Missouri
Department of
Natural Resources

Use Attainability Analysis

for

WBID 1821 Muddy Shawnee Creek

Submitted by
MEC/ERC

To
Missouri Department of Natural Resources
Water Protection Program

On
October 24, 2008

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet A – Water Body Identification

I. Water Body Information (for water body being surveyed)

Water Body Name (from USGS 7.5' quad):	Muddy Shawnee Creek
Missouri Water Body Identification (WBID) Number:	1821
8-digit HUC:	07140105 Upper Mississippi - Cape Girardeau
County(ies), Listed Upstream to Downstream:	Cape Girardeau
Upstream Legal Description (from Table H):	31, 33N, 13E
Downstream Legal Description (from Table H):	19, 33N, 13E
Number of sites evaluated:	3
List all site numbers, consecutively upstream to downstream:	1) CoRd 530 Downstream 2) Off Hwy C-Downstream Private Rd Access 3) Downstream of Hwy C bridge
Include a Site Location Map(s). The map must include all requirements detailed in the *Missouri Recreational Use Attainability Analyses: Water Body Survey and Assessment Protocol* (Section IV.D.8.a).	

II. Facility Information (list all permitted discharges to this water body segment)

Facility Name(s) and Permit Number(s):
Pocohontas City of MO0130150

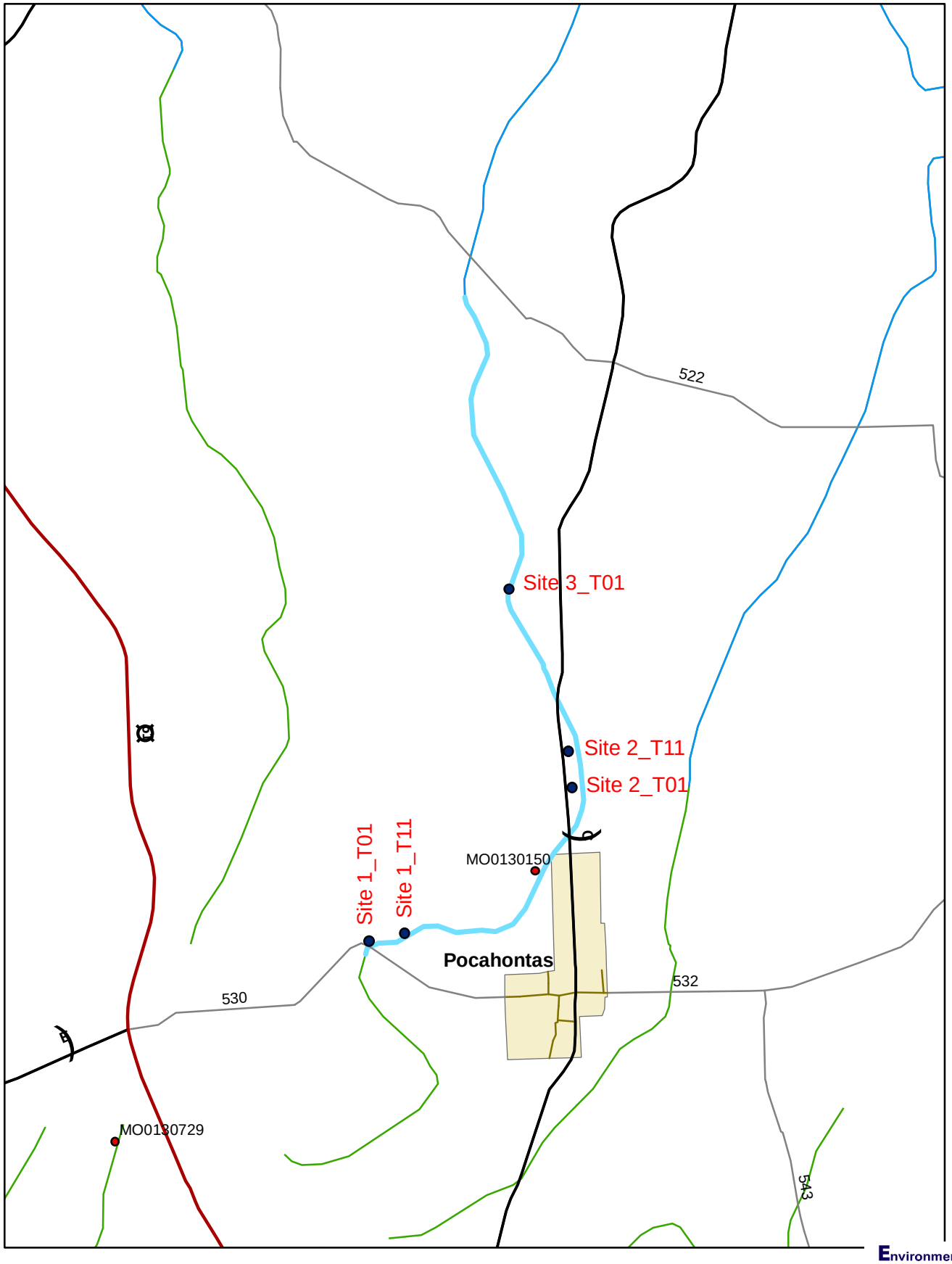
III. UAA Surveyor (please **PRINT** legibly)

