



Use Attainability Analysis

for

WBID 0031 McLean Creek

Submitted by

AE Solutions (MEC Water Resources)

To

Missouri Department of Natural Resources
Water Protection Program

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): McLean Cr.
Missouri Water Body Identification (WBID) Number: 0031
8-digit HUC: 07110004
County(ies), Listed Upstream to Downstream: Lincoln
Upstream Legal Description (from Table H): 16, 49N, 2E
Downstream Legal Description (from Table H): Mouth
Number of sites evaluated: 3
List all site numbers, <u>consecutively upstream to downstream</u> : Site 1: Willow Bend Rd. crossing Site 2: Whiteside Drive crossing Site 3: 150 m downstream of Site 2
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)

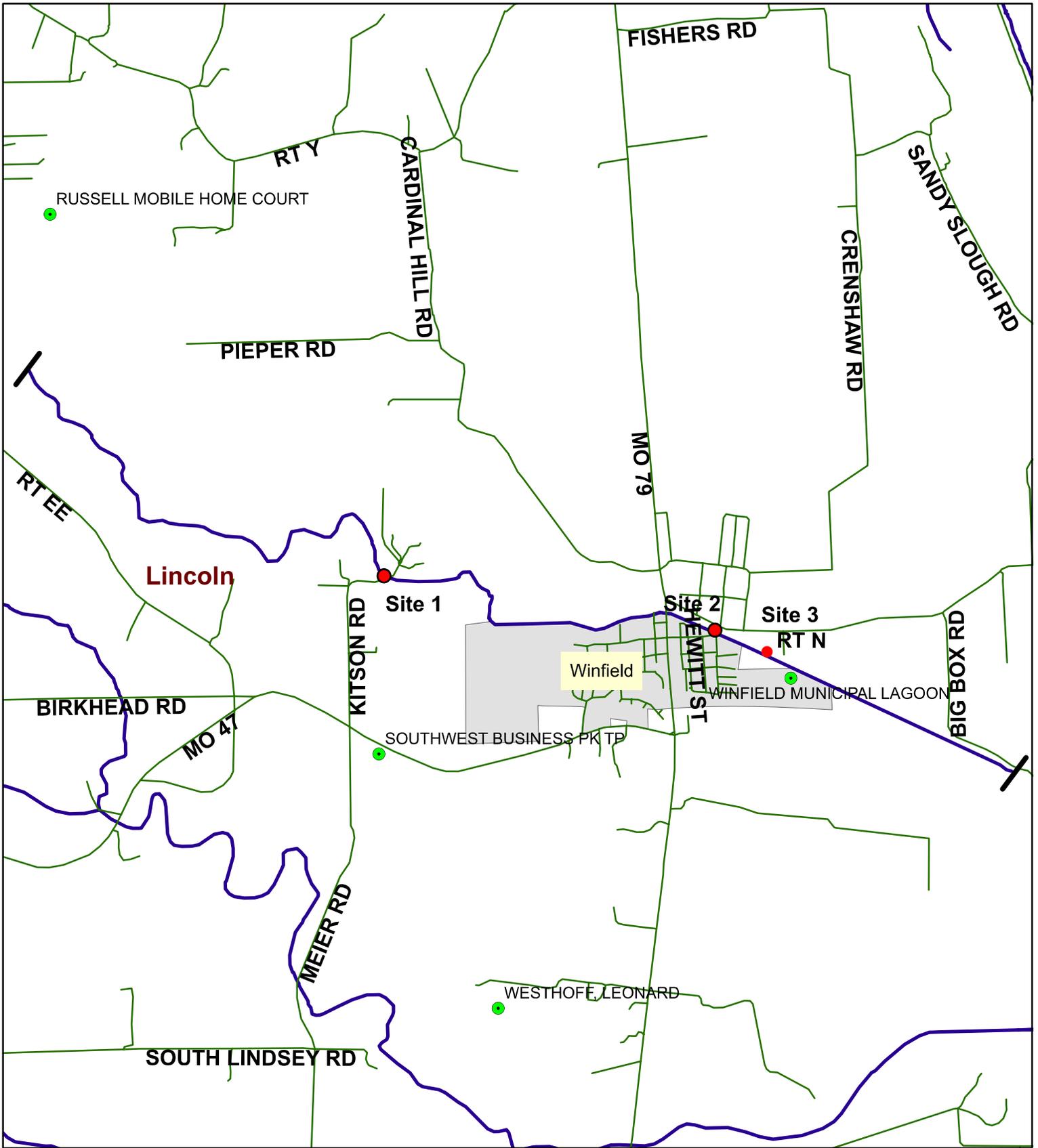
Facility Name(s) and Permit Number(s): Winfield Municipal Lagoon MO 0088676

