Missouri
Department of
Natural Resources

Use Attainability Analysis

for

WBID 0087 Sharpsburg Branch

Submitted by
MEC Water Resources

To
Missouri Department of Natural Resources
Water Protection Program

On
October 17, 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):	Sharpsburg Br.
Missouri Water Body Identification (WBID) Number:	0087
8-digit HUC:	07110004
County(ies), Listed Upstream to Downstream:	Marion
Upstream Legal Description (from Table H):	28, 57N, 8W
Downstream Legal Description (from Table H):	mouth
Number of sites evaluated:	3
List all site numbers, consecutively upstream to downstream: Site 1: Rt. CC crossing; Site 2: 0.4 miles dnstream of Rt CC crossing; Site 3: 0.7 miles dnstream of Rt. CC crossing	

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):

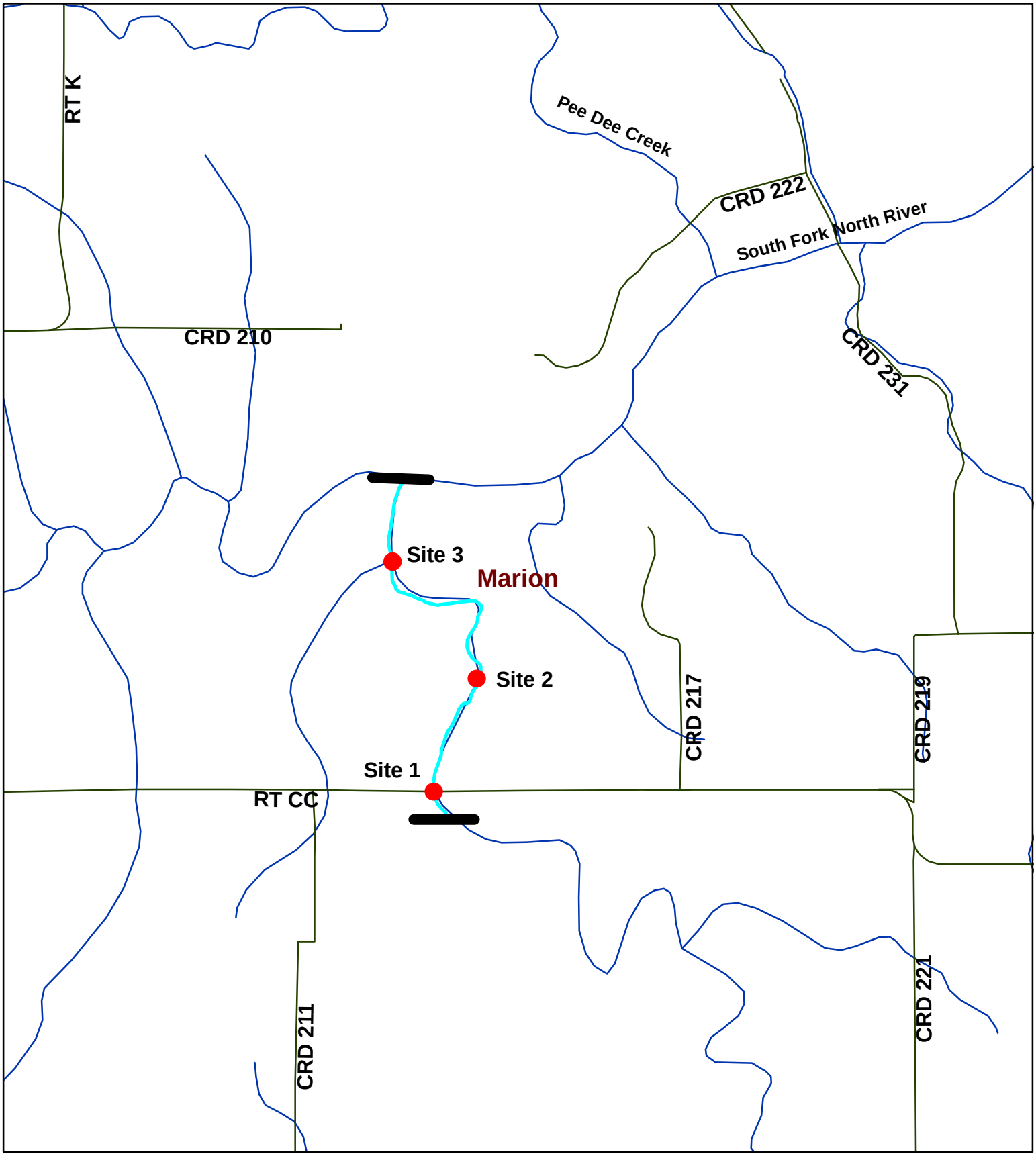
Monroe City WWTF
MO 0055379

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

Name of Surveyor: Renee Martin	Telephone Number: 573-875-7844
Organization/Employer: AE Solutions	

