Missouri
Department of
Natural Resources

Use Attainability Analysis

for

WBID 2166 Eaton Branch

Submitted by
Environmental Resource Coalition

To
Missouri Department of Natural Resources
Water Protection Program

On
May 29, 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): Eaton Branch
Missouri Water Body Identification (WBID) Number: 2166
8-digit HUC: 07140104
County(ies), Listed Upstream to Downstream: St. Francois
Upstream Legal Description (from Table H): Mouth
Downstream Legal Description (from Table H): 9, 36N, 4E
Number of sites evaluated: 3
List all site numbers, consecutively upstream to downstream: Site 1, Site 2, Site 3
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): West St. Francois Co R-IV High School WWTF MO-0125083

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

Name of Surveyor: T. Altnether, J. Velevka	Telephone Number: 573-443-4100
Organization/Employer: MEC Water Resources	

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.

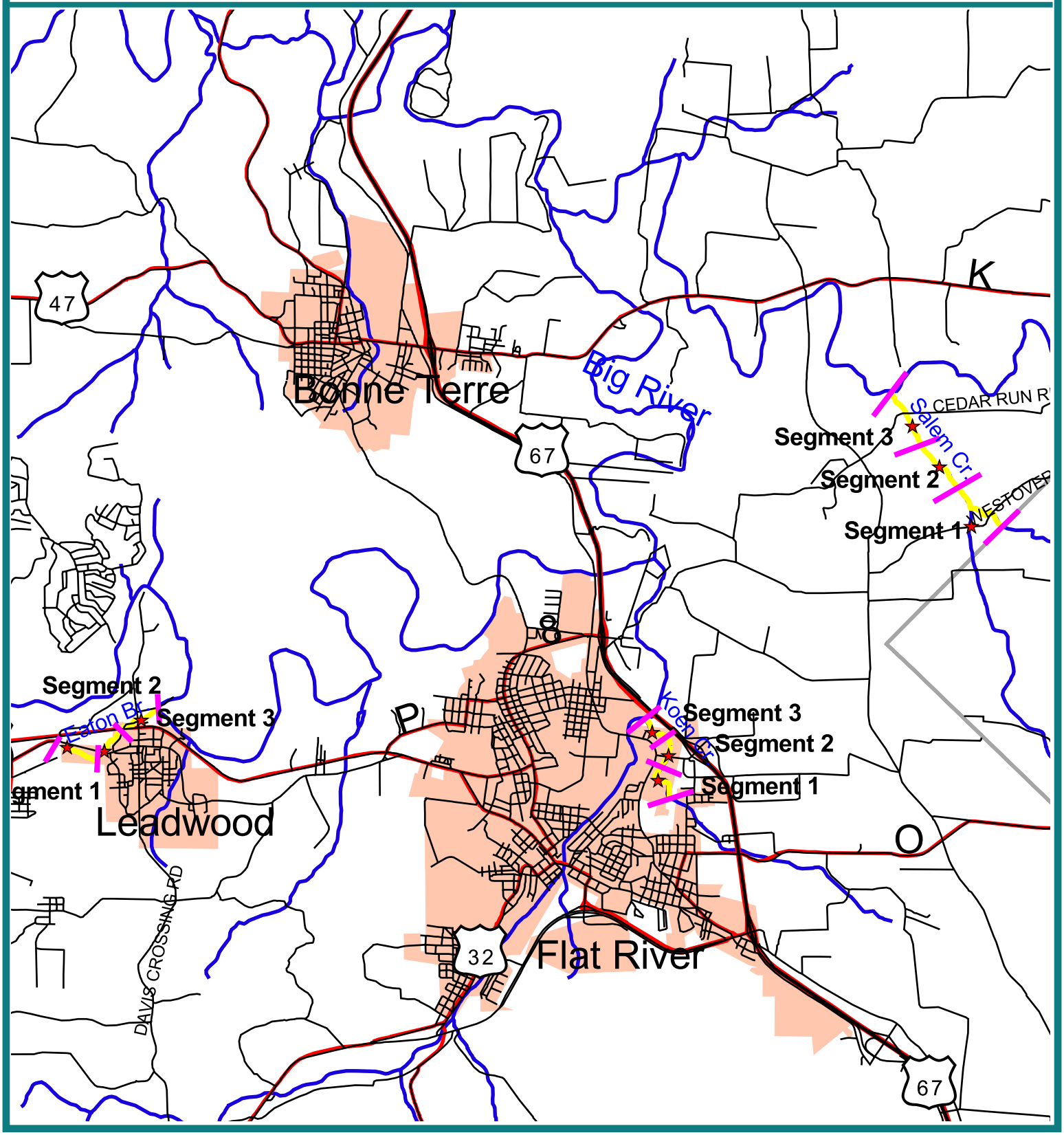
Signed: _____ **Date:** 5/14/08

Rec 5-20-08

Eaton Branch WBID: 2166 3 mi.

