

Use Attainability Analysis
for
Waterbody Identification # 2618
Ditch # 2

Conducted by:
Environmental Resources Coalition

To:
Missouri Department of Natural Resources
Water Protection Program

Submitted: December 22, 2005



Stream Description – WB ID: 2618 – Ditch # 2

Ditch # 2 (WB 2618) is located in the Pleistocene Valley Plains (Level IV Region 73b) of the Mississippi River Alluvial Plain eco-region. Chapman et al. (2002) characterized the region as the following:

*A broad, flat, alluvial plain, the **Pleistocene Valley Plains** eco-region is distinct from the dissected topography of the neighboring Ozark Highlands (39). The region was formed from Pleistocene glacial outwash deposits from the Mississippi and Ohio Rivers and subsequently covered with fertile, thick, alluvial and eolian deposits. Sand dune fields and eolian deposits also occur in the plain between the Bluff Hills (Crowley's Ridge) (74a) and the Ozark Highlands (39) to the west, and along the eastern border of Sikeston Ridge, center of the New Madrid Seismic zone. Most of the area was historically covered with bald cypress, tupelo swamp forest, and mixed deciduous bottomland forest. Natural grasslands occupied sandy terraces. Today, row crop agriculture dominates the landscape with primary production in soybeans, cotton, and rice.*

Ditch # 2 is an eight mile long class C stream in southeastern Ripley County. The classified stream reach begins just upstream of Highway 142 north of the city of Naylor and runs southwest to just downstream of the Ripley County Road H-6 bridge. The majority of the classified stream segment lies downstream of the city of Naylor wastewater treatment facility (WWTF) (MO0099279) and was the focus of our stream assessment. The surrounding area is primarily in agricultural production, with exception of a few rural residences which dot the landscape. This waterbody is primarily used for field drainage.