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: Renee Mart **Date:** 9/18/08



Sharpsburg Branch
WBID 0087
Marion County

Meters

0 375 750 1,500 2,250

WBID # 0087

Site # 01

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: 8/11/08 1550	Location Description (e.g., road crossing):
Stream Name: Sharpsburg Br.	Rt CC Crossing
Current Weather Conditions: Sunny + Clear	Facility Name(s): Monroe City WWTF
Weather Conditions for Past 10 days: 0.77" rain	Permit Number(s): MO 0055379
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): 0603593	Northing (UTM Y): 4396224	Horizontal Accuracy: (EPE / FOM / PDOP) 22 ~~Meters~~ FT
Site 11	Easting (UTM X): 0603642	Northing (UTM Y): 4396437	Horizontal Accuracy: (EPE / FOM / PDOP) 22 ~~Meters~~ FT

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
3127	up ~~dn~~ stream	3128	dn ~~up~~ 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 # Sharpsburg Br 0087 Date of Survey 8/11/08

Site # 01

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:
Private property

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%.)

5 % Cobble	65 % Gravel	30 % Sand	– % Silt	– % Mud/Clay	– % Bedrock

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

Benthic algae - abundant

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 # Sharpsburg Br 0087 Date of Survey 8/11/08

Site # 01

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)
		N/A			

Comments: (Please record any additional comments here.)

N/A

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

Printed Names of Personnel Collecting Data: Tiffanie Hamilton, Jennifer Hrabik

Surveyor's Signature: Tiffanie A. Hamilton Date of Survey: 8/11/08

Organization: AE Solutions Position: Field Technician

SV 9/9/08

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: Sharpsburg Branch Waterbody ID: 87 Site #: 0087_01

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: 603593 UTM Y: 4396224 +/- 22 (feet)

11 UTM X: 603642 UTM Y: 4396437 +/- 22 (feet)

Average Stream Width: 11.7 (meters)
(To determne Length of Reach)

Length of Survey Segment: 234.7 (meters)
(20x average stream width)

Field Staff: JH, TH

Dissolved Oxygen

Date: 8/11/2008 Time: 15:50

Dissolved Oxygen: 8.39 (mg/L)

Dissolved Oxygen: 98.9 (% sat)

Specific Cond: 401 (µS/cm)

Water Temperature: 23.2 (°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	0.68	0.14	0.72	0.10	0.59	0.14	1.52	0.30	1.64	0.60	1.45	0.62	1.59	0.54	1.37	0.25	1.49	0.15	1.11	0.13	0.75	0.15
2	1.36	0.24	1.44	0.30	1.18	0.19	3.04	0.61	3.28	0.70	2.90	0.60	3.18	0.75	2.74	0.25	2.98	0.26	2.22	0.15	1.50	0.16
3	2.04	0.18	2.16	0.35	1.77	0.15	4.56	0.67	4.92	0.67	4.35	0.60	4.77	0.65	4.11	0.31	4.47	0.36	3.33	0.25	2.25	0.15
4	2.72	0.14	2.88	0.36	2.36	0.24	6.08	0.59	6.56	0.65	5.80	0.58	6.36	0.62	5.48	0.35	5.96	0.40	4.44	0.14	3.00	0.20
5	3.40	0.26	3.60	0.30	2.95	0.27	7.60	0.40	8.20	0.58	7.25	0.50	7.95	0.65	6.85	0.40	7.45	0.37	5.55	0.20	3.75	0.22
6	4.08	0.20	4.32	0.25	3.54	0.18	9.12	0.31	9.84	0.55	8.70	0.56	9.54	0.71	8.22	0.50	8.94	0.32	6.66	0.25	4.50	0.23
7	4.76	0.28	5.04	0.17	4.13	0.18	10.64	0.21	11.48	0.54	10.15	0.67	11.13	0.60	9.59	0.51	10.43	0.32	7.77	0.25	5.25	0.26
8	5.44	0.23	5.76	0.04	4.72	0.14	12.16	0.20	13.12	0.43	11.60	0.50	12.72	0.63	10.96	0.63	11.92	0.28	8.88	0.20	6.00	0.26
9	6.12	0.13	6.48	0.02	5.31	0.04	13.68	0.25	14.76	0.32	13.05	0.37	14.31	0.51	12.33	0.47	13.41	0.26	9.99	0.11	6.75	0.22
Right Bank	6.80	0.00	7.20	0.00	5.90	0.00	15.20	0.00	16.40	0.00	14.50	0.00	15.90	0.00	13.70	0.00	14.90	0.00	11.10	0.00	7.50	0.00
Feature Type (riffle, run, or pool)	Run		Run		Run		Pool		Pool		Pool		Pool		Pool		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: _____ Date: 8/11/2008

