



Missouri  
Department of  
Natural Resources

Use Attainability Analysis

for

WBID 0482 Wildcat Creek

Submitted by  
BWR

to

Missouri Department of Natural Resources  
Water Protection Program

Date received: July 18, 2007

**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):	WILDCAT CREEK
Missouri Water Body Identification (WBID) Number:	482
8-digit HUC:	10280101
County:	NODAWAY / GENTRY
Upstream Legal Description (from Table H):	8,63N,33W
Downstream Legal Description (from Table H):	6,62N,32W
Number of sites evaluated	4
List all sites numbers, listed consequently upstream to downstream:	1, 2, 3, 4

**Site Locations Map(s):** Attach a map of entire segment with assessment sites clearly labeled. Mark any other items that may be of interest.

**II. Subsegmentation** (fill this section out only in cases where subsegmentation is being proposed)

LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION, IN METERS)			
Upstream Coordinates:		Downstream Coordinates:	
UTM X	Y	UTM X	Y
HORIZONTAL COLLECTION METHOD (Indicate the method used to determine the locational data.)			
Global Positioning System (GPS)		Interpolation	
Static Mode		Topographic Map or DRG	
Dynamic Mode (Kinematic)		Aerial Photograph or DOQQ	
Precise Positioning Service		Satellite Imagery	
Signal Averaging		Interpolation Other	
Real Time Differential Processing			
HORIZONTAL ACCURACY ESTIMATE			
GPS Data Quality		Interpolation Data Quality	
FOM	± _____ Meters	Source Map Scale: 1:24,000 1:100,000 Other _____	
EPE	± _____ Feet or ± _____ Meters		
PDOP		± _____ Feet or ± _____ Meters	

**III. Discharger Facility Information** (list all permitted dischargers on the stream)

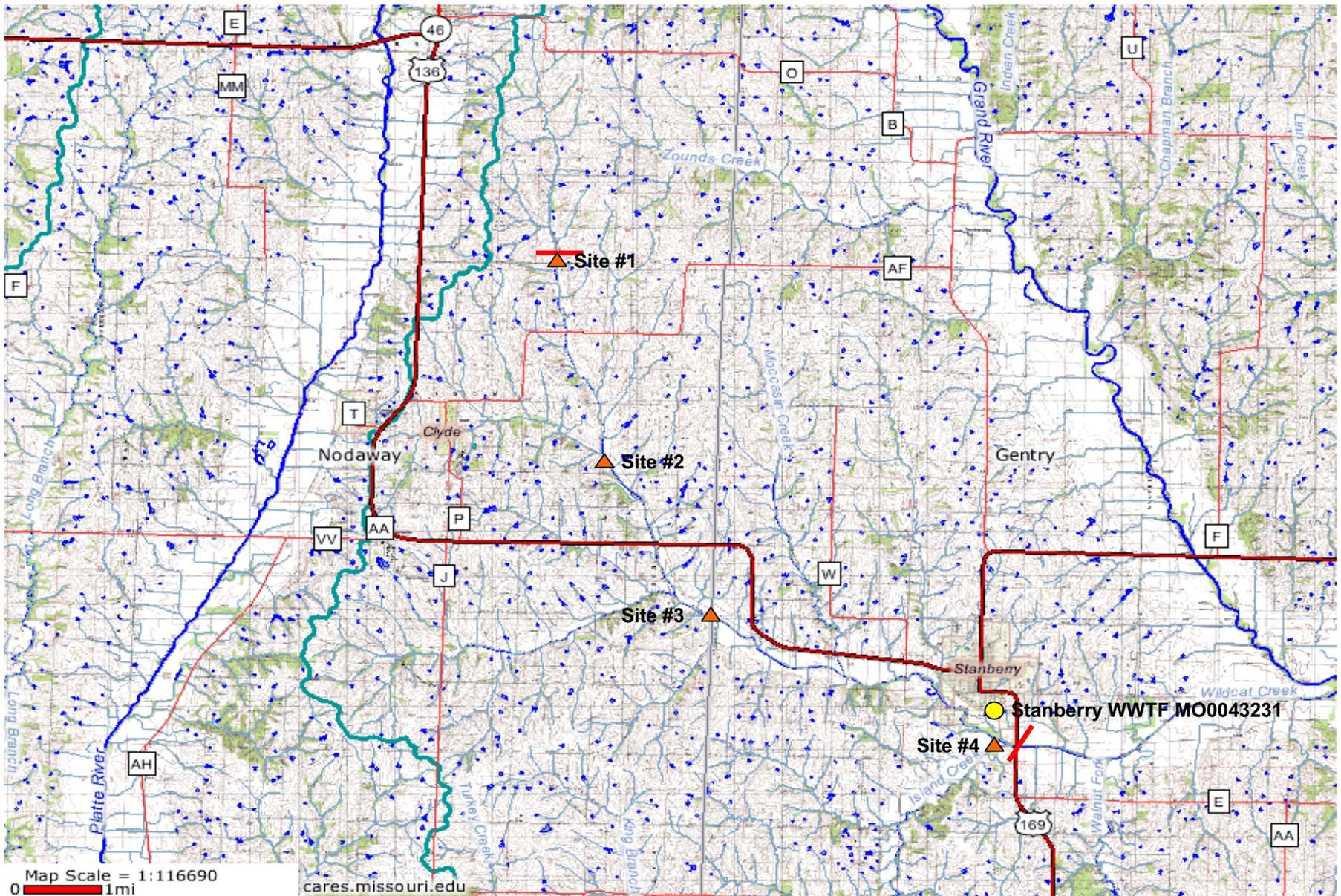
Discharger Facility Name(s):	STANBERRY WWTF
Discharger Permit Number(s):	MO 0043231