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

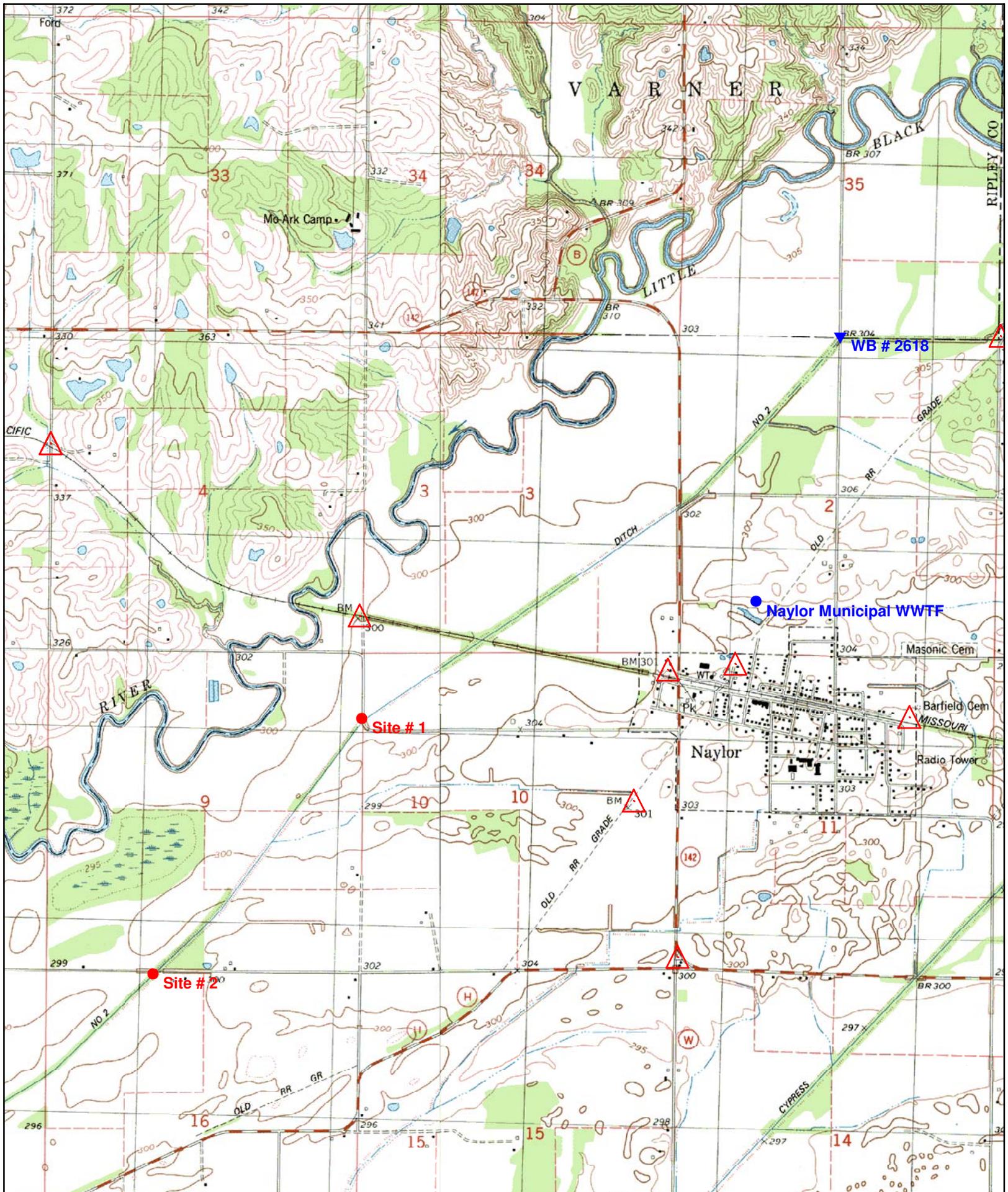
Data Sheet A: Waterbody Identification

Waterbody Name: Ditch # 2
8 – digit HUC: 11010008
Missouri WBID # 2618
County: Ripley
Upstream Legal Description: Sec. 2, T22N, R4E, Ripley County
Downstream Legal Description: Sec. 30, T22N, R4E, Ripley County
Upstream Coordinates: Latitude 36.592136 ° N , Longitude 90.601862 ° W
Downstream Coordinates: Latitude 36.519322 ° N , Longitude 90.686643 ° W
Discharger Facility Name(s): Naylor Municipal WWTF
Discharger Permit Number(s): MO0099279
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.

