Missouri
Department of
Natural Resources

Use Attainability Analysis

for

WBID 0123 Middle Fork Salt River

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):	Middle Fk. Salt R.
Missouri Water Body Identification (WBID) Number:	0123
8-digit HUC:	07110006
County(ies), Listed Upstream to Downstream:	Macon
Upstream Legal Description (from Table H):	23, 59N, 14W
Downstream Legal Description (from Table H):	16, 56N, 13W
Number of sites evaluated:	15

List all site numbers, consecutively upstream to downstream:

site 1: Hwy M Crossing
site 2: 50m downstream of site 1
site 3: Kettle St. Crossing
site 4: Kennedy St. crossing
site 5: Kennel St. crossing
site 6: 50m dnstream of site 5
site 7: Rt DD Crossing
site 8: 50m dnstream of site 7
site 9: Melody Ave. Crossing
site 10: Hwy 36 Bridge
site 11: Vine St. Crossing
site 12: Rt PP Bridge
site 13: 50m dnstream of site 12
site 14: 50m upstream of site 15
site 15: Mahogany Rd 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):

Macon WWTF
MO 0023221

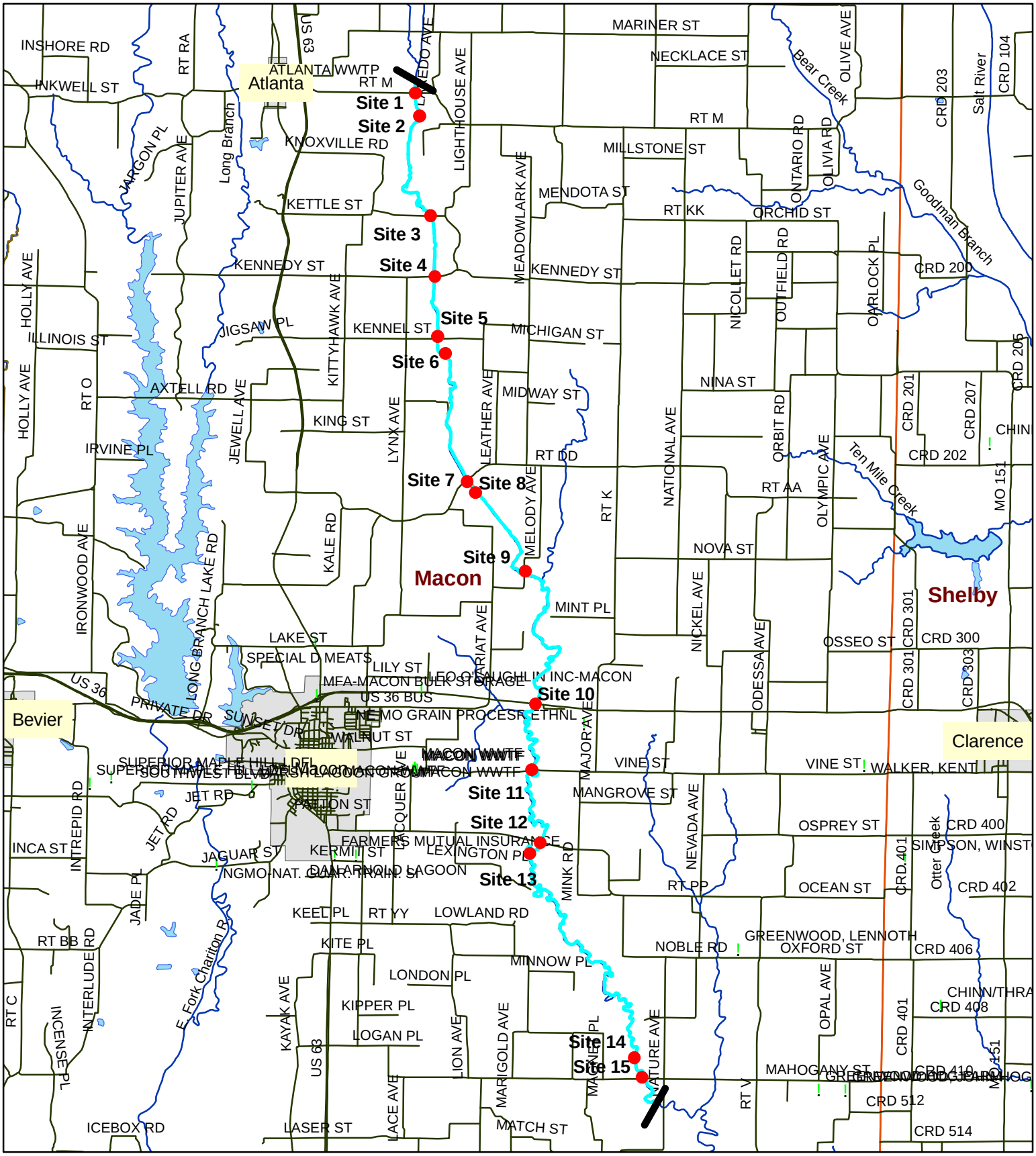
III. UAA Surveyor (please **PRINT** legibly)

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

9/14/08



Middle Fk. Salt River
WBID 0123
Macon County

Meters

0 1,900 3,800 7,600 11,400

WBID # 0123

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: 8/20/08 06:41	Location Description (e.g., road crossing):
Stream Name: M. FK SALT R.	Hwy M crossing
Current Weather Conditions: Partly cloudy	Facility Name(s): Macon WWTF
Weather Conditions for Past 10 days: 0.71" of rain	Permit Number(s): MO 0023221
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): 0548075	Northing (UTM Y): 4416425	Horizontal Accuracy: (EPE / FOM / PDOP) 41	~~Meters~~ SKH ft
Site 11	Easting (UTM X): 0548083	Northing (UTM Y): 4416248	Horizontal Accuracy: (EPE / FOM / PDOP) 28	~~Meters~~ SKH ft

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
0043	upstream	TH ~~0044~~ 0045	downstream	0046	livestock watering
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 # M. Fk. SALT R. #0123 Date of Survey 8/20/08

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 (1)
☐ None of the above	Comments / Other:			

(1) Transects 5 + 6

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

— % Cobble	— % Gravel	70 % Sand	— % Silt	30 % 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 (1)	☐ Foam	☐ None	☐ Other: (1) scum due to log jam.

*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 # M. FK. SALT R. # 0123 Date of Survey 8/20/08

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.)

Woody debris throughout site.

50 m of severe bank erosion ~~be~~ at Transect 7.

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: 8/20/08

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: Middle Fk. Salt R. Waterbody ID: 0123 Site #: 0123_01

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: 548075 UTM Y: 4416425 +/- 41 (feet)

11 UTM X: 548083 UTM Y: 4416248 +/- 28 (feet)

Average Stream Width: 4.2 (meters) Length of Survey Segment: 150 (meters)

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

Field Staff: JRH, TAH

Dissolved Oxygen

Date: 8/20/2008 Time: 6:41

Dissolved Oxygen: 3.31 (mg/L)

Dissolved Oxygen: 35.7 (% sat)

Specific Cond: 289 (µS/cm)

Water Temperature: 19.1 (°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	0.74	0.41	0.47	0.73	0.48	0.62	0.45	0.38	0.45	0.43	0.59	0.24	0.41	0.11	0.26	0.06	0.09	0.05	0.24	0.06	0.46	0.15
2	1.48	0.42	0.94	0.69	0.96	0.70	0.90	0.43	0.90	0.54	1.18	0.41	0.82	0.12	0.52	0.10	0.18	0.06	0.48	0.06	0.92	0.29
3	2.22	0.48	1.41	0.69	1.44	0.78	1.35	0.53	1.35	0.55	1.77	0.55	1.23	0.10	0.78	0.11	0.27	0.05	0.72	0.05	1.38	0.15
4	2.96	0.49	1.88	0.60	1.92	0.78	1.80	0.49	1.80	0.54	2.36	0.54	1.64	0.08	1.04	0.15	0.36	0.07	0.96	0.02	1.84	0.15
5	3.70	0.57	2.35	0.44	2.40	0.80	2.25	0.49	2.25	0.57	2.95	0.58	2.05	0.08	1.30	0.19	0.45	0.08	1.20	0.02	2.30	0.15
6	4.44	0.58	2.82	0.33	2.88	0.75	2.70	0.44	2.70	0.64	3.54	0.53	2.46	0.14	1.56	0.21	0.54	0.09	1.44	0.03	2.76	0.15
7	5.18	0.61	3.29	0.45	3.36	0.75	3.15	0.45	3.15	0.75	4.13	0.55	2.87	0.18	1.82	0.19	0.63	0.08	1.68	0.05	3.22	0.16
8	5.92	0.60	3.76	0.37	3.84	0.76	3.60	0.39	3.60	0.70	4.72	0.50	3.28	0.19	2.08	0.20	0.72	0.05	1.92	0.05	3.68	0.21
9	6.66	0.62	4.23	0.13	4.32	0.50	4.05	0.28	4.05	0.41	5.31	0.25	3.69	0.12	2.34	0.15	0.81	0.02	2.16	0.07	4.14	0.23
Right Bank	7.40	0.00	4.70	0.00	4.80	0.00	4.50	0.00	4.55	0.00	5.90	0.00	4.10	0.00	2.60	0.00	0.95	0.00	2.45	0.00	4.60	0.00
Feature Type (riffle, run, or pool)	Pool		Pool		Pool		Pool		Pool		Pool		Pool		Pool		Run		Run		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: _____ Date: 8/20/2008

WBID # 0123

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: 8/20/08 07:12	Location Description (e.g., road crossing):
Stream Name: M FK SALT R.	50 m downstream of Site 01, Transect 11
Current Weather Conditions: Partly cloudy	Facility Name(s): Macon WWTF
Weather Conditions for Past 10 days: 0.71" of rain	Permit Number(s): MO 0023221
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): 0548079	Northing (UTM Y): 4416195	Horizontal Accuracy: (EPE / FOM / PDOP)	32 ~~Meters~~ ft
Site 11	Easting (UTM X): 0548106	Northing (UTM Y): 4416033	Horizontal Accuracy: (EPE / FOM / PDOP)	18 ~~Meters~~ ft

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
0047	upstream	0048	downstream	0049	livestock watering
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 # Middle Fk Salt R. # 0123 Date of Survey 8/20/08

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%.)

