



Missouri
Department of
Natural Resources

Use Attainability Analysis

for

WBID 3427 Fassnacht Creek

Submitted by
Olsson Associates

To
Missouri Department of Natural Resources
Water Protection Program

On
June 3, 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): Trib. Fassnight Creek
Missouri Water Body Identification (WBID) Number: 3427
8-digit HUC: 11010002
County(ies), Listed Upstream to Downstream: Greene
Upstream Legal Description (from Table H): 25, 29N, 22W
Downstream Legal Description (from Table H): 30, 29N, 21W
Number of sites evaluated: 3
List all site numbers, <u>consecutively upstream to downstream</u> : 1, 2, 3
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)

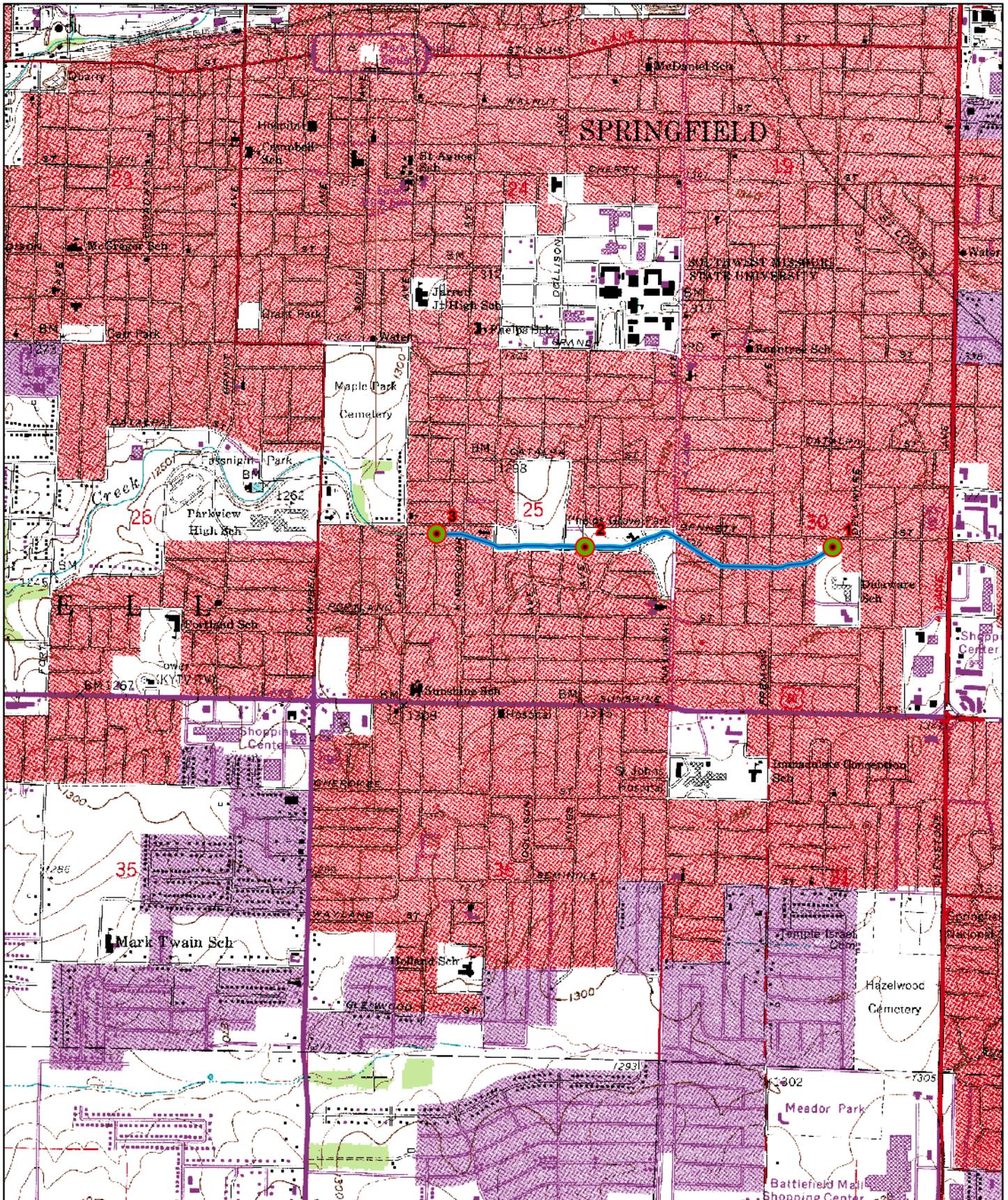
Facility Name(s) and Permit Number(s): Kraft Foods Global, Inc, MO-0001945
--