Koen Creek WBID: 2171 1 mi.

Salem Creek WBID: 2174 2 mi.



WBID # 2166

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: 5/01/08	Location Description (e.g., road crossing): Near Hwy M
Stream Name: Eaton Branch	
Current Weather Conditions: Pt. Cldy, 62°F, Breezy	Facility Name(s): West St. Francois County R-IV High School WWTF
Weather Conditions for Past 10 days: 0.50 rain, Pt Cldy Clear	Permit Number(s): MO 0125083
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)~~ Northing UTMX: 419 5814	~~Northing (UTM Y)~~ Easting UTMY: 0710689	Horizontal Accuracy: (EPE / FOM / PDOP) 14.3	Meters
Site 11	~~Easting (UTM X)~~ Northing UTMX: 419 5745	~~Northing (UTM Y)~~ Easting UTMY: 0710857	Horizontal Accuracy: (EPE / FOM / PDOP) 10.6	Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
2166-01-021	Up Stream	2166-01-022	Down Stream		
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.)

N/A

Stream Name & WBID # Eatons Branch, 2166 Date of Survey 5/1/08

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: Forest
Comments: N/A				

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: N/A			

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

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

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

Periphyton common, grasses

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 # Salem Branch 2166 Date of Survey 5/01/08

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.)

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

Printed Names of Personnel Collecting Data: James VeVerka, Tim Altnether

Surveyor's Signature: [signature] Date of Survey: 5/01/08

Organization: MEC Water Position: Water Quality Scientist

AuC 5-20-08

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: Eaton Branch Waterbody ID: 2166 Site #: 1

Estimated Channel Incision: 0 (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: 710689 UTM Y: 4193814 +/- 14.3 (meters)

11 UTM X: 710857 UTM Y: 4193745 +/- 10.6 (meters)

Average Stream Width: 1 (meters) (To determne Length of Reach)

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

Field Staff: TA, JV

Dissolved Oxygen

Date: 5/1/2008 Time: 8:04

Dissolved Oxygen: 5.95 (mg/L)

Dissolved Oxygen: 57.2 (% sat)

Specific Cond: 461.4 (µS/cm)

Water Temperature: 13.3 (°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	0.04	0.00	0.11	0.01	0.10	0.01	0.08	0.00	0.07	0.01	0.08	0.00	0.20	0.05	0.05	0.00	0.07	0.01	0.07	0.01	0.07	0.01
2	0.08	0.00	0.22	0.02	0.20	0.01	0.16	0.00	0.14	0.01	0.16	0.01	0.40	0.07	0.10	0.00	0.14	0.01	0.14	0.02	0.14	0.02
3	0.12	0.00	0.33	0.00	0.30	0.01	0.24	0.13	0.21	0.03	0.24	0.01	0.60	0.08	0.15	0.00	0.21	0.00	0.21	0.02	0.21	0.02
4	0.16	0.00	0.44	0.00	0.40	0.00	0.32	0.13	0.28	0.02	0.32	0.03	0.80	0.12	0.20	0.00	0.28	0.00	0.28	0.02	0.28	0.03
5	0.20	0.03	0.55	0.00	0.50	0.00	0.40	0.12	0.35	0.02	0.40	0.05	1.00	0.08	0.25	0.00	0.35	0.00	0.35	0.03	0.35	0.02
6	0.24	0.03	0.66	0.00	0.60	0.00	0.18	0.11	0.42	0.04	0.48	0.07	1.20	0.11	0.30	0.00	0.42	0.00	0.42	0.02	0.42	0.01
7	0.28	0.03	0.77	0.02	0.70	0.02	0.56	0.10	0.49	0.05	0.56	0.09	1.40	0.01	0.35	0.00	0.49	0.02	0.49	0.02	0.49	0.00
8	0.32	0.02	0.88	0.02	0.80	0.02	0.64	0.08	0.56	0.04	0.63	0.09	1.60	0.00	0.40	0.00	0.56	0.01	0.56	0.00	0.56	0.00
9	0.36	0.01	0.99	0.02	0.90	0.01	0.72	0.04	0.63	0.01	0.72	0.07	1.80	0.00	0.45	0.00	0.63	0.01	0.63	0.00	0.63	0.00
Right Bank	0.40	0.00	1.10	0.00	1.00	0.00	0.80	0.00	0.70	0.00	0.80	0.00	2.00	0.00	0.50	0.00	0.70	0.00	0.70	0.00	0.70	0.00
Feature Type (riffle, run, or pool)	Riffle		Riffle		Riffle		Run		Run		Run		Run		Riffle		Run		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: _____ Date: _____