— % Cobble	5 % Gravel	75 % Sand	— % Silt	20 % Mud/Clay	— % Bedrock

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

Benthic algae at Transect 10

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:

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Stream Name & WBID # Middle Fk. Salt R. # 0123 Date of Survey 8/20/08

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.)

Woody debris throughout site.

Cattle crossing at Transect 9, 10, 11

Major bank erosion throughout site

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

Printed Names of Personnel Collecting Data: Jennifer Habik & Tiffanie Hamilton

Surveyor's Signature: Jennifer Habik Date of Survey: 8/20/08

Organization: AE Solutions Position: Environmental Specialist

SV 9/19/08

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: Middle Fk. Salt R. Waterbody ID: 0123 Site #: 0123_02

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: 548079 UTM Y: 4416195 +/- 32 (feet)

11 UTM X: 548106 UTM Y: 4416033 +/- 18 (feet)

Average Stream Width: 3.2 (meters) Length of Survey Segment: 150 (meters)

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

Field Staff: JRH, TAH

Dissolved Oxygen

Date: 8/20/2008 Time: 7:12

Dissolved Oxygen: 3.31 (mg/L)

Dissolved Oxygen: 35.9 (% sat)

Specific Cond: 370 (µS/cm)

Water Temperature: 19.3 (°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	0.57	0.10	0.37	0.15	0.19	0.06	0.36	0.20	0.27	0.05	0.13	0.03	0.32	0.09	0.50	0.14	0.36	0.27	0.29	0.20	0.16	0.00
2	1.14	0.26	0.74	0.14	0.38	0.06	0.72	0.20	0.54	0.04	0.26	0.03	0.64	0.11	1.00	0.19	0.72	0.19	0.58	0.20	0.32	0.09
3	1.71	0.26	1.11	0.15	0.57	0.08	1.08	0.25	0.81	0.05	0.39	0.05	0.96	0.14	1.50	0.25	1.08	0.16	0.87	0.20	0.48	0.10
4	2.28	0.25	1.48	0.15	0.76	0.10	1.44	0.29	1.08	0.03	0.52	0.06	1.28	0.15	2.00	0.36	1.44	0.26	1.16	0.22	0.64	0.11
5	2.85	0.26	1.85	0.14	0.95	0.12	1.80	0.31	1.35	0.02	0.65	0.07	1.60	0.17	2.50	0.45	1.80	0.15	1.45	0.19	0.80	0.15
6	3.42	0.30	2.22	0.16	1.14	0.14	2.16	0.36	1.62	0.02	0.78	0.05	1.92	0.23	3.00	0.64	2.16	0.18	1.74	0.19	0.96	0.12
7	3.99	0.24	2.59	0.16	1.33	0.18	2.52	0.40	1.89	0.02	0.91	0.03	2.24	0.25	3.50	0.57	2.52	0.12	2.03	0.14	1.12	0.10
8	4.56	0.25	2.96	0.15	1.52	0.16	2.88	0.36	2.16	0.03	1.04	0.02	2.56	0.20	4.00	0.60	2.88	0.10	2.32	0.08	1.28	0.08
9	5.13	0.19	3.33	0.12	1.71	0.10	3.24	0.33	2.43	0.01	1.17	0.01	2.88	0.10	4.50	0.52	3.24	0.08	2.61	0.06	1.44	0.05
Right Bank	5.65	0.00	3.65	0.00	1.85	0.00	3.55	0.00	2.65	0.00	1.25	0.00	3.15	0.00	4.95	0.15	3.60	0.00	2.85	0.00	1.55	0.00
Feature Type (riffle, run, or pool)	Pool		Run		Run		Pool		Riffle		Riffle		Run		Pool		Pool		Pool		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: 8/20/2008

WBID # 0123

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: 8/20/08 07:54	Location Description (e.g., road crossing): Kettle St. crossing
Stream Name: M FK SALT R.	
Current Weather Conditions: Partly cloudy	Facility Name(s): Macon WWTF
Weather Conditions for Past 10 days: 0.71" of rain	Permit Number(s): MO 0023221
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): 0548511	Northing (UTM Y): 4413199	Horizontal Accuracy: (EPE / FOM / PDOP)	15 ~~Meters~~ SWH FT
Site 11	Easting (UTM X): 0548522	Northing (UTM Y): 4413032	Horizontal Accuracy: (EPE / FOM / PDOP)	17 ~~Meters~~ SWH FT

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
0050	upstream	0051	downstream		
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

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

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

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

N/A

Stream Name & WBID # MFk Salt R #0123 Date of Survey 8/20/08

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:			

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

40 % Cobble	20 % Gravel	30 % Sand	- % Silt	10 % Mud/Clay	— % Bedrock

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

Filamentous algae — all at Transect 1 only
benthic algae — willows — ~~abundant~~ 40%

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 # M Fk. Salt #0123 Date of Survey 8/20/08

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.)

Log jam at low water crossing – Transect 1.

Filamentous algae + willows + benthic algae at Transect 1.

Some woody debris throughout site.

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

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

Surveyor's Signature: Jeff A. Hill Date of Survey: 8/20/08

Organization: AE Solutions Position: Field Technician

9/19/08

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: Middle Fk. Salt R. Waterbody ID: 0123 Site #: 0123_03

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: 548511 UTM Y: 4413199 +/- 15 (feet)

11 UTM X: 548522 UTM Y: 4413032 +/- 17 (feet)

Average Stream Width: 4.7 (meters) Length of Survey Segment: 150 (meters)

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

Field Staff: JRH, TAH

Dissolved Oxygen

Date: 8/20/2008 Time: 7:54

Dissolved Oxygen: 2.99 (mg/L)

Dissolved Oxygen: 33.1 (% sat)

Specific Cond: 297 (µS/cm)

Water Temperature: 19.8 (°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	0.57	0.04	0.97	0.20	0.61	0.40	0.30	0.08	0.33	0.05	0.16	0.03	0.68	0.20	0.60	0.18	0.30	0.02	0.47	0.24	0.43	0.02
2	1.14	0.01	1.94	0.39	1.22	0.40	0.60	0.10	0.66	0.02	0.32	0.06	1.36	0.15	1.20	0.18	0.60	0.02	0.94	0.30	0.86	0.04
3	1.71	0.09	2.91	0.53	1.83	0.40	0.90	0.12	0.99	0.05	0.48	0.10	2.04	0.14	1.80	0.10	0.90	0.01	1.41	0.16	1.29	0.01
4	2.28	0.14	3.88	0.50	2.44	0.43	1.20	0.15	1.32	0.08	0.64	0.12	2.72	0.15	2.40	0.03	1.20	0.01	1.88	0.08	1.72	0.00
5	2.85	0.12	4.85	0.42	3.05	0.46	1.50	0.10	1.65	0.10	0.80	0.15	3.40	0.11	3.00	0.05	1.50	0.02	2.35	0.25	2.15	0.00
6	3.42	0.13	5.82	0.31	3.66	0.55	1.80	0.09	1.98	0.16	0.96	0.15	4.08	0.13	3.60	0.08	1.80	0.02	2.82	0.21	2.58	0.02
7	3.99	0.01	6.79	0.34	4.27	0.72	2.10	0.08	2.31	0.15	1.12	0.15	4.76	0.10	4.20	0.05	2.10	0.01	3.29	0.16	3.01	0.00
8	4.56	0.10	7.76	0.39	4.88	0.75	2.40	0.05	2.64	0.22	1.28	0.13	5.44	0.08	4.80	0.09	2.40	0.05	3.76	0.13	3.44	0.01
9	5.13	0.08	8.73	0.19	5.49	0.85	2.70	0.02	2.97	0.21	1.44	0.11	6.12	0.16	5.40	0.09	2.70	0.03	4.23	0.02	3.87	0.01
Right Bank	5.70	0.00	9.65	0.00	6.10	0.00	2.95	0.00	3.25	0.00	1.60	0.00	6.75	0.00	5.95	0.00	3.00	0.00	4.65	0.00	4.30	0.00
Feature Type (riffle, run, or pool)	Riffle		Pool		Pool		Pool		Run		Riffle		Pool		Run		Riffle		Pool		Riffle	

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

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

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

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

All measurements to be taken to the nearest 0.01 meter.