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

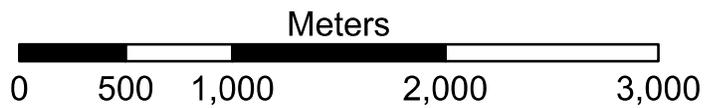
Name of Surveyor: Renee Martin	Telephone Number: 573-875-7844
Organization/Employer: AE Solutions	

Please verify that you have completed all sections of all data sheets, checked all applicable boxes, provided a map (that includes all requirements listed in the *Missouri Recreational Use Attainability Analyses: Water Body Survey and Assessment Protocol*) and that this form is complete.

Signed: _____ Date: _____



**McLean Creek
WBID 0031
Lincoln County**



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: 4/22/2008 11:30	Location Description (e.g., road crossing):
Stream Name: McLean Cr.	Willow Bend Rd. crossing
Current Weather Conditions: Sunny & Clear	Facility Name(s): Winfield Municipal Lagoon
Weather Conditions for Past 10 days: 1.42" Precipitation	Permit Number(s): MO 00886760
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): 06938845	Northing (UTM Y): 4319309	Horizontal Accuracy: (EPE / FOM / PDOP) 14 Feet		
Site 11	Easting (UTM X): 0694045	Northing (UTM Y): 4319293	Horizontal Accuracy: (EPE / FOM / PDOP) 14 Feet		

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
2946	Downstream	2947	Upstream	2948	Fenced –in manmade riprap (trans 10-11 Rural residential)
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
2949	Fenced in man made riprap (trans 10-11)				
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 Data Sheet D- Recreational Use Interview when conducting interviews.)				

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 checked="" 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: Private property				

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

<input checked="" 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 type="checkbox"/> None of the above	Comments / Other:			
Trash @ trans 10-11 fenced in man-made riprap				

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

5% Cobble	15% Gravel	80% Sand	% Silt	% Mud/Clay	% Bedrock
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Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site.)

Benthic Algae

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 checked="" type="checkbox"/> Fine sediments	<input 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.

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: _____ Jennifer Hrabik & Renee Martin _____