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

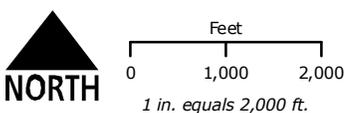
Name of Surveyor: Rodney Holland	Telephone Number: 417-890-8802
Organization/Employer: Olsson Associates	

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: 4-2-08



**MISSOURI RECREATIONAL
USE ATTAINABILITY ANALYSIS**



Stream: Fasnicht Cr.
WBID: 3427

Map Sheet: 1/1
County: Greene



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: 4-2-08 10:00 a.m.	Location Description (e.g., road crossing):
Stream Name: Trib. Fassnight Creek	40 meters downstream of culvert
Current Weather Conditions: Sunny	Facility Name(s): Kraft Foods Global Inc.
Weather Conditions for Past 10 days:	Permit Number(s):MO-0001945
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): 476173	Northing (UTM Y): 4115810	Horizontal Accuracy: (EPE / FOM / PDOP) 14 Meters
Site 11	Easting (UTM X): 476024	Northing (UTM Y): 4115755	Horizontal Accuracy: (EPE / FOM / PDOP) 21 Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
3427-1	Upstream looking down				
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
3427-1-B	Downstream looking up				
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.)				

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 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 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%.)

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

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

Algae growth minimal

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 type="checkbox"/> None	<input checked="" type="checkbox"/> Other: Algae
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.

Site # 1

Field Data Sheets for Recreational Use Stream Surveys

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

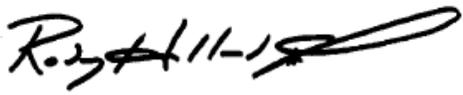
Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses.)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)
n/a – concrete channel		3.2	Entire length	< 0.05	< 0.05

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: _____ Rodney Holland, Chris Parks _____

Surveyor's Signature: 

Date of Survey: 4-2-08

Organization: Olsson Associates Position: Field Team Leader & Field Team Member

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: <u>Fassnight</u>	Waterbody ID: <u>3427</u>	Site #: <u>1</u>	Dissolved Oxygen	
Estimated Channel Incision: <u>N/A</u> (m) (height between low bank width and water)			Date: <u>4/2/2008</u>	Time: <u>10:00 a.m.</u>
GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM)			Dissolved Oxygen: <u>12.86</u> (mg/L)	
01 UTM X <u>476173</u>	UTM Y: <u>4115810</u>	+/- <u>14 ft.</u> (meters)	Dissolved Oxygen: <u>118.9</u> (% sat)	
11 UTM X <u>476024</u>	UTM Y: <u>4115755</u>	+/- <u>21 ft.</u> (meters)	Specific Cond: <u>357</u> (µS/cm)	
Average Stream Width: <u>1</u> (meters)		Length of Survey Segment: <u>150</u> (meters)		
(To determine Length of Reach)		(20x average stream width)		
Field Staff: <u>Rodney Holland, Chris Parks</u>				

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	0.1	0	0.1	0	0.1	0	0.1	0	0.1	0	0.1	0	0.1	0	0.1	0	0.1	0	0.1	0	0.1	0
2	0.2	0	0.2	0	0.2	0	0.2	0	0.2	0	0.2	0	0.2	0	0.2	0	0.2	0	0.2	0	0.2	0
3	0.3	0	0.3	0	0.3	0	0.3	0	0.3	0	0.3	0	0.3	0	0.3	0	0.3	0	0.3	0	0.3	0
4	0.4	0	0.4	0	0.4	0	0.4	0	0.4	0	0.4	0	0.4	0	0.4	0	0.4	0	0.4	0	0.4	0
5	0.5	0	0.5	0	0.5	0	0.5	0	0.5	0	0.5	0	0.5	0	0.5	0	0.5	0	0.5	0	0.5	0
6	0.6	0	0.6	0	0.6	0	0.6	0	0.6	0	0.6	0	0.6	0	0.6	0	0.6	0	0.6	0	0.6	0
7	0.1	0	0.1	0	0.1	0	0.1	0	0.1	0	0.1	0	0.1	0	0.1	0	0.1	0	0.1	0	0.1	0
8	0.8	0	0.8	0	0.8	0	0.8	0	0.8	0	0.8	0	0.8	0	0.8	0	0.8	0	0.8	0	0.8	0
9	0.9	0	0.9	0	0.9	0	0.9	0	0.9	0	0.9	0	0.9	0	0.9	0	0.9	0	0.9	0	0.9	0
Right Bank	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
Feature Type <small>(riffle, run, or pool)</small>	concrete																					