Name of Surveyor: Abigail L Lynn	Telephone Number: (573) 634-7078
Organization/Employer: ERC	

Please verify that you have completed all sections of all data sheets, checked all applicable boxes, provided a map (that includes all requirments listed in the *Missouri Recreational Use Attainability Analysies: Water Body Survey and Assessment Protocol*) and that this form is complete.

Signed: Abigail L Lynn **Date:** 10/16/08

WBID # 1821 - Muddy Shawnee Creek
Cape Girardeau County



Environmental Resources Coalition

Weather Conditions

Weather conditions ten days pervious to stream assessment are listed in the tables below. The date(s) that the stream was assessed are shaded.

Data from the WeatherUnderground.com
Cape Girardeau, MO

Date	Precipitation (Inches)	Min. Temp (ºF)	Max. Temp (ºF)	Avg. Temp (ºF)
10/6/2008	0.00	53.0	78.0	66.0
10/7/2008	0.00	60.0	69.0	66.0
10/8/2008	0.00	51.0	69.0	62.0
10/9/2008	0.00	44.0	73.0	58.0
10/10/2008	0.00	47.0	76.0	65.0
10/11/2008	0.00	58.0	80.0	69.0
10/12/2008	0.00	59.0	81.0	69.0
10/13/2008	0.00	65.0	76.0	69.0
10/14/2008	0.00	65.0	72.0	68.0
10/15/2008	0.00	56.0	78.0	69.0
10/16/2008	0.00	44.0	61.0	53.0

WBID # 1821

Site # 1

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (Page 1 of 3)

(must be completed for each site)

Date & Time: 10/16/08 11:58	Location Description (e.g., road crossing):
Stream Name: Muddy Shawnee Creek	Co Rd 530 Downstream
Current Weather Conditions: 63° partly cloudy	Facility Name(s): Pocahontas City of
Weather Conditions for Past 10 days: attached	Permit Number(s): MO0130150
Official Drought Conditions at time of this survey (search DNR home page for "drought"): No drought ☑; Phase I ☐; Phase II ☐; Phase III ☐; Phase IV ☐; Unknown ☐	

Site Location:

LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION, IN METERS)					
Site 01	Easting (UTM X): 16502659816	Northing (UTM Y): 4153977	Horizontal Accuracy: (EPE) / FOM / PDOP)	8	Meters
Site 11	Easting (UTM X): 16502659974	Northing (UTM Y): 4154001	Horizontal Accuracy: (EPE) / FOM / PDOP)	7	Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
331	Transect I Downstream	332	Transect II Upstream		
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

Uses Observed*: (Uses actually observed at the time of survey.)

