Missouri
Department of
Natural Resources

Use Attainability Analysis

for

WBID 1868 Dry Fork Creek

Submitted by
MEC/ERC

To
Missouri Department of Natural Resources
Water Protection Program

On
October 24, 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):	Dry Fork Creek
Missouri Water Body Identification (WBID) Number:	1868
8-digit HUC:	07140102 Meramec
County(ies), Listed Upstream to Downstream:	Dent
Upstream Legal Description (from Table H):	25, 34N, 7W
Downstream Legal Description (from Table H):	29, 35N, 6W
Number of sites evaluated:	7
List all site numbers, consecutively upstream to downstream:	1) Upstream at Hwy H Bridge 2 Downstream at Hwy H Bridge 3) Upstream of Dent Co Rd 2330 4) Upstream of Hwy DD bridge 5) Downstream of Hwy DD bridge 6) Downstream at Co Rd 2240 bridge 7) Upstream of Hwy 72 bridge

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):

Green Forest R-11 School MO0085103

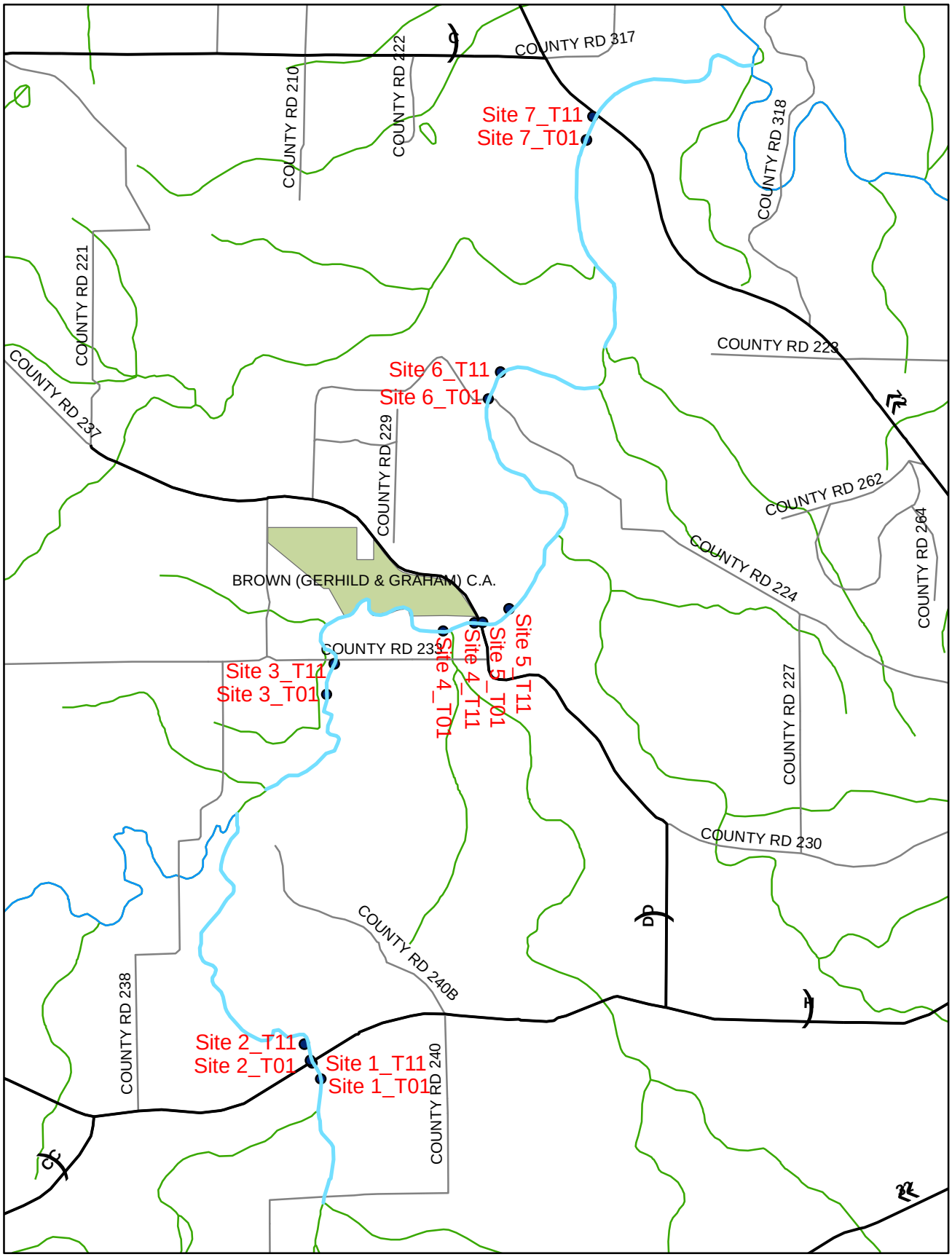
III. UAA Surveyor (please **PRINT** legibly)

Name of Surveyor: Bob Bacon	Telephone Number: (573) 634-7078
Organization/Employer: ERC	

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: Robert R Bacon **Date:** 10-4-08

WBID # 1868 - Dry Fork Creek
Dent County



0 1,250 2,500 5,000 Meters

Environmental Resources Coalition

Weather Conditions

Weather conditions ten days pervious to stream assessment are listed in the tables below. The date(s) that the stream was assessed are shaded.