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

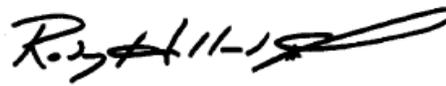
GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

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: 4/2/2008

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: 4-2-08 10:45 a.m.	Location Description (e.g., road crossing):
Stream Name: Trib. Fassnight Creek	2 meters downstream of culvert on Bennett
Current Weather Conditions: Sunny	Facility Name(s): Kraft Foods Global Inc.
Weather Conditions for Past 10 days:	Permit Number(s): MO-0001945
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): 475356	Northing (UTM Y): 4115867	Horizontal Accuracy: (EPE / FOM / PDOP) 10 Meters
Site 11	Easting (UTM X): 475220	Northing (UTM Y): 4115824	Horizontal Accuracy: (EPE / FOM / PDOP) 12 Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
3427-2-A	Upstream looking down				
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
3427-2-B	Downstream looking up				
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.)				

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 checked="" 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:				

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%.)

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

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

Grass 1m x 27m

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.

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.)

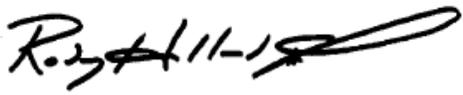
Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)
concrete channel					

Comments: (Please record any additional comments here.)

Drainage channel

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

Printed Names of Personnel Collecting Data: _____ Rodney Holland, Chris Parks _____

Surveyor's Signature: 

Date of Survey: 4-2-08

Organization: Olsson Associates Position: Field Team Leader & Field Team Member

Field Data Sheets for Recreational Use Stream Surveys

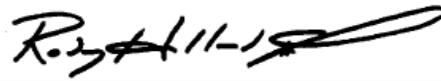
Data Sheet C - Field Survey Results

Stream Name: <u>Trib. Fassnight Cr.</u>	Waterbody ID: <u>3427</u>	Site #: <u>2</u>	Dissolved Oxygen	
Estimated Channel Incision: <u>N/A</u> (m) (height between low bank width and water)			Date: <u>4/2/2008</u>	Time: <u>10:45 a.m.</u>
GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM)			Dissolved Oxygen: <u>12.86</u> (mg/L)	
01 UTM X <u>475356</u>	UTM Y: <u>4115867</u>	+/- <u>10 ft.</u> (meters)	Dissolved Oxygen: <u>112.8</u> (% sat)	
11 UTM X <u>475220</u>	UTM Y: <u>4115824</u>	+/- <u>12 ft.</u> (meters)	Specific Cond: <u>562</u> (µS/cm)	
Average Stream Width: <u>3.6</u> (meters)		Length of Survey Segment: <u>150</u> (meters)	Water Temperature: <u>10.4</u> (°C)	
(To determine Length of Reach)			(20x average stream width)	
Field Staff: <u>Rodney Holland, Chris Parks</u>				

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	0.36	0	0.36	0	0.36	0	0.36	0	0.36	0	0.36	0	0.36	0	0.36	0	0.36	0	0.36	0	0.36	0
2	0.72	0	0.72	0	0.72	0	0.72	0	0.72	0	0.72	0	0.72	0	0.72	0	0.72	0	0.72	0	0.72	0
3	1.08	0	1.08	0	1.08	0	1.08	0	1.08	0	1.08	0	1.08	0	1.08	0	1.08	0	1.08	0	1.08	0
4	1.44	0	1.44	0	1.44	0	1.44	0	1.44	0	1.44	0	1.44	0	1.44	0	1.44	0	1.44	0	1.44	0
5	1.8	0	1.8	0	1.8	0	1.8	0	1.8	0	1.8	0	1.8	0	1.8	0	1.8	0	1.8	0	1.8	0
6	2.16	0	2.16	0	2.16	0	2.16	0	2.16	0	2.16	0	2.16	0	2.16	0	2.16	0	2.16	0	2.16	0
7	2.52	0	2.52	0	2.52	0	2.52	0	2.52	0	2.52	0	2.52	0	2.52	0	2.52	0	2.52	0	2.52	0
8	2.88	0	2.88	0	2.88	0	2.88	0	2.88	0	2.88	0	2.88	0	2.88	0	2.88	0	2.88	0	2.88	0
9	3.24	0	3.24	0	3.24	0	3.24	0	3.24	0	3.24	0	3.24	0	3.24	0	3.24	0	3.24	0	3.24	0
Right Bank	3.6	0	3.6	0	3.6	0	3.6	0	3.6	0	3.6	0	3.6	0	3.6	0	3.6	0	3.6	0	3.6	0
Feature Type	concrete		concrete																			

