Missouri
Department of
Natural Resources

Use Attainability Analysis

for

WBID 0860 Sewer Creek

Submitted by
SES, Inc.

To
Missouri Department of Natural Resources
Water Protection Program

On

October 14, 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): Sewer Branch
Missouri Water Body Identification (WBID) Number: 860
8-digit HUC: 10300103
County(ies), Listed Upstream to Downstream: Pettis
Upstream Legal Description (from Table H): T46N R21W Sec 16
Downstream Legal Description (from Table H): T46N R21W Sec 9
Number of sites evaluated: 3
List all site numbers, consecutively upstream to downstream: 1, 2, 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): Waterloo Industries Inc. MO0111465

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

Name of Surveyor: Bryan Deimeke	Telephone Number: 913-307-0046
Organization/Employer: SES, Inc.	

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: Bryan Deimeke **Date:** 9/22/08


860 Sewer Br.
Site 3
Site 2
Site 1
860 Sewer Br.
Pettis County
Mccurdy Rd
Parker Rd
MCCURDY RD
MIFFELBAUSER RD
Mccurdy Ln
Saline St
Post Oak St
STATE HWY H
SWOPE RD
BATTEROIL PARK RD
Tane Rd

WBID # __860____

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: 9/18/08 14:50	Location Description (e.g., road crossing): East of McCurdy Rd
Stream Name: Sewer Br.	
Current Weather Conditions: Clear	Facility Name(s): Waterloo Industries Inc.
Weather Conditions for Past 10 days: 5.53 in	Permit Number(s): MO0111465
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): 0479534	Northing (UTM Y): 4291062	Horizontal Accuracy: (EPE / FOM / PDOP)	5 Meters
Site 11	Easting (UTM X): 0479463	Northing (UTM Y): 4291264	Horizontal Accuracy: (EPE / FOM / PDOP)	6 Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
31	Downstream	32	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 # _Sewer Br._____860_____ Date of Survey __9/18/08___

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:				

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%.)

60% Cobble	20% Gravel	% Sand	% Silt	% Mud/Clay	20% Bedrock

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

None

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 # Sewer Br. 860 Date of Survey 9/18/08

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.)

Did not get DO reading as meter was not working properly.

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

Printed Names of Personnel Collecting Data: Bryan Deimeke and David Bender

Surveyor's Signature: Bryan Deimeke Date of Survey: 9/18/08

Organization: SES, Inc. Position: Field Team Leader

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: Sewer Br. Waterbody ID: 860 Site #: 1

Estimated Channel Incision: 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: 0479534 UTM Y: 4291062 +/- 5 (meters)

11 UTM X: 0479463 UTM Y: 4291264 +/- 6 (meters)

Average Stream Width: 11 (meters) (To determne Length of Reach)

Length of Survey Segment: 220 (meters) (20x average stream width)

Field Staff: Bryan Deimeke and David Bender

Dissolved Oxygen

Date: 9/18/2008 Time: 14:50

Dissolved Oxygen: N/A (mg/L)

Dissolved Oxygen: (% sat)

Specific Cond: (µS/cm)

Water Temperature: N/A (°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	1.00	0.01	1.10	0.15	1.20	0.15	0.90	0.05	1.20	0.05	1.10	0.15	0.80	0.15	1.00	0.40	1.00	0.25	1.10	0.25	0.80	0.01
2	2.00	0.15	2.20	0.30	2.40	0.20	1.80	0.30	2.40	0.20	2.20	0.40	1.60	0.30	2.00	0.45	2.00	0.60	2.20	0.25	1.60	0.05
3	3.00	0.20	3.30	0.25	3.60	0.45	2.70	0.30	3.60	0.50	3.30	0.50	2.40	0.30	3.00	0.45	3.00	0.60	3.30	0.20	2.40	0.10
4	4.00	0.25	4.40	0.15	4.80	0.60	3.60	0.35	4.80	0.50	4.40	0.40	3.20	0.30	4.00	0.40	4.00	0.60	4.40	0.30	3.20	0.20
5	5.00	0.30	5.50	0.20	6.00	0.35	4.50	0.35	6.00	0.60	5.50	0.20	4.00	0.25	5.00	0.35	5.00	0.60	5.50	0.30	4.00	0.30
6	6.00	0.35	6.60	0.25	7.20	0.25	5.40	0.30	7.20	0.55	6.60	0.35	4.80	0.15	6.00	0.30	6.00	0.55	6.60	0.30	4.80	0.30
7	7.00	0.20	7.70	0.20	8.40	0.30	6.30	0.30	8.40	0.45	7.70	0.50	5.60	0.05	7.00	0.25	7.00	0.35	7.70	0.30	5.60	0.25
8	8.00	0.20	8.80	0.20	9.60	0.15	7.20	0.15	9.60	0.25	8.80	0.60	6.40	0.05	8.00	0.25	8.00	0.25	8.80	0.25	6.40	0.30
9	9.00	0.10	9.90	0.10	10.80	0.15	8.10	0.20	10.80	0.20	9.90	0.20	7.20	0.05	9.00	0.05	9.00	0.10	9.90	0.15	7.20	0.15
Right Bank	10.00	0.00	11.00	0.00	12.00	0.00	9.00	0.00	12.00	0.00	11.00	0.00	8.00	0.00	10.00	0.00	10.00	0.00	11.00	0.00	8.00	0.00
Feature Type (riffle, run, or pool)	run		run		run		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: Bryan Deimeke Date: 9/18/2008