Data from the WeatherUnderground.com
Salem, MO

Date	Precipitation (Inches)	Min. Temp (ºF)	Max. Temp (ºF)	Avg. Temp (ºF)
9/23/2008	0.00	57.0	82.0	68.0
9/24/2008	0.00	58.0	83.0	69.0
9/25/2008	0.00	56.0	84.0	68.0
9/26/2008	0.00	50.0	81.0	64.0
9/27/2008	0.00	50.0	81.0	63.0
9/28/2008	0.00	52.0	84.0	66.0
9/29/2008	0.20	57.0	80.0	66.0
9/30/2008	0.00	50.0	67.0	59.0
10/1/2008	0.00	45.0	73.0	57.0
10/2/2008	0.00	41.0	66.0	52.0
10/3/2008	0.00	41.0	73.0	55.0
10/4/2008	0.00	46.0	74.0	59.0

WBID # 1868

Site # 1

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (Page 1 of 3)

(must be completed for each site)

Date & Time: 10-3-08 9:15	Location Description (e.g., road crossing):
Stream Name: Dry Fork Creek	upstream at Hwy H Bridge
Current Weather Conditions: Sunny, Clear ~68°F	Facility Name(s): Green Forest R-11 School
Weather Conditions for Past 10 days: See attached	Permit Number(s): MO0085103
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): 1550618317	Northing (UTM Y): 4166021	Horizontal Accuracy: (EPE / FOM / PDOP)	Meters 7
Site 11	Easting (UTM X): 1550618242	Northing (UTM Y): 4166163	Horizontal Accuracy: (EPE / FOM / PDOP)	Meters 6

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
361	Upstream view @ Transect 11	362	downstream view @ Transect 1		
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

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

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

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

Stream Name & WBID # 1868 Pryfork Creek Date of Survey 10-2-08

Site # 1

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (Page 2 of 3)

Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

☐ City/county parks	☐ Playgrounds	☐ MDC conservation lands	☐ Urban areas	☐ Rural Residential
☐ Campgrounds	☐ State parks	☐ National forests	☐ Nature trails	☐ Stairs/walkway
☐ Boating accesses	☐ Fence	☐ No trespass sign	☑ Steep slopes	☐ Other:

Comments: Pasture / Woods

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	20 % Gravel	80 % Sand	% Silt	% Mud/Clay	% Bedrock

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

< 5% emergent aquatic macrophytes

Water Characteristics*: (Mark all that apply.)

Odor:	☐ Sewage	☐ Musky	☐ Chemical	☐ None	☑ Other: Dry
Color:	☐ Clear	☐ Green	☐ Gray	☐ Milky	☑ Other: Dry
Bottom Deposit:	☐ Sludge	☐ Solids	☐ Fine sediments	☑ None	☐ Other: Dry
Surface Deposit:	☐ Oil	☐ Scum	☐ Foam	☑ None	☐ Other: Dry

*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 # 1868 Dry Fork Creek Date of Survey 10-3-08

Site # 1

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (Page 3 of 3)

Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses.)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

Comments: (Please record any additional comments here.)

Dry

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

Printed Names of Personnel Collecting Data: Bob Bacon and Candy Schilling

Surveyor's Signature: Robert M Bacon Date of Survey: 10-3-08

Organization: EKC Position: Field Crew

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: Dry Fork Creek Waterbody ID: 1868 Site #: 1

Estimated Channel Incision: Dry (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 15S0618317 UTM Y: 4166021 +/- 7 (meters)

11 UTM X 15S0618242 UTM Y: 4166163 +/- 6 (meters)

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

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

Field Staff: Candy Shilling and Robert Bacon

Dissolved Oxygen

Date: 10/3/2008 Time: 9:15

Dissolved Oxygen: Dry (mg/L)

Dissolved Oxygen: Dry (% sat)

Specific Cond: Dry (µS/cm)

Water Temperature: Dry (°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		0		0		0		0		0		0		0		0		0		0	
2	0		0		0		0		0		0		0		0		0		0		0	
3	0		0		0		0		0		0		0		0		0		0		0	
4	0		0		0		0		0		0		0		0		0		0		0	
5	0		0		0		0		0		0		0		0		0		0		0	
6	0		0		0		0		0		0		0		0		0		0		0	
7	0		0		0		0		0		0		0		0		0		0		0	
8	0		0		0		0		0		0		0		0		0		0		0	
9	0		0		0		0		0		0		0		0		0		0		0	
Right Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feature Type (riffle, run, or pool)	Dry		Dry		Dry		Dry		Dry		Dry		Dry		Dry		Dry		Dry		Dry	

