Missouri
Department of
Natural Resources

Use Attainability Analysis

for

WBID 2885 Doe Run Creek

Submitted by
MEC Water Resources

To
Missouri Department of Natural Resources
Water Protection Program

On
December 1, 2007

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):	Doe Run Creek
Missouri Water Body Identification (WBID) Number:	2885
8-digit HUC: 08020202	County: St. Francois
Upstream Legal Description (from Table H):	20, 35N, 5E
Downstream Legal Description(from Table H):	27, 35N, 5E
Number of sites evaluated 3	
List all sites numbers, listed consecutively upstream to downstream: 1, 2, 3	

II. Discharger Facility Information (list all permitted dischargers on the stream)

Discharger Facility Name(s):	Emmanuel Baptist Church
Discharger Permit Number(s):	~~St. Francois SC~~ MO0092088

III. UAA Surveyor (please print legibly)

Name of Surveyor Tim Allhether, James Veverka	Telephone Number: 573-443-4100
Organization/Employer: MEC Water Resources	
Position: Water Quality Scientist	

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

Signed: _____ **Date:** 11/8/07

JWC 11-8-07

Doe Run Creek (WBID 2885)

Upstream Boundary
Downstream Boundary

Miles
0 0.1 0.2 0.4 0.6 0.8 1

WBID # 2885

Site # 2

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization

(must be completed for each site)

Date & Time: 10/30/07 11:59	Site Location Description (e.g., road crossing): North of Buck Mtn. Rd.
Personnel (Data Collectors): JV/TA	
Current Weather Conditions: Clear/Light Breeze/59°F	Facility Name:
Weather Conditions for Past 10 days: Spotty Rain/Clear	Permit Number:
Drought Conditions?: No drought ☑; Phase I □; Phase II □; Phase III □; Phase IV □; Unknown □	

Site Location:

	LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION, IN METERS)				
JV	Site 11 ~~Site 01~~	Easting (UTM X): 4177674	Northing (UTM Y): 155 0720522	Horizontal Accuracy: (EPE / FOM / PDOP) 6.1	Meters
JV	Site 01 ~~Site 11~~	Easting (UTM X): 4177806	Northing (UTM Y): 155 0720512	Horizontal Accuracy: (EPE / FOM / PDOP) 7.6	Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
2885_1_1346	Up Stream	2885_1_1347	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 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.)

WBID # 2985
Site # 1

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (continued)

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: Pasture
Comments:				

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
Comments / Other: None Observed				

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

80 % Cobble	10 % Gravel	10 % Sand	% Silt	% Mud/Clay	% Bedrock

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

Grasses common, algal growth 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~~ SV	☒ Other: Leaf mats
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 effect another use.

WBID # 2885

Site # 1

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (continued)

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.)

None

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

Surveyor's Signature: [signature] Date of Survey: 10/30/07

Organization: MEC Water Resources Position: Water Quality Scientist

AWC 11-8-07

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Waterbody ID: 2885 Site #: 1 (wbid_site #)

Estimated Channel Incision: 0.20 (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: 4177806 UTM Y: 155 0720512 +/- ~~34~~ 6.6 (meters)

11 UTM X: 4177674 UTM Y: 155 0720522 +/- 6.1 (meters)

Average Stream Width: 5 (meters) (To determne Length of Reach)

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

Field Staff: JV/TA

Dissolved Oxygen

Date: 10/30/07 Time: 11:59

Dissolved Oxygen: 4.23 (mg/L)

Dissolved Oxygen: 37.5 (% sat)

Specific Cond: 175.7 (µS/cm)