WBID # 0087

Site # 02

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: 8/11/08 1515	Location Description (e.g., road crossing): 0.4 miles dnstream of Rt CC crossing
Stream Name: Sharpsburg Br.	
Current Weather Conditions: Sunny + clear	Facility Name(s): Monroe City WWTF
Weather Conditions for Past 10 days: 0.77" rain	Permit Number(s): MO 0085379
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): 0603757	Northing (UTM Y): 4396594	Horizontal Accuracy: (EPE / FOM / PDOP) 28 ~~Meters~~ Ft
Site 11	Easting (UTM X): 0603831	Northing (UTM Y): 4396715	Horizontal Accuracy: (EPE / FOM / PDOP) 25 ~~Meters~~ Ft

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
3125	Upstream	3126	dnstream		
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 # Sharpsburg Br. 0087 Date of Survey 8/11/08

Site # 02

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: private property

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	60 % Gravel	30 % Sand	– % Silt	– % Mud/Clay	– % Bedrock

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

Benthic algae – abundant

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 # Sharpsburg Br 0087 Date of Survey 8/11/08

Site # 02

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)
		N/A			

Comments: (Please record any additional comments here.)

N/A

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

Printed Names of Personnel Collecting Data: Tiffanie Hamilton, Jennifer Hrabik

Surveyor's Signature: Tiffanie A. Hamilt Date of Survey: 8/11/08

Organization: AE Solutions Position: Field Technician

SV 9/19/08

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: Sharpsburg Branch Waterbody ID: 87 Site #: 0087_02

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: 603757 UTM Y: 4396594 +/- 28 (feet)

11 UTM X: 603831 UTM Y: 4396715 +/- 25 (feet)

Average Stream Width: 7.3 (meters)
(To determne Length of Reach)

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

Field Staff: JH, TH

Dissolved Oxygen

Date: 8/11/2008 Time: 15:15

Dissolved Oxygen: 7.00 (mg/L)

Dissolved Oxygen: 80.5 (% sat)

Specific Cond: 410 (µS/cm)

Water Temperature: 24.1 (°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	0.62	0.21	0.28	0.03	0.58	0.05	0.50	0.09	0.44	0.02	1.30	0.28	1.28	0.20	0.90	0.06	1.16	0.25	0.58	0.06	0.38	0.10
2	1.24	0.24	0.56	0.08	1.16	0.03	1.00	0.20	0.88	0.02	2.60	0.29	2.56	0.26	1.80	0.08	2.32	0.26	1.16	0.03	0.76	0.10
3	1.86	0.29	0.84	0.08	1.74	0.09	1.50	0.22	1.32	0.04	3.90	0.37	3.84	0.31	2.70	0.11	3.48	0.21	1.74	0.13	1.14	0.14
4	2.48	0.25	1.12	0.13	2.32	0.10	2.00	0.23	1.76	0.10	5.20	0.52	5.12	0.31	3.60	0.14	4.64	0.25	2.32	0.16	1.52	0.15
5	3.10	0.22	1.40	0.15	2.90	0.18	2.50	0.25	2.20	0.13	6.50	0.50	6.40	0.30	4.50	0.12	5.80	0.11	2.90	0.14	1.90	0.15
6	3.72	0.18	1.68	0.14	3.48	0.20	3.00	0.28	2.64	0.17	7.80	0.45	7.68	0.30	5.40	0.17	6.96	0.12	3.48	0.15	2.28	0.04
7	4.34	0.14	1.96	0.10	4.06	0.15	3.50	0.20	3.08	0.30	9.10	0.49	8.96	0.25	6.30	0.23	8.12	0.15	4.06	0.12	2.66	0.12
8	4.96	0.12	2.24	0.11	4.64	0.14	4.00	0.19	3.52	0.25	10.40	0.60	10.24	0.24	7.20	0.14	9.28	0.06	4.64	0.14	3.04	0.17
9	5.58	0.01	2.52	0.09	5.22	0.13	4.50	0.13	3.96	0.19	11.70	0.44	11.52	0.23	8.10	0.09	10.44	0.04	5.22	0.09	3.42	0.10
Right Bank	6.20	0.00	2.80	0.00	5.80	0.00	5.00	0.00	4.40	0.00	13.00	0.00	12.80	0.00	9.00	0.00	11.60	0.00	5.80	0.00	3.80	0.00
Feature Type (riffle, run, or pool)	Run		Riffle		Riffle		Run		Run		Run		Run		Run		Run		Run		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: _____ Date: 8/11/2008