rwc

WBID # 2166

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: 5/01/08 9:00	Location Description (e.g., road crossing): Off West Rd
Stream Name: Eatons Branch	
Current Weather Conditions: Partly 62°F Breezy	Facility Name(s): West St. Francois County R-IV High School WWTF
Weather Conditions for Past 10 days: 0.50 in rain, Clear M. Cldy	Permit Number(s): MO 0125085
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	~~Northing (UTM Y)~~ ~~Easting (UTM X)~~: 419754	~~Easting (UTM X)~~ ~~Northing (UTM Y)~~: 0711268	Horizontal Accuracy: (EPE / FOM / PDOP) 18.1	Meters
Site 11	~~Northing (UTM Y)~~ ~~Easting (UTM X)~~: 419390	~~Easting (UTM X)~~ ~~Northing (UTM Y)~~: 0711353	Horizontal Accuracy: (EPE / FOM / PDOP) 18.2	Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
2166-02-023	Up Stream	2166-02-024	Down Stream		
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.)

N/A

Stream Name & WBID # Eula's Branch, 2166 Date of Survey 5/01/08

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: Mines

Comments: N/A

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: N/A			

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

30 % Cobble	20 % Gravel	10 % Sand	10 % Silt	30 % Mud/Clay	% Bedrock

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

periphyton common

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 # Eatons Branch, 2166 Date of Survey 5/01/08

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)
NA	NA				

Comments: (Please record any additional comments here.)

NA

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

Printed Names of Personnel Collecting Data: James VeVerka, Tim Altnether

Surveyor's Signature: [signature] Date of Survey: 5/01/08

Organization: MEC Water Position: Water Quality Scientist

Amc 5-20-08

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: Eaton Branch Waterbody ID: 2166 Site #: 2

Estimated Channel Incision: 0 (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: 711268 UTM Y: 4193754 +/- 18.1 (meters)

11 UTM X: 711333 UTM Y: 4193901 +/- 18.2 (meters)

Average Stream Width: 4 (meters) (To determne Length of Reach)

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

Field Staff: TA,JV

Dissolved Oxygen

Date: 5/1/2008 Time: 9:00

Dissolved Oxygen: 9.76 (mg/L)

Dissolved Oxygen: 98.1 (% sat)

Specific Cond: 635 (µS/cm)

Water Temperature: 15.6 (°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	0.38	0.07	0.61	0.00	0.46	0.10	0.20	0.03	0.33	0.06	0.40	0.09	0.45	0.06	0.33	0.07	0.39	0.00	0.45	0.00	0.25	0.04
2	0.76	0.10	1.22	0.01	0.92	0.08	0.40	0.15	0.66	0.08	0.80	0.13	0.90	0.05	0.66	0.11	0.78	0.00	0.90	0.06	0.50	0.04
3	1.14	0.06	1.83	0.01	1.38	0.00	0.60	0.15	0.99	0.05	1.20	0.13	1.35	0.04	0.99	0.11	1.17	0.00	1.35	0.03	0.75	0.05
4	1.52	0.07	2.44	0.09	1.84	0.02	0.80	0.14	1.32	0.11	1.60	0.13	1.80	0.05	1.32	0.09	1.56	0.08	1.80	0.08	1.00	0.07
5	1.90	0.11	3.05	0.07	2.30	0.01	1.00	0.15	1.65	0.15	2.00	0.14	2.25	0.05	1.65	0.15	1.95	0.15	2.25	0.10	1.25	0.07
6	2.28	0.09	3.66	0.06	2.76	0.01	1.20	0.16	1.98	0.16	2.40	0.13	2.70	0.04	1.98	0.11	2.34	0.15	2.70	0.13	1.50	0.09
7	2.66	0.09	4.27	0.02	3.22	0.03	1.40	0.15	2.31	0.15	2.80	0.12	3.15	0.04	2.31	0.16	2.73	0.16	3.15	0.14	1.75	0.15
8	3.04	0.08	4.88	0.06	3.68	0.05	1.60	0.14	2.64	0.12	3.20	0.13	3.60	0.05	2.64	0.06	3.12	0.20	3.60	0.18	2.00	0.15
9	3.42	0.08	5.49	0.05	4.14	0.08	1.80	0.07	2.97	0.10	3.60	0.07	4.05	0.10	2.97	0.09	3.51	0.09	4.05	0.12	2.25	0.18
Right Bank	3.80	0.00	6.10	0.00	4.60	0.00	2.00	0.00	3.30	0.00	4.00	0.00	4.50	0.00	3.30	0.00	3.90	0.00	4.50	0.00	2.50	0.00
Feature Type (riffle, run, or pool)	Run		Riffle		Riffle		Run		Run		Run		Run		Run		Run		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: _____ Date: _____