Water Temperature: 9.9 (°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	Dry		0.47	0.07	0.37	0.08	0.34	0.00	0.26	0.02	0.67	0.15	0.17	0.00 ~~0.03~~	0.19	0.03	0.23	0.04	0.28	0.00	0.67	0.06
2			0.94	0.06	0.74	0.09	0.68	0.00	0.52	0.01	1.34	0.15	0.34	0.00	0.38	0.00	0.46	0.05	0.56	0.01	1.34	0.10
3			1.41	0.07	1.11	0.09	1.02	0.01	0.78	0.05	2.01	0.21	0.51	0.00	0.57	0.00	0.69	0.04	0.84	0.04	2.01	0.11
4			1.88	0.03	1.48	0.10	1.36	0.00	1.04	0.06	2.68	0.19	0.68	0.06 ~~0.14~~	0.76	0.11	0.92	0.07 ~~0.20~~	1.12	0.00	2.68	0.14
5			2.35	0.00	1.85	0.10	1.70	0.00	1.30	0.00	3.35	0.25	0.80	0.05 ~~0.14~~	0.95	0.12	1.15	0.05	1.40	0.02	3.35	0.14
6			2.82	0.00	2.22	0.10	2.04	0.01	1.56	0.00	4.02	0.24	0.96	0.04 ~~0.14~~	1.14	0.11	1.38	0.05	1.68	0.01	4.02	0.15
7			3.29	0.00	2.59	0.10	2.38	0.00	1.82	0.05	4.69	0.20	1.12	0.05 ~~0.08~~	1.33	0.08	1.61	0.06	1.96	0.01	4.69	0.14
8			3.76	0.02	2.96	0.10	2.72	0.00	2.08	0.03	5.36	0.16	1.28	0.00 ~~0.08~~	1.52	0.08	1.84	0.04	2.24	0.01	5.36	0.12
9			4.23	0.04	3.30	0.04	3.06	0.00	2.34	0.03	6.03	0.15	1.44	0.04	1.71	0.04	2.07	0.03	2.52	0.01	6.03	0.15
Right Bank		0	4.70	0	3.70	0	3.40	0	2.60	0	6.70	0	1.70	0	1.90	0	2.30	0	2.80	0	6.70	0
Feature Type (riffle, run, or pool)	Dry		Run		Run		Riffle		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. Transect ordered in upstream to downstream order.
Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)
Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)
All measurements to be taken to the nearest 0.01 meter.

BKC 11-8-07

Signed: [signature] Date: 10/30/07

WBID # 2885
Site # 2

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization

(must be completed for each site)

Date & Time: 10/30/07 10:37	Site Location Description (e.g., road crossing): Off of Buck Mtn Rd.
Personnel (Data Collectors): JV/TA	
Current Weather Conditions: Clear/Calm/50	Facility Name:
Weather Conditions for Past 10 days: Spotty Snow/Clear	Permit Number:
Drought Conditions?: 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): 4177775	Northing (UTM Y): 15 5 0720884	Horizontal Accuracy: (EPE / FOM / PDOP) 10.8 Meters
Site 11	Easting (UTM X): 4177727	Northing (UTM Y): 15 5 ~~0720~~ 0721007	Horizontal Accuracy: (EPE / FOM / PDOP) 10.9 Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
2885_2_1342	Upstream	2885_2_1343	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 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.)

WBID # 2885
Site # 2

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (continued)

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: Pasture and forest land

Comments:

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

Comments / Other: No observed

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

5 % Cobble	5 % Gravel	5 % Sand	% Silt	% Mud/Clay	85 % Bedrock

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

Willow, grasses common / algal growth 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: Leaf mats
Surface Deposit:	☐ Oil	☐ Scum	☐ Foam	☐ None	☒ Other: algal growth

*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 effect another use.

WBID # 2985
Site # 2

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (continued)

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)
Pool	500m	10m	50m	0.90	>1.00

Comments: (Please record any additional comments here.)

*Pool was up stream from first Transect appox. 100m
* Large bedrock boulders covering Transect #1-6

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

Surveyor's Signature: [signature] Date of Survey: 10/30/07

Organization: MEC Water Resources Position: ~~TO/~~ Water Quality Scientist

AKC 11-8-07

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Waterbody ID: 2888 Site #: 2 (wbid_site #)

Estimated Channel Incision: 0.20 (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: ~~4177775~~ 4177775 UTM Y: 15 S 0720884 +/- 10.8 (meters)

11 UTM X: 4177222 UTM Y: 15 S 0721007 +/- 10.9 (meters)

Average Stream Width: 5 (meters) (To determne Length of Reach)

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

Field Staff: 3V/TA

Dissolved Oxygen

Date: 10/30/07 Time: 10:37

Dissolved Oxygen: 3.16 (mg/L)

Dissolved Oxygen: 29.8 (% sat)

Specific Cond: 180.2 (µS/cm)