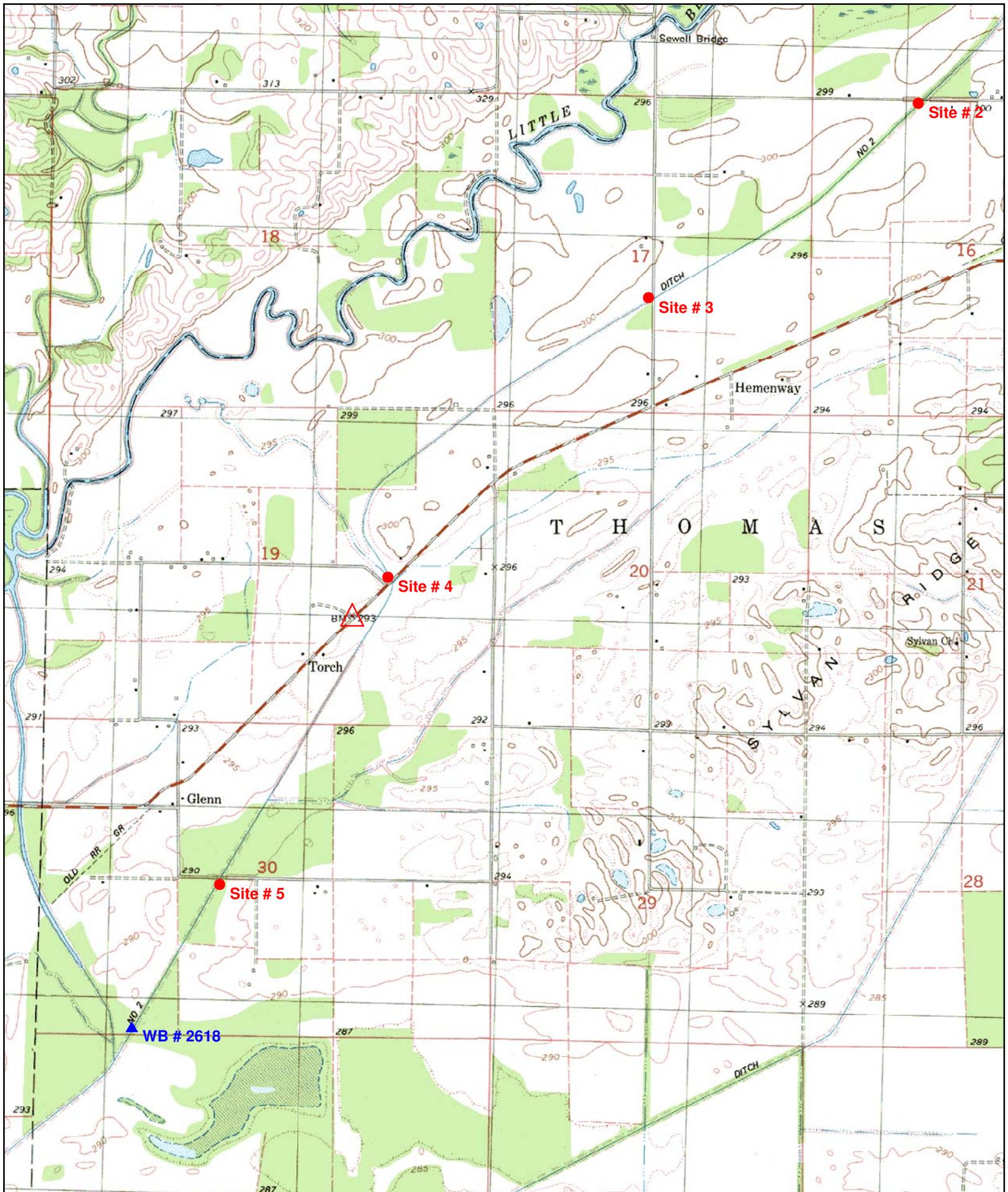
Signed: Robert R. Bacon

Date: 12-22-2005



Name: NAYLOR
 Date: 12/20/2005
 Scale: 1 inch equals 2000 feet

Location: 036.5798877° N 090.6213050° W



Name: OXLY
Date: 12/20/2005
Scale: 1 inch equals 2000 feet

Location: 036.5392847° N 090.6653509° W

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
Doniphan, Missouri - Station ID: 232289

Date	Precipitation (Inches)	Min. Temp (°F)	Max. Temp (°F)	Avg. Temp (°F)
04/05/2005	0	44	74	59
04/06/2005	0.31	54	76	65
04/07/2005	0.22	54	69	62
04/08/2005	0.40	48	64	56
04/09/2005	0	48	74	61
04/10/2005	0	48	76	62
04/11/2005	0	59	79	69
04/12/2005	1.00	53	65	59
04/13/2005	0	50	65	58
04/14/2005	0.01	44	60	52
04/15/2005	0	35	74	55

Date	Precipitation (Inches)	Min. Temp (°F)	Max. Temp (°F)	Avg. Temp (°F)
05/23/2005	0.04	61	90	76
05/24/2005	0	52	90	71
05/25/2005	0	46	77	62
05/26/2005	0	44	73	59
05/27/2005	0	44	75	60
05/28/2005	Trace	45	76	61
05/29/2005	0	51	85	68
05/30/2005	0	52	82	67
05/31/2005	0	52	84	68
06/01/2005	0	61	85	73
06/02/2005	0	61	82	72

Weather Conditions (continued)