Surveyor's Signature: _____ Date of Survey: _____

Organization: _____ Position: _____

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: <u>McLean Creek</u> Waterbody ID: <u>0031</u> Site #: <u>0031_01</u> Estimated Channel Incision: <u>0.1</u> (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: <u>693884</u> UTM Y: <u>4319309</u> +/- <u>14</u> (feet) 11 UTM X: <u>694045</u> UTM Y: <u>4319293</u> +/- <u>14</u> (feet) Average Stream Width: <u>5.5</u> (meters) Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach) (20x average stream width) Field Staff: <u>J. Hrabik & R.Martin</u>	Dissolved Oxygen Date: <u>4/22/2008</u> Time: <u>11:30</u> Dissolved Oxygen: <u>10.94</u> (mg/L) Dissolved Oxygen: <u>110.4</u> (% sat) Specific Cond: <u>394</u> (µS/cm) Water Temperature: <u>15.7</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	0.35	0.04	0.72	0.19	0.80	0.62	0.57	0.27	0.50	0.18	0.63	0.60	0.62	0.29	0.67	0.31	0.22	0.03	0.62	0.17	0.51	0.19
2	0.70	0.15	1.44	0.27	1.60	0.48	1.14	0.34	1.00	0.20	1.26	>1	1.24	0.53	1.34	0.21	0.44	0.03	1.24	0.34	1.02	0.27
3	1.05	0.15	2.16	0.14	2.40	0.37	1.71	0.37	1.50	0.23	1.89	>1	1.86	0.69	2.01	0.21	0.66	0.04	1.86	0.45	1.53	0.20
4	1.40	0.15	2.88	0.19	3.20	0.27	2.28	0.27	2.00	0.20	2.52	0.98	2.48	0.92	2.68	0.21	0.88	0.03	2.48	0.69	2.04	0.17
5	1.75	0.16	3.60	0.77	4.00	0.13	2.85	0.20	2.50	0.20	3.15	0.89	3.10	>1	3.35	0.25	1.10	0.08	3.10	0.76	2.55	0.17
6	2.10	0.27	4.32	0.74	4.80	0.13	3.42	0.18	3.00	0.19	3.78	0.64	3.72	>1	4.02	0.26	1.32	0.08	3.72	0.74	3.06	0.12
7	2.45	0.32	5.04	0.67	5.60	0.15	3.99	0.18	3.50	0.12	4.41	0.47	4.34	>1	4.69	0.23	1.54	0.15	4.34	0.74	3.57	0.13
8	2.80	0.32	5.76	0.47	6.40	0.20	4.56	0.18	4.00	0.06	5.04	0.25	4.96	0.80	5.36	0.18	1.76	0.20	4.96	0.68	4.08	0.17
9	3.15	0.10	6.48	0.09	7.20	0.26	5.13	0.24	4.50	0.06	5.67	0.07	5.58	0.32	6.03	0.18	1.98	0.25	5.58	0.27	4.59	0.20
Right Bank	3.50	0.00	7.20	0.00	8.00	0.00	5.70	0.00	5.00	0.00	6.30	0.00	6.20	0.00	6.70	0.00	2.20	0.00	6.20	0.00	5.10	0.00
Feature Type <small>(riffle, run, or pool)</small>	Riffle		Run		Run		Run		Run		Pool		Pool		Run		Riffle		Run		Run	

rwc

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: _____ Date: _____

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: 4/22/2008 12:15	Location Description (e.g., road crossing):
Stream Name: McLean Cr.	Whiteside Dr. crossing
Current Weather Conditions: Sunny & Clear	Facility Name(s): Winfield Municipal Lagoon
Weather Conditions for Past 10 days: 1.42" Precipitation	Permit Number(s): MO 00886760
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):0696178	Northing (UTM Y): 4318935	Horizontal Accuracy: (EPE / FOM / PDOP)	13 Feet	
Site 11	Easting (UTM X): 0696321	Northing (UTM Y): 4318891	Horizontal Accuracy: (EPE / FOM / PDOP)	11 Feet	

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
2950	Downstream	2951	Upstream		
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

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

<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.)				

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 checked="" 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:				

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

<input checked="" 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 type="checkbox"/> None of the above	Comments / Other:			

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

% Cobble	5% Gravel	80% Sand	% Silt	15% Mud/Clay	% Bedrock
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Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site.)

Benthic Algae, Grasses

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 checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input checked="" type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input 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.