Water Temperature: 12.5 (°C)

Transect Cross-Section

Station	01 Distance (m)	01 Depth (m)	02 Distance (m)	02 Depth (m)	03 Distance (m)	03 Depth (m)	04 Distance (m)	04 Depth (m)	05 Distance (m)	05 Depth (m)	06 Distance (m)	06 Depth (m)	07 Distance (m)	07 Depth (m)	08 Distance (m)	08 Depth (m)	09 Distance (m)	09 Depth (m)	10 Distance (m)	10 Depth (m)	11 Distance (m)	11 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	0.52	0.00	0.29	0.00	0.28	0.09	0.47	0.07	0.89	0.00	0.41	0.00	0.72	0.41	0.61	0.26	0.10	0.03	0.37	0.09	0.28	0.14
2	1.04	0.00	0.58	0.00	0.56	0.09	0.94	0.01	1.78	0.00	0.82	0.00	1.44	0.55	1.22	0.39	0.20	0.01	0.74	0.15	0.56	0.37
3	1.56	0.09	0.87	0.01	0.84	0.09	1.41	0.00	2.67	0.00	1.23	0.00	2.16	0.59	1.83	0.57	0.30	0.00	1.11	0.00	0.84	0.29
4	2.08	0.07	1.16	0.00	1.12	0.00	1.88	0.00	3.56	0.00	1.64	0.00	2.88	0.60	2.44	0.63	0.40	0.00	1.48	0.22	1.12	0.36
5	2.60	0.00	1.45	0.00	1.40	0.00	2.35	0.00	4.45	0.00	2.05	0.00	3.60	0.56	3.05	0.72	0.50	0.00	1.85	0.19	1.40	0.29
6	3.12	0.00	1.74	0.00	1.68	0.00	2.82	0.01 ~~0.05~~	5.34	0.00	2.46	0.00	4.32	0.67	3.66	0.60	0.60	0.00	2.22	0.16	1.68	0.26
7	3.64	0.03	2.03	0.00	1.96	0.01	3.29	0.00	6.23	0.00	2.87	0.00	5.04	0.47	4.27	0.51	0.70	0.04	2.59	0.17	1.96	0.24
8	4.16	0.05	2.32	0.00	2.24	0.00	3.76	0.00	7.12	0.06	3.28	0.00	5.76	0.47	4.88	0.46	0.80	0.05	2.96	0.10	2.24	0.22
9	4.68	0.00	2.61	0.00	2.52	0.00	4.23	0.00	8.01	0.07	3.69	0.02	6.48	0.25	5.49	0.21	0.90	0.06	3.33	0.28	2.52	~~0.04~~ 0.10 3V
Right Bank	5.20	0	2.90	0	2.80	0	4.70	0	8.90	0	4.10	0	7.20	0	6.10	0	1.00	0	5.70	0	2.80	0
Feature Type (riffle, run, or pool)	Riffle		Run		Riffle		Riffle		~~Run~~ Riffle 3V		Riffle		Pool		Pool		Riffle		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 by dividing wetted width by ten)
Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)
All measurements to be taken to the nearest 0.01 meter.

AWC 11-8-07

Signed: [signature] Date: 10/30/07

WBID # 2885
Site # 3

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization
(must be completed for each site)

Date & Time: 10/30/07 9:59	Site Location Description (e.g., road crossing): Off of Pendleton Rd
Personnel (Data Collectors): SV/TA	
Current Weather Conditions: Clear/Calm/50°F	Facility Name:
Weather Conditions for Past 10 days: Spotty Showers/Clear	Permit Number:
Drought Conditions?: 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): 4177052	Northing (UTM Y): 0772168	Horizontal Accuracy: (EPE / FOM / PDOP) 7.6 Meters
Site 11	Easting (UTM X): 4177176	Northing (UTM Y): 0722197	Horizontal Accuracy: (EPE / FOM / PDOP) 11.0 Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
2885_L_1340	Up Stream	2885_L_1341	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 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.)

WBID # 2885
Site # T 3

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (continued)

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: Pasture

Comments:

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

Comments / Other:
No observed

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

% Cobble	20 % Gravel	70 % Sand	5 % Silt	5 % Mud/Clay	% Bedrock

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

Grasses and algal growth 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: Leaf mats
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 effect another use.