Surveyor's Signature: _____ Date: 8/20/2008

WBID # 0123

Site # 04

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: 8/20/08 08:33	Location Description (e.g., road crossing): Kennedy St. Crossing
Stream Name: M FK. SALT R.	
Current Weather Conditions: Partly sunny	Facility Name(s): Macon WWTF
Weather Conditions for Past 10 days: 0.71" of rain	Permit Number(s): MO 0023221
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): 0548568	Northing (UTM Y): 4411610	Horizontal Accuracy: (EPE / FOM / PDOP)	16 ~~Meters~~ Ft
Site 11	Easting (UTM X): 0548977	Northing (UTM Y): 4411465	Horizontal Accuracy: (EPE / FOM / PDOP)	20 ~~Meters~~ Ft

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
0052	upstream	0053	downstream	0054	livestock watering crossing
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 # M. FK SALT #0123 Date of Survey 8/20/08

Site # 04

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:
Fence across creek at Transect 1.
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:			

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

— % Cobble	5 % Gravel	75 % Sand	— % Silt	20 % Mud/Clay	— % Bedrock

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

Benthic algae } abundant
Diatoms

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 # M. Fk SALT #023 Date of Survey 8/20/08

Site # D4

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.)

Woody debris at Transect 3.

Downed trees over Transect 3.

Bank erosion at Transect 3

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

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

Surveyor's Signature: Tiffanie A. Hamilton Date of Survey: 8/20/08

Organization: AE Solutions Position: Field Technician

4/14/08

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: Middle Fk. Salt R. Waterbody ID: 0123 Site #: 0123_04

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: 548568 UTM Y: 4411610 +/- 16 (feet)

11 UTM X: 548577 UTM Y: 4411465 +/- 20 (feet)

Average Stream Width: 3.3 (meters) Length of Survey Segment: 150 (meters)

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

Field Staff: JRH, TAH

Dissolved Oxygen

Date: 8/20/2008 Time: 8:33

Dissolved Oxygen: 5.99 (mg/L)

Dissolved Oxygen: 64.8 (% sat)

Specific Cond: 345 (µS/cm)

Water Temperature: 18.9 (°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	0.30	0.09	0.29	0.44	0.43	0.32	0.61	0.20	0.42	0.10	0.43	0.02	0.30	0.06	0.28	0.05	0.49	0.05	0.16	0.05	0.21	0.05
2	0.60	0.12	0.58	0.55	0.86	0.58	1.22	0.34	0.84	0.09	0.86	0.05	0.60	0.05	0.56	0.10	0.98	0.00	0.32	0.02	0.42	0.08
3	0.90	0.23	0.87	0.60	1.29	0.82	1.83	0.44	1.26	0.13	1.29	0.08	0.90	0.03	0.84	0.09	1.47	0.00	0.48	0.10	0.63	0.08
4	1.20	0.25	1.16	0.60	1.72	0.99	2.44	0.46	1.68	0.14	1.72	0.08	1.20	0.05	1.12	0.08	1.96	0.00	0.64	0.11	0.84	0.06
5	1.50	0.24	1.45	0.62	2.15	0.95	3.05	0.48	2.10	0.11	2.15	0.04	1.50	0.04	1.40	0.08	2.45	0.00	0.80	0.08	1.05	0.04
6	1.80	0.25	1.74	0.60	2.58	0.90	3.66	0.48	2.52	0.14	2.58	0.08	1.80	0.02	1.68	0.08	2.94	0.02	0.96	0.06	1.26	0.03
7	2.10	0.15	2.03	0.58	3.01	0.80	4.27	0.44	2.94	0.06	3.01	0.10	2.10	0.04	1.96	0.04	3.43	0.03	1.12	0.04	1.47	0.08
8	2.40	0.11	2.32	0.54	3.44	0.69	4.88	0.39	3.36	0.10	3.44	0.11	2.40	0.10	2.24	0.04	3.92	0.05	1.28	0.02	1.68	0.10
9	2.70	0.11	2.61	0.52	3.87	0.36	5.49	0.35	3.78	0.15	3.87	0.10	2.70	0.06	2.52	0.05	4.41	0.06	1.44	0.02	1.89	0.08
Right Bank	2.95	0.00	2.90	0.00	4.30	0.00	6.05	0.00	4.20	0.00	4.25	0.00	3.00	0.00	2.80	0.00	4.90	0.00	1.55	0.00	2.10	0.00
Feature Type (riffle, run, or pool)	Run		Pool		Pool		Pool		Pool		Pool		Riffle		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: 8/20/2008

WBID # 0123

Site # 05

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: 8/20/08 09:11	Location Description (e.g., road crossing): Kennel St. crossing
Stream Name: M. FK SALT R	
Current Weather Conditions: mostly cloudy	Facility Name(s): macon WWTF
Weather Conditions for Past 10 days: 0.71" of rain	Permit Number(s): MO 0023221
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): 0548656	Northing (UTM Y): 4409991	Horizontal Accuracy: (EPE / FOM / PDOP)	18 ~~Meters~~ Ft
Site 11	Easting (UTM X): 0548641	Northing (UTM Y): 4409840	Horizontal Accuracy: (EPE / FOM / PDOP)	23 ~~Meters~~ Ft

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
0055	upstream	0056	downstream	0057	trash
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 # M. Fk. SALT #0123 Date of Survey 8/20/08

Site # 05

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:			

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

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

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

abundant Benthic algae

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 # M. Fk. Salt R. #0123 Date of Survey 8/20/08

Site # 05

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.)

Log jam at Transect 11 causing previous pools.

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

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

Surveyor's Signature: Jennifer Hrabik Date of Survey: 8/20/08

Organization: AE Solutions Position: Environmental Specialist

9/19/08

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: Middle Fk. Salt R. Waterbody ID: 0123 Site #: 0123_05

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: 548656 UTM Y: 4409991 +/- 18 (feet)

11 UTM X: 548641 UTM Y: 4409840 +/- 23 (feet)

Average Stream Width: 4.7 (meters) Length of Survey Segment: 150 (meters)

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

Field Staff: JRH, TAH

Dissolved Oxygen

Date: 8/20/2008 Time: 9:11

Dissolved Oxygen: 5.59 (mg/L)

Dissolved Oxygen: 60.8 (% sat)

Specific Cond: 346 (µS/cm)

Water Temperature: 19.6 (°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	0.16	0.14	0.54	0.08	0.59	0.10	0.56	0.08	0.56	0.15	0.67	0.10	0.58	0.15	0.67	0.10	0.56	0.36	0.71	0.15	0.58	0.44
2	0.32	0.13	1.08	0.14	1.18	0.14	1.12	0.10	1.12	0.10	1.34	0.14	1.16	0.14	1.34	0.11	1.12	0.38	1.42	0.15	1.16	0.40
3	0.48	0.13	1.62	0.13	1.77	0.19	1.68	0.10	1.68	0.20	2.01	0.14	1.74	0.14	2.01	0.17	1.68	0.36	2.13	0.24	1.74	0.34
4	0.64	0.10	2.16	0.10	2.36	0.20	2.24	0.10	2.24	0.20	2.68	0.20	2.32	0.14	2.68	0.19	2.24	0.30	2.84	0.28	2.32	0.29
5	0.80	0.08	2.70	0.14	2.95	0.15	2.80	0.15	2.80	0.21	3.35	0.20	2.90	0.10	3.35	0.20	2.80	0.30	3.55	0.40	2.90	0.29
6	0.96	0.05	3.24	0.10	3.54	0.25	3.36	0.15	3.36	0.25	4.02	0.19	3.48	0.10	4.02	0.20	3.36	0.31	4.26	0.39	3.48	0.26
7	1.12	0.04	3.78	0.10	4.13	0.24	3.92	0.13	3.92	0.20	4.69	0.19	4.06	0.16	4.69	0.10	3.92	0.30	4.97	0.30	4.06	0.31
8	1.28	0.02	4.32	0.10	4.72	0.13	4.48	0.11	4.48	0.15	5.36	0.14	4.64	0.18	5.36	0.09	4.48	0.25	5.68	0.21	4.64	0.29
9	1.44	0.01	4.86	0.10	5.31	0.08	5.04	0.09	5.04	0.04	6.03	0.11	5.22	0.10	6.03	0.09	5.04	0.18	6.39	0.19	5.22	0.14
Right Bank	1.60	0.00	5.40	0.00	5.85	0.00	5.60	0.00	5.55	0.00	6.65	0.00	5.80	0.00	6.70	0.00	5.60	0.00	7.10	0.00	5.80	0.00
Feature Type (riffle, run, or pool)	Run		Run		Pool		Pool		Pool		Pool		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: _____ Date: 8/20/2008

WBID # 0123

Site # 06

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: 8/20/08 09:33	Location Description (e.g., road crossing): 50 m dnstream of site 05
Stream Name: M. Fk SALT R.	
Current Weather Conditions: Mostly cloudy	Facility Name(s): Macon WWTF
Weather Conditions for Past 10 days: 0.71" of rain	Permit Number(s): MO 00 23221
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): 0548674	Northing (UTM Y): 4409762	Horizontal Accuracy: (EPE / FOM / PDOP)	21 ~~Meters~~ feet
Site 11	Easting (UTM X): 0548713	Northing (UTM Y): 4409612	Horizontal Accuracy: (EPE / FOM / PDOP)	22 ~~Meters~~ feet

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
TH ~~0058~~, 0059	upstream	0060	downstream	0061, 0062	log jam + low water crossing
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 # M. Fk Salt R. #0123 Date of Survey 8/20/08

Site # 06

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:			

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

— % Cobble	5 % Gravel	50 % Sand	— % Silt	45 % 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 # M. Fk. Salt R. #0123 Date of Survey 8/20/08

Site # 06

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.)