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: Robert R. Bacon Date: 10/3/2008

WBID # 1868

Site # 2

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (Page 1 of 3)

(must be completed for each site)

Date & Time: 10-2-08 9:40	Location Description (e.g., road crossing): Downstream @ Henry H bridge
Stream Name: Dry Fork Creek	
Current Weather Conditions: Clear, Sunny ~70°F	Facility Name(s): Green Forest R-11 School
Weather Conditions for Past 10 days: attached	Permit Number(s): MO0085103
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): 155061822	Northing (UTM Y): 4166189	Horizontal Accuracy: (EPE / FOM / PDOP)	6 Meters
Site 11	Easting (UTM X): 155061817.0	Northing (UTM Y): 4166337	Horizontal Accuracy: (EPE / FOM / PDOP)	5 Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
363	downstream view @ Trans 1	365	Upstream view transect #11		
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

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

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

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

Stream Name & WBID # Dry Fork Creek 1868 Date of Survey 10-5-08

Site # 2

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (Page 2 of 3)

Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

☐ City/county parks	☐ Playgrounds	☐ MDC conservation lands	☐ Urban areas	☐ Rural Residential
☐ Campgrounds	☐ State parks	☐ National forests	☐ Nature trails	☐ Stairs/walkway
☐ Boating accesses	☐ Fence	☐ No trespass sign	☒ Steep slopes	☐ Other:

Comments: Pasture

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	30 % Gravel	70 % Sand	% Silt	% Mud/Clay	% Bedrock

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

None - dry

Water Characteristics*: (Mark all that apply.)

Odor:	☐ Sewage	☐ Musky	☐ Chemical	☐ None	☒ Other:	dry
Color:	☐ Clear	☐ Green	☐ Gray	☐ Milky	☒ Other:	dry
Bottom Deposit:	☐ Sludge	☐ Solids	☐ Fine sediments	☐ None	☒ Other:	dry
Surface Deposit:	☐ Oil	☐ Scum	☐ Foam	☐ None	☒ Other:	dry

*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 # Dry Fork Creek 1868 Date of Survey 10-3-08

Site # 1868

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (Page 3 of 3)

Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses.)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

Comments: (Please record any additional comments here.)

None - Dry

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

Printed Names of Personnel Collecting Data: Bob Bacon / Cindy Schilling

Surveyor's Signature: [signature] Date of Survey: 10-3-08

Organization: ERC Position: Field Manager

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: Dry Fork Creek Waterbody ID: 1868 Site #: 2

Estimated Channel Incision: Dry (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 15S0618224 UTM Y: 4166189 +/- 6 (meters)

11 UTM X 15S0618170 UTM Y: 4166337 +/- 5 (meters)

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

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

Field Staff: Candy Shilling and Robert Bacon

Dissolved Oxygen

Date: 10/3/2008 Time: 9:40

Dissolved Oxygen: Dry (mg/L)

Dissolved Oxygen: Dry (% sat)

Specific Cond: Dry (µS/cm)

Water Temperature: Dry (°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		0		0		0		0		0		0		0		0		0		0	
2	0		0		0		0		0		0		0		0		0		0		0	
3	0		0		0		0		0		0		0		0		0		0		0	
4	0		0		0		0		0		0		0		0		0		0		0	
5	0		0		0		0		0		0		0		0		0		0		0	
6	0		0		0		0		0		0		0		0		0		0		0	
7	0		0		0		0		0		0		0		0		0		0		0	
8	0		0		0		0		0		0		0		0		0		0		0	
9	0		0		0		0		0		0		0		0		0		0		0	
Right Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feature Type (riffle, run, or pool)	Dry		Dry		Dry		Dry		Dry		Dry		Dry		Dry		Dry		Dry		Dry	

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: Robert R. Bacon Date: 10/3/2008

WBID # 1868

Site # 3

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (Page 1 of 3)

(must be completed for each site)

Date & Time: 10-3-08	Location Description (e.g., road crossing): upstream of Dent Co. Rd 2370
Stream Name: Dry Fork Creek	
Current Weather Conditions: sunny clear ~ 70°F	Facility Name(s): Green Forest R-11 School
Weather Conditions for Past 10 days: attached	Permit Number(s): MO0085103
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): 15S 0618370	Northing (UTM Y): 4169515	Horizontal Accuracy: (EPE / FOM / PDOP)	6	Meters wpt 6
Site 11	Easting (UTM X): 15S 0618439	Northing (UTM Y): 4169796	Horizontal Accuracy: (EPE / FOM / PDOP)	6	Meters wpt 5

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
366	upstream view @ T11	367	road crossing	368	downstream view @ T1
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

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

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

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

Stream Name & WBID # Dry Fork Creek 1868 Date of Survey 10-3-08

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: pastures / fields in grass

Evidence of Human Use*: (Attach photos and reference in "Photos" section.)