**IV. UAA Surveyor** (please print legibly)

Name of Surveyor	ALEX BARTLETT	Telephone Number:	816.363.2696
Organization/Employer:	BWR CORPORATION		
Position:	ENVIRONMENTAL SCIENTIST		

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

Signed:  Date: 7/13/07



# Wildcat Creek

## WBID #482



WBID# 482  
 Site# 1

**Field Data Sheets for Recreational Use Stream Surveys**  
**Data Sheet B - Site Characterization**  
 (must be completed for each site)

Date & Time: <u>7/13/07 0930</u>	Site Location Description (e.g., road crossing): <u>BRIDGE CROSSING @ CR 290 (DOWNSTREAM)</u>
Personnel (Data Collectors): <u>BARTLETT &amp; CASEY</u>	Facility Name: <u>STANBERRY WWTF</u>
Current Weather Conditions: <u>SUNNY ~ 75°F</u>	Permit Number: <u>MO0043231</u>
Weather Conditions for Past 10 days: <u>FAIR</u>	
Drought Conditions?: 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 Locations:**

LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION, IN METERS)	
Site GPS Coordinates: UTM X: <u>40.29843</u>	Y: <u>094.64349</u>
HORIZONTAL COLLECTION METHOD (Indicate the method used to determine the locational data.)	
Global Positioning System (GPS)	Interpolation
Static Mode	Topographic Map or DRG
Dynamic Mode (Kinematic)	Aerial Photograph or DOQQ
Precise Positioning Service	Satellite Imagery
Signal Averaging	Interpolation Other
Real Time Differential Processing	
HORIZONTAL ACCURACY ESTIMATE	
GPS Data Quality	Interpolation Data Quality
FOM ± _____ Meters	Source Map Scale: 1:24,000 1:100,000 Other _____ ± _____ Feet or ± _____ Meters
EPE ± _____ Feet or ± _____ Meters	
PDOP	

**Photos:**

Upstream Photos		Downstream Photos		Other Photos	
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
<u>1,2-482</u>	<u>+ BAN K-S</u>	<u>3,4-482</u>	<u>TRAN E-A</u>		

**Uses Observed\*:** (Uses actually observed at 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.)				

**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"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Fence	<input checked="" type="checkbox"/> Steep slopes	<input type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Comments:				

**Indications of Human Use\*:** (attach photos)

<input checked="" type="checkbox"/> Roads	<input type="checkbox"/> Rope swings	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input type="checkbox"/> RV / ATV Tracks
<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Other:	
Comments: <u>CR 290</u>					

**% CHANNEL FEATURES**

RUN - 100

RIFFLE - 0

POOL - 0

\* Page Two - Data Sheet B for WBID # 482 :

SITE #1

**Stream Morphology:**

**Upstream View's Physical Dimensions:** Is there any water present at this view?  Yes  No

If so, is there an obvious current?  Yes  No

**Select one of the following channel features:**

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE					
RUN					
POOL					

**Downstream View's Physical Dimensions:** Is there any water present at this view?  Yes  No

If so, is there an obvious current?  Yes  No

**Select one of the following channel features:**

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE					
RUN					
POOL					

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

% Cobble	% Gravel	80 % Sand	20 % Silt	% Mud/Clay	% Bedrock
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**Aquatic Vegetation\*:** (Note amount of vegetation or algal growth at the assessment site)

MODERATE AMOUNT OF ALGAL GROWTH

**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 checked="" type="checkbox"/> Foam	<input type="checkbox"/> None	<input type="checkbox"/> Other:

**Comments:** Please attach any additional comments () to this form.

\*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 effect another use.

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

Surveyor's Signature: [Signature] Date of Survey: 7/13/07

Organization: BWR CORP. Position: ENV. SCI.

