
Ave Depth (cm)	27.86	16.58
Maximum Depth (cm)*	53.0	34.0
Flow Present	Yes	Yes
Flow (cfs)	-	-
SUBSTRATE		
Cobble	40%	20%
Gravel	40%	80%
Sand	0%	0%
Silt	0%	0%
Mud / Clay	20%	0%
Bedrock	0%	0%
	100%	100%
OTHER		
Uses Observed	None	None
Evidence of Human Use (WBCR)	None	None
Aquatic Vegetation	Filamentous algae	Filamentous algae 40%
Water Characteristics		
Odor	None	None
Color	Turbid	Slightly turbid
Bottom Deposits	None	None
Surface Deposits	None	None

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

NOTES:

WB # 0187 – Coon Creek

Site # 5 - Freemount Road

GPS Location 39.1235025 North
91.4141825 West

Upstream Views

04/25/05

06/07/05

Downstream Views

04/25/05

06/07/05

Physical Dimensions – Site # 5

	04/25/05	06/07/05
Assessment Location	Downstream	Downstream
Time	12:40 PM	11:50 AM
Stream Type	Run	Run
Width (m)	12.80	7.92
Length (m)	15.24	15.24
Ave Depth (cm)	34.89	19.29
Maximum Depth (cm)*	66.0	37.0
Flow Present	Yes	Yes
Flow (cfs)	-	-
SUBSTRATE		
Cobble	30%	30%
Gravel	30%	20%
Sand	40%	50%
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	None	None
Water Characteristics		
Odor	None	None
Color	Turbid	Clear
Bottom Deposits	None	None
Surface Deposits	None	Oily film in places

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

NOTES:

WB # 0187 – Coon Creek

Site # 6 - Post Oak School Rd.

GPS Location 39.119971 North
91.4074032 West

Upstream Views

04/25/05

06/07/05

Downstream Views

04/25/05

06/07/05

Physical Dimensions – Site # 6

	04/25/05	06/07/05
Assessment Location	Upstream	Upstream
Time	12:50 PM	11:48 AM
Stream Type	Run	Run
Width (m)	8.23	8.84
Length (m)	76.20	76.20
Ave Depth (cm)	12.00	23.00
Maximum Depth (cm)*	31.0	45.0
Flow Present	Yes	Yes
Flow (cfs)	-	-
SUBSTRATE		
Cobble	0%	20%
Gravel	10%	50%
Sand	90%	30%
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	None	Algae 30%
Water Characteristics		
Odor	None	None
Color	Lightly turbid	Slightly turbid
Bottom Deposits	None	None
Surface Deposits	None	Foam, oily film

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

NOTES:

In the upstream view picture, Coon Creek is the larger stream to the right.

Site Descriptions

Site #1: Site #1 of Coon Creek is located on Morgan School Road and is the uppermost assessment site of the classified reach. Wooded areas surround the stream at this site. The water is turbid and tea-colored, and there is a great deal of woody debris throughout the site. The banks are steep and brush covered making access to the stream difficult.

Site #2: Site #2 of Coon Creek is located on Swope School Road. Wooded areas surround the stream at this site. Banks are steep and brush covered making access to the stream difficult. Woody debris is very prevalent in the water at this site.

Site #3: Site #3 of Coon Creek is located on Coon Creek Road. At this site, the banks are steep and brush covered making access to the stream difficult. Wooded areas and farm fields surround the stream at this site. The water is very turbid with foam on the surface. There are floating mats of algae, along with thick periphyton growth on the rocks. Woody debris is widespread throughout the site, and the stream has a very slow flow.

Site #4: Site #4 of Coon Creek is located at the Highway 161 bridge at the southwestern edge of the Middletown city limits. Farm fields line one side of the water body, wooded areas and houses line the opposite side. The creek banks within the Highway 161 road easement are not as steep or brush covered as the other assessment sites on Coon Creek.

Site #5: Site #5 of Coon Creek is located on Freemount Road, just south of the Middletown city limits. Wooded areas surround the stream at this site. The banks are steep and brush covered making access to the stream difficult.