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: 4/2/2008

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: 4-2-08 11:10 a.m.	Location Description (e.g., road crossing):
Stream Name: Trib. Fassnight Creek	2 meters downstream of culvert (King St.)
Current Weather Conditions: Sunny	Facility Name(s): Kraft Foods Global, Inc.
Weather Conditions for Past 10 days:	Permit Number(s): MO-0001945
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): 475035	Northing (UTM Y): 4115828	Horizontal Accuracy: (EPE / FOM / PDOP) 21 Meters
Site 11	Easting (UTM X): 474893	Northing (UTM Y): 4115831	Horizontal Accuracy: (EPE / FOM / PDOP) 10 Meters

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
3427-3-A	Upstream looking down				
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
3427-3-B	Downstream looking up				
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 checked="" 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:				

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%.)

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

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

Algae growth Minimal

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.

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.)

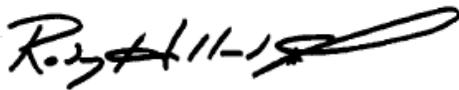
Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)
concrete channel					

Comments: (Please record any additional comments here.)

Drainage channel

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

Printed Names of Personnel Collecting Data: Rodney Holland, Chris Parks

Surveyor's Signature:  Date of Survey: 4-2-08

Organization: Olsson Associates Position: Field Team Leader & Field Team Member

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: <u>Fassnight</u>	Waterbody ID: <u>3427</u>	Site #: <u>3</u>	Dissolved Oxygen	
Estimated Channel Incision: _____ (m) (height between low bank width and water)			Date: <u>4/2/2008</u>	Time: <u>11:15 a.m.</u>
GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM)			Dissolved Oxygen: <u>14.93</u> (mg/L)	
01 UTM X <u>475035</u>	UTM Y: <u>4115828</u>	+/- <u>21 ft.</u> (<u>meters</u>)	Dissolved Oxygen: <u>144.4</u> (% sat)	
11 UTM X <u>474893</u>	UTM Y: <u>4115831</u>	+/- <u>10 ft.</u> (<u>meters</u>)	Specific Cond: <u>450</u> (μS/cm)	
Average Stream Width: <u>6.4</u> (meters)		Length of Survey Segment: <u>150</u> (meters)	Water Temperature: <u>14.1</u> (°C)	
(To determine Length of Reach)			(20x average stream width)	
Field Staff: <u>Rodney Holland, Chris Parks</u>				

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	0.64	0	0.64	0	0.64	0	0.64	0	0.64	0	0.64	0	0.64	0	0.64	0	0.64	0	0.64	0	0.64	0
2	1.28	0	1.28	0	1.28	0	1.28	0	1.28	0	1.28	0	1.28	0	1.28	0	1.28	0	1.28	0	1.28	0
3	1.92	0	1.92	0	1.92	0	1.92	0	1.92	0	1.92	0	1.92	0	1.92	0	1.92	0	1.92	0	1.92	0
4	2.56	0	2.56	0	2.56	0	2.56	0	2.56	0	2.56	0	2.56	0	2.56	0	2.56	0	2.56	0	2.56	0
5	3.2	0	3.2	0	3.2	0	3.2	0	3.2	0	3.2	0	3.2	0	3.2	0	3.2	0	3.2	0	3.2	0
6	3.84	0	3.84	0	3.84	0	3.84	0	3.84	0	3.84	0	3.84	0	3.84	0	3.84	0	3.84	0	3.84	0
7	4.48	0	4.48	0	4.48	0	4.48	0	4.48	0	4.48	0	4.48	0	4.48	0	4.48	0	4.48	0	4.48	0
8	5.12	0	5.12	0	5.12	0	5.12	0	5.12	0	5.12	0	5.12	0	5.12	0	5.12	0	5.12	0	5.12	0
9	5.76	0	5.76	0	5.76	0	5.76	0	5.76	0	5.76	0	5.76	0	5.76	0	5.76	0	5.76	0	5.76	0
Right Bank	6.4	0	6.4	0	6.4	0	6.4	0	6.4	0	6.4	0	6.4	0	6.4	0	6.4	0	6.4	0	6.4	0
Feature Type <small>(riffle, run, or pool)</small>	Concrete																					

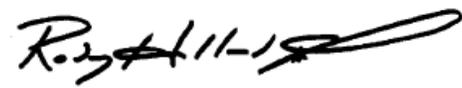
Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

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: _____