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID #482 SITE # 1

	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
T <sub>A</sub>	1 WETTED WIDTH	< 0.1		1	CHANNEL FEATURE: RUN
	2 0.80 m	< 0.1		2	
	3	< 0.1		3	
	4 MEASUREMENTS	< 0.1		4	DISSOLVED OXYGEN: 9.96 ppm
	5 0.08 m	0.1		5	
	6 APART	0.1		6	
	7	0.1		7	
	8	< 0.1		8	
	9	< 0.1		9	
	10	< 0.1		10	
T <sub>B</sub>	1 WETTED WIDTH	< 0.1		12	CHANNEL FEATURE: RUN
	2 0.70 m	< 0.1		13	
	3	< 0.1		14	
	4 MEASUREMENTS	< 0.1		15	DISSOLVED OXYGEN: 9.47 ppm
	5 0.07 m	0.1		16	
	6 APART	0.1		17	
	7	< 0.1		18	
	8	< 0.1		19	
	9	< 0.1		20	
	10	< 0.1		21	
T <sub>C</sub>	1 WETTED WIDTH	< 0.1		23	CHANNEL FEATURE: RUN
	2 1.3	< 0.1		24	
	3	< 0.1		25	
	4 MEASUREMENTS	< 0.1		26	DISSOLVED OXYGEN: 8.89 ppm
	5 0.13 m	< 0.1		.	
	6 APART	< 0.1		.	
	7	< 0.1		.	
	8	< 0.1		n	
	9	< 0.1			
	10	< 0.1			

If there is an odd number of entries find middle rank  $[(n+1)/2]$ . The corresponding sorted value depth to the middle rank is the median depth.

If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: [Signature] Date: 7/13/07

Organization: BWR CORP. Position: ENV. SCI.

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 482 SITE # 1

	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
T <sub>D</sub>	1 WETTED WIDTH	< 0.1		1 CHANNEL FEATURE :	
	2 1.0 m	< 0.1		2 RUN	
	3	< 0.1		3	
	4 MEASUREMENTS	< 0.1		4 DISSOLVED OXYGEN :	
	5 0.10 m	< 0.1		5	
	6 APART	< 0.1		6 8.65	ppm
	7	< 0.1		7	
	8	< 0.1		8	
	9	< 0.1		9	
	10	< 0.1		10	
T <sub>E</sub>	1 WETTED WIDTH	< 0.1		12 CHANNEL FEATURE :	
	2 0.9 m	< 0.1		13 RUN	
	3	< 0.1		14	
	4 MEASUREMENTS	< 0.1		15 DISSOLVED OXYGEN :	
	5 0.09 m	< 0.1		16	
	6 APART	< 0.1		17 7.96	ppm
	7	< 0.1		18	
	8	< 0.1		19	
	9	< 0.1		20	
	10	< 0.1		21	
T <sub>F</sub>	1 WETTED WIDTH	< 0.1		23 CHANNEL FEATURE :	
	2 1.0 m	< 0.1		24 RUN	
	3	< 0.1		25	
	4 MEASUREMENTS	< 0.1		26 DISSOLVED OXYGEN :	
	5 0.10 m	< 0.1		.	
	6 APART	< 0.1		. 7.80	ppm
	7	< 0.1		.	
	8	< 0.1		n	
	9	< 0.1			
	10	< 0.1			

If there is an odd number of entries find middle rank  $[(n+1)/2]$ . The corresponding sorted value depth to the middle rank is the median depth.

If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: [Signature] Date: 7/13/07

Organization: BWR CORP. Position: RNJ.SCI.

Data Sheet C - Cross-Sectional Depth Measurements (for estimation of median depth)

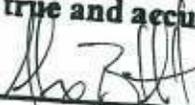
WBID # 482

Site # 1

Transsect	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
G	1 wetted width	< 0.1			
	2 0.8 m	< 0.1		1	Channel Feature:
	3	< 0.1		2	Run
	4 measurements	< 0.1		3	
	5 0.08 m	0.1		4	Dissolved Oxygen
	6 apart	< 0.1		5	
	7	< 0.1		6	7.10
	8	< 0.1		7	ppm
	9	< 0.1		8	7
	10	< 0.1		9	
H	1 wetted width	< 0.1		10	
	2 2.4 m	< 0.1		11	
	3	< 0.1		12	Channel Feature:
	4 measurements	< 0.1		13	Run
	5 0.24 m	< 0.1		14	
	6 apart	< 0.1		15	Dissolved Oxygen:
	7	< 0.1		16	
	8	< 0.1		17	6.61
	9	< 0.1		18	ppm
	10	< 0.1		19	7
I	1 wetted width	< 0.1		20	
	2 0.9 m	< 0.1		21	
	3	< 0.1		22	
	4 measurements	< 0.1		23	Channel Feature:
	5 0.09 m	< 0.1		24	Run
	6 apart	< 0.1		25	
	7	< 0.1		26	Dissolved Oxygen
	8	< 0.1		.	
	9	< 0.1		.	6.58
	10	< 0.1		n	ppm

If there is an odd number of entries find middle rank  $[(n+1)/2]$ . The corresponding sorted value depth to the middle rank is the median depth.  
 If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: 

Date: 7/13/07

Organization: BWR CORP.

Position: ENV. SCI.