rwc

WBID # 2166

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: 5/01/08 9:25	Location Description (e.g., road crossing): off of Hwy 8
Stream Name: Eatons Branch	
Current Weather Conditions: Overcast 60°F Breezy	Facility Name(s): West St. Francois County R-IV High School WWTF
Weather Conditions for Past 10 days: 0.50 in rain, Clear Pt. Cldy	Permit Number(s): MO 0125085
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~~ Y): 4194242	~~Northing~~ (UTM ~~Y~~ X): 0711843	Horizontal Accuracy: (EPE / FOM / PDOP) 9.5	Meters
Site 11	~~Easting~~ (UTM ~~X~~ Y): 4194315	~~Northing~~ (UTM ~~Y~~ X): 0711963	Horizontal Accuracy: (EPE / FOM / PDOP) 6-5	Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
2166_03_025	Up Stream	2166_03_026	Down Stream		
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.)

N/A

Stream Name & WBID # Eatons Branch, 2166 Date of Survey 5/01/08

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: N/A				

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: N/A			

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

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

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

Periphyton and IV common

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 # Eatons Branch, 2166 Date of Survey 5/01/08

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)
NA					

Comments: (Please record any additional comments here.)

NA

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

Printed Names of Personnel Collecting Data: James VeVerka, Tim Atherton

Surveyor's Signature: JVV Date of Survey: 5/01/08

Organization: MEC Water Position: Water Quality Scientist

MJC 5-20-08

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: Eaton Branch Waterbody ID: 2166 Site #: 3

Estimated Channel Incision: 0 (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:711843 UTM Y: 4194242 +/- 9.5 (meters)

11 UTM X:711963 UTM Y: 4194315 +/- 6.5 (meters)

Average Stream Width: 4 (meters) (To determne Length of Reach)

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

Field Staff: TA, JV

Dissolved Oxygen

Date: 5/1/2008 Time: 9:25

Dissolved Oxygen: 9.69 (mg/L)

Dissolved Oxygen: 98.1 (% sat)

Specific Cond: 690 (µS/cm)

Water Temperature: 15.9 (°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	0.39	0.09	0.26	0.14	0.30	0.14	0.38	0.61	0.33	0.24	0.25	0.63	0.45	0.37	0.38	0.35	0.39	0.60	0.44	0.45	0.47	0.43
2	0.78	0.05	0.52	0.11	0.60	0.30	0.76	0.66	0.66	0.36	0.50	0.70	0.90	0.44	0.76	0.32	0.78	0.59	0.88	0.55	0.94	0.52
3	1.17	0.00	0.78	0.15	0.90	0.37	1.14	0.60	0.99	0.40	0.75	0.65	1.35	0.41	1.14	0.35	1.17	0.54	1.32	0.58	1.41	0.58
4	1.56	0.04	1.04	0.16	1.20	0.42	1.52	0.65	1.32	0.44	1.00	0.52	1.80	0.41	1.52	0.35	1.56	0.50	1.76	0.54	1.88	0.54
5	1.95	0.00	1.30	0.13	1.50	0.43	1.90	0.65	1.65	0.39	1.25	0.32	2.25	0.38	1.90	0.39	1.95	0.41	2.20	0.49	2.35	0.49
6	2.34	0.07	1.56	0.16	1.80	0.40	2.28	0.75	1.98	0.39	1.50	0.40	2.70	0.60	2.28	0.41	2.34	0.41	2.64	0.43	2.82	0.40
7	2.73	0.04	1.82	0.16	2.10	0.44	2.66	0.89	2.31	0.51	1.75	0.40	3.15	0.62	2.66	0.44	2.73	0.00	3.08	0.37	3.29	0.33
8	3.12	0.08	2.08	0.13	2.40	0.46	3.04	0.91	2.64	0.58	2.00	0.04	3.60	0.65	3.04	0.44	3.12	0.39	3.52	0.16	3.76	0.34
9	3.51	0.07	2.34	0.09	2.70	0.19	3.42	0.90	2.97	0.52	2.25	0.00	4.05	0.36	3.42	0.38	3.51	0.23	3.96	0.14	4.23	0.23
Right Bank	3.90	0.00	2.60	0.00	3.00	0.00	3.80	0.00	3.30	0.00	2.50	0.00	4.50	0.00	3.80	0.00	3.9	0.00	4.40	0.00	4.70	0.00
Feature Type (riffle, run, or pool)	Riffle		Run		Pool		Pool		Run		Run		Run		Run		Run		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: _____ Date: _____

rwc

WBID # 2166
Site 1
Upstream

WBID # 2166
Site 1
Downstream

WBID #2166
Site 2
Upstream

WBID # 2166
Site 2
Down stream

WBID # 2166
Site 3
Upstream

WBID # 2166
Site 3
Downstream