



Missouri
Department of
Natural Resources

Use Attainability Analysis

for

WBID 3632 Huldy Hollow

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):	Huldy Hollow
Missouri Water Body Identification (WBID) Number:	3632
8-digit HUC:	11010008 - Current River
County(ies), Listed Upstream to Downstream:	Texas
Upstream Legal Description (from Table H):	28, 31N, 07W
Downstream Legal Description (from Table H):	Mouth
Number of sites evaluated:	3
List all site numbers, <u>consecutively upstream to downstream</u> :	1) upstream of site 2 - located off Big Creek 2) upstream of site 3 - located off Big Creek 3) - located off Big Creek
Include a Site Location Map(s). The map must include all requirements detailed in the <i>Missouri Recreational Use Attainability Analyses: Water Body Survey and Assessment Protocol</i> (Section IV.D.8.a).	

II. Facility Information (list all permitted discharges to this water body segment)

Facility Name(s) and Permit Number(s):
None listed

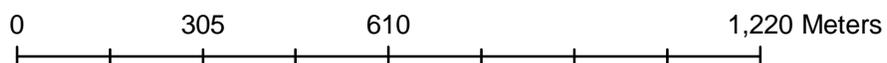
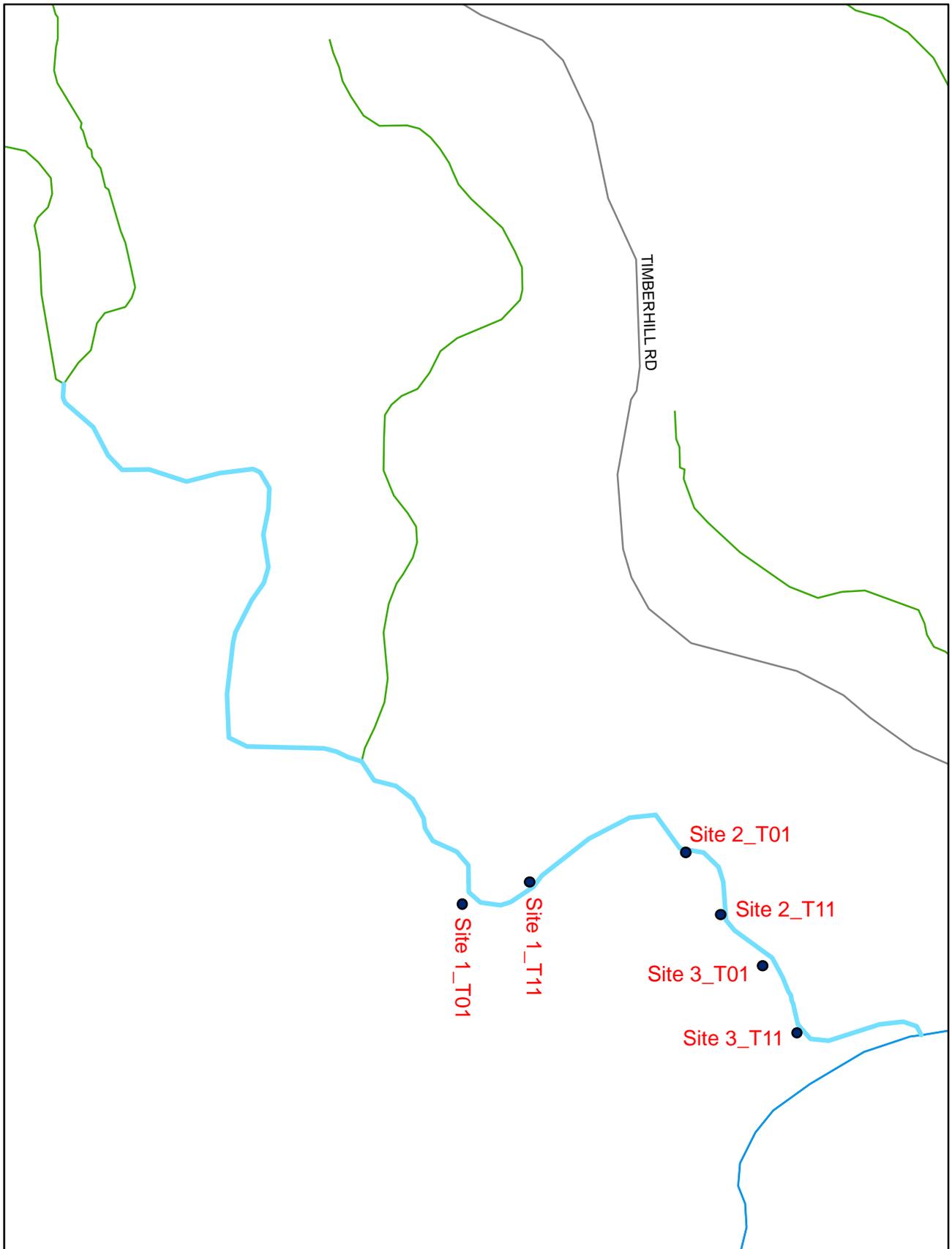
III. UAA Surveyor (please **PRINT** legibly)