February 5, 2007

Data Sheet C - Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 482

Site # 1

Transsect	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
J	wetted width	<0.1			
	1.0 m	0.1		1	Channel Feature:
		0.1		2	RUN
		0.1		3	
	measurements	0.1		4	Dissolved Oxygen
	0.10 m	<0.1		5	
	apart	<0.1		6	6.90 ppm
		<0.1		7	
		<0.1		8	
		<0.1		9	
K	wetted width	<0.1		10	
	1.1 m	0.1		11	
		<0.1		12	Channel Feature:
		0.1		13	RUN
	measurements	0.1		14	
	0.11 m	0.1		15	Dissolved Oxygen:
	apart	<0.1		16	
		<0.1		17	9.06 ppm
		<0.1		18	
		<0.1		19	
L	wetted width			20	
	— m			21	
				22	
				23	Channel Feature:
	measurements			24	
	— m			25	
	apart			26	Dissolved Oxygen
				.	
				.	
				n	

If there is an odd number of entries find middle rank  $[(n+1)/2]$ . The corresponding sorted value depth the middle rank is the median depth.  
 If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAS datasheet is true and accurate.

Signed: [Signature] Date: 7/13/07  
 Organization: BWR CORP. Position: ENV. SCI.

WBID# 482  
 Site# 2

**Field Data Sheets for Recreational Use Stream Surveys**  
**Data Sheet B - Site Characterization**  
 (must be completed for each site)

Date & Time: <u>7/13/07</u>	Site Location Description (e.g., road crossing): <u>BRIDGE CROSSING @ CR 320 (UPSTREAM)</u>
Personnel (Data Collectors): <u>BARTLETT &amp; CASEY</u>	Facility Name: <u>STANBERRY WWTF</u>
Current Weather Conditions: <u>SUNNY ~ 75°F</u>	Permit Number: <u>MO0043231</u>
Weather Conditions for Past 10 days: <u>FAIR</u>	
Drought Conditions?: 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 Locations:**

Site GPS Coordinates: UTM X: <u>40.25840</u> Y: <u>094.62949</u>	
HORIZONTAL COLLECTION METHOD (Indicate the method used to determine the locational data): Global Positioning System (GPS)	
Static Mode	Interpolation
Dynamic Mode (Kinematic)	Topographic Map or DRG
Precise Positioning Service	Aerial Photograph or DOQQ
Signal Averaging	Satellite Imagery
Real Time Differential Processing	Interpolation Other
GPS Data Quality	
FOM ± _____ Meters	Interpolation Data Quality Source Map Scale: 1:24,000 1:100,000 Other _____ ± _____ Feet or ± _____ Meters
EPE ± _____ Feet or ± _____ Meters	
PDOP	

**Photos:**

Upstream Photos		Downstream Photos		Other Photos	
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
<u>78-482</u>	<u>TRAN J-K</u>	<u>5,6-482</u>	<u>TRAN B-A</u>		

**Uses Observed\*:** (Uses actually observed at 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.)

**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"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Fence	<input checked="" type="checkbox"/> Steep slopes	<input type="checkbox"/> None of the above	<input type="checkbox"/> Other:

Comments:

**Indications of Human Use\*:** (attach photos)

<input checked="" type="checkbox"/> Roads	<input type="checkbox"/> Rope swings	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input type="checkbox"/> RV / ATV Tracks
<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Other:	

Comments: CR 320

**% CHANNEL FEATURES**

RUN - 100

RIFFLE - 0

POOL - 0

\* Page Two - Data Sheet B for WBID # 482 :

**Stream Morphology:**

SITE #2

**Upstream View's Physical Dimensions:** Is there any water present at this view?  Yes  No

If so, is there an obvious current?  Yes  No

**Select one of the following channel features:**

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE					
RUN					
POOL					

**Downstream View's Physical Dimensions:** Is there any water present at this view?  Yes  No

If so, is there an obvious current?  Yes  No

**Select one of the following channel features:**

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE					
RUN					
POOL					

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

% Cobble	% Gravel	85 % Sand	15 % Silt	% Mud/Clay	% Bedrock
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**Aquatic Vegetation\*:** (Note amount of vegetation or algal growth at the assessment site)

CONSIDERABLE ALGAL GROWTH

**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:

**Comments:** Please attach any additional comments () to this form.

\*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 effect another use.

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

Surveyor's Signature: [Signature] Date of Survey: 7/13/07

Organization: BWR CORP. Position: ENV. SCI.

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID #482 SITE # 2

	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth	
TA	1 WETTED WIDTH	<0.1		1	CHANNEL FEATURE:	
	2 3.0 M	<0.1		2		RUN
	3	<0.1		3		
	4 MEASUREMENTS	<0.1		4	DISSOLVED OXYGEN:	
	5 0.3 M	0.1		5		
	6 APART	0.1		6	7.11	ppm
	7	<0.1		7		
	8	<0.1		8		
	9	<0.1		9		
	10	<0.1		10		
TB	1 WETTED WIDTH	<0.1		12	CHANNEL FEATURE:	
	2 2.5 M	<0.1		13		RUN
	3	0.1		14		
	4 MEASUREMENTS	0.1		15	DISSOLVED OXYGEN:	
	5 0.25 M	<0.1		16		
	6 APART	<0.1		17	7.51	ppm
	7	<0.1		18		
	8	<0.1		19		
	9	<0.1		20		
	10	<0.1		21		
TC	1 WETTED WIDTH	<0.1		23	CHANNEL FEATURE:	
	2 5.0	<0.1		24		RUN
	3	<0.1		25		
	4 MEASUREMENTS	<0.1		26	DISSOLVED OXYGEN:	
	5 0.50 M	<0.1		.		
	6 APART	<0.1		.	8.60	ppm
	7	<0.1		.		
	8	<0.1		n		
	9	<0.1				
	10	<0.1				

If there is an odd number of entries find middle rank  $[(n+1)/2]$ . The corresponding sorted value depth to the middle rank is the median depth.