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

Data from the Midwestern Regional Climate Center

Doniphan, Missouri - Station ID: 232289

Date	Precipitation (Inches)	Min. Temp (°F)	Max. Temp (°F)	Average Temp (°F)
10/16/2005	0	39	80	60
10/17/2005	0	39	75	57
10/18/2005	0	42	81	62
10/19/2005	0	50	82	66
10/20/2005	0	52	89	71
10/21/2005	0.08	53	73	63
10/22/2005	0	41	61	51
10/23/2005	0	41	68	55
10/24/2005	0	33	52	43
10/25/2005	0	32	56	44
10/26/2005	0	27	56	42

WB # 2618 – Ditch # 2

Site # 1 – Ripley County Road 142

GPS Location

**36.5743879 North
90.6295391 West**

Upstream Views

04/15/05



06/02/05



Downstream Views

04/15/05



06/02/05



WB # 2618 – Ditch # 2

Site # 1 - (continued)

**Upstream View
10/26/05**



**Downstream View
10/26/05**



Physical Dimensions – Site # 1

	04/15/05	06/02/05
Assessment Location	Upstream	Upstream
Time	7:40AM	8:07AM
Stream Type	Run	Run
Width (m)	6.71	6.86
Length (m)	482.80	482.80
Avg. Depth (cm)	49.81	-
Maximum Depth (cm)*	90.0	125
Flow Present	No	No
Flow (cfs)	-	-

SUBSTRATE

Cobble	0%	0%
Gravel	0%	0%
Sand	0%	0%
Silt	50%	50%
Mud / Clay	50%	50%
Bedrock	0%	0%
	100%	100%

OTHER

Uses Observed	None	None
Evidence of Human Use (WBCR)	None	None
Aquatic Vegetation	Macrophytes - coontail (~20% coverage)	Floating mats of algae
<i>Water Characteristics</i>		
Odor	Sulfurous gas expelled from sediment	Sulfurous gas
Color	Turbid	Very turbid
Bottom Deposits	8 to 10 inches of fine sediment	Fine Sediment
Surface Deposits	None	Small amounts of foam

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

NOTES:

06/02/2005 cross-section measurements not taken - no average depth calculated

Physical Dimensions – Site # 1 (continued)

	10/26/05	10/26/05
Assessment Location	Upstream	Downstream
Time	2:25 PM	2:30 PM
Stream Type	Run	Run
Width (m)	4.88	6.10
Length (m)	482.80	482.80
Avg. Depth (cm)	25.56	27.27
Maximum Depth (cm)*	49.0	45.0
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	20% macrophyte cover	20% macrophyte cover

Water Characteristics

Odor	Sulfurous gas	Sulfurous gas
Color	Turbid	Turbid
Bottom Deposits	None	None
Surface Deposits	None	None

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

WB # 2618 – Ditch # 2

Site # 2 – Ripley County Road H-1

GPS Location

**36.5624675 North
90.6415397 West**

Upstream Views

04/15/05



06/02/05



Downstream Views

04/15/05



06/02/05



WB # 2618 – Ditch # 2

Site # 2 - (continued)

**Upstream View
10/26/05**



**Downstream View
10/26/05**



Physical Dimensions – Site # 2

	04/15/05	06/02/05
Assessment Location	Downstream	Downstream
Time	8:25AM	8:45AM
Stream Type	Run	Run
Width (m)	6.91	6.50
Length (m)	740.36	740.36
Avg. Depth (cm)	28.46	27.46
Maximum Depth (cm)*	45.0	47.0
Flow Present	No	No
Flow (cfs)	-	-
 <u>SUBSTRATE</u>		
Cobble	0%	0%
Gravel	0%	0%
Sand	20%	20%
Silt	50%	50%
Mud / Clay	30%	30%
Bedrock	0%	0%
	100%	100%
 <u>OTHER</u>		
Uses Observed	None	None
Evidence of Human Use (WBCR)	None	None
Aquatic Vegetation	None	None
<i>Water Characteristics</i>		
Odor	None	None
Color	Turbid	Turbid
Bottom Deposits	Fine sediment	None
Surface Deposits	None	Foam

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

Physical Dimensions – Site # 2 (continued)