☐ Swimming	☐ Skin diving	☐ SCUBA diving	☐ Tubing	☐ Water skiing
☐ Wind surfing	☐ Kayaking	☐ Boating	☐ Wading	☐ Rafting
☐ Hunting	☐ Trapping	☐ Fishing	☒ None of the above	☐ Other:

Describe: (Include number of individuals recreating, photo-documentation of evidence of recreational uses, etc. Use *Data Sheet D- Recreational Use Interview* when conducting interviews.)

Stream Name & WBID # Muddy Shawnee Creek 1821 Date of Survey 10/16/08

Site # 1

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (Page 2 of 3)

Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

☐ City/county parks	☐ Playgrounds	☐ MDC conservation lands	☐ Urban areas	☐ Rural Residential
☐ Campgrounds	☐ State parks	☐ National forests	☐ Nature trails	☐ Stairs/walkway
☐ Boating accesses	☐ Fence	☐ No trespass sign	☐ Steep slopes	☐ Other:
Comments: Farm Fields, CRP				

Evidence of Human Use*: (Attach photos and reference in "Photos" section.)

☐ Roads	☐ Foot paths/prints	☐ Dock/platform	☐ Camping Sites	☐ Rope swings
☐ RV / ATV Tracks	☐ Fire pit/ring	☐ NPDES Discharge	☐ Fishing Tackle	☐ Livestock Watering
☒ None of the above	Comments / Other:			

Substrate*: (These values should add up to 100%.)

20 % Cobble	10 % Gravel	% Sand	% Silt	% Mud/Clay	70 % Bedrock

Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site.)

70-80% algae cover on bedrock

Water Characteristics*: (Mark all that apply.)

Odor:	☐ Sewage	☐ Musky	☐ Chemical	☒ None	☐ Other:
Color:	☒ Clear	☐ Green	☐ Gray	☐ Milky	☐ Other:
Bottom Deposit:	☐ Sludge	☐ Solids	☒ Fine sediments	☐ None	☐ Other:
Surface Deposit:	☒ Oil	☐ Scum	☒ Foam	☐ None	☐ Other:

*This information is not to be used solely for removal of a recreational use designation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that affect another use.

Stream Name & WBID # Muddy Shawnee Creek 1821 Date of Survey 10/16/08

Site # 1

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (Page 3 of 3)

Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses.)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

Comments: (Please record any additional comments here.)

- bedrock very slippery

Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.

Printed Names of Personnel Collecting Data: Abigail Lynn & Travis Howell

Surveyor's Signature: [signature] Date of Survey: 10/16/08

Organization: ERC Position: Field Manager

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: Muddy Shawnee Creek Waterbody ID: 1821 Site #: 1

Estimated Channel Incision: 0.1 (m) (height between low bank width and water)

GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (**EPE** / PDOP / FOM)

01 UTM X 16S0265816 UTM Y: 4153977 +/- 8 (meters)

11 UTM X 16S0265974 UTM Y: 4154001 +/- 7 (meters)

Average Stream Width: 3 (meters) (To determne Length of Reach)

Length of Survey Segment: 150 (meters) (20x average stream width)

Field Staff: Abby Lynn and Travis Howell (AL & TH)

Dissolved Oxygen

Date: 10/16/2008 Time: 11:58

Dissolved Oxygen: 6.12 (mg/L)

Dissolved Oxygen: 65 (% sat)

Specific Cond: 558 (µS/cm)

Water Temperature: 18.21 (°C)