☒ Roads (1)	☐ 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: Farm road crossing @ ~ Transect # 2			

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

5 % Cobble	15 % Gravel	65 % Sand	% Silt	15 % Mud/Clay	% Bedrock

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

< 5% aquatic macrophytes

~ 5-10 algae cover on rocks / gravel

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 # Dry Fork Creek 1868 Date of Survey 10-3-08

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)
Pool	@ Trans 7	~3.0	~7.0	–	>1.5 m
Pool	@ Trans 9	~4.0	~10.0	–	>1.5 m

Comments: (Please record any additional comments here.)

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

Printed Names of Personnel Collecting Data: Bob Bacon & Cindy Schilling

Surveyor's Signature: [signature] Date of Survey: 10-3-08

Organization: ERC Position: Field Manager

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: Dry Fork Creek Waterbody ID: 1868 Site #: 3

Estimated Channel Incision: 0.3 (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 16S0618370 UTM Y: 4169515 +/- 6 (meters)

11 UTM X 16S0618439 UTM Y: 4169796 +/- 6 (meters)

Average Stream Width: 11 (meters) Length of Survey Segment: 150 (meters)

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

Field Staff: Abby Lynn and Travis Howell (AL & TH)

Dissolved Oxygen

Date: 10/3/2008 Time: 12:22

Dissolved Oxygen: 8.94 (mg/L)

Dissolved Oxygen: 89.5 (% sat)

Specific Cond: 236 (µS/cm)

Water Temperature: 15.52 (°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	1.4	0.75	1.06	0.39	0.34	0.05	1.54	0.58	1.4	0.36	1.33	0.46	1.4		1.5	0.49	1.6		1.64	1.01	1.84	0.7
2	2.8	0.76	2.12	0.42	0.68	0.15	3.08	0.84	2.8	0.53	2.66	0.76	2.8		3	0.81	3.2		3.28	1.3	3.68	0.81
3	4.2	1.02	3.18	0.31	1.02	0.18	4.62	0.97	4.2	0.78	3.99	0.85	4.2	Deep	4.5	0.74	4.8	Deep	4.92	1.34	5.52	1
4	5.6	1	4.24	0.34	1.36	0.21	6.16	1.01	5.6	0.94	5.32	0.94	5.6	> 1.5m	6	0.72	6.4	> 1.5m	6.56	1.32	7.36	1.23
5	7	0.74	5.3	0.37	1.7	0.28	7.7	1.14	7	0.97	6.65	0.96	7		7.5	0.69	8		8.2	1.1	9.2	1.12
6	8.4	0.72	6.36	0.37	2.04	0.27	9.24	1.2	8.4	0.92	7.98	0.98	8.4		9	0.68	9.6		9.84	1.07	11.04	1.3
7	9.8	0.57	7.42	0.38	2.38	0.13	10.78	1.02	9.8	0.94	9.31	1	9.8		10.5	0.76	11.2		11.48	0.94	12.88	1.05
8	11.2	0.51	8.48	0.29	2.72	0.11	12.32	0.92	11.2	0.74	10.64	0.8	11.2		12	0.68	12.8		13.12	0.78	14.72	1.02
9	12.6	0.17	9.54	0.13	3.06	0.3	13.86	0.87	12.6	0.5	11.97	0.71	12.6		13.5	0.31	14.4		14.76	0.89	16.56	0.64
Right Bank	14	0	10.6	0	3.4	0	15.4	0	14	0	13.3	0	14	0	15	0	16	0	16.4	0	18.4	0
Feature Type (riffle, run, or pool)	Run		Run		Riffle		Run		Run		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: Robert R. Bacon Date: 10/3/2008

WBID # 1868

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: 10-3-08 15:20	Location Description (e.g., road crossing): upstream of Hwy DD bridge
Stream Name: Dry Fork Creek	
Current Weather Conditions: Clear, Sunny 73°F	Facility Name(s): Green Forest Rural School
Weather Conditions for Past 10 days: see attachment	Permit Number(s): MO0085103
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): 155 0619429	Northing (UTM Y): 4170091	Horizontal Accuracy: (EPE / FOM / PDOP) 9 Meters
Site 11	Easting (UTM X): 155 0619715	Northing (UTM Y): 4170167	Horizontal Accuracy: (EPE / FOM / PDOP) 5 Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
369	Upstream view @ Transect 11	370	downstream view @ Transect 1		
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

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

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

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

Stream Name & WBID # Dry Fork Creek 1468 Date of Survey 10-3-08

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: MDC conservation land on left descending bank

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	55 % Gravel	45 % Sand	% Silt	% Mud/Clay	% Bedrock

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

~75% dead periphyton coverage.