WBID # 2885

Site # 3

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (continued)

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.)

None

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

Surveyor's Signature: [signature] Date of Survey: 10/30/07

Organization: NEC Water Resources Position: Water Quality Scientist

RNC 11-8-07

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Waterbody ID: 2885 Site #: ~~1~~ 3 (wbid_site #)

Estimated Channel Incision: ~~0.15~~ 0.20 (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: 4177072 UTM Y: 15S 0772168 +/- 1.6 (meters)

11 UTM X: 4177176 UTM Y: 15S 0772197 +/- 1.0 (meters)

Average Stream Width: 7 (meters) (To determne Length of Reach)

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

Field Staff: JU/JA

Dissolved Oxygen

Date: 10/30/07 Time: 9:59

Dissolved Oxygen: 2.93 (mg/L)

Dissolved Oxygen: 25.3 (% sat)

Specific Cond: 459.5 (µS/cm)

Water Temperature: 9.0 (°C)

Transect Cross-Section

Station	01 Distance (m)	01 Depth (m)	02 Distance (m)	02 Depth (m)	03 Distance (m)	03 Depth (m)	04 Distance (m)	04 Depth (m)	05 Distance (m)	05 Depth (m)	06 Distance (m)	06 Depth (m)	07 Distance (m)	07 Depth (m)	08 Distance (m)	08 Depth (m)	09 Distance (m)	09 Depth (m)	10 Distance (m)	10 Depth (m)	11 Distance (m)	11 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	1.01	0.24	0.66	0.21	0.69	0.17	0.81	0.16	0.75	0.46	1.08	0.16	1.00	0.13	0.35	0.11	0.27	0.20	0.43	0.10	0.25	0.14
2	2.02	0.18	1.32	0.33	1.38	0.25	1.62	0.19	1.50	0.40	2.16	0.10	2.00	0.11	0.70	0.10	0.54	0.29	0.86	0.02	0.50	0.18
3	3.03	0.10	1.98	0.43	2.07	0.36	2.43	0.26	2.25	0.41	3.24	0.09	3.00	0.04	1.05	0.07	0.81	0.33	1.29	0.00	0.75	0.17
4	4.04	0.00	2.64	0.44	2.76	0.46	3.24	0.34	3.00	0.39	4.32	0.03	4.00	0.00	1.40	0.03	1.08	0.30	1.72	0.04	1.00	0.15
5	5.05	0.00	3.30	0.29	3.45	0.58	4.05	0.40	3.75	0.35	5.40	0.00	5.00	0.00	1.75	0.05	1.35	0.29	2.15	0.07	1.25	0.13
6	6.06	0.00	3.96	0.24	4.14	0.66	4.86	0.49	4.50	0.24	6.48	0.00	6.00	0.00	2.10	0.07	1.62	0.28	2.58	0.12	1.50	0.10
7	7.07	0.00	4.92	0.26	4.83	0.69	[illegible]	0.56	5.25	0.26	7.56	0.00	7.00	0.00	2.45	0.10	1.89	0.25	3.01	0.14	1.75	0.08
8	8.68	0.15	5.28	0.28	5.52	0.47	6.48	0.56	6.00	0.22	8.64	0.02	8.00	0.00	2.80	0.10	2.16	0.17	3.44	0.06	2.00	0.06
9	9.09	0.18	5.94	0.31	6.21	0.55	7.29	0.41	6.75	0.15	9.72	0.06	9.00	0.00	3.15	0.03	2.43	0.09	3.87	0.05	~~0.25~~ 2.25	0.01
Right Bank	10.10	0	6.60	0	6.90	0	8.10	0	7.50	0	10.80	0	10.00	0	3.50	0	2.70	0	4.30	0	2.50	0
Feature Type (riffle, run, or pool)	~~10.10~~ Run		Run		Pool		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 by dividing wetted width by ten)
Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)
All measurements to be taken to the nearest 0.01 meter.

RMC 11-5-07

Signed: [signature] Date: 10/30/07

WBID 2885
Site 1
US

WBID 2885
Site 2
US

WBID 2885
Site 3
DNS

WBID 2885
Site 1
DNS

WBID 2885
Site 3
US

WBID 2885
Site 2
DNS