~~F~~ 24

Log jam and old low water crossing at Transect 8.

Old low water crossing not connected to roads.

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: [signature] Date of Survey: 8/20/08

Organization: AE Solutions Position: Field Technician

SV 9/14/08

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: Middle Fk. Salt R. Waterbody ID: 0123 Site #: 0123_06

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: 548674 UTM Y: 4409762 +/- 21 (feet)

11 UTM X: 548713 UTM Y: 4409612 +/- 22 (feet)

Average Stream Width: 4.8 (meters) Length of Survey Segment: 150 (meters)

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

Field Staff: JRH, TAH

Dissolved Oxygen

Date: 8/20/2008 Time: 9:33

Dissolved Oxygen: 3.09 (mg/L)

Dissolved Oxygen: 33.1 (% sat)

Specific Cond: 347 (µS/cm)

Water Temperature: 19.7 (°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	0.15	0.75	0.25	0.86	0.25	0.77	0.15	0.40	0.08	0.24	0.10	0.40	0.10	0.57	0.20	0.25	0.06	0.21	0.08	0.30	0.06
2	1.24	0.25	1.50	0.25	1.72	0.33	1.54	0.00	0.80	0.12	0.48	0.10	0.80	0.06	1.14	0.44	0.50	0.01	0.42	0.08	0.60	0.04
3	1.86	0.19	2.25	0.34	2.58	0.40	2.31	0.00	1.20	0.15	0.72	0.10	1.20	0.08	1.71	0.54	0.75	0.01	0.63	0.10	0.90	0.07
4	2.48	0.13	3.00	0.30	3.44	0.40	3.08	0.00	1.60	0.15	0.96	0.13	1.60	0.06	2.28	0.49	1.00	0.02	0.84	0.11	1.20	0.09
5	3.10	0.26	3.75	0.28	4.30	0.35	3.85	0.00	2.00	0.15	1.20	0.14	2.00	0.09	2.85	0.53	1.25	0.01	1.05	0.14	1.50	0.10
6	3.72	0.27	4.50	0.30	5.16	0.33	4.62	0.02	2.40	0.06	1.44	0.14	2.40	0.10	3.42	0.51	1.50	0.02	1.26	0.17	1.80	0.11
7	4.34	0.31	5.25	0.23	6.02	0.25	5.39	0.15	2.80	0.03	1.68	0.14	2.80	0.12	3.99	0.40	1.75	0.02	1.47	0.19	2.10	0.10
8	4.96	0.35	6.00	0.20	6.88	0.19	6.16	0.26	3.20	0.04	1.92	0.10	3.20	0.13	4.56	0.26	2.00	0.04	1.68	0.10	2.40	0.09
9	5.58	0.40	6.75	0.24	7.74	0.16	6.93	0.27	3.60	0.02	2.16	0.05	3.60	0.17	5.13	0.04	2.25	0.01	1.89	0.04	2.70	0.02
Right Bank	6.20	0.00	7.45	0.00	8.60	0.00	7.65	0.00	4.00	0.00	2.40	0.00	3.95	0.00	5.70	0.00	2.45	0.00	2.05	0.00	2.95	0.00
Feature Type (riffle, run, or pool)	Pool		Pool		Pool		Run		Run		Run		Run		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 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: 8/20/2008

WBID # 0123

Site # 07

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: 8/20/08 10:19	Location Description (e.g., road crossing): Rt DD crossing
Stream Name: M. Fk. SALT R.	
Current Weather Conditions: Partly sunny	Facility Name(s): Macon WWTF
Weather Conditions for Past 10 days: 0.71" of rain	Permit Number(s): MO 0023221
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): 0549451	Northing (UTM Y): 4406327	Horizontal Accuracy: (EPE / FOM / PDOP) 20 ~~Meters~~ ft
Site 11	Easting (UTM X): 0549564	Northing (UTM Y): 4406197	Horizontal Accuracy: (EPE / FOM / PDOP) 20 ~~Meters~~ ft

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
~~0003~~ TH, 0004	upstream	0005	downstream		
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

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

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

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

N/A

Stream Name & WBID # M. FK SALT R. #0123 Date of Survey 8/20/08

Site # 07

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%.)

60 % Cobble	10 % 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 # M. FK. SALT R. #0123 Date of Survey 8/20/08

Site # ~~0123~~ 07

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: Jennifer Hrabik + Tiffanie Hamilton

Surveyor's Signature: Jennifer Hrabik Date of Survey: 8/20/08

Organization: AE Solutions Position: Environmental Specialist

9/18/08

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: Middle Fk. Salt R. Waterbody ID: 0123 Site #: 0123_07

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: 549451 UTM Y: 4406327 +/- 20 (feet)

11 UTM X: 549564 UTM Y: 4406197 +/- 20 (feet)

Average Stream Width: 6.1 (meters) Length of Survey Segment: 150 (meters)

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

Field Staff: JRH, TAH

Dissolved Oxygen

Date: 8/20/2008 Time: 10:19

Dissolved Oxygen: 3.47 (mg/L)

Dissolved Oxygen: 38.4 (% sat)

Specific Cond: 437 (µS/cm)

Water Temperature: 19.9 (°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	0.79	0.25	0.70	0.35	0.76	0.36	0.54	0.08	0.67	0.09	0.28	0.15	0.39	0.10	0.39	0.06	0.44	0.09	0.87	0.66	0.84	0.23
2	1.58	0.35	1.40	0.33	1.52	0.44	1.08	0.10	1.34	0.01	0.56	0.15	0.78	0.09	0.78	0.10	0.88	0.11	1.74	0.70	1.68	0.28
3	2.37	0.34	2.10	0.34	2.28	0.39	1.62	0.06	2.01	0.02	0.84	0.14	1.17	0.10	1.17	0.04	1.32	0.13	2.61	0.70	2.52	0.21
4	3.16	0.24	2.80	0.24	3.04	0.34	2.16	0.05	2.68	0.07	1.12	0.14	1.56	0.11	1.56	0.05	1.76	0.15	3.48	0.75	3.36	0.15
5	3.95	0.20	3.50	0.25	3.80	0.29	2.70	0.10	3.35	0.08	1.40	0.14	1.95	0.11	1.95	0.07	2.20	0.14	4.35	0.85	4.20	0.19
6	4.74	0.23	4.20	0.43	4.56	0.27	3.24	0.06	4.02	0.06	1.68	0.11	2.34	0.12	2.34	0.25	2.64	0.14	5.22	0.90	5.04	0.16
7	5.53	0.20	4.90	0.56	5.32	0.30	3.78	0.02	4.69	0.04	1.96	0.09	2.73	0.11	2.73	0.29	3.08	0.13	6.09	0.82	5.88	0.14
8	6.32	0.27	5.60	0.35	6.08	0.25	4.32	0.02	5.36	0.03	2.24	0.06	3.12	0.10	3.12	0.28	3.52	0.20	6.96	0.74	6.72	0.14
9	7.11	0.25	6.30	0.19	6.84	0.20	4.86	0.01	6.03	0.02	2.52	0.03	3.51	0.10	3.51	0.22	3.96	0.24	7.83	0.62	7.56	15.00
Right Bank	7.95	0.00	7.00	0.00	7.65	0.00	5.45	0.00	6.75	0.00	2.85	0.00	3.90	0.00	3.95	0.00	4.40	0.00	8.70	0.00	8.40	0.00
Feature Type (riffle, run, or pool)	Pool		Pool		Pool		Riffle		Riffle		Run		Run		Run		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: _____ Date: 8/20/2008

WBID # 0123

Site # 08

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: 8/20/08 10:40	Location Description (e.g., road crossing): 50m dnstream of site 07
Stream Name: M. Fk. SALT	
Current Weather Conditions: mostly sunny	Facility Name(s): Macon WWTF
Weather Conditions for Past 10 days: 0.71" rain	Permit Number(s): MO 0023221
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): 549604	Northing (UTM Y): 4406116	Horizontal Accuracy: (EPE / FOM / PDOP)	18 ~~Meters~~ ft
Site 11	Easting (UTM X): 549707	Northing (UTM Y): 4406007	Horizontal Accuracy: (EPE / FOM / PDOP)	21 ~~Meters~~ ft

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
0066	upstrea	0067, 0068	downstream		
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

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

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

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

N/A

Stream Name & WBID # M. Fk SALT #0123 Date of Survey 8/20/08

Site # 08

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%.)