	10/26/05	10/26/05
Assessment Location	Upstream	Downstream
Time	2:39 PM	2:39 PM
Stream Type	Run	Run
Width (m)	3.96	Dry
Length (m)	740.36	740.36
Avg. Depth (cm)	13.21	Dry
Maximum Depth (cm)*	21.0	Dry
Flow Present	No	No
Flow (cfs)	-	-

SUBSTRATE

Cobble	0%	0%
Gravel	0%	0%
Sand	0%	0%
Silt	90%	90%
Mud / Clay	10%	10%
Bedrock	0%	0%
	100%	100%

OTHER

Uses Observed	None	None
Evidence of Human Use (WBCR)	None	None
Aquatic Vegetation	Bottom algae, < 5 % macrophyte coverage	None
<i>Water Characteristics</i>		
Odor	None	None
Color	Turbid	None
Bottom Deposits	None	None
Surface Deposits	None	None

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

WB 2618 - Ditch # 2

06/02/05

Irrigation of crops caused increased water level in Ditch # 2



Picture # 1



Picture # 2



Picture # 3

Picture # 1 – rice field near Ditch # 2 –water runoff

Picture # 2 – white irrigation tubes in field –watering corn

Picture # 3 – flooding of rice fields adjacent to Ditch # 2

WB 2618 - Ditch # 2

06/02/05

Irrigation of crops caused increased water level in Ditch # 2



Picture # 1



Picture # 2



Picture # 3

Picture # 1 – overflow pipe from rice field to ditch that runs into Ditch # 2

Picture # 2 – drainage pipe emptying into Ditch # 2

Picture # 3 –example of drainage pipe and Ditch # 2 in same picture

WB # 2618 – Ditch # 2

Site # 3 – Ripley County Road H-4

GPS Location

36.5533861 North
90.6570665 West

Upstream Views

04/15/05



06/02/05



Downstream Views

04/15/05



06/02/05



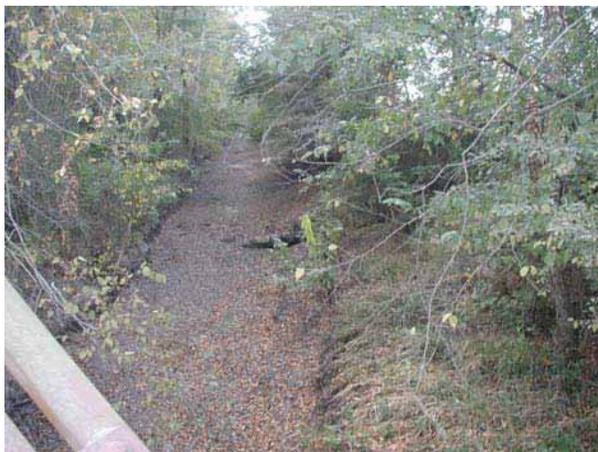
WB # 2618 – Ditch # 2

Site # 3 - (continued)

**Upstream View
10/26/05**



**Downstream View
10/26/05**



Physical Dimensions – Site # 3

	04/15/05	06/02/05
Assessment Location	Upstream	Upstream
Time	8:40AM	8:51AM
Stream Type	Run	Run
Width (m)	6.71	Dry
Length (m)	60.96	60.96
Avg. Depth (cm)	32.21	Dry
Maximum Depth (cm)*	58.0	Dry
Flow Present	No	No
Flow (cfs)	-	-

SUBSTRATE

Cobble	0%	0%
Gravel	0%	0%
Sand	10%	0%
Silt	60%	60%
Mud / Clay	30%	40%
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	Turbid	None
Bottom Deposits	Fine sediment	None
Surface Deposits	None	None

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

NOTES:

06/02/05 –no water in ditch (except for puddles) – several debris dams upstream

Physical Dimensions – Site # 3 (continued)

	10/26/05	10/26/05
Assessment Location	Upstream	Downstream
Time	2:45 PM	2:45 PM
Stream Type	Run	Run
Width (m)	Dry	Dry
Length (m)	60.96	60.96
Avg. Depth (cm)	Dry	Dry
Maximum Depth (cm)*	Dry	Dry
Flow Present	No	No
Flow (cfs)	-	-