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 # Dry Fork Creek 1868 Date of Survey 10-3-08

Site # 04

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)
run	@ Transect 6	1.5m	8.0m		~1.70 >1.5
pool	@ Transect 9	2.0m	10.0m		~1.60 >1.5

Comments: (Please record any additional comments here.)

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

Printed Names of Personnel Collecting Data: Bob Bacon / Cindy Schelling

Surveyor's Signature: Robert M Bacon Date of Survey: 10-3-08

Organization: ERC Position: Field Manager

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: Dry Fork Creek Waterbody ID: 1868 Site #: 4

Estimated Channel Incision: 0.25 (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 15S0619429 UTM Y: 4170091 +/- 9 (meters)

11 UTM X 15S0619715 UTM Y: 4170167 +/- 5 (meters)

Average Stream Width: 10 (meters) Length of Survey Segment: 150 (meters)

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

Field Staff: Candy Shilling and Robert Bacon

Dissolved Oxygen

Date: 10/3/2008 Time: 15:36

Dissolved Oxygen: 8.86 (mg/L)

Dissolved Oxygen: 90.7 (% sat)

Specific Cond: 239 (µS/cm)

Water Temperature: 16.53 (°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	0.73	0.07	0.99	0.05	1	0.45	0.77	0.06	1.2	0.23	1.1		1.56	0.48	1.13	0.81	1.25		1.04	0.08	1.23	0.28
2	1.46	0.12	1.98	0.05	2	0.59	1.54	0.09	2.4	0.24	2.2	deep	3.12	0.61	2.26	1.12	2.5	deep	2.08	0.26	2.46	0.36
3	2.19	0.15	2.97	0.03	3	0.62	2.31	0.13	3.6	0.24	3.3		4.68	0.73	3.39	0.91	3.75		3.12	0.18	3.69	0.49
4	2.92	0.18	3.96	0.02	4	0.58	3.08	0.16	4.8	0.26	4.4	hole	6.24	0.72	4.52	0.77	5	hole	4.16	0.13	4.92	0.67
5	3.65	0.18	4.95	0.09	5	0.54	3.85	0.17	6	0.27	5.5	>1.5	7.8	0.75	5.65	0.67	6.25	>1.5	5.2	0.09	6.15	0.79
6	4.38	0.16	5.94	0.24	6	0.46	4.62	0.19	7.2	0.49	6.6		9.36	0.89	6.78	0.5	7.5		6.24	0.14	7.38	0.89
7	5.11	0.18	6.93	0.35	7	0.36	5.39	0.28	8.4	0.71	7.7		10.92	0.82	7.91	0.33	8.75		7.28	0.23	8.61	0.97
8	5.84	0.16	7.92	0.31	8	0.33	6.16	0.14	9.6	0.71	8.8	>1.5	12.48	0.75	9.04	0.23	10		8.32	0.41	9.84	1.12
9	6.57	0.24	8.91	0.19	9	0.13	6.93	0.08	10.8	0.84	9.9	>1.5	14.04	0.72	10.17	0.16	11.25		9.36	0.46	11.07	1.02
Right Bank	7.3	0	9.9	0	10	0	7.7	0	12	0	11	0	15.6	0	11.3	0	12.5	0	10.4	0	12.3	0
Feature Type (riffle, run, or pool)	Run		Riffle		Run		Riffle		Run		Run		Run		Run		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: Robert R. Bacon Date: 10/3/2008

WBID # 1868

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: 10-3-08 16:02	Location Description (e.g., road crossing): downstream of Hwy DD bridge
Stream Name: Dry Fork Creek	
Current Weather Conditions: Sunny, Clear 70°F	Facility Name(s): Green Forest R-11 School
Weather Conditions for Past 10 days: see attached	Permit Number(s): MO 0085103
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): 15S 0619788	Northing (UTM Y): 4170173	Horizontal Accuracy: (EPE / FOM / PDOP) 10 Meters
Site 11	Easting (UTM X): 15S 0620026	Northing (UTM Y): 4170293	Horizontal Accuracy: (EPE / FOM / PDOP) 15 Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
371	downstream view @ Transect 1	372	rope swing	373	from road
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
374	upstream view @ transect 11				
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

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

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

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

Stream Name & WBID # Dry Fork Creek 1868 Date of Survey 10-3-08

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: livestock pasture

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: see picture 145 @ or near Transect 4			

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

5 % Cobble	50 % Gravel	40 % Sand	% Silt	5 % Mud/Clay	% Bedrock

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

< 5% emergent vegetation
~ 80 dying periphiton on gravel + sand

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 # Dry Fork Creek Date of Survey 10-3-08

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)
pool	@ Transect 2	~8.0	~20 m	—	>1.5

Comments: (Please record any additional comments here.)