Transect Cross-Section

Station	01		02		03		04		05		06		07		08		09		10		11	
	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
Left Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.17	0.05	0.21	0.02	0.26	0.01	0.58	0.24	0.34	0.08	0.19	0.08	0.23	0.1	0.38	0.1	0.42	0.14	0.28	0.18	0.28	0.1
2	0.34	0.09	0.42	0.04	0.52	0.01	1.16	0.31	0.68	0.22	0.38	0.08	0.46	0.19	0.76	0.14	0.84	0.14	0.56	0.24	0.56	0.13
3	0.51	0.12	0.63	0.02	0.78	0.02	1.74	0.37	1.02	0.33	0.57	0.09	0.69	0.21	1.14	0.1	1.26	0.16	0.84	0.23	0.84	0.13
4	0.68	0.12	0.84	0.03	1.04	0.03	2.32	0.43	1.36	0.32	0.76	0.09	0.92	0.16	1.52	0.13	1.68	0.17	1.12	0.23	1.12	0.14
5	0.85	0.1	1.05	0.05	1.3	0.03	2.9	0.46	1.7	0.27	0.95	0.04	1.15	0.1	1.9	0.15	2.1	0.17	1.4	0.23	1.4	0.14
6	1.02	0.11	1.26	0.03	1.56	0.03	3.48	0.6	2.04	0.25	1.14	0.05	1.38	0.03	2.28	0.16	2.52	0.21	1.68	0.21	1.68	0.12
7	1.19	0.13	1.47	0.05	1.82	0.03	4.06	0.63	2.38	0.36	1.33	0.06	1.61	0.04	2.66	0.12	2.94	0.22	1.96	0.21	1.96	0.11
8	1.36	0.14	1.68	0.04	2.08	0.03	4.64	0.48	2.72	0.39	1.52	0.06	1.84	0.03	3.04	0.14	3.36	0.21	2.24	0.19	2.24	0.12
9	1.53	0.05	1.89	0.01	2.34	0.01	5.22	0.42	3.06	0.19	1.71	0.03	2.07	0.02	3.42	0.12	3.78	0.11	2.52	0.17	2.52	0.11
Right Bank	1.7	0	2.1	0	2.6	0	5.8	0	3.4	0	1.9	0	2.3	0	3.8	0	4.2	0	2.8	0	2.8	0
Feature Type (riffle, run, or pool)	Run		Run		Run		Pool		Pool		Run		Run		Run		Pool		Run		Run	

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine bv dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.1 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Surveyor's Signature: Abigail L. Lynn Date: 10/16/2008

WBID # 1821

Site # 2

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (Page 1 of 3)

(must be completed for each site)

Date & Time: 10/16/08 12:33	Location Description (e.g., road crossing): Off Hwy C - Downstream Private Road Access
Stream Name: Muddy Shawnee Creek	
Current Weather Conditions: Co. 50° partly cloud	Facility Name(s): Pocahontas City of
Weather Conditions for Past 10 days: attached	Permit Number(s): MO 0130150
Official Drought Conditions at time of this survey (search DNR home page for "drought"): No drought ☒; Phase I ☐; Phase II ☐; Phase III ☐; Phase IV ☐; Unknown ☐	

Site Location:

LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION, IN METERS)				
Site 01	Easting (UTM X): 16502666774	Northing (UTM Y): 4154592	Horizontal Accuracy: (EPE / FOM / PDOP) 5	Meters
Site 11	Easting (UTM X): 16502660737	Northing (UTM Y): 4154751	Horizontal Accuracy: (EPE / FOM / PDOP) 9	Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
333	transect 1 downstream	334	transect 3 Road through stream	335	transect 5 Road through stream
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
336	transect 11 upstream				
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

Uses Observed*: (Uses actually observed at the time of survey.)

☐ Swimming	☐ Skin diving	☐ SCUBA diving	☐ Tubing	☐ Water skiing
☐ Wind surfing	☐ Kayaking	☐ Boating	☐ Wading	☐ Rafting
☐ Hunting	☐ Trapping	☐ Fishing	☒ None of the above	☐ Other:

Describe: (Include number of individuals recreating, photo-documentation of evidence of recreational uses, etc. Use *Data Sheet D- Recreational Use Interview* when conducting interviews.)