SUBSTRATE

Cobble	0%	0%
Gravel	0%	0%
Sand	0%	0%
Silt	90%	90%
Mud / Clay	10%	10%
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	None	None
Bottom Deposits	None	None
Surface Deposits	None	None

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

WB # 2618 – Ditch # 2

Site # 4 - Highway H

GPS Location

**36.5403792 North
90.672082 West**

Upstream Views

04/15/05



06/02/05



Downstream Views

04/15/05



06/02/05



WB # 2618 – Ditch # 2

Site # 4 - (continued)

**Upstream View
10/26/05**



**Downstream View
10/26/05**



Physical Dimensions – Site # 4

	04/15/05	06/02/05
Assessment Location	Downstream	Downstream
Time	10:15AM	8:54AM
Stream Type	Run	Run
Width (m)	9.14	6.1
Length (m)	15.24	15.24
Avg. Depth (cm)	17.27	48.36
Maximum Depth (cm)*	49.0	87.0
Flow Present	No	No
Flow (cfs)	-	-

SUBSTRATE

Cobble	0%	0%
Gravel	0%	0%
Sand	0%	0%
Silt	70%	60%
Mud / Clay	30%	40%
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	Turbid	Very turbid
Bottom Deposits	Deep fine sediment	None
Surface Deposits	None	Thick oily film

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

Physical Dimensions – Site # 4 (continued)

	10/26/05	10/26/05
Assessment Location	Upstream	Downstream
Time	2:59 PM	3:08 PM
Stream Type	Run	Run
Width (m)	2.13	3.35
Length (m)	15.24	15.24
Avg. Depth (cm)	21.50	24.17
Maximum Depth (cm)*	42.0	53.0
Flow Present	No	No
Flow (cfs)	-	-

SUBSTRATE

Cobble	0%	0%
Gravel	0%	0%
Sand	0%	0%
Silt	80%	80%
Mud / Clay	20%	20%
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	Turbid	Turbid
Bottom Deposits	None	None
Surface Deposits	None	None

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

WB # 2618 – Ditch # 2

Site # 5 – Ripley County Road H-6

GPS Location

**36.526045 North
90.6817387 West**

Upstream Views

04/15/05

06/02/05



Downstream Views

04/15/05

06/02/05



WB # 2618 – Ditch # 2

Site # 5 - (continued)

**Upstream View
10/26/05**



**Downstream View
10/26/05**



Physical Dimensions – Site # 5

	04/15/05	06/02/05
Assessment Location	Downstream	Downstream
Time	9:30AM	9:52AM
Stream Type	Run	Run
Width (m)	10.36	5.44
Length (m)	30.48	30.48
Avg. Depth (cm)	65.92	32.58
Maximum Depth (cm)*	114	46
Flow Present	No	No
Flow (cfs)	-	-

SUBSTRATE

Cobble	0%	0%
Gravel	0%	0%
Sand	0%	0%
Silt	50%	50%
Mud / Clay	50%	50%
Bedrock	0%	0%
	100%	100%

OTHER

Uses Observed	None	None
Evidence of Human Use (WBCR)	None	None
Aquatic Vegetation	None	10% filamentous algae coverage

Water Characteristics

Odor	Sulfurous gas expelled from sediment	Sulfurous gas expelled from sediment
Color	Turbid	Turbid
Bottom Deposits	Fine sediment	Fine sediment
Surface Deposits	None	None

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

NOTES:

06/02/05 – water significantly lower than previous visit, some trees have been cleared out on downstream side of stream since previous visit

Physical Dimensions – Site # 5 (continued)