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

Printed Names of Personnel Collecting Data: Robert Baron / Candy Schilling

Surveyor's Signature: Robert R Baron Date of Survey: 10-3-08

Organization: ERC Position: Field Manager

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: Dry Fork Creek Waterbody ID: 1868 Site #: 5

Estimated Channel Incision: 0.15 (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 15S0619788 UTM Y: 4170173 +/- 10 (meters)

11 UTM X 15S0620026 UTM Y: 4170293 +/- 15 (meters)

Average Stream Width: 11 (meters) Length of Survey Segment: 150 (meters)

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

Field Staff: Candy Shilling and Robert Bacon

Dissolved Oxygen

Date: 10//3/08 Time: 16:02

Dissolved Oxygen: 9.64 (mg/L)

Dissolved Oxygen: 100 (% sat)

Specific Cond: 237 (µS/cm)

Water Temperature: 17.1 (°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	1.28	0.53	2		2.01	0.53	2	0.9	1.2	0.11	2.05	0.22	1.55	0.27	1.3	0.26	1.1	0.18	1.22	0.55	0.35	0.02
2	2.56	0.39	4	Deep	4.02	0.37	4	0.65	2.4	0.37	4.1	0	3.1	0.4	2.6	0.12	2.2	0.29	2.44	0.5	0.7	0.05
3	3.84	0.36	6		6.03	0.52	6	0.33	3.6	0.45	6.15	0	4.65	0.13	3.9	0	3.3	0.33	3.66	0.39	1.05	0.09
4	5.12	0.37	8	> 1.5	8.04	0.43	8	0.61	4.8	0.51	8.2	0	6.2	0	5.2	0	4.4	0.33	4.88	0.54	1.4	0.09
5	6.4	0.31	10		10.05	0.23	10	0.84	6	0.55	10.25	0	7.75	0	6.5	0	5.5	0.17	6.1	0.47	1.75	0.11
6	7.68	0.39	12		12.06	0.25	12	0.96	7.2	0.69	12.3	0	9.3	0.01	7.8	0	6.6	0.13	7.32	0.34	2.1	0.19
7	8.96	0.8	14		14.07	0.39	14	1.24	8.4	0.55	14.35	0	10.85	0.01	9.1	0.11	7.7	0.09	8.54	0.29	2.45	0.19
8	10.24	1.01	16		16.08	0.17	16	0.95	9.6	0.41	16.4	0.18	12.4	0	10.4	0.06	8.8	0.11	9.76	0.26	2.8	0.17
9	11.52	0.73	18		18.09	0.15	18	0.6	10.8	0.31	18.45	0.09	13.95	0	11.7	0.07	9.9	0.05	10.98	0.18	3.15	0.08
Right Bank	12.8	0	20	0	20.1	0	20	0	12	0	20.5	0	15.5	0	13	0	11	0	12.2	0	3.5	0
Feature Type (riffle, run, or pool)	Run		Pool		Run		Pool		Run		Riffle		Riffle		Riffle		Run		Run		Riffle	

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

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

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

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

All measurements to be taken to the nearest 0.01 meter.

Surveyor's Signature: Robert R. Bacon Date: 10/3/2008

WBID # 1868

Site # 6

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: 10-3-08 17:52	Location Description (e.g., road crossing): Downstream at Co Rd 2240 bridge
Stream Name: Dry Fork Creek	
Current Weather Conditions: Sunny, Clear ~65°F	Facility Name(s): Green Forest R-11 School
Weather Conditions for Past 10 days: see attached sheet	Permit Number(s): MO 0095103
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): 15S 0619841	Northing (UTM Y): 4172199	Horizontal Accuracy: (EPE / FOM / PDOP) 7 Meters
Site 11	Easting (UTM X): 15S 0619951	Northing (UTM Y): 4172445	Horizontal Accuracy: (EPE / FOM / PDOP) 9 Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
375	downstream view @ Transect 1	376	Upstream view @ Transect 11		
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

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

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

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

Stream Name & WBID # Dry Fork Creek 1868 Date of Survey 10-2-08

Site # 1868

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (Page 2 of 3)

Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

☐ City/county parks	☐ Playgrounds	☐ MDC conservation lands	☐ Urban areas	☐ Rural Residential
☐ Campgrounds	☐ State parks	☐ National forests	☐ Nature trails	☐ Stairs/walkway
☐ Boating accesses	☒ Fence	☐ No trespass sign	☒ Steep slopes	☐ Other:
Comments:				

Evidence of Human Use*: (Attach photos and reference in "Photos" section.)