___ % Cobble	5 % Gravel	50 % Sand	___ % Silt	45 % 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 # M. Pk. SAT #0123 Date of Survey 8/20/08

Site # 08

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 Hratik

Surveyor's Signature: Tiffanie A. Hamilton Date of Survey: 8/20/08

Organization: AE Solutions Position: Field Technician

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: Middle Fk. Salt R. Waterbody ID: 0123 Site #: 0123_08

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: 549604 UTM Y: 4406116 +/- 18 (feet)

11 UTM X: 549707 UTM Y: 4406007 +/- 21 (feet)

Average Stream Width: 4.0 (meters) Length of Survey Segment: 150 (meters)

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

Field Staff: JH, TH

Dissolved Oxygen

Date: 8/20/2008 Time: 10:40

Dissolved Oxygen: 6.14 (mg/L)

Dissolved Oxygen: 67.7 (% sat)

Specific Cond: 360 (µS/cm)

Water Temperature: 19.9 (°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	0.22	0.15	0.58	0.25	0.59	0.45	0.47	0.28	0.14	0.07	0.29	0.08	0.34	0.10	0.71	0.30	0.58	0.23	0.25	0.10	0.27	0.06
2	0.44	0.19	1.16	0.19	1.18	0.59	0.94	0.32	0.28	0.10	0.58	0.12	0.68	0.10	1.42	0.44	1.16	0.25	0.50	0.06	0.54	0.10
3	0.66	0.24	1.74	0.00	1.77	0.62	1.41	0.30	0.42	0.10	0.87	0.14	1.02	0.10	2.13	0.36	1.74	0.23	0.75	0.04	0.81	0.12
4	0.88	0.20	2.32	0.00	2.36	0.51	1.88	0.30	0.56	0.12	1.16	0.15	1.36	0.09	2.84	0.39	2.32	0.28	1.00	0.06	1.08	0.12
5	1.10	0.19	2.90	0.03	2.95	0.23	2.35	0.30	0.70	0.10	1.45	0.19	1.70	0.10	3.55	0.70	2.90	0.27	1.25	0.07	1.35	0.14
6	1.32	0.15	3.48	0.04	3.54	0.30	2.82	0.31	0.84	0.08	1.74	0.20	2.04	0.08	4.26	0.90	3.48	0.31	1.50	0.06	1.62	0.15
7	1.54	0.11	4.06	0.05	4.13	0.40	3.29	0.28	0.98	0.03	2.03	0.15	2.38	0.09	4.97	0.95	4.06	0.34	1.75	0.05	1.89	0.13
8	1.76	0.08	4.64	0.23	4.72	0.34	3.76	0.22	1.12	0.02	2.32	0.14	2.72	0.10	5.68	0.84	4.64	0.32	2.00	0.02	2.16	0.11
9	1.98	0.02	5.22	0.25	5.31	0.14	4.23	0.08	1.26	0.01	2.61	0.08	3.06	0.06	6.39	0.58	5.22	0.28	2.25	0.01	2.43	0.06
Right Bank	2.15	0.00	5.80	0.00	5.90	0.00	4.70	0.00	1.35	0.00	2.85	0.00	3.40	0.00	7.10	0.00	5.80	0.00	2.45	0.00	2.65	0.00
Feature Type (riffle, run, or pool)	Run		Run		Pool		Pool		Riffle		Run		Run		Pool		Pool		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: 8/20/2008

WBID # 0123

Site # 09

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: 8/20/08 11:19	Location Description (e.g., road crossing): Melody Ave. crossing
Stream Name: M. Fk. SALT	
Current Weather Conditions: Partly sunny	Facility Name(s): Macon WWTF
Weather Conditions for Past 10 days: 0.71" of rain	Permit Number(s): MO 0023221
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): 0550929	Northing (UTM Y): 4403888	Horizontal Accuracy: (EPE / FOM / PDOP) 23 ~~Meters~~ 34 ~~FT~~
Site 11	Easting (UTM X): 0551087	Northing (UTM Y): 4403824	Horizontal Accuracy: (EPE / FOM / PDOP) 13 ~~Meters~~ 22 ~~FT~~

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
0069	upstream	0070	downstream	0071, 0072	electric fence across stream → Transect 10 cattle crossing / watering
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
0073	two track	0074	electric fence at Transect 10	0075	house
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 # M. Fk. Salt #0123 Date of Survey 8/20/08

Site # 09

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: electric fence at Transects 9 + 10 — crosses stream and runs along (L) bank between Transects 9 + 10. private property
electric fence 20 ft overhead at Transect 1.

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%.)

— % Cobble	— % Gravel	100 % 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 # M. Fk. Salt #0133 Date of Survey 8/20/08

Site # 09

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.)

Woody debris at transect 1.

Electric fence 20 ft overhead at Transect 1.

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: 8/20/08

Organization: AE Solutions Position: Field Technician

9/19/08

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: Middle Fk. Salt R. Waterbody ID: 0123 Site #: 0123_09

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: 550929 UTM Y: 4403888 +/- 23 (feet)

11 UTM X: 551087 UTM Y: 4403824 +/- 13 (feet)

Average Stream Width: 3.6 (meters) Length of Survey Segment: 150 (meters)

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

Field Staff: JH, TH

Dissolved Oxygen

Date: 8/20/2008 Time: 11:19

Dissolved Oxygen: 3.68 (mg/L)

Dissolved Oxygen: 41.4 (% sat)

Specific Cond: 377 (µS/cm)

Water Temperature: 21.2 (°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	0.76	0.54	0.60	0.32	0.32	0.40	0.28	0.06	0.27	0.22	0.39	0.15	0.31	0.28	0.32	0.20	0.22	0.20	0.26	0.12	0.22	0.04
2	1.52	0.82	1.20	0.60	0.64	0.38	0.56	0.06	0.54	0.27	0.78	0.15	0.62	0.27	0.64	0.18	0.44	0.20	0.52	0.13	0.44	0.05
3	2.28	0.79	1.80	0.64	0.96	0.34	0.84	0.08	0.81	0.24	1.17	0.15	0.93	0.25	0.96	0.15	0.66	0.20	0.78	0.10	0.66	0.09
4	3.04	0.44	2.40	0.54	1.28	0.32	1.12	0.10	1.08	0.23	1.56	0.19	1.24	0.20	1.28	0.14	0.88	0.19	1.04	0.10	0.88	0.12
5	3.80	0.28	3.00	0.50	1.60	0.30	1.40	0.12	1.35	0.19	1.95	0.19	1.55	0.17	1.60	0.14	1.10	0.20	1.30	0.08	1.10	0.16
6	4.56	0.19	3.60	0.38	1.92	0.25	1.68	0.13	1.62	0.16	2.34	0.15	1.86	0.14	1.92	0.14	1.32	0.20	1.56	0.07	1.32	0.20
7	5.32	0.15	4.20	0.30	2.24	0.16	1.96	0.15	1.89	0.10	2.73	0.14	2.17	0.08	2.24	0.14	1.54	0.21	1.82	0.03	1.54	0.25
8	6.08	0.11	4.80	0.21	2.56	0.08	2.24	0.15	2.16	0.05	3.12	0.17	2.48	0.06	2.56	0.14	1.76	0.20	2.08	0.02	1.76	0.29
9	6.84	0.02	5.40	0.08	2.88	0.06	2.52	0.17	2.43	0.01	3.51	0.21	2.79	0.05	2.88	0.12	1.98	0.21	2.34	0.02	1.98	0.24
Right Bank	7.60	0.00	5.95	0.00	3.20	0.00	2.80	0.00	2.70	0.00	3.90	0.00	3.10	0.00	3.20	0.00	2.15	0.00	2.60	0.00	2.15	0.00
Feature Type (riffle, run, or pool)	Pool		Pool		Pool		Run		Run		Run		Run		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: 8/20/2008

WBID # 0123

Site # 10

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: 8/20/08 12:17	Location Description (e.g., road crossing): Hwy 36 Bridge
Stream Name: M Fk Salt.	
Current Weather Conditions: mostly cloudy	Facility Name(s): Macon WWTF
Weather Conditions for Past 10 days: 0.71" rain	Permit Number(s): MO 0023221
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): 0551195	Northing (UTM Y): 4400417	Horizontal Accuracy: (EPE / FOM / PDOP) 14 ~~Meters~~ FT
Site 11	Easting (UTM X): 0551090	Northing (UTM Y): 4400257	Horizontal Accuracy: (EPE / FOM / PDOP) 21 ~~Meters~~ FT

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
~~127~~ 0076	upstream of construction	0077	road construction crossing	0078	downstream of construction crossing
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
0079	upstream	0080	downstream		
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 # M Fk SALT #0123 Date of Survey 8/20/08

Site # 10

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%.)