	10/26/05	10/26/05
Assessment Location	Upstream	Downstream
Time	3:12 PM	3:20 PM
Stream Type	Run	Run
Width (m)	5.49	6.10
Length (m)	30.48	30.48
Avg. Depth (cm)	8.20	31.81
Maximum Depth (cm)*	17.0	49.0
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	Some benthic algal growth	Some benthic algal growth
Water Characteristics		
Odor	Sulfurous gas expelled from sediment	Sulfurous gas expelled from sediment
Color	Turbid/clear	Turbid/clear
Bottom Deposits	None	None
Surface Deposits	None	None

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

Stream Assessment Summary

ERC conducted stream assessments for this waterbody segment (Ditch # 2, WB # 2618) on three separate occasions during the defined recreation season (April 1 through October 31). This field assessment data yielded widely varying results for cross-sectional average depth and maximum cross-sectional depth. This variation is due to hydrologic alteration by irrigation related field drainage and several significant debris dams throughout the stream segment.

Irrigation related field drainage discharge is not a persistent condition throughout the recreational season but rather a condition that depends on weather and the particular stage in the crops life cycle. Debris dams on very low gradient streams such as Ditch # 2 are both transient over time and in location where they might occur. In this region, drainage debris dams are frequently removed by drainage boards to improve water conveyance.

Below are the summary tables of the stream depth variables for Ditch # 2. As the tables indicate, two assessment sites (Site # 1 and Site # 5) either met or exceeded the average depth and/or the maximum depth thresholds specified in the UAA protocol. The overall average depth and maximum depth for these two assessment sites yielded a maximum depth of 88 cm for Site # 1 and for Site # 5 the average depth of 43.44 cm and a maximum depth of 69.7 cm, which is much more characteristic of the stream during the recreational season.

ERC has reported all field assessment data collected even for conditions of obvious hydrologic alteration to evaluate the UAA protocol. Under conditions of hydrologic alteration the average of all assessments, taken throughout the recreation season, better characterize the waterbody than any discrete assessment.

Site # 1 (Upstream Assessment Location)

Assessment Date	Average Depth (cm)	Maximum Depth (cm)
04/15/2005	49.81	90.0
06/02/2005	-	125.0
10/26/2005	25.26	49.0
Average		88.0

Site # 2 (Downstream Assessment Location)

Assessment Date	Average Depth (cm)	Maximum Depth (cm)
04/15/2005	28.46	45.0
06/02/2005	27.46	47.0
10/26/2005	0	0
Average	18.6	30.7

Stream Assessment Summary (continued)

Site # 3 (Upstream Assessment Location)

Assessment Date	Average Depth (cm)	Maximum Depth (cm)
04/15/2005	32.21	58.0
06/02/2005	0	0
10/26/2005	0	0
Average	10.74	19.3

Site # 4 (Downstream Assessment Location)

Assessment Date	Average Depth (cm)	Maximum Depth (cm)
04/16/2005	17.27	49.0
06/03/2005	48.36	87.0
10/27/2005	24.17	53.0
Average	29.93	63.0

Site # 5 (Downstream Assessment Location)

Assessment Date	Average Depth (cm)	Maximum Depth (cm)
04/16/2005	65.92	114.0
06/03/2005	32.58	46.0
10/27/2005	31.81	49.0
Average	43.44	69.7

Site Descriptions

Site #1: Site #1 of Ditch # 2 is located on Ripley County Road # 142. The stream has steep banks that are moderately brush covered making access to the stream difficult. Agricultural fields entirely surround this site and many field drainage pipes can be seen. Several large trash items (i.e. tires) could be seen on the bottom of the ditch. The water at this site was consistently turbid and appeared stagnant, or, if flowing, was moving extremely slowly. Approximately one mile upstream, beavers have constructed a sizeable dam and it is also believed that a sizeable debris dam is located downstream as well. The stream water level at this site is greatly affected by irrigation related field drainage discharge and debris dams.

Site #2: Site #2 of Ditch # 2 is located off County Road II-1. Farm fields entirely surround the area. The stream has steep banks that are brush covered making access to the stream difficult. The bed of the waterbody at this site contained a lot of trash including broken glass, tires, several appliances and some old fencing material.