If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: [Signature] Date: 7/13/07

Organization: BWR CORP. Position: ENV. SCI.

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 482 SITE # 2

	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
T <sub>D</sub>	1 WETTED WIDTH	< 0.1		1	CHANNEL FEATURE :
	2 2.0 m	< 0.1		2	RUN
	3	< 0.1		3	
	4 MEASUREMENTS	< 0.1		4	DISSOLVED OXYGEN :
	5 0.20 m	0.1		5	
	6 APART	0.1		6	9.06
	7	< 0.1		7	PPM
	8	< 0.1		8	
	9	< 0.1		9	
	10	< 0.1		10	
T <sub>E</sub>	1 WETTED WIDTH	< 0.1		12	CHANNEL FEATURE :
	2 2.70 m	< 0.1		13	RUN
	3	< 0.1		14	
	4 MEASUREMENTS	< 0.1		15	DISSOLVED OXYGEN :
	5 0.27 m	< 0.1		16	
	6 APART	< 0.1		17	10.19
	7	< 0.1		18	PPM
	8	< 0.1		19	
	9	< 0.1		20	
	10	< 0.1		21	
T <sub>F</sub>	1 WETTED WIDTH	< 0.1		23	CHANNEL FEATURE :
	2 4.0 m	< 0.1		24	RUN
	3	0.1		25	
	4 MEASUREMENTS	< 0.1		26	DISSOLVED OXYGEN :
	6 0.40 m	< 0.1		.	
	6 APART	< 0.1		.	10.52
	7	< 0.1		.	PPM
	8	< 0.1		n	
	9	< 0.1			
	10	< 0.1			

If there is an odd number of entries find middle rank  $[(n+1)/2]$ . The corresponding sorted value depth to the middle rank is the median depth.

If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: [Signature] Date: 7/13/07

Organization: BWR CORP. Position: ENV. SCI.

Data Sheet C - Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 482

Site # 2

Transect	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
G	1 wetted width	< 0.1			
	2 3.5 m	< 0.1		1	Channel Feature:
	3	< 0.1		2	RUN
	4	< 0.1		3	
	5 measurements	< 0.1		4	Dissolved Oxygen:
	6 0.35 m	< 0.1		5	
	7 apart	< 0.1		6	10.93
	8	< 0.1		7	ppm
	9	< 0.1		8	%
	10	< 0.1		9	
H	1 wetted width	< 0.1		10	
	2 6.0 m	< 0.1		11	
	3	< 0.1		12	Channel Feature:
	4	< 0.1		13	RUN
	5 measurements	< 0.1		14	
	6 0.60 m	< 0.1		15	Dissolved Oxygen:
	7 apart	< 0.1		16	
	8	< 0.1		17	11.23
	9	< 0.1		18	ppm
	10	< 0.1		19	%
I	1 wetted width	< 0.1		20	
	2 5.0 m	< 0.1		21	
	3	< 0.1		22	
	4	< 0.1		23	Channel Feature:
	5 measurements	< 0.1		24	RUN
	6 0.50 m	< 0.1		25	
	7 apart	< 0.1		26	Dissolved Oxygen:
	8	< 0.1		.	
	9	< 0.1		.	11.19
	10	< 0.1		n	ppm

If there is an odd number of entries find middle rank  $[(n+1)/2]$ . The corresponding sorted value depth to the middle rank is the median depth.  
 If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: 

Date: 7/13/07

Organization: BWR Corp.

Position: ENV. SCI.

Data Sheet C - Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 482

Site # 2

Transect	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
Transect 1	wetted width	< 0.1			
	2.5 m	0.1		1	Channel Feature:
		0.1		2	RUN
	measurements	< 0.1		3	
	0.75 m	< 0.1		4	Dissolved Oxygen:
	apart	< 0.1		5	
		0.1		6	11.27
		0.1		7	ppm
		0.1		8	%
		< 0.1		9	
Transect 2	wetted width	< 0.1		10	
	2.0 m	< 0.1		11	
		0.1		12	Channel Feature:
	measurements	0.1		13	RUN
	0.20 m	< 0.1		14	
	apart	< 0.1		15	Dissolved Oxygen:
		< 0.1		16	
		< 0.1		17	11.20
		< 0.1		18	ppm
		< 0.1		19	%
Transect 3	wetted width			20	
	m			21	
				22	
	measurements			23	Channel Feature:
	m			24	
	apart			25	
				26	Dissolved Oxygen:
				.	
				.	ppm
				n	%

If there is an odd number of entries find middle rank  $[(n+1)/2]$ . The corresponding sorted value depth the middle rank is the median depth.  
 If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UA datasheet is true and accurate.