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: _____ Jennifer Hrabik & Renee Martin _____

Surveyor's Signature: _____ Date of Survey: _____

Organization: _____ Position: _____

Field Data Sheets for Recreational Use Stream Surveys
Data Sheet C - Field Survey Results

Stream Name: <u>McLean Creek</u> Waterbody ID: <u>0031</u> Site #: <u>0031_02</u> Estimated Channel Incision: <u>0.2</u> (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: <u>696178</u> UTM Y: <u>4318935</u> +/- <u>13</u> (feet) 11 UTM X: <u>696321</u> UTM Y: <u>4318891</u> +/- <u>11</u> (feet) Average Stream Width: <u>4</u> (meters) Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach) (20x average stream width) Field Staff: <u>J. Hrabik & R. Martin</u>	Dissolved Oxygen Date: <u>4/22/2008</u> Time: <u>12:15</u> Dissolved Oxygen: <u>11.9</u> (mg/L) Dissolved Oxygen: <u>125.8</u> (% sat) Specific Cond: <u>504</u> (µS/cm) Water Temperature: <u>17.7</u> (°C)
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rwc

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	0.45	0.27	0.18	0.08	0.50	0.28	0.50	0.31	0.50	0.48	0.33	0.16	0.45	0.02	0.26	0.30	0.42	0.42	0.36	0.44	0.30	0.28
2	0.90	0.14	0.36	0.08	1.00	0.50	1.00	0.59	1.00	0.80	0.66	0.34	0.90	0.17	0.52	0.45	0.84	0.84	0.72	0.71	0.60	0.56
3	1.35	0.12	0.54	0.25	1.50	0.85	1.50	0.82	1.50	0.93	0.99	0.72	1.35	0.18	0.78	0.59	1.26	1.26	1.08	0.80	0.90	0.64
4	1.80	0.40	0.72	0.20	2.00	0.97	2.00	0.87	2.00	>1	1.32	0.80	1.80	0.18	1.04	0.71	1.68	1.68	1.44	0.86	1.20	0.74
5	2.25	0.45	0.90	0.20	2.50	0.87	2.50	0.87	2.50	>1	1.65	0.81	2.25	0.18	1.30	0.75	2.10	2.10	1.80	0.83	1.50	0.74
6	2.70	0.50	1.08	0.08	3.00	0.90	3.00	0.87	3.00	0.97	1.98	0.80	2.70	0.18	1.56	0.44	2.52	2.52	2.16	0.81	1.80	0.77
7	3.15	0.48	1.26	0.13	3.50	0.85	3.50	0.76	3.50	0.97	2.31	0.78	3.15	0.24	1.82	0.42	2.94	2.94	2.52	0.86	2.10	0.76
8	3.60	0.48	1.44	0.09	4.00	0.89	4.00	0.58	4.00	0.81	2.64	0.86	3.60	0.30	2.08	0.31	3.36	3.36	2.88	0.83	2.40	0.65
9	4.05	0.28	1.62	0.04	4.50	0.40	4.50	0.29	4.50	0.53	2.97	0.85	4.05	0.37	2.34	0.17	3.78	3.78	3.24	0.39	2.70	0.20
Right Bank	4.50	0.00	1.80	0.00	5.00	0.00	5.00	0.00	5.00	0.00	3.30	0.20	4.50	0.00	2.60	0.00	4.20	4.20	3.60	0.00	3.00	0.00
Feature Type <small>(riffle, run, or pool)</small>	Run		Riffle		Run		Run															

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width
 GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.
 Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)
 Mark dry depth measurements as 0; record actual measurements to 0.1 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: _____

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: 4/22/2008 12:45	Location Description (e.g., road crossing):
Stream Name: McLean Cr.	150 m downstream of site 2
Current Weather Conditions: Sunny & Clear	Facility Name(s): Winfield Municipal Lagoon
Weather Conditions for Past 10 days: 1.42" Precipitation	Permit Number(s): MO 00886760
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): 0696538	Northing (UTM Y): 4318785	Horizontal Accuracy: (EPE / FOM / PDOP)	12 Feet	
Site 11	Easting (UTM X): 0696710	Northing (UTM Y): 4318713	Horizontal Accuracy: (EPE / FOM / PDOP)	12 Feet	

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
2953	Downstream	2954	Upstream		
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

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

<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.)				

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 checked="" 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: Public grounds – baseball field from trans 3-6				

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

<input checked="" 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 type="checkbox"/> None of the above	Comments / Other:			

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

% Cobble	5% Gravel	20% Sand	% Silt	75% Mud/Clay	% Bedrock
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Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site.)