WBID # 0087

Site # 03

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: 8/11/08 14:30	Location Description (e.g., road crossing): 0.7 miles dnstream of Rt CC crossing
Stream Name: Sharpsburg Br	
Current Weather Conditions: Sunny + clear	Facility Name(s): Monroe City WWTF
Weather Conditions for Past 10 days: 0.77" rain	Permit Number(s): MO 0055379
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): 0603929	Northing (UTM Y): 4396973	Horizontal Accuracy: (EPE / FOM / PDOP) 16 ~~Meters~~ 24 Ft
Site 11	Easting (UTM X): 0603858	Northing (UTM Y): 4397143	Horizontal Accuracy: (EPE / FOM / PDOP) 14 ~~Meters~~ 24 Ft

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
312~~2~~3	vpstream	312~~2~~4	dnstream		
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 # Sharpsburg Br. 0087 Date of Survey 8/11/08

Site # 03

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:
private property

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%.)

5 % Cobble	60 % Gravel	35 % Sand	— % Silt	— % Mud/Clay	— % Bedrock

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

Benthic algae - abundant

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 # Sharpsburg Br 0087 Date of Survey 8/11/08

Site # 03

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)
		N/A			

Comments: (Please record any additional comments here.)

N/A

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

Printed Names of Personnel Collecting Data: Tiffanie Hamilton, Jennifer Hrabik

Surveyor's Signature: Tiffanie L. Hamilton Date of Survey: 8/11/08

Organization: AESolutions Position: Field Technician

9/14/08

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: Sharpsburg Branch Waterbody ID: 87 Site #: 0087_03

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: 603929 UTM Y: 4396973 +/- 16 (feet)

11 UTM X: 603858 UTM Y: 4397143 +/- 14 (feet)

Average Stream Width: 8.6 (meters)
(To determne Length of Reach)

Length of Survey Segment: 172.0 (meters)
(20x average stream width)

Field Staff: JH, TH

Dissolved Oxygen

Date: 8/11/2008 Time: 14:30

Dissolved Oxygen: 9.63 (mg/L)

Dissolved Oxygen: 108.6 (% sat)

Specific Cond: 388 (µS/cm)

Water Temperature: 24.6 (°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	0.56	0.14	0.48	0.09	0.65	0.15	0.82	0.12	0.81	0.57	1.40	0.34	1.42	0.29	1.30	0.26	1.29	0.16	0.92	0.05	0.45	0.15
2	1.12	0.22	0.96	0.11	1.30	0.23	1.64	0.24	1.62	0.60	2.80	0.46	2.84	0.30	2.60	0.37	2.58	0.21	1.84	0.05	0.90	0.22
3	1.68	0.11	1.44	0.19	1.95	0.28	2.46	0.30	2.43	0.75	4.20	0.61	4.26	0.39	3.90	0.44	3.87	0.34	2.76	0.10	1.35	0.24
4	2.24	0.15	1.92	0.27	2.60	0.34	3.28	0.27	3.24	0.50	5.60	0.62	5.68	0.34	5.20	0.48	5.16	0.36	3.68	0.09	1.80	0.25
5	2.80	0.11	2.40	0.31	3.25	0.23	4.10	0.32	4.05	0.40	7.00	0.55	7.10	0.33	6.50	0.41	6.45	0.44	4.60	0.01	2.25	0.11
6	3.36	0.15	2.88	0.30	3.90	0.23	4.92	0.29	4.86	0.41	8.40	0.50	8.52	0.35	7.80	0.40	7.74	0.48	5.52	0.15	2.70	0.16
7	3.92	0.20	3.36	0.36	4.55	0.15	5.74	0.25	5.67	0.55	9.80	0.60	9.94	0.30	9.10	0.44	9.03	0.54	6.44	0.09	3.15	0.13
8	4.48	0.17	3.84	0.40	5.20	0.05	6.56	0.25	6.48	0.43	11.20	0.31	11.36	0.37	10.40	0.41	10.32	0.57	7.36	0.05	3.60	0.10
9	5.04	0.10	4.32	0.31	5.85	0.02	7.38	0.23	7.29	0.30	12.60	0.37	12.78	0.42	11.70	0.36	11.61	0.20	8.28	0.08	4.05	0.03
Right Bank	5.60	0.00	4.80	0.00	6.50	0.00	8.20	0.00	8.10	0.00	14.00	0.00	14.20	0.00	13.00	0.00	12.90	0.00	9.20	0.00	4.50	0.00
Feature Type (riffle, run, or pool)	Riffle		Run		Run		Pool		Pool		Pool		Pool		Run		Run		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: _____ Date: 8/11/2008

WBID: 0087
SITE: 1
DN STREAM

AES
WBID: 0087
SITE: 2
DN STREAM

WBID: 0087
SITE: 1
UP STREAM

AES
WBID: 0087
SITE: 2
UP STREAM

WBID: 0087
SITE: 3
DN STREAM

WBID: 0087
SITE: 3
UPSTREAM