Stream Name & WBID # Muddy Shawnee Creek 1821 Date of Survey 10/16/08

Site # 2

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (Page 2 of 3)

Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

☐ City/county parks	☐ Playgrounds	☐ MDC conservation lands	☐ Urban areas	☒ Rural Residential
☐ Campgrounds	☐ State parks	☐ National forests	☐ Nature trails	☐ Stairs/walkway
☐ Boating accesses	☐ Fence	☐ No trespass sign	☐ Steep slopes	☐ Other:
Comments: Farm Fields				

Evidence of Human Use*: (Attach photos and reference in "Photos" section.)

☐ Roads	☐ Foot paths/prints	☐ Dock/platform	☐ Camping Sites	☐ Rope swings
☐ RV / ATV Tracks	☐ Fire pit/ring	☐ NPDES Discharge	☐ Fishing Tackle	☐ Livestock Watering
☒ None of the above	Comments / Other:			

Substrate*: (These values should add up to 100%.)

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

Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site.)

40% long strands filamentous algae
70% algae coats bedrock

Water Characteristics*: (Mark all that apply.)

Odor:	☐ Sewage	☐ Musky	☐ Chemical	☒ None	☐ Other:
Color:	☒ Clear	☐ Green	☐ Gray	☐ Milky	☐ Other:
Bottom Deposit:	☐ Sludge	☐ Solids	☒ Fine sediments	☐ None	☐ Other:
Surface Deposit:	☐ Oil	☐ Scum	☒ Foam	☐ None	☐ Other:

*This information is not to be used solely for removal of a recreational use designation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that affect another use.

Stream Name & WBID # Muddy Shawnee Creek 1821 Date of Survey 10/16/08

Site # 2

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (Page 3 of 3)

Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses.)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

Comments: (Please record any additional comments here.)

- Private Road bridge over transect # 9-10
- roads through stream to access land

Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.

Printed Names of Personnel Collecting Data: Abigail Lynn & Travis Howell

Surveyor's Signature: Abigail Lynn Date of Survey: 10/16/08

Organization: ERC Position: Field Manager

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: Muddy Shawnee Creek Waterbody ID: 1821 Site #: 2

Estimated Channel Incision: 0.15 (m) (height between low bank width and water)

GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (**EPE** / PDOP / FOM)

01 UTM X 16S0266774 UTM Y: 4154592 +/- 5 (meters)

11 UTM X 16S0266739 UTM Y: 4154751 +/- 9 (meters)

Average Stream Width: 2 (meters) (To determne Length of Reach)

Length of Survey Segment: 150 (meters) (20x average stream width)

Field Staff: Abby Lynn and Travis Howell (AL & TH)

Dissolved Oxygen

Date: 10/16/2008 Time: 12:33

Dissolved Oxygen: 11.2 (mg/L)

Dissolved Oxygen: 120 (% sat)

Specific Cond: 737 (µS/cm)

Water Temperature: 18.57 (°C)