– % Cobble	– % Gravel	20 % Sand	– % Silt	80 % 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 # M. Fk Salt #0123 Date of Survey 8/20/08

Site # 10

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.)

Woody debris at Transect 7

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: 8/20/08

Organization: AE Solutions Position: Field Technician

SV 9/8/08

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: Middle Fk. Salt R. Waterbody ID: 0123 Site #: 0123_10

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: 551195 UTM Y: 4400417 +/- 14 (feet)

11 UTM X: 551090 UTM Y: 4400257 +/- 21 (feet)

Average Stream Width: 8.8 (meters) Length of Survey Segment: 175 (meters)

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

Field Staff: JH, TH

Dissolved Oxygen

Date: 8/20/2008 Time: 12:17

Dissolved Oxygen: 5.11 (mg/L)

Dissolved Oxygen: 57.9 (% sat)

Specific Cond: 368 (µS/cm)

Water Temperature: 20.5 (°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	0.84	0.44	0.71	0.10	1.11	0.44	1.01	0.39	0.99	0.45	1.06	0.55	0.99	0.39	0.89	0.36	0.57	0.29	0.73	0.21	0.74	0.15
2	1.68	0.45	1.42	0.22	2.22	0.63	2.02	0.56	1.98	0.64	2.12	0.80	1.98	0.39	1.78	0.60	1.14	0.31	1.46	0.21	1.48	0.20
3	2.52	0.57	2.13	0.20	3.33	0.49	3.03	0.54	2.97	0.55	3.18	0.70	2.97	0.39	2.67	0.55	1.71	0.39	2.19	0.26	2.22	0.26
4	3.36	0.54	2.84	0.24	4.44	0.35	4.04	0.50	3.96	0.55	4.24	0.60	3.96	0.30	3.56	0.60	2.28	0.38	2.92	0.29	2.96	0.20
5	4.20	0.44	3.55	0.21	5.55	0.38	5.05	0.54	4.95	0.58	5.30	0.55	4.95	0.38	4.45	0.50	2.85	0.25	3.65	0.27	3.70	0.23
6	5.04	0.39	4.26	0.29	6.66	0.33	6.06	0.40	5.94	0.58	6.36	0.54	5.94	0.38	5.34	0.45	3.42	0.15	4.38	0.27	4.44	0.25
7	5.88	0.36	4.97	0.15	7.77	0.30	7.07	0.35	6.93	0.46	7.42	0.44	6.93	0.36	6.23	0.34	3.99	0.09	5.11	0.25	5.18	0.25
8	6.72	0.34	5.68	0.14	8.88	0.20	8.08	0.24	7.92	0.25	8.48	0.43	7.92	0.38	7.12	0.25	4.56	0.08	5.84	0.24	5.92	0.15
9	7.56	0.25	6.39	0.15	9.99	0.14	9.09	0.10	8.91	0.10	9.54	0.09	8.91	0.13	8.01	0.11	5.13	0.02	6.57	0.19	6.66	0.11
Right Bank	8.40	0.00	7.10	0.00	11.10	0.00	10.10	0.00	9.90	0.00	10.60	0.00	9.90	0.00	8.90	0.00	5.70	0.00	7.25	0.00	7.40	0.00
Feature Type (riffle, run, or pool)	Pool		Pool		Pool		Pool		Pool		Pool		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: _____ Date: 8/20/2008

WBID # 0123

Site # 11

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: 8/20/08 12:56	Location Description (e.g., road crossing): Vine St. Crossing
Stream Name: M. FK. SALT	
Current Weather Conditions: mostly cloudy	Facility Name(s): Macon WWTF
Weather Conditions for Past 10 days: 0.71" rain	Permit Number(s): MO ~~0072223~~ 24 0023221
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): 0551120	Northing (UTM Y): 4398734	Horizontal Accuracy: (EPE / FOM / PDOP) 15 ~~Meters~~ 24 FT
Site 11	Easting (UTM X): 0551257	Northing (UTM Y): 4398705	Horizontal Accuracy: (EPE / FOM / PDOP) 16 ~~Meters~~ 24 FT

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
0081	upstream	0082	downstream		
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

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

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

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

N/A

Stream Name & WBID # M. FK. SALT #0123 Date of Survey 8/20/08

Site # 11

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	5 % Gravel	60 % Sand	3 % Silt	30 % Mud/Clay	— % Bedrock

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

Benthic algae
Filamentous 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 # M. Fk. SALT #0123 Date of Survey 8/20/08

Site # 11

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.)

WRP easement, partnership between landowner, USDA, + NRCS.

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: 8/20/08

Organization: AE Solutions Position: Field Technician

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: Middle Fk. Salt R. Waterbody ID: 0123 Site #: 0123_11

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: 551120 UTM Y: 4398734 +/- 15 (feet)

11 UTM X: 551251 UTM Y: 4398705 +/- 16 (feet)

Average Stream Width: 6.0 (meters) Length of Survey Segment: 150 (meters)

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

Field Staff: JH, TH

Dissolved Oxygen

Date: 8/20/2008 Time: 12:56

Dissolved Oxygen: 5.16 (mg/L)

Dissolved Oxygen: 59.8 (% sat)

Specific Cond: 595 (µS/cm)

Water Temperature: 22.2 (°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	0.84	0.29	0.95	0.58	0.32	0.15	0.70	0.13	0.45	0.20	0.60	0.11	0.45	0.06	0.30	0.15	0.85	0.71	0.81	>1.00	0.45	0.08
2	1.68	0.33	1.90	0.65	0.64	0.25	1.40	0.15	0.90	0.21	1.20	0.08	0.90	0.15	0.60	0.19	1.70	>1.00	1.62	>1.00	0.90	0.10
3	2.52	0.46	2.85	0.75	0.96	0.22	2.10	0.21	1.35	0.23	1.80	0.19	1.35	0.19	0.90	0.20	2.55	>1.00	2.43	>1.00	1.35	0.21
4	3.36	0.70	3.80	0.75	1.28	0.24	2.80	0.20	1.80	0.19	2.40	0.29	1.80	0.24	1.20	0.25	3.40	>1.00	3.24	>1.00	1.80	0.26
5	4.20	0.92	4.75	0.47	1.60	0.22	3.50	0.40	2.25	0.24	3.00	0.28	2.25	0.33	1.50	0.31	4.25	>1.00	4.05	>1.00	2.25	0.25
6	5.04	>1.00	5.70	0.33	1.92	0.17	4.20	0.34	2.70	0.30	3.60	0.31	2.70	0.35	1.80	0.35	5.10	>1.00	4.86	>1.00	2.70	0.26
7	5.88	0.81	6.65	0.30	2.24	0.15	4.90	0.22	3.15	0.16	4.20	0.33	3.15	0.30	2.10	0.30	5.95	>1.00	5.67	>1.00	3.15	0.25
8	6.72	0.66	7.60	0.30	2.56	0.14	5.60	0.21	3.60	0.14	4.80	0.15	3.60	0.33	2.40	0.25	6.80	>1.00	6.48	>1.00	3.60	0.25
9	7.56	0.41	8.55	0.31	2.88	0.04	6.30	0.24	4.05	0.03	5.40	0.17	4.05	0.15	2.70	0.10	7.65	0.76	7.29	0.96	4.05	0.19
Right Bank	8.40	0.00	9.50	0.00	3.15	0.00	6.95	0.00	4.50	0.00	5.95	0.00	4.50	0.00	2.95	0.00	8.50	0.00	8.10	0.00	4.50	0.00
Feature Type (riffle, run, or pool)	Pool		Pool		Riffle		Run		Run		Run		Run		Run		Pool		Pool		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: 8/20/2008

WBID # 80123

Site # 12

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: 8/20/08 13:37	Location Description (e.g., road crossing): Rt PP Bridge
Stream Name: M. Fk SALT	
Current Weather Conditions: Mostly cloudy	Facility Name(s): Macon WWTF
Weather Conditions for Past 10 days: 0.71" rain	Permit Number(s): MO 0023221
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): 0551352	Northing (UTM Y): 4396834	Horizontal Accuracy: (EPE / FOM / PDOP) 23 ~~Meters~~ Ft
Site 11	Easting (UTM X): 0551256	Northing (UTM Y): 4396605	Horizontal Accuracy: (EPE / FOM / PDOP) 16 ~~Meters~~ Ft

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
0083	upstream	0084	downstream		
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

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

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

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

N/A

Stream Name & WBID # M Fk. Salt #0123 Date of Survey 8/20/08

Site # 12

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: Very steep banks; >15 ft down to water; straight drop-off. 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:			

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

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

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

Duckweed - Sparse

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 # M. Fk. Salt #0123 Date of Survey 8/20/08

Site # 12

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.)

A lot of woody debris throughout site.