Site #6: Site #6 of Coon Creek is located on Post Oak School Road, just south of the Middletown city limits, and is the only site below the Middletown City Lagoon outfall. Pastures, wooded areas, and cropland surround the stream at this site.

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 A. Bastian

Date: 7-14-2005

Organization: ERC

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 May and June of 2005. 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 season, 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: 05/25/05
Time: 2:45 PM
Name: Hugh Lehnen
Reason for interview: lives near site #1

Hugh Lehnen has lived near Coon Creek for 35 years. Mr. Lehnen stated that he does not use the stream for recreation, nor has he seen anyone else using it.

Date: 05/25/05
Time: 2:35 PM
Name: Dennis Lehnen
Reason for Interview: lives near site #1

Dennis Lehnen has lived near Coon Creek for 59 years. He stated that he does not use the water body for recreation, only for livestock watering. Mr. Lehnen said he has not seen anyone use the stream for recreational activities.

Summaries of Interviews (cont'd)

Date: 05/05/05
Time: 3:15 PM
Name: Jason Todd
Reason for Interview: lives near site #1

Jason Todd has lived near Coon Creek for 25 years. He does not use the stream for recreating because he has no need and because it is hard to get to. Mr. Todd stated that he has seen people fishing for bait from the stream, but has not seen anyone get in it.

Date: 05/25/05
Time: 3:32 PM
Name: David Whitehead
Reason for Interview: lives near site #1

David Whitehead has lived near Coon Creek for 52 years, and owns ¾ of a mile along it. He stated that he and his family camp near the stream, but do not get in. Mr. Whitehead said that in 1985 and years prior the stream was mostly sand bars with 3-feet deep holes, and today it is shallow with rock bottoms. He commented that he has not seen anyone recreating in the stream.

Date: 05/25/05
Time: 3:30 PM
Name: Barbara Welschmeyer
Reason for Interview: lives near site #1

Barbara Welschmeyer has lived near Coon Creek for 28 years. She does not use the stream for recreation because it isn't safe. Mrs. Welschmeyer stated that she has not seen anyone use the water body because it is hard to access and the depth of the water is insufficient.

Date: 05/25/05
Time: 3:55 PM
Name: Rodney Allison
Reason for Interview: lives near site #3

Rodney Allison has lived near Coon Creek for 55 years. He stated that he does not use the water body for recreation because of insufficient depth. Mr. Allison said he has not seen other people recreating in the stream.

Summaries of Interviews (cont'd)

Date: 06/30/05
Time: 5:58 PM
Name: David Hughes
Reason for Interview: lives near site #3 – phone interview

David Hughes has lived near Coon Creek for 26 years. He does not use the water body for recreation because of its polluted state. Commenting on the poor state of the stream, Mr. Hughes said, "I guarantee if you ever drink water from it, you won't be leaving." He has not seen anyone using the stream for recreation, but did say people used to trap and fish from it.

Date: 06/30/05
Time: 6:12 PM
Name: Herb Cochran
Reason for Interview: farms land between sites # 4, 5, and 6 – phone interview

Herb Cochran has farmed along Coon Creek for 20 years. He does not use the stream for recreational activities because there are no fish in it, and he has no time to do so. Mr. Cochran stated that he has not seen anyone swimming or wading in the stream. However, he has seen people fishing a few times during the summer months during what he referred to as low to medium flow conditions.

Date: 7/11/05
Time: 7:59 AM
Name: Ronald Ford
Reason for Interview: operates WWTF in Middletown (between sites 5 and 6) – phone interview

Ronald Ford has operated the Middletown City Lagoon for 27 years. He does not use Coon Creek and has never seen anyone else using the creek for recreation activities. Ford stated that lack of water is one of the primary reasons that no one uses the stream. Ford also mentioned that the stream is used for livestock watering.

Date: 6/30/05
Time: 6:09 PM
Name: Willard Leverett
Reason for Interview: owns land along site #6 – phone interview

Willard Leverett has lived near Coon Creek for 78 years, and owns approximately ¼ to ½ mile along the stream. He stated that about ten years ago he would fish from the water body during the summer months, but has not done so lately. Mr. Leverett also mentioned that he has occasionally seen people fish from the stream during the summer months.