Transect Cross-Section

Station	01		02		03		04		05		06		07		08		09		10		11	
	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
Left Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.19	0.08	0.21	0.01	0.24	0.02	0.36	0.06	0.25	0.04	0.33	0.04	0.25	0.02	0.14	0.01	0.28	0.02	0.14	0.02	0.28	0.14
2	0.38	0.08	0.42	0.02	0.48	0.02	0.72	0.08	0.5	0.06	0.66	0.02	0.5	0.02	0.28	0.02	0.56	0.02	0.28	0.03	0.56	0.16
3	0.57	0.06	0.63	0.03	0.72	0.02	1.08	0.08	0.75	0.06	0.99	0.02	0.75	0.03	0.42	0.03	0.84	0.03	0.42	0.03	0.84	0.26
4	0.76	0.04	0.84	0.03	0.96	0.03	1.44	0.08	1	0.07	1.32	0.02	1	0.03	0.56	0.04	1.12	0.05	0.56	0.03	1.12	0.27
5	0.95	0.04	1.05	0.03	1.2	0.02	1.8	0.08	1.25	0.06	1.65	0.01	1.25	0.05	0.7	0.03	1.4	0.05	0.7	0.04	1.4	0.18
6	1.14	0.04	1.26	0.04	1.44	0.03	2.16	0.11	1.5	0.07	1.98	0.03	1.5	0.04	0.84	0.03	1.68	0.07	0.84	0.04	1.68	0.13
7	1.33	0.07	1.47	0.03	1.68	0.04	2.52	0.12	1.75	0.06	2.31	0.04	1.75	0.05	0.98	0.03	1.96	0.03	0.98	0.02	1.96	0.1
8	1.52	0.09	1.68	0.04	1.92	0.02	2.88	0.13	2	0.06	2.64	0.03	2	0.02	1.12	0.03	2.24	0.04	1.12	0.04	2.24	0.08
9	1.71	0.06	1.89	0.05	2.16	0.02	3.24	0.13	2.25	0.07	2.97	0.05	2.25	0.03	1.26	0.02	2.52	0.02	1.26	0.01	2.52	0.03
Right Bank	1.9	0	2.1	0	2.4	0	3.6	0	2.5	0	3.3	0	2.5	0	1.4	0	2.8	0	1.4	0	2.8	0
Feature Type (riffle, run, or pool)	Run		Run		Run		Run		Run		Riffle		Run		Riffle		Riffle		Riffle		Run	

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine bv dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.1 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Surveyor's Signature: Abigail L. Lynn Date: 10/16/2008

WBID # 1821

Site # 3

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (Page 1 of 3)

(must be completed for each site)

Date & Time: 10/16/08 13:00	Location Description (e.g., road crossing): Downstream of Hwy C bridge
Stream Name: Muddy Shawnee Creek	
Current Weather Conditions: 40° clear	Facility Name(s): Pocahontas City of
Weather Conditions for Past 10 days: attached	Permit Number(s): MO0130150
Official Drought Conditions at time of this survey (search DNR home page for "drought"): No drought ☑; Phase I ☐; Phase II ☐; Phase III ☐; Phase IV ☐; Unknown ☐	

Site Location:

LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION, IN METERS)				
Site 01	Easting (UTM X): 765026	Northing (UTM Y): 4155475	Horizontal Accuracy: (EPE / FOM / PDOP) 5	Meters
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy: (EPE / FOM / PDOP)	Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
338	Transect 1 Downstream				
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

Uses Observed*: (Uses actually observed at the time of survey.)

☐ Swimming	☐ Skin diving	☐ SCUBA diving	☐ Tubing	☐ Water skiing
☐ Wind surfing	☐ Kayaking	☐ Boating	☐ Wading	☐ Rafting
☐ Hunting	☐ Trapping	☐ Fishing	☑ None of the above	☐ Other:

Describe: (Include number of individuals recreating, photo-documentation of evidence of recreational uses, etc. Use *Data Sheet D- Recreational Use Interview* when conducting interviews.)

Stream Name & WBID # Muddy Shawnee Creek 1821 Date of Survey 10/10/08

Site # 3

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (Page 2 of 3)

Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

☐ City/county parks	☐ Playgrounds	☐ MDC conservation lands	☐ Urban areas	☐ Rural Residential
☐ Campgrounds	☐ State parks	☐ National forests	☐ Nature trails	☐ Stairs/walkway
☐ Boating accesses	☐ Fence	☐ No trespass sign	☐ Steep slopes	☐ Other:
Comments: Farm Fields, wooded				

Evidence of Human Use*: (Attach photos and reference in "Photos" section.)