☐ Roads	☐ Foot paths/prints	☐ Dock/platform	☐ Camping Sites	☐ Rope swings
☐ RV / ATV Tracks	☐ Fire pit/ring	☐ NPDES Discharge	☐ Fishing Tackle	☐ Livestock Watering
☒ None of the above	Comments / Other:			

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

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

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

> 5% emergent vegetation

~ 80% dying periphyton (end of life cycle)

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 # Dry Fork Creek 1868 Date of Survey 10-3-08

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)

Comments: (Please record any additional comments here.)

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

Printed Names of Personnel Collecting Data: Bob Bacon / Cindy Schilling

Surveyor's Signature: [signature] Date of Survey: 10-3-08

Organization: EEL Position: Trail Manager

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: Dry Fork Creek Waterbody ID: 1868 Site #: 6

Estimated Channel Incision: 0.2 (m) (height between low bank width and water)

GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (**EPE** / PDOP / FOM)

01 UTM X 15S0619841 UTM Y: 4172199 +/- 7 (meters)

11 UTM X 16S0619951 UTM Y: 4172445 +/- 9 (meters)

Average Stream Width: 10 (meters) Length of Survey Segment: 150 (meters)

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

Field Staff: Abby Lynn and Travis Howell (AL & TH)

Dissolved Oxygen

Date: 10/3/2008 Time: 17:52

Dissolved Oxygen: _____ (mg/L)

Dissolved Oxygen: _____ (% sat)

Specific Cond: _____ (µS/cm)

Water Temperature: _____ (°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	1.1	0.17	0.41	0.02	0.51	0.03	0.58	0.05	0.47	0.17	0.2	0.02	0.68	0.1	0.95	0.1	0.45	0.16	0.86	0.53	0.57	0.12
2	2.2	0	0.82	0.04	1.02	0.04	1.16	0.23	0.94	0.25	0.4	0.02	1.36	0.15	1.9	0.24	0.9	0.23	1.72	0.85	1.14	0.14
3	3.3	0.23	1.23	0.11	1.53	0.07	1.74	0.21	1.41	0.26	0.6	0.06	2.04	0.19	2.85	0.26	1.35	0.26	2.58	0.89	1.71	0.17
4	4.4	0.35	1.64	0.13	2.04	0	2.32	0.12	1.88	0.25	0.8	0.08	2.72	0.2	3.8	0.2	1.8	0.29	3.44	0.66	2.28	0.21
5	5.5	0.38	2.05	0.11	2.55	0.01	2.9	0.13	2.35	0.3	1	0	3.4	0.32	4.75	0.18	2.25	0.21	4.3	0.52	2.85	0.15
6	6.6	0.34	2.46	0.14	3.06	0	3.48	0.14	2.82	0.34	1.2	0.04	4.08	0.32	5.7	0.21	2.7	0.19	5.16	0.33	3.42	0.16
7	7.7	0.28	2.87	0.03	3.57	0.02	4.06	0.12	3.29	0.32	1.4	0.05	4.76	0.44	6.65	0.25	3.15	0.18	6.02	0.2	3.99	0.14
8	8.8	0.28	3.28	0.05	4.08	0.03	4.64	0.09	3.76	0.23	1.6	0.06	5.44	0.63	7.6	0.29	3.6	0.07	6.88	0.17	4.56	0.1
9	9.9	0.22	3.69	0.02	4.59	0.02	5.22	0.09	4.23	0.12	1.8	0.03	6.12	0.41	8.55	0.31	4.05	0.04	7.74	0.11	5.13	0.08
Right Bank	11	0	4.1	0	5.1	0	5.8	0	4.7	0	2	0	6.8	0	9.5	0	4.5	0	8.6	0	5.7	0
Feature Type (riffle, run, or pool)	Run		Riffle		Riffle		Run		Run		Riffle		Run		Run		Run		Run		Run	

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

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

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

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

All measurements to be taken to the nearest 0.01 meter.

Surveyor's Signature: Robert R. Bacon Date: 10/3/2008

WBID # 1868

Site # 7

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: 10-4-08 8:47	Location Description (e.g., road crossing): upstream of Hwy 72 bridge
Stream Name: Dry Fork Creek	
Current Weather Conditions: Sunny Partly Cloudy ~60°F	Facility Name(s): Green Forest R-II School
Weather Conditions for Past 10 days: attached	Permit Number(s): MO0088103
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): 15S 0620729	Northing (UTM Y): 4174552	Horizontal Accuracy: (EPE / FOM / PDOP) 9	Meters
Site 11	Easting (UTM X): 15S 0620792	Northing (UTM Y): 4174767	Horizontal Accuracy: (EPE / FOM / PDOP) 5	Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
377	upstream view @ Trans 11	378	downstream view @ Trans 1		
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

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

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

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

Stream Name & WBID # _____ Date of Survey _____

Site # _____

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: farm pastures / woods

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%.)