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: 8/20/08

Organization: AE Solutions Position: Field Technician

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: Middle Fk. Salt R. Waterbody ID: 0123 Site #: 0123_12

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: 551352 UTM Y: 4396834 +/- 23 (feet)

11 UTM X: 551256 UTM Y: 4396605 +/- 16 (feet)

Average Stream Width: 11.2 (meters) Length of Survey Segment: 224 (meters)

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

Field Staff: JH, TH

Dissolved Oxygen

Date: 8/20/2008 Time: 13:37

Dissolved Oxygen: 2.12 (mg/L)

Dissolved Oxygen: 27.4 (% sat)

Specific Cond: 552 (µS/cm)

Water Temperature: 22.6 (°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	1.45	>1.00	1.41	>1.00	1.42	0.62	0.93	0.58	1.16	0.61	1.15	0.56	1.01	0.76	1.00	0.67	1.05	0.62	0.98	0.61	1.01	0.42
2	2.90	>1.00	2.82	>1.00	2.84	0.99	1.86	0.95	2.32	0.88	2.30	0.65	2.02	0.74	2.00	0.97	2.10	0.81	1.96	0.79	2.02	0.68
3	4.35	>1.00	4.23	>1.00	4.26	>1.00	2.79	>1.00	3.48	0.96	3.45	0.65	3.03	0.79	3.00	>1.00	3.15	0.98	2.94	0.92	3.03	0.79
4	5.80	>1.00	5.64	>1.00	5.68	>1.00	3.72	>1.00	4.64	>1.00	4.60	0.80	4.04	0.90	4.00	>1.00	4.20	>1.00	3.92	>1.00	4.04	0.91
5	7.25	>1.00	7.05	>1.00	7.10	>1.00	4.65	>1.00	5.80	0.90	5.75	0.75	5.05	0.91	5.00	>1.00	5.25	>1.00	4.90	>1.00	5.05	>1.00
6	8.70	>1.00	8.46	>1.00	8.52	>1.00	5.58	>1.00	6.96	0.91	6.90	0.80	6.06	0.76	6.00	>1.00	6.30	>1.00	5.88	0.98	6.06	>1.00
7	10.15	>1.00	9.87	>1.00	9.94	>1.00	6.51	>1.00	8.12	0.78	8.05	0.76	7.07	0.65	7.00	>1.00	7.35	>1.00	6.86	0.84	7.07	>1.00
8	11.60	>1.00	11.28	>1.00	11.36	>1.00	7.44	0.79	9.28	0.81	9.20	0.65	8.08	0.21	8.00	>1.00	8.40	0.64	7.84	0.60	8.08	0.88
9	13.05	>1.00	12.69	>1.00	12.78	0.97	8.37	0.40	10.44	0.29	10.35	0.30	9.09	0.10	9.00	0.65	9.45	0.46	8.82	0.39	9.09	0.57
Right Bank	14.50	0.00	14.10	0.00	14.20	0.00	9.30	0.00	11.60	0.00	11.50	0.00	10.10	0.00	10.00	0.00	10.50	0.00	9.80	0.00	10.10	0.00
Feature Type (riffle, run, or pool)	Pool		Pool		Pool		Pool		Pool		Pool		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: _____ Date: 8/20/2008

WBID # 0123

Site # 13

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: 8/20/08 1411	Location Description (e.g., road crossing): 50m downstream of site 12
Stream Name: M FK SALT	
Current Weather Conditions: mostly cloudy	Facility Name(s): Macon WWTF
Weather Conditions for Past 10 days: 0.71" rain	Permit Number(s): MO 0023221
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): 0551238	Northing (UTM Y): 4396572	Horizontal Accuracy: (EPE / FOM / PDOP) 14	Meters ~~Ft~~
Site 11	Easting (UTM X): 0551217	Northing (UTM Y): 4396386	Horizontal Accuracy: (EPE / FOM / PDOP) 13	Meters ~~Ft~~

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
0085	upstream	0086	downstream		
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

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

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

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

N/A

Stream Name & WBID # M Fk. Salt #0123 Date of Survey 8/20/08

Site # 13

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:
Slopes > 15ft. throughout site – straight drop-off.
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:			

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

– % Cobble	– % Gravel	– % Sand	– % Silt	100 % 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 # M. Fk. Salt #0123 Date of Survey 8/20/08

Site # 13

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.)

Woody debris throughout site

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: Jeff A. Hamilt Date of Survey: 8/20/08

Organization: AE Solutions Position: Field Technician

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: Middle Fk. Salt R. Waterbody ID: 0123 Site #: 0123_13

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: 551238 UTM Y: 4396572 +/- 14 (feet)

11 UTM X: 551217 UTM Y: 4396386 +/- 13 (feet)

Average Stream Width: 11.2 (meters) Length of Survey Segment: 223 (meters)

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

Field Staff: JH, TH

Dissolved Oxygen

Date: 8/20/2008 Time: 14:11

Dissolved Oxygen: 4.02 (mg/L)

Dissolved Oxygen: 46.2 (% sat)

Specific Cond: 548 (µS/cm)

Water Temperature: 22.6 (°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	0.40	0	0.20	0	0.13	0	0	0	0	0	0	0	0	0	0	0	0
1	1.11	0.47	1.16	0.82	0.97	0.78	1.10	>1.00	1.09	0.20	0.94	0.97	1.02	0.93	1.34	0.87	1.29	0.70	1.16	0.47	1.10	>1.00
2	2.22	0.64	2.32	0.87	1.94	0.98	2.20	>1.00	2.18	0.56	1.88	0.99	2.04	>1.00	2.68	0.94	2.58	0.79	2.32	0.74	2.20	>1.00
3	3.33	0.78	3.48	0.95	2.91	0.99	3.30	>1.00	3.27	0.75	2.82	0.90	3.06	>1.00	4.02	>1.00	3.87	0.82	3.48	0.75	3.30	>1.00
4	4.44	0.85	4.64	0.86	3.88	>1.00	4.40	>1.00	4.36	0.94	3.76	0.84	4.08	>1.00	5.36	>1.00	5.16	0.89	4.64	0.85	4.40	>1.00
5	5.55	0.83	5.80	0.67	4.85	0.99	5.50	>1.00	5.45	>1.00	4.70	0.82	5.10	>1.00	6.70	>1.00	6.45	>1.00	5.80	0.98	5.50	>1.00
6	6.66	0.66	6.96	0.62	5.82	>1.00	6.60	>1.00	6.54	0.95	5.64	0.74	6.12	>1.00	8.04	>1.00	7.74	0.95	6.96	0.99	6.60	>1.00
7	7.77	0.62	8.12	0.34	6.79	>1.00	7.70	>1.00	7.63	0.86	6.58	0.56	7.14	>1.00	9.38	>1.00	9.03	0.88	8.12	0.94	7.70	>1.00
8	8.88	0.64	9.28	0.21	7.76	>1.00	8.80	>1.00	8.72	0.83	7.52	0.22	8.16	>1.00	10.72	>1.00	10.32	0.80	9.28	0.93	8.80	>1.00
9	9.99	0.64	10.44	0.11	8.73	0.84	9.90	0.71	9.81	0.72	8.46	0.06	9.18	0.96	12.06	0.99	11.61	0.62	10.44	0.75	9.90	>1.00
Right Bank	11.10	0.00	11.60	0.00	9.70	0.00	11.00	0.00	10.90	0.00	9.40	0.00	10.20	0.40	13.40	0.42	12.90	0.00	11.60	0.00	11.00	0.00
Feature Type (riffle, run, or pool)	Pool		Pool		Pool		Pool		Pool		Pool		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: _____ Date: 8/20/2008

WBID # 0123

Site # ~~15~~ 14 ~~24~~

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: 8/20/08 15:23	Location Description (e.g., road crossing): site 15 ~~24~~ 50 m upstream of ~~Mahogany Rd crossing~~
Stream Name: M Fk Salt	
Current Weather Conditions: mostly cloudy	Facility Name(s): Macon WWTF
Weather Conditions for Past 10 days: 0.71" rain	Permit Number(s): MO 0023221
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): 0553853	Northing (UTM Y): 4390900	Horizontal Accuracy: (EPE / FOM / PDOP) 22 ~~Meters~~ ~~24~~ Ft
Site 11	Easting (UTM X): 0553999	Northing (UTM Y): 4390881	Horizontal Accuracy: (EPE / FOM / PDOP) 22 ~~Meters~~ ~~24~~ Ft

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
0092	upstream	0093	downstream		
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

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

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

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

N/A

Stream Name & WBID # M.FK. SALT #0123 Date of Survey 8/20/08

Site # ~~15~~ 14 ~~20~~

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%.)

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

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

Benthic algae } abundant
Diatoms

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 # M. FK SALT #0123 Date of Survey 8/20/08

Site # 15 14 2A

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.)