Algae, Grasses

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 checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input checked="" type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input 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.

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.)

Landowners at original site 3 (Big Box Rd) denied permission to access the stream

Stanley & Ann Rolf
636-668-8423

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 & Renee Martin _____

Surveyor's Signature: _____ Date of Survey: _____

Organization: _____ Position: _____

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: <u>McLean Creek</u> Waterbody ID: <u>0031</u> Site #: <u>0031_03</u> Estimated Channel Incision: <u>0.2</u> (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: <u>696538</u> UTM Y: <u>4318785</u> +/- <u>12</u> (feet) 11 UTM X: <u>696710</u> UTM Y: <u>4318713</u> +/- <u>12</u> (feet) Average Stream Width: <u>3.2</u> (meters) Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach) (20x average stream width) Field Staff: <u>J. Hrabik & R.Martin</u>	Dissolved Oxygen Date: <u>4/22/2008</u> Time: <u>12:45</u> Dissolved Oxygen: <u>11.52</u> (mg/L) Dissolved Oxygen: <u>125.2</u> (% sat) Specific Cond: <u>502</u> (µS/cm) Water Temperature: <u>18.2</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	0.32	0.41	0.40	0.74	0.33	0.23	0.30	>1	0.31	0.44	0.30	0.28	0.32	0.20	0.30	0.24	0.33	0.30	0.32	0.97	0.28	0.60
2	0.64	0.83	0.80	0.87	0.66	0.32	0.60	>1	0.62	>1	0.60	0.39	0.64	0.45	0.60	0.64	0.66	0.41	0.64	>1	0.56	>1
3	0.96	>1	1.20	0.93	0.99	0.63	0.90	>1	0.93	>1	0.90	0.71	0.96	0.76	0.90	>1	0.99	0.90	0.96	>1	0.84	>1
4	1.28	>1	1.60	0.86	1.32	0.97	1.20	>1	1.24	>1	1.20	0.85	1.28	>1	1.20	>1	1.32	>1	1.28	>1	1.12	>1
5	1.60	>1	2.00	0.59	1.65	>1	1.50	>1	1.55	>1	1.50	0.86	1.60	>1	1.50	>1	1.65	>1	1.60	>1	1.40	>1
6	1.92	>1	2.40	0.90	1.98	1.00	1.80	>1	1.86	>1	1.80	0.98	1.92	>1	1.80	>1	1.98	>1	1.92	0.80	1.68	>1
7	2.24	>1	2.80	0.92	2.31	0.60	2.10	>1	2.17	>1	2.10	1.00	2.24	>1	2.10	>1	2.31	>1	2.24	0.62	1.96	0.80
8	2.56	>1	3.20	0.82	2.64	0.65	2.40	>1	2.48	>1	2.40	0.81	2.56	0.65	2.40	0.22	2.64	0.46	2.56	0.46	2.24	0.58
9	2.88	0.72	3.60	0.60	2.97	0.44	2.70	0.56	2.79	0.52	2.70	0.70	2.88	0.31	2.70	0.20	2.97	0.28	2.88	0.21	2.52	0.21
Right Bank	3.20	0.00	4.00	0.00	3.30	0.00	3.00	0.00	3.10	0.00	3.00	0.00	3.20	0.00	3.00	0.00	3.30	0.00	3.20	0.00	2.80	0.00
Feature Type <small>(riffle, run, or pool)</small>	Pool																					