5 % Cobble	40 % Gravel	50 % Sand	% Silt	5 % Mud/Clay	% Bedrock

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

- some periphyton growth on gravel

Water Characteristics*: (Mark all that apply.)

Odor:	☐ Sewage	☐ Musky	☐ Chemical	☒ None	☐ Other:
Color:	☐ Clear	☐ Green	☐ Gray	☐ Milky	☒ Other: Stained - Tannins
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 # Dry Fork Creek 1868 Date of Survey 10/4/08

Site # 7

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (Page 3 of 3)

Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses.)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

Comments: (Please record any additional comments here.)

Water darkly stained w/ tannins (dead leaves) very low conductivity

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

Printed Names of Personnel Collecting Data: Robert R. Bacon / Cindy Schilling

Surveyor's Signature: Robert R. Bacon Date of Survey: 10-4-08

Organization: ERC Position: Field Manager

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: Dry Fork Creek Waterbody ID: 1868 Site #: 7

Estimated Channel Incision: 0.25 (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 15S0620729 UTM Y: 4174552 +/- 9 (meters)

11 UTM X 15S0620792 UTM Y: 4174767 +/- 5 (meters)

Average Stream Width: 8 (meters) Length of Survey Segment: 150 (meters)

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

Field Staff: Robert Bacon and Candy Shilling

Dissolved Oxygen

Date: 10/4/2008 Time: 8:47

Dissolved Oxygen: 7.01 (mg/L)

Dissolved Oxygen: 65.8 (% sat)

Specific Cond: 92 (µS/cm)

Water Temperature: 12.57 (°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	0.08	1.35	0.13	0		0		0		0		0.4	0.04	0.13	0.01	1.14	0.31	0.83	0.45	1.25	0.53
2	1.14	0.17	2.7	0.12	0		0		0		0		0.8	0.08	0.26	0.02	2.28	0.19	1.66	0.53	2.5	0.48
3	1.71	0.25	4.05	0.17	0		0		0		0		1.2	0.1	0.39	0.05	3.42	0.18	2.49	0.48	3.75	0.36
4	2.28	0.27	5.4	0.19	0		0		0		0		1.6	0.11	0.52	0.07	4.56	0.2	3.32	0.4	5	0.28
5	2.85	0.33	6.75	0.24	0		0		0		0		2	0.14	0.65	0.08	5.7	0.15	4.15	0.31	6.25	0.26
6	3.42	0.36	8.1	0.31	0		0		0		0		2.4	0.14	0.78	0.08	6.84	0.13	4.98	0.23	7.5	0.21
7	3.99	0.3	9.45	0.47	0		0		0		0		2.8	0.15	0.91	0.08	7.98	0.17	5.81	0.13	8.75	0.21
8	4.56	0.33	10.8	0.63	0		0		0		0		3.2	0.12	1.04	0.08	9.12	0.14	6.64	0.09	10	0.21
9	5.13	0.34	12.15	0.47	0		0		0		0		3.6	0.05	1.17	0.05	10.26	0.07	7.47	0.04	11.25	0.19
Right Bank	5.7	0	13.5	0	0	0	0	0	0	0	0	0	4	0	1.3	0	11.4	0	8.3	0	12.5	0
Feature Type (riffle, run, or pool)	Pool		Pool		Dry		Dry		Dry		Dry		Run		Run		Run		Run		Run	

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

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All measurements to be taken to the nearest 0.01 meter.

Surveyor's Signature: Robert R. Bacon Date: 10/4/2008

Dry Fork Cr
10-3-08
WBID # 1868
Site 1
Transect 1
10/03/2008

Dry Fork Cr
10-3-08
WBID # 1868
Site 2
Transect 11
10/03/2008

Dry Fork Cr
10-3-08
WBID # 1868
Site 1
Transect 11
10/03/2008

Dry Fork Cr
10-3-08
WBID # 1868
Site 2
Transect 1
10/03/2008

10/03/2008

Dry Fork
10.03.08
WBID 1868
Site 4
Tran 11
10/03/2008

Dry Fork
10.3.08
WBID 1868
Site 3
10/03/2008

Dry Fork
10.03.08
WBID 1868
Site 3 Tran 1
10/03/2008

Dry Fork
10.03.08
WBID 1868
Site 5
Tran 1
10/03/2008

10/03/2008

Dry Fork
10.03.08
WBID 1868
Site 4
Tran 1
10/03/2008

10/03/2008

Dry Fork
10·03·08
WBID 1868
Site 6
Trans. 1
10/03/2008

Dry Fork
10·04·08
WBID 1868
Site 7
Trans 11
10/04/2008

Dry Fork
10·03·08
WBID 1868
Site 5
Tran 11
10/03/2008

Dry Fork
10·03·08
WBID 1868
Site 6
Trans. 11
10/03/2008

Dry Fork
10-04-08
WBID 1868
Site 7
Trans 1
10/04/2008