Signed: [Signature] Date: 7/13/07  
 Organization: BWR CORP. Position: ENV. SCI.

WBID# 482  
 Site# 3

**Field Data Sheets for Recreational Use Stream Surveys**  
**Data Sheet B - Site Characterization**  
 (must be completed for each site)

Date & Time: <u>7/13/07</u>	Site Location Description (e.g., road crossing): <u>BRIDGE CROSSING AT 340 st</u>
Personnel (Data Collectors): <u>BARTLETT &amp; CASEY</u>	
Current Weather Conditions: <u>SUNNY ~ 80° F</u>	Facility Name: <u>STANBERRY WWTF</u>
Weather Conditions for Past 10 days: <u>FAIR</u>	Permit Number: <u>MO0043231</u>
Drought Conditions?: 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 Locations:**

Site GPS Coordinates: UTM X: <u>40.22929</u> Y: <u>094.60855</u>	
HORIZONTAL COLLECTION METHOD (Indicate the method used to determine the locational data.)	
Global Positioning System (GPS)	Interpolation
Static Mode	Topographic Map or DRG
Dynamic Mode (Kinematic)	Aerial Photograph or DOQQ
Precise Positioning Service	Satellite Imagery
Signal Averaging	Interpolation Other
Real Time Differential Processing	
GPS Data Quality	Interpolation Data Quality
FOM ± _____ Meters	Source Map Scale: 1:24,000 1:100,000 Other _____ ± _____ Feet or ± _____ Meters
EPE ± _____ Feet or ± _____ Meters	
PDOP	

**Photos:**

Upstream Photos		Downstream Photos		Other Photos	
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
<u>1,12-482</u>	<u>TRAN, J-K</u>	<u>9,10-482</u>	<u>TRAN, B-A</u>		

**Uses Observed\*:** (Uses actually observed at 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.)

**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"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Fence	<input type="checkbox"/> Steep slopes	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:

Comments:

**Indications of Human Use\*:** (attach photos)

<input checked="" type="checkbox"/> Roads	<input type="checkbox"/> Rope swings	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input type="checkbox"/> RV / ATV Tracks
<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Other:	

Comments: CR 340

**% CHANNEL FEATURES**

RUN - 100  
 RIFFLE - 0  
 POOL - 0

\* Page Two - Data Sheet B for WBID # 482 :

**Stream Morphology:**

SITE #3

Upstream View's Physical Dimensions: Is there any water present at this view?  Yes  No

If so, is there an obvious current?  Yes  No

**Select one of the following channel features:**

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE					
RUN					
POOL					

Downstream View's Physical Dimensions: Is there any water present at this view?  Yes  No

If so, is there an obvious current?  Yes  No

**Select one of the following channel features:**

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE					
RUN					
POOL					

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

% Cobble	% Gravel	90 % Sand	10 % Silt	% Mud/Clay	% Bedrock
----------	----------	-----------	-----------	------------	-----------

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

MODERATE ALGAL & MACROPHYTE GROWTH

**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:

**Comments:** Please attach any additional comments () to this form.

\*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 effect another use.

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

Surveyor's Signature: [Signature] Date of Survey: 2/13/07  
 Organization: BWR CORP. Position: ENV. SCI.

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID #482 SITE # 3

	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
T <sub>A</sub>	1 WETTED WIDTH	< 0.1		1	CHANNEL FEATURE: RUN
	2 2.3 m	0.1		2	
	3	0.1		3	
	4 MEASUREMENTS	0.1		4	DISSOLVED OXYGEN: 5.85 ppm
	5 0.23 m	0.1		5	
	6 APART	0.1		6	
	7	0.1		7	
	8	< 0.1		8	
	9	< 0.1		9	
	10	< 0.1		10	
			11		
T <sub>B</sub>	1 WETTED WIDTH	< 0.1		12	CHANNEL FEATURE: RUN
	2 2.1 m	< 0.1		13	
	3	0.1		14	
	4 MEASUREMENTS	0.1		15	DISSOLVED OXYGEN: 5.66 ppm
	5 0.21 m	< 0.1		16	
	6 APART	< 0.1		17	
	7	< 0.1		18	
	8	< 0.1		19	
	9	< 0.1		20	
	10	< 0.1		21	
			22		
T <sub>C</sub>	1 WETTED WIDTH	< 0.1		23	CHANNEL FEATURE: RUN
	2 2.2	< 0.1		24	
	3	0.1		25	
	4 MEASUREMENTS	0.1		26	DISSOLVED OXYGEN: 6.20 ppm
	5 0.22 m	< 0.1		.	
	6 APART	< 0.1		.	
	7	< 0.1		.	
	8	< 0.1		n	
	9	< 0.1			
	10	< 0.1			

If there is an odd number of entries find middle rank  $[(n+1)/2]$ . The corresponding sorted value depth to the middle rank is the median depth.

If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: [Signature] Date: 7/13/07

Organization: BWR CORP. Position: ENV. SCI.