Name of Surveyor:	Robert R 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 requirements listed in the *Missouri Recreational Use Attainability Analyses: Water Body Survey and Assessment Protocol*) and that this form is complete.

Signed: Robert R Bacon Date: 10-5-08

WBID # 3632 - Huldy Hollow Texas County



Weather Conditions

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

Data from the WeatherUnderground.com
Montauk/Salem, MO

Date	Precipitation (Inches)	Min. Temp (°F)	Max. Temp (°F)	Avg. Temp (°F)
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
10/5/2008	0.00	53.0	78.0	64.0

WBID # 3632
 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: <u>10-5-08 9:45</u>	Location Description (e.g., road crossing): <u>upstream site 2 - located off Big Creek</u>
Stream Name: <u>Huldy Hollow</u>	
Current Weather Conditions: <u>clear, sunny ~60°</u>	Facility Name(s): <u>None listed</u>
Weather Conditions for Past 10 days: <u>see attached sheet</u>	Permit Number(s): <u>None listed</u>
Official Drought Conditions at time of this survey (search DNR home page for "drought"): No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>	

Site Location:

LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION, IN METERS)			
Site 01	Easting (UTM X): <u>15 S 0614783</u>	Northing (UTM Y): <u>4134583</u>	Horizontal Accuracy: (EPE / FOM / PDOP) <u>5</u> Meters
Site 11	Easting (UTM X): <u>15 S 0614933</u>	Northing (UTM Y): <u>4134632</u>	Horizontal Accuracy: (EPE / FOM / PDOP) <u>7</u> Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
<u>397</u>	<u>upstream view @ Transect 11</u>	<u>398</u>	<u>downstream view @ Transect 1</u>		
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.)

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe: (Include number of individuals recreating, photo-documentation of evidence of recreational uses, etc. Use <i>Data Sheet D- Recreational Use Interview</i> when conducting interviews.)				

Stream Name & WBID # Huldy Hollow 3632

Date of Survey 10-5-08

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.)

<input type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep slopes	<input type="checkbox"/> Other:
Comments: <u>woods - very remote location</u>				

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

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input type="checkbox"/> RV / ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Livestock Watering
<input checked="" type="checkbox"/> None of the above	Comments / Other:			

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

<u>90</u> % Cobble	<u>10</u> % Gravel	% Sand	% Silt	% Mud/Clay	% Bedrock
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Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site.)

none - just rotty terrestrial plant material

Water Characteristics*: (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> 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 # Huldy Hollow 3032

Date of Survey 10-5-08

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.)

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, Candy Schilling

Surveyor's Signature: [Signature] Date of Survey: 10-5-08

Organization: ERC Position: Field Manager

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: <u>Huldy Hollow</u> Waterbody ID: <u>3632</u> Site #: <u>1</u> Estimated Channel Incision: <u>0.3</u> (m) (height between low bank width and water) GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (<u>EPE</u> / PDOP / FOM) 01 UTM X <u>15S0614783</u> UTM Y: <u>4134583</u> +/- <u>5</u> (meters) 11 UTM X <u>15S0614933</u> UTM Y: <u>4134632</u> +/- <u>7</u> (meters) Average Stream Width: <u>Dry</u> (meters) Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach) (20x average stream width) Field Staff: <u>Candy Shilling and Bob Bacon</u>	<h4 style="text-align: center; margin: 0;">Dissolved Oxygen</h4> Date: <u>10/5/2008</u> Time: <u>11:12</u> Dissolved Oxygen: <u>7.41</u> (mg/L) Dissolved Oxygen: <u>75.1</u> (% sat) Specific Cond: <u>333</u> (µS/cm) Water Temperature: <u>15.98</u> (°C)
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Transect Cross-Section