Lots of woody debris throughout site

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: 8/20/08

Organization: AE Solutions Position: Field Technician

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: Middle Fk. Salt R. Waterbody ID: 0123 Site #: 0123_14

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: 553853 UTM Y: 4390900 +/- 22 (feet)

11 UTM X: 553999 UTM Y: 4390881 +/- 22 (feet)

Average Stream Width: 7.5 (meters) Length of Survey Segment: 150 (meters)

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

Field Staff: JRH, TAH

Dissolved Oxygen

Date: 8/20/2008 Time: 15:43

Dissolved Oxygen: 7.58 (mg/L)

Dissolved Oxygen: 87.0 (% sat)

Specific Cond: 468 (µS/cm)

Water Temperature: 22.2 (°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	0.75	0.14	0.87	0.48	0.81	0.38	0.47	0.02	0.91	0.23	1.02	0.43	0.73	0.19	0.61	0.23	0.68	0.16	0.78	0.15	0.60	0.18
2	1.50	0.14	1.74	0.56	1.62	0.45	0.94	0.09	1.82	0.29	2.04	0.64	1.46	0.36	1.22	0.48	1.36	0.14	1.56	0.20	1.20	0.31
3	2.25	0.19	2.61	0.44	2.43	0.63	1.41	0.24	2.73	0.24	3.06	0.71	2.19	0.60	1.83	0.60	2.04	0.14	2.34	0.44	1.80	0.37
4	3.00	0.24	3.48	0.39	3.24	0.59	1.88	0.16	3.64	0.15	4.08	0.72	2.92	0.60	2.44	0.59	2.72	0.13	3.12	0.57	2.40	0.43
5	3.75	0.30	4.35	0.46	4.05	0.50	2.35	0.50	4.55	0.31	5.10	0.70	3.65	0.75	3.05	0.71	3.40	0.23	3.90	0.85	3.00	0.55
6	4.50	0.34	5.22	0.60	4.86	0.38	2.82	0.42	5.46	0.56	6.12	0.76	4.38	0.75	3.66	0.66	4.08	0.29	4.68	0.87	3.60	0.72
7	5.25	0.34	6.09	0.55	5.67	0.40	3.29	0.60	6.37	0.77	7.14	0.92	5.11	0.56	4.27	0.45	4.76	0.44	5.46	0.68	4.20	0.45
8	6.00	0.25	6.96	0.39	6.48	0.21	3.76	0.63	7.28	0.75	8.16	>1.00	5.84	0.39	4.88	0.29	5.44	0.33	6.24	0.45	4.80	0.44
9	6.75	0.23	7.83	0.21	7.29	0.14	4.23	0.58	8.19	0.50	9.18	>1.00	6.57	0.30	5.49	0.13	6.12	0.27	7.02	0.20	5.40	0.39
Right Bank	7.45	0.00	8.70	0.00	8.10	0.00	4.70	0.00	9.10	0.00	10.20	0.00	7.30	0.00	6.05	0.00	6.80	0.00	7.80	0.00	5.95	0.00
Feature Type (riffle, run, or pool)	Pool		Pool		Pool		Pool		Pool		Pool		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: _____ Date: 8/20/2008

WBID # 0123

Site # ~~14~~ 15

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: 8/20/08 1515	Location Description (e.g., road crossing): Mahogany Rd crossing ~~50 m upstream of site 15~~
Stream Name: M FK SALT	
Current Weather Conditions: mostly cloudy	Facility Name(s): Macon WWTF
Weather Conditions for Past 10 days: 0.71" rain	Permit Number(s): MO 0023221
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): 0554026	Northing (UTM Y): 4390846	Horizontal Accuracy: (EPE / FOM / PDOP) 22 ~~Meters~~ ~~24~~ Ft
Site 11	Easting (UTM X): 0554008	Northing (UTM Y): 4390697	Horizontal Accuracy: (EPE / FOM / PDOP) 22 ~~Meters~~ ~~24~~ Ft

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
0088	Log jam @ Transect 11	0089	upstream	0090 0091	downstream
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

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

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

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

N/A

Stream Name & WBID # M. FK SALT #0123 Date of Survey 8/20/08

Site # 1415

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%.)

– % Cobble	– % Gravel	– % Sand	– % Silt	100 % 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 # M. Fk. Salt #0123 Date of Survey 8/20/08

Site # ~~14~~ 24 15

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.)

Huge log jam at Transect 11. at crossing.
Lots of woody debris, throughout site

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: 8/20/08

Organization: AE Solutions Position: Field Technician

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: Middle Fk. Salt R. Waterbody ID: 0123 Site #: 0123_15

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: 554026 UTM Y: 4390846 +/- 22 (feet)

11 UTM X: 554008 UTM Y: 4390697 +/- 22 (feet)

Average Stream Width: 6.9 (meters) Length of Survey Segment: 150 (meters)

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

Field Staff: JH, TH

Dissolved Oxygen

Date: 8/20/2008 Time: 15:15

Dissolved Oxygen: 5.82 (mg/L)

Dissolved Oxygen: 66.9 (% sat)

Specific Cond: 472 (µS/cm)

Water Temperature: 22.1 (°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	0.71	0.21	0.81	0.20	0.75	0.19	0.72	0.46	0.61	0.38	0.45	0.15	0.76	0.62	0.83	0.86	0.64	0.13	0.67	0.09	0.65	0.11
2	1.42	0.48	1.62	0.35	1.50	0.44	1.44	0.65	1.22	0.45	0.90	0.22	1.52	0.79	1.66	0.80	1.28	0.30	1.34	0.19	1.30	0.19
3	2.13	0.74	2.43	0.54	2.25	0.59	2.16	0.75	1.83	0.63	1.35	0.30	2.28	0.75	2.49	0.85	1.92	0.33	2.01	0.22	1.95	0.35
4	2.84	0.60	3.24	0.79	3.00	0.71	2.88	0.70	2.44	0.80	1.80	0.65	3.04	0.83	3.32	0.85	2.56	0.31	2.68	0.24	2.60	0.29
5	3.55	0.39	4.05	0.73	3.75	0.65	3.60	0.53	3.05	0.80	2.25	0.82	3.80	0.80	4.15	0.82	3.20	0.30	3.35	0.25	3.25	0.34
6	4.26	0.31	4.86	0.54	4.50	0.65	4.32	0.48	3.66	0.64	2.70	0.85	4.56	0.80	4.98	0.70	3.84	0.26	4.02	0.33	3.90	0.40
7	4.97	0.20	5.67	0.39	5.25	0.47	5.04	0.35	4.27	0.33	3.15	0.72	5.32	0.56	5.81	0.58	4.48	0.27	4.69	0.31	4.55	0.25
8	5.68	0.19	6.48	0.31	6.00	0.49	5.76	0.20	4.88	0.29	3.60	0.54	6.08	0.40	6.64	0.49	5.12	0.25	5.36	0.29	5.20	0.24
9	6.39	0.12	7.29	0.19	6.75	0.24	6.48	0.12	5.49	0.11	4.05	0.34	6.84	0.20	7.47	0.26	5.76	0.25	6.03	0.18	5.85	0.23
Right Bank	7.10	0.00	8.10	0.00	7.45	0.00	7.20	0.00	6.10	0.00	4.50	0.00	7.60	0.00	8.30	0.00	6.35	0.00	6.65	0.00	6.50	0.00
Feature Type (riffle, run, or pool)	Pool		Pool		Pool		Pool		Pool		Pool		Pool		Pool		Pool		Run		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: _____ Date: 8/20/2008

SITE #01

DOWNSTREAM

SITE #02

UPSTREAM

SITE #01

UPSTREAM

BID #0123

TE #01

vestock watering

BID #0123
TE #02
vestock watering

SITE #03
DOWNSTREAM

SITE #02
DOWNSTREAM

SITE #03
UPSTREAM

SITE #04

DOWNSTREAM

SITE #05

UPSTREAM

SITE #04

UPSTREAM

BID #0123

TE #04

vestock watering/crossing

SITE #05

TRASH

SITE #06

DOWNSTREAM

SITE #05

DOWNSTREAM

SITE #06

UPSTREAM

SITE #06

Log jam and old low water crossing

SITE #07

DOWNSTREAM

SITE #06

Log jam and old low water crossing

SITE #07

UPSTREAM

SITE #08

DOWNSTREAM

SITE #09

UPSTREAM

SITE #08

UPSTREAM

SITE #08

DOWNSTREAM

SITE #09
Electric fence across stream
at Transect 10.
Livestock watering/crossing

WBID #0123
SITE #09
Two-track road across
stream.

SITE #09
DOWNSTREAM

SITE #09
Electric fence across stream
at Transect 10.
Livestock watering/crossing

BID #0123

TE #09

ectric fence at Transect

BID #0123

TE #09

ouse

SITE #10

UPSTREAM of construction

BID #0123

TE #10

oad construction crossing

SITE #10

UPSTREAM

SITE #11

UPSTREAM

SITE #10

Downstream of
Construction crossing

SITE #10

DOWNSTREAM

SITE #12

UPSTREAM

SITE #13

UPSTREAM

SITE #11

DOWNSTREAM

SITE #12

DOWNSTREAM

SITE #14

UPSTREAM

SITE #15

Log jam at Transect 11

SITE #13

DOWNSTREAM

SITE #14

DOWNSTREAM

SITE #15

DOWNSTREAM

SITE #15

UPSTREAM

SITE #15

DOWNSTREAM