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 482 SITE # 3

	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
T <sub>D</sub>	1 WETTED WIDTH	< 0.1		1 CHANNEL FEATURE :	
	2 3.4 m	< 0.1		2 RUN	
	3	< 0.1		3	
	4 MEASUREMENTS	< 0.1		4 DISSOLVED OXYGEN :	
	5 0.34 m	< 0.1		5	
	6 APART	< 0.1		6 6.39	PPM
	7	< 0.1		7	
	8	< 0.1		8	
	9	< 0.1		9	
	10	< 0.1		10	
T <sub>E</sub>	1 WETTED WIDTH	< 0.1		12 CHANNEL FEATURE :	
	2 3.5 m	< 0.1		13 RUN	
	3	< 0.1		14	
	4 MEASUREMENTS	< 0.1		15 DISSOLVED OXYGEN :	
	5 0.35 m	< 0.1		16	
	6 APART	< 0.1		17 6.75	PPM
	7	< 0.1		18	
	8	< 0.1		19	
	9	< 0.1		20	
	10	< 0.1		21	
T <sub>F</sub>	1 WETTED WIDTH	< 0.1		23 CHANNEL FEATURE :	
	2 4.0 m	< 0.1		24 RUN	
	3	< 0.1		25	
	4 MEASUREMENTS	< 0.1		26 DISSOLVED OXYGEN :	
	5 0.40 m	< 0.1		.	
	6 APART	< 0.1		. 7.00	PPM
	7	< 0.1		.	
	8	< 0.1		n	
	9	< 0.1			
	10	< 0.1			

If there is an odd number of entries find middle rank  $[(n+1)/2]$ . The corresponding sorted value depth to the middle rank is the median depth.

If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: [Signature] Date: 7/13/07

Organization: BWP CORP. Position: ENV. SCI.

Data Sheet C - Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 482

Site # 3

Transect	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
Transect G	1 wetted width	<0.1			
	2 5.2 m	<0.1		1	Channel Feature:
	3	<0.1		2	RUN
	4 measurements	<0.1		3	
	5 0.52 m	<0.1		4	Dissolved Oxygen
	6 apart	<0.1		5	
	7	<0.1		6	7.10
	8	<0.1		7	ppm
	9	<0.1		8	7
	10	<0.1		9	
Transect H	1 wetted width	<0.1		10	
	2 3.2 m	<0.1		11	
	3	<0.1		12	Channel Feature:
	4 measurements	<0.1		13	RUN
	5 0.32 m	<0.1		14	
	6 apart	<0.1		15	Dissolved Oxygen:
	7	<0.1		16	
	8	<0.1		17	7.13
	9	<0.1		18	ppm
	10	<0.1		19	7
Transect I	1 wetted width	<0.1		20	
	2 2.7 m	<0.1		21	
	3	<0.1		22	
	4 measurements	<0.1		23	Channel Feature:
	5 0.77 m	<0.1		24	RUN
	6 apart	<0.1		25	
	7	<0.1		26	Dissolved Oxygen
	8	<0.1		.	
	9	<0.1		.	7.19
	10	<0.1		n	ppm

If there is an odd number of entries find middle rank  $[(n+1)/2]$ . The corresponding sorted value depth to the middle rank is the median depth.  
 If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: [Signature]

Date: 7/13/07

Organization: BWR CORP.

Position: ENV. SCI.

Data Sheet C - Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 482

Site # 3

Transect	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth	
1	wetted width	< 0.1				
	4.0 m	0.1		1	Channel Feature:	
		0.1		2	RUN	
	measurements	< 0.1		3		
	0.40 m	< 0.1		4	Dissolved Oxygen:	
	apart	< 0.1		5		
		< 0.1		6	7.07	ppm
		< 0.1		7		%
		< 0.1		8		
		< 0.1		9		
2	wetted width	< 0.1		10		
	5.0 m	< 0.1		11		
		< 0.1		12	Channel Feature:	
	measurements	< 0.1		13	RUN	
	0.50 m	< 0.1		14		
	apart	< 0.1		15	Dissolved Oxygen:	
		< 0.1		16		
		< 0.1		17	6.92	ppm
		< 0.1		18		%
		< 0.1		19		
3	wetted width			20		
				21		
				22		
				23	Channel Feature:	
	measurements			24		
				25		
				26	Dissolved Oxygen:	
				.		
				.	ppm	
				n	%	

If there is an odd number of entries find middle rank  $[(n+1)/2]$ . The corresponding sorted value depth the middle rank is the median depth.  
 If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this U.A. datasheet is true and accurate.

Signed: [Signature]

Organization: BWR CORP.

Date: 7/3/07

February 5, 2007

Position: ENV. SCI.