		01		02		03		04		05		06		07		08		09		10		11	
Station		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	
	1	0.24	0.14	0.14	0.1	0.09	0.06	0.21	0.09	0.09	0.02	0.08	0.05	0	0	0	0	0	0	0	0	0	
	2	0.48	0.21	0.28	0.13	0.18	0.07	0.42	0.1	0.18	0.03	0.16	0.07	0	0	0	0	0	0	0	0	0	
	3	0.72	0.36	0.42	0.14	0.27	0.06	0.63	0.13	0.27	0.04	0.24	0.08	0	0	0	0	0	0	0	0	0	
	4	0.96	0.37	0.56	0.2	0.36	0.09	0.84	0.11	0.36	0.05	0.32	0.08	0	0	0	0	0	0	0	0	0	
	5	1.2	0.35	0.7	0.26	0.45	0.07	1.05	0.12	0.45	0.07	0.4	0.09	0	0	0	0	0	0	0	0	0	
	6	1.44	0.32	0.84	0.22	0.54	0.08	1.26	0.14	0.54	0.07	0.48	0.09	0	0	0	0	0	0	0	0	0	
	7	1.68	0.18	0.98	0.18	0.63	0.06	1.47	0.11	0.63	0.08	0.56	0.07	0	0	0	0	0	0	0	0	0	
	8	1.92	0.17	1.12	0.06	0.72	0.04	1.68	0.09	0.72	0.11	0.64	0.06	0	0	0	0	0	0	0	0	0	
	9	2.16	0.12	1.26	0.05	0.81	0.03	1.89	0.04	0.81	0.11	0.72	0.04	0	0	0	0	0	0	0	0	0	
Right Bank		2.4	0	1.4	0	0.9	0	2.1	0	0.9	0	0.8	0	0	0	0	0	0	0	0	0	0	
Feature Type		Pool		Riffle		Riffle		Run		Riffle		Run		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 by 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: 10/5/2008

WBID # 3632

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: <u>10-5-08 10:05</u>	Location Description (e.g., road crossing): <u>located off Big Creek</u>
Stream Name: <u>Huldy Hollow</u>	
Current Weather Conditions: <u>sunny, clear, ~65°F</u>	Facility Name(s): <u>None listed</u>
Weather Conditions for Past 10 days: <u>see attached</u>	Permit Number(s): <u>None listed</u>
Official Drought Conditions at time of this survey (search DNR home page for "drought"): No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>	

Site Location:

LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION, IN METERS)			
Site 01	Easting (UTM X): <u>15S 0615283</u>	Northing (UTM Y): <u>4134699</u>	Horizontal Accuracy: (EPE) / FOM / PDOP <u>5</u> Meters
Site 11	Easting (UTM X): <u>15S 0615361</u>	Northing (UTM Y): <u>4134559</u>	Horizontal Accuracy: (EPE) / FOM / PDOP <u>7</u> Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
<u>394</u>	<u>upstream view @ Transect 11</u>	<u>396</u>	<u>downstream view @ Transect 1</u>		
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.)

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe: (Include number of individuals recreating, photo-documentation of evidence of recreational uses, etc. Use <i>Data Sheet D- Recreational Use Interview</i> when conducting interviews.)				

Stream Name & WBID # Huldy Hollow 31032

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.)

<input type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep slopes	<input type="checkbox"/> Other:
Comments: <u>Woods - very remote location</u>				

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

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input checked="" type="checkbox"/> RV / ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Livestock Watering
<input type="checkbox"/> None of the above	Comments / Other: <u>ATV tracks cross stream several places between site 2 and 3</u>			

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

<u>85</u> % Cobble	<u>10</u> % Gravel	<u>5</u> % Sand	% Silt	% Mud/Clay	% Bedrock
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Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site.)

none - dry

Water Characteristics*: (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input checked="" type="checkbox"/> Other: <u>Dry</u>
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input checked="" type="checkbox"/> Other: <u>Dry</u>
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input type="checkbox"/> None	<input checked="" type="checkbox"/> Other: <u>Dry</u>

*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 # Hurdy Hollow 3632

Date of Survey 10/5/08

Site # 2

Field Data Sheets for Recreational Use Stream Surveys

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

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

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

Comments: (Please record any additional comments here.)