☐ Roads	☐ Foot paths/prints	☐ Dock/platform	☐ Camping Sites	☐ Rope swings
☐ RV / ATV Tracks	☐ Fire pit/ring	☐ NPDES Discharge	☐ Fishing Tackle	☐ Livestock Watering
☒ None of the above	Comments / Other:			

Substrate*: (These values should add up to 100%.)

40 % Cobble	20 % Gravel	% Sand	% Silt	% Mud/Clay	40 % Bedrock

Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site.)

40% filamentous algae
60% algae cover on rocks

Water Characteristics*: (Mark all that apply.)

Odor:	☐ Sewage	☐ Musky	☐ Chemical	☒ None	☐ Other:
Color:	☒ Clear	☐ Green	☐ Gray	☐ Milky	☐ Other:
Bottom Deposit:	☐ Sludge	☐ Solids	☒ Fine sediments	☐ None	☐ Other:
Surface Deposit:	☐ Oil	☐ Scum	☒ Foam	☐ None	☐ Other:

*This information is not to be used solely for removal of a recreational use designation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that affect another use.

Stream Name & WBID # Muddy Shawnee Creek 1821 Date of Survey 10/16/08

Site # 3

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (Page 3 of 3)

Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses.)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

Comments: (Please record any additional comments here.)

- Landowner denied access to stream
- No other locations are available to get readings

Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.

Printed Names of Personnel Collecting Data: Abigail Lynn + Travis Howell

Surveyor's Signature: Abigail Lynn Date of Survey: 10/16/08

Organization: ERC Position: Field Manager

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: Muddy Shawnee Creek Waterbody ID: 1821 Site #: 3

Estimated Channel Incision: 0.1 (m) (height between low bank width and water)

GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (**EPE** / PDOP / FOM)

01 UTM X 16S0266525 UTM Y: 4155475 +/- 5 (meters)

11 UTM X: UTM Y: +/- (meters)

Average Stream Width: 3.8 +/- (meters) Length of Survey Segment: 150 (meters)

(To determne Length of Reach) (20x average stream width)

Field Staff: Abby Lynn and Travis Howell (AL & TH)

Dissolved Oxygen

Date: 10/16/2008 Time: 13:00

Dissolved Oxygen: 10.32 (mg/L)

Dissolved Oxygen: 83 (% sat)

Specific Cond: 640 (µS/cm)

Water Temperature: 18.32 (°C)

Transect Cross-Section

	01		02		03		04		05		06		07		08		09		10		11	
Station	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
Left Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.38	0.02	0		0										0		0		0		0	
2	0.76	0.03	0		0										0		0		0		0	
3	1.14	0.04	0		0										0		0		0		0	
4	1.52	0.06	0		0		Landowner denied staff access to continue assessing the stream												0		0	
5	1.9	0.1	0		0										0		0		0		0	
6	2.28	0.12	0		0										0		0		0		0	
7	2.66	0.09	0		0										0		0		0		0	
8	3.04	0.04	0		0										0		0		0		0	
9	3.42	0.06	0		0										0		0		0		0	
Right Bank	3.8	0		0		0		0		0		0		0		0		0		0		0
Feature Type (riffle, run, or pool)	Riffle																					

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine bv dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.1 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Surveyor's Signature: Abigail L. Lynn Date: 10/16/2008

Muddy Shawnee Creek
WBID# 1821
Site #1
Transect #11
Upstream

Muddy Shawnee Creek
WBID# 1821
Site #2
Transect #3
Road through Stream

Muddy Shawnee Creek
WBID# 1821
Site #1
Transect #1
Downstream

Muddy Shawnee Creek
WBID# 1821
Site #2
Transect #1
Downstream

Muddy Shawnee Creek
WBID# 1821
Site # 2
Transect # 11
Upstream

Muddy Shawnee Creek
WBID# 1821
Site # 2
Transect # 5
Read through Stream

Muddy Shawnee Creek
WBID# 1821
Site # 3
Transect # 1
Downstream