WBID # __860____

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: 9/18/08 16:00	Location Description (e.g., road crossing): East of McCurdy Rd.
Stream Name: Sewer Br.	
Current Weather Conditions: Clear	Facility Name(s): Waterloo Industries Inc.
Weather Conditions for Past 10 days: 5.53 in	Permit Number(s): MO0111465
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): 0479429	Northing (UTM Y): 4291694	Horizontal Accuracy: (EPE / FOM / PDOP)	5 Meters
Site 11	Easting (UTM X): 0479459	Northing (UTM Y): 4291863	Horizontal Accuracy: (EPE / FOM / PDOP)	6 Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
33	Downstream	34	Road	35	Log jam
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
36	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 # _Sewer Br. 860_____ Date of Survey _9/18/08_____

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:				

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

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

None

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 # _Sewer Br. 860_____ Date of Survey _9/18/08_____

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.)

Log Jam at Transect 7.
Did not get DO reading as meter was not working properly.

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

Printed Names of Personnel Collecting Data: Bryan Deimeke and David Bender

Surveyor's Signature: Bryan Deimeke Date of Survey: 9/18/08

Organization: SES, Inc. Position: Field Team Leader

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: Sewer Br. Waterbody ID: 860 Site #: 2

Estimated Channel Incision: 0.5 (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: 0479429 UTM Y: 4291694 +/- 5 (meters)

11 UTM X: 0479459 UTM Y: 4291863 +/- 6 (meters)

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

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

Field Staff: Bryan Deimeke and David Bender

Dissolved Oxygen

Date: 9/18/2008 Time: 16:00

Dissolved Oxygen: N/A (mg/L)

Dissolved Oxygen: (% sat)

Specific Cond: (µS/cm)

Water Temperature: N/A (°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	0.40	0.01	0.40	0.15	0.40	0.15	0.60	0.15	0.70	0.10	0.70	0.20	0.70	0.40	0.50	0.05	0.50	0.10	0.60	0.70	0.70	0.15
2	0.80	0.05	0.80	0.25	0.80	0.30	1.20	0.30	1.40	0.30	1.40	0.70	1.40	0.50	1.00	0.10	1.00	0.60	1.20	1.00	1.40	0.75
3	1.20	0.05	1.20	0.25	1.20	0.30	1.80	0.20	2.10	0.35	2.10	0.85	2.10	0.50	1.50	0.05	1.50	0.70	1.80	1.00	2.10	1.00
4	1.60	0.10	1.60	0.25	1.60	0.35	2.40	0.10	2.80	0.35	2.80	0.75	2.80	0.50	2.00	0.05	2.00	0.70	2.40	1.00	2.80	1.00
5	2.00	0.15	2.00	0.30	2.00	0.45	3.00	0.15	3.50	0.40	3.50	0.70	3.50	0.55	2.50	0.15	2.50	0.70	3.00	1.00	3.50	1.00
6	2.40	0.20	2.40	0.30	2.40	0.40	3.60	0.30	4.20	0.40	4.20	0.65	4.20	0.50	3.00	0.25	3.00	0.70	3.60	1.00	4.20	1.00
7	2.80	0.25	2.80	0.35	2.80	0.40	4.20	0.65	4.90	0.30	4.90	0.65	4.90	0.45	3.50	0.25	3.50	0.75	4.20	1.00	4.90	1.00
8	3.20	0.35	3.20	0.10	3.20	0.35	4.80	0.65	5.60	0.20	5.60	0.40	5.60	0.30	4.00	0.30	4.00	0.80	4.80	1.00	5.60	1.00
9	3.60	0.20	3.60	0.05	3.60	0.20	5.40	0.30	6.30	0.20	6.30	0.20	6.30	0.05	4.50	0.15	4.50	0.50	5.40	0.70	6.30	1.00
Right Bank	4.00	0.00	4.00	0.00	4.00	0.00	6.00	0.00	7.00	0.00	7.00	0.00	7.00	0.00	5.00	0.00	5.00	0.00	6.00	0.00	7.00	0.00
Feature Type (riffle, run, or pool)	run		run		run		run		pool		pool		pool		run		run		pool		pool	