Site #3: Site #3 of Ditch # 2 is located on the north/south County Road north of Hwy N. Farm fields are in close proximity along with patches of small wooded areas. The site has steep banks (12-16 feet) that are brush covered. Although corn fields were being irrigated on 06/02/05 the ditch contained no water at this site. Assessors team believe that several beaver or debris dam are located upstream of this site. Appliances and broken bottles are some of the items dumped at this site.

Site #4: Site #4 of Ditch # 2 is located at Highway II. This site is surrounded by a large forested riparian area and farm fields. The banks were approximately 12-16 feet high and covered in brush and trees making access to the ditch very difficult.

Site #5: Site #5 of Ditch # 2 is located off County Road II-6. The site is surrounded by swampy forest areas and farm fields. Banks are steep (approximately 12-16 feet) and are brush and tree covered. The water in the ditch at this site had a stagnant odor and was very turbid during our assessments. No trespassing signs are posted and purple paint marked the trees of the swampy forested north side of the 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: Rohit R. Bhanu

Date: 12-22-2005

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: 06/02/05

Time: 8:04 AM

Name: Cloyce Young

Reason for Interview: in field near Site # 1

Cloyce Young has worked as a field machinery operator near Ditch # 2 for three years. He does not use the waterbody for recreation, and stated that he would never do so. Mr. Young stated that the only reason the waterbody had considerable depth was because of the irrigation drainage discharge form nearby rice fields. He commented that he has not seen anyone using the stream for recreational activities because of safety hazards, including numerous snakes.

Date: 06/02/05

Time: 8:35 AM

Name: Rick Spargo

Reason for Interview: lives near Site # 2

Rick Spargo has lived near Ditch # 2 for 50 years. He does not use the stream for recreational activities, and stated that it is usually dry except during periods of irrigation in nearby fields. Mr. Spargo stated that no one uses the stream because it is typically too dry.

Summaries of Interviews (continued)

Date: 06/02/05

Time: 8:40 AM

Name: Leon Day

Reason for Interview: lives near Site # 2

Leon Day has lived near Ditch # 2 for 35 years and does not use it for recreational activities because the stream lacks sufficient depth. Mr. Day farms approximately $\frac{3}{4}$ of a mile along the ditch and has not seen anyone recreating in the stream, but he has seen people fishing from the road. At the time of the interview, there had not been a substantial rain since May 7th.

Date: 06/02/05

Time: 9:32 AM

Name: Stanley Leon Martin

Reason for Interview: lives near Site # 4

Stanley Martin has lived near Ditch #2 for 54 years and does not use it for recreational activities because of lack of depth. Mr. Martin stated that beaver dams throughout the ditch cause variations in the depth. He commented that he has seen people fishing off the bridge during the spring and summer months, but has never seen anyone in the ditch.

Date: 06/02/05

Time: 9:26 AM

Name: John Scott Campbell

Reason for Interview: lives near Site # 4

John Campbell has lived near Ditch # 2 for 12 years and owns approximately $\frac{1}{4}$ mile along both sides of the stream. He does not use it for recreation because of the large population of turtles and snakes. Mr. Campbell said nobody uses the stream. "Most people around here aren't brave enough to get in it," he stated. He also commented that the ditch currently had water in it due to local irrigation of crops.

Summaries of Interviews (continued)

Date: 06/02/05

Time: 9:54 AM

Name: Robert Tyra

Reason for Interview: lives near Site # 5

Robert Tyra has lived near Ditch # 2 for four years and does not use the stream for recreational activities. He stated that he has seen people fishing off the bridge during spring. He knows that several people use the stream to dump their trash but has never witnessed it.

Date: 10/26/05

Time: 3:25 PM

Name: Pamela Sue Altom

Reason for Interview: works at Naylor city hall – city clerk

Pamela Altom has lived near Ditch #2 all her life. She has worked with the city and lived in the town of Naylor for four years. She stated that she has never used the ditch for recreational activities or seen anyone use the stream. This is primarily due to the snakes and the fact that there are cleaner and larger rivers to recreate nearby (i.e. the Current River).