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 / Candy Schilling

Surveyor's Signature: Robert R. Bacon Date of Survey: 10-5-08

Organization: ERC Position: Field Manager

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: <u>Huldy Hollow</u> Waterbody ID: <u>3632</u> Site #: <u>2</u> Estimated Channel Incision: <u>Dry</u> (m) (height between low bank width and water) GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (<u>EPE</u> / PDOP / FOM) 01 UTM X <u>15S0615283</u> UTM Y: <u>4134699</u> +/- <u>5</u> (meters) 11 UTM X <u>15S0615361</u> UTM Y: <u>4134559</u> +/- <u>7</u> (meters) Average Stream Width: <u>Dry</u> (meters) Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach) (20x average stream width) Field Staff: <u>Candy Shilling and Robert Bacon</u>	Dissolved Oxygen Date: <u>10/5/2008</u> Time: <u>10:05</u> Dissolved Oxygen: <u>Dry</u> (mg/L) Dissolved Oxygen: <u>Dry</u> (% sat) Specific Cond: <u>Dry</u> (µS/cm) Water Temperature: <u>Dry</u> (°C)
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Transect Cross-Section

Station		01		02		03		04		05		06		07		08		09		10		11	
		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	
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	
Feature Type <small>(riffle, run, or pool)</small>		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 by 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: 10/5/2008

WBID # 3632

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: <u>10-5-08 9:45</u>	Location Description (e.g., road crossing): <u>upstream of Timberhill ford crossing - up Holdy Hollow creek off Big Creek</u>
Stream Name: <u>Holdy Hollow</u>	
Current Weather Conditions: <u>Sunny clear ~70°F</u>	Facility Name(s): <u>None listed</u>
Weather Conditions for Past 10 days: <u>see attached</u>	Permit Number(s): <u>None listed</u>
Official Drought Conditions at time of this survey (search DNR home page for "drought"): No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>	

Site Location:

LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION, IN METERS)			
Site 01	Easting (UTM X): <u>153 0615455</u>	Northing (UTM Y): <u>413 9444</u>	Horizontal Accuracy: (EPE) / FOM / PDOP <u>4</u> Meters
Site 11	Easting (UTM X): <u>151 0615573</u>	Northing (UTM Y): <u>4134293</u>	Horizontal Accuracy: (EPE) / FOM / PDOP <u>4</u> Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
<u>392</u>	<u>upstream view @ Transect 11</u>	<u>393</u>	<u>downstream view @ Transect 1</u>		
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.)

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe: (Include number of individuals recreating, photo-documentation of evidence of recreational uses, etc. Use <i>Data Sheet D- Recreational Use Interview</i> when conducting interviews.)				

Stream Name & WBID # Huldy Hollow 3630

Date of Survey 10-5-08

Site # 3

Field Data Sheets for Recreational Use Stream Surveys

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

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

<input type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep slopes	<input type="checkbox"/> Other:
Comments: <u>woods - very remote location</u>				

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

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input checked="" type="checkbox"/> RV / ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Livestock Watering
<input type="checkbox"/> None of the above	Comments / Other: <u>Tracks in dry stream bed</u>			

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

<u>30</u> % Cobble	<u>60</u> % Gravel	<u>10</u> % Sand	% Silt	% Mud/Clay	% Bedrock
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Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site.)

none

Water Characteristics*: (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other: <u>Dry</u>
Color:	<input type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other: <u>Dry</u>
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other: <u>Dry</u>
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input type="checkbox"/> None	<input type="checkbox"/> Other: <u>Dry</u>

*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 # Huldy Hollow 3632

Date of Survey 10-5-08

Site # 3

Field Data Sheets for Recreational Use Stream Surveys

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

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

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

Comments: (Please record any additional comments here.)

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: 10-5-08

Organization: ERC Position: Field Manager

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: <u>Huldy Hollow</u> Waterbody ID: <u>3632</u> Site #: <u>3</u> Estimated Channel Incision: <u>Dry</u> (m) (height between low bank width and water) GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (<u>EPE</u> / PDOP / FOM) 01 UTM X <u>15S0615455</u> UTM Y: <u>4134444</u> +/- <u>4</u> (meters) 11 UTM X <u>15S0615533</u> UTM Y: <u>4134293</u> +/- <u>4</u> (meters) Average Stream Width: <u>Dry</u> (meters) Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach) (20x average stream width) Field Staff: <u>Candy Shilling and Robert Bacon</u>	Dissolved Oxygen Date: <u>10/5/2008</u> Time: <u>9:40</u> Dissolved Oxygen: <u>Dry</u> (mg/L) Dissolved Oxygen: <u>Dry</u> (% sat) Specific Cond: <u>Dry</u> (µS/cm) Water Temperature: <u>Dry</u> (°C)
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Transect Cross-Section

Station	01		02		03		04		05		06		07		08		09		10		11	
	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 <small>(riffle, run, or pool)</small>	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 by 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: 10/5/2008