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: Bryan Deimeke Date:

WBID # __860____

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: 9/18/08 16:40	Location Description (e.g., road crossing): East of McCurdy Rd
Stream Name: Sewer Br.	
Current Weather Conditions: Clear	Facility Name(s): Waterloo Industries Inc.
Weather Conditions for Past 10 days: 5.53 in	Permit Number(s): MO0111465
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): 0479444	Northing (UTM Y): 4292202	Horizontal Accuracy: (EPE / FOM / PDOP)	6 Meters
Site 11	Easting (UTM X): 0479381	Northing (UTM Y): 4292325	Horizontal Accuracy: (EPE / FOM / PDOP)	8 Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
37	Downstream	38	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 # _Sewer Br. 860_____ Date of Survey _9/18/08_____

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:				

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	90% Gravel	5% Sand	% Silt	5% Mud/Clay	% Bedrock

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

None

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 # Sewer Br. 860 Date of Survey 9/18/08

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.)

Did not get DO reading as meter was not working properly.

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

Printed Names of Personnel Collecting Data: Bryan Deimeke and David Bender

Surveyor's Signature: Bryan Deimeke Date of Survey: 9/18/08

Organization: SES, Inc. Position: Field Team Leader

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: Sewer Br. Waterbody ID: 860 Site #: 3

Estimated Channel Incision: 2 (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: 0479444 UTM Y: 4292202 +/- 6 (meters)

11 UTM X: 0479381 UTM Y: 4292325 +/- 8 (meters)

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

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

Field Staff: Bryan Deimeke and David Bender

Dissolved Oxygen

Date: 9/18/2008 Time: 16:40

Dissolved Oxygen: N/A (mg/L)

Dissolved Oxygen: (% sat)

Specific Cond: (µS/cm)

Water Temperature: N/A (°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	0.20	0.05	0.20	0.05	0.40	0.05	0.50	0.20	0.80	0.30	0.60	0.35	1.00	0.10	0.80	0.20	0.90	0.10	0.80	1.00	0.80	0.10
2	0.40	0.15	0.40	0.15	0.80	0.10	1.00	0.40	1.60	0.35	1.20	0.30	2.00	0.50	1.60	0.60	1.80	0.25	1.60	1.00	1.60	0.40
3	0.60	0.25	0.60	0.25	1.20	0.15	1.50	0.40	2.40	0.45	1.80	0.20	3.00	0.90	2.40	1.00	2.70	0.60	2.40	1.00	2.40	1.00
4	0.80	0.35	0.80	0.40	1.60	0.15	2.00	0.45	3.20	0.30	2.40	0.10	4.00	1.00	3.20	1.00	3.60	0.80	3.20	1.00	3.20	1.00
5	1.00	0.45	1.00	0.40	2.00	0.15	2.50	0.50	4.00	0.35	3.00	0.10	5.00	0.90	4.00	0.95	4.50	1.00	4.00	1.00	4.00	1.00
6	1.20	0.40	1.20	0.40	2.40	0.15	3.00	0.45	4.80	0.40	3.60	0.10	6.00	0.80	4.80	0.85	5.40	1.00	4.80	1.00	4.80	1.00
7	1.40	0.25	1.40	0.40	2.80	0.20	3.50	0.40	5.60	0.35	4.20	0.05	7.00	0.85	5.60	0.75	6.30	1.00	5.60	1.00	5.60	1.00
8	1.60	0.20	1.60	0.40	3.20	0.20	4.00	0.45	6.40	0.30	4.80	0.05	8.00	0.80	6.40	0.50	7.20	0.95	6.40	1.00	6.40	0.40
9	1.80	0.05	1.80	0.40	3.60	0.40	4.50	0.25	7.20	0.20	5.40	0.01	9.00	0.20	7.20	0.20	8.10	0.25	7.20	0.80	7.20	0.20
Right Bank	2.00	0.00	2.00	0.00	4.00	0.00	5.00	0.00	8.00	0.00	6.00	0.00	10.00	0.00	8.00	0.00	9.00	0.00	8.00	0.00	8.00	0.00
Feature Type (riffle, run, or pool)	run		run		run		run		pool		riffle		pool		pool		pool		pool		pool	

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: Bryan Deimeke Date: 9/18/2008