rwc

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: _____ Date: _____



WBID #0031
Site #1
Downstream



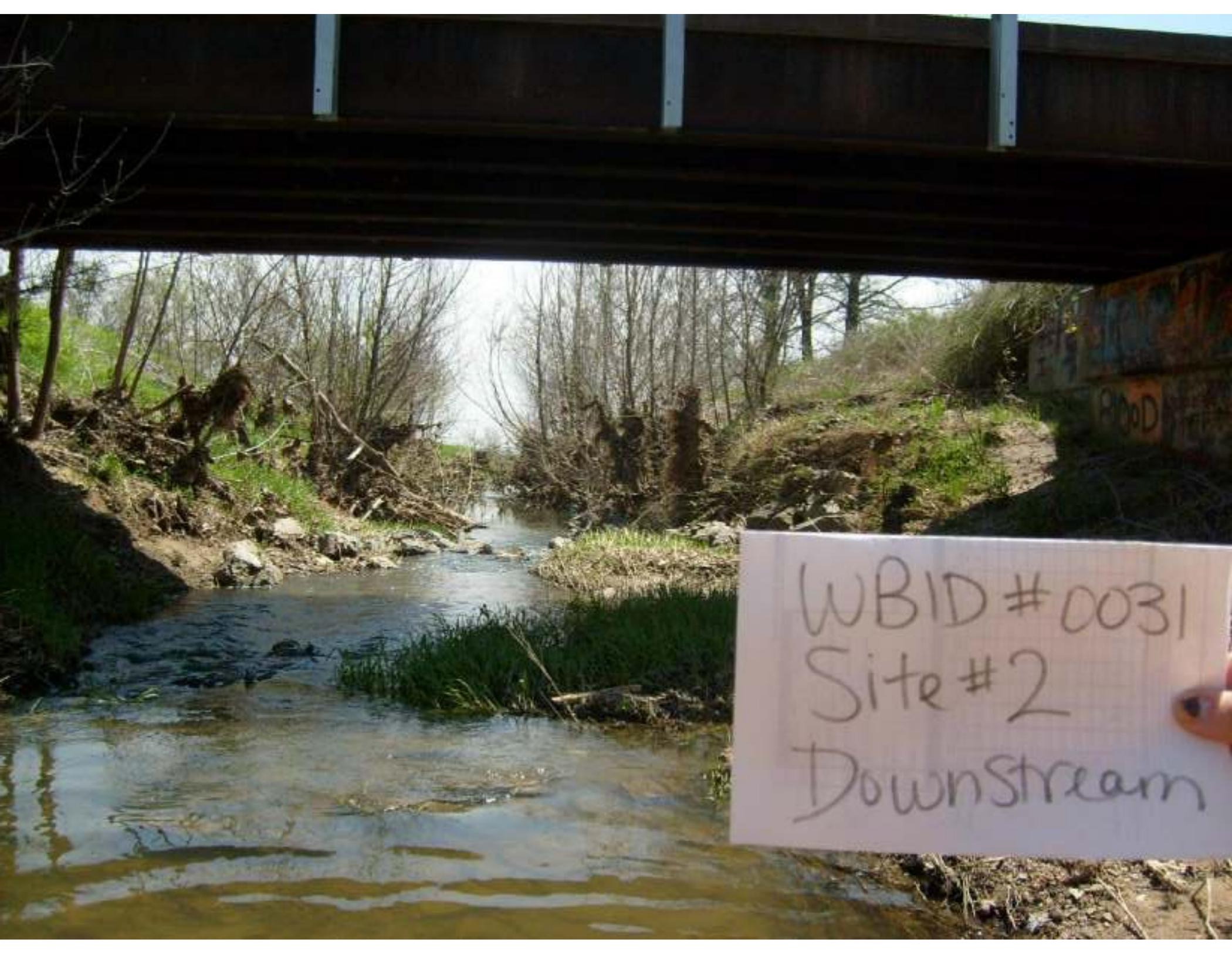
WBID #0031
Site #1
Up Stream

WBID #0031
Site #1
Fenced-in man-
made rip-rap
Rural Resident.



WBID #0031
Site #1
Fenced-in man-
made rip-rap
Rural Residential





WBID # 0031
Site # 2
Downstream

WBID #0031
Site #2
UPstream



AES

WBID #0031
Site #3
Dn Stream



AES

WBID #0031
Site #3
Upstream