WBID# 482  
 Site# 4

**Field Data Sheets for Recreational Use Stream Surveys**  
**Data Sheet B - Site Characterization**  
 (must be completed for each site)

Date & Time: <u>7/13/07</u>	Site Location Description (e.g., road crossing): <u>BRIDGE CROSSING AT HWY 169 (UPSTREAM)</u>
Personnel (Data Collectors): <u>BARTLETT &amp; CASEY</u>	Facility Name: <u>STANBERRY WWTF</u>
Current Weather Conditions: <u>SUNNY ~ 80°F</u>	Permit Number: <u>MO0043231</u>
Weather Conditions for Past 10 days: <u>FAIR</u>	
Drought Conditions?: 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 Locations:**

Site GPS Coordinates: UTM X: <u>40.20184</u> Y: <u>094.53152</u>	
HORIZONTAL COLLECTION METHOD (Indicate the method used to determine the locational data):	
Global Positioning System (GPS)	
Static Mode	Interpolation
Dynamic Mode (Kinematic)	Topographic Map or DRG
Precise Positioning Service	Aerial Photograph or DOQQ
Signal Averaging	Satellite Imagery
Real Time Differential Processing	Interpolation Other
GPS Data Quality	
FOM ± _____ Meters	Interpolation Data Quality
EPE ± _____ Feet or ± _____ Meters	
PDOP	
Source Map Scale: 1:24,000 1:100,000 Other _____	
± _____ Feet or ± _____ Meters	

**Photos:**

Upstream Photos		Downstream Photos		Other Photos	
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
<u>15, 16 482</u>	<u>FRAN J-K</u>	<u>13, 14 482</u>	<u>TRAN B-A</u>		

**Uses Observed\*:** (Uses actually observed at 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.)

**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"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Fence	<input type="checkbox"/> Steep slopes	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:

Comments:

**Indications of Human Use\*:** (attach photos)

<input checked="" type="checkbox"/> Roads	<input type="checkbox"/> Rope swings	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input type="checkbox"/> RV / ATV Tracks
<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Other:	

Comments: HWY 169

**% CHANNEL FEATURES**

RUN - 100

RIFFLE - 0

POOL - 0

\* Page Two - Data Sheet B for WBID # 482 :  
Stream Morphology:

SITE #4

Upstream View's Physical Dimensions: Is there any water present at this view?  Yes  No

If so, is there an obvious current?  Yes  No

Select one of the following channel features:

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE					
RUN					
POOL					

Downstream View's Physical Dimensions: Is there any water present at this view?  Yes  No

If so, is there an obvious current?  Yes  No

Select one of the following channel features:

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE					
RUN					
POOL					

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

% Cobble	% Gravel	90 % Sand	10 % Silt	% Mud/Clay	% Bedrock
----------	----------	-----------	-----------	------------	-----------

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

MODERATE ALGAL & MACROPHYTE GROWTH

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:

Comments: Please attach any additional comments () to this form.

\*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 effect another use.

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

Surveyor's Signature: [Signature] Date of Survey: 7/13/07  
Organization: BWR CORP. Position: ENV. SCI.

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID #482 SITE # 4

	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
TA	1 WETTED WIDTH	0.2		1	CHANNEL FEATURE:
	2 15.0 m	0.3		2	RUN
	3	0.4		3	
	4 MEASUREMENTS	0.4		4	DISSOLVED OXYGEN:
	5 1.50 m	0.4		5	
	6 APART	0.3		6	5.25 ppm
	7	<0.1		7	
	8	<0.1		8	
	9	0.1		9	
	10	<0.1		10	
TB	1 WETTED WIDTH	<0.1		11	
	2 10.0 m	<0.1		12	CHANNEL FEATURE:
	3	<0.1		13	RUN
	4 MEASUREMENTS	<0.1		14	
	5 1.0 m	<0.1		15	DISSOLVED OXYGEN:
	6 APART	<0.1		16	
	7	<0.1		17	5.08 ppm
	8	<0.1		18	
	9	<0.1		19	
	10	<0.1		20	
TC	1 WETTED WIDTH	<0.1		21	
	2 18.0	<0.1		22	
	3	<0.1		23	CHANNEL FEATURE:
	4 MEASUREMENTS	<0.1		24	RUN
	5 1.80 m	<0.1		25	
	6 APART	<0.1		26	DISSOLVED OXYGEN:
	7	<0.1		.	5.98 ppm
	8	<0.1		.	
	9	<0.1		n	
	10	<0.1			

If there is an odd number of entries find middle rank  $[(n+1)/2]$ . The corresponding sorted value depth to the middle rank is the median depth.

If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: [Signature] Date: 7/13/07

Organization: BWR CORP. Position: ENV. SCI.

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 482 SITE # 4

	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
T <sub>D</sub>	1 WETTED WIDTH	0.7		1	CHANNEL FEATURE :
	2 18.0 m	< 0.1		2	RUN
	3	< 0.1		3	
	4 MEASUREMENTS	< 0.1		4	DISSOLVED OXYGEN :
	5 1.50 m	< 0.1		5	
	6 APART	< 0.1		6	5.95
	7	< 0.1		7	ppm
	8	< 0.1		8	
	9	< 0.1		9	
	10	< 0.1		10	
T <sub>E</sub>	1 WETTED WIDTH	< 0.1		11	
	2 8.5 m	0.1		12	CHANNEL FEATURE :
	3	< 0.1		13	RUN
	4 MEASUREMENTS	0.1		14	
	5 0.85 m	< 0.1		15	DISSOLVED OXYGEN :
	6 APART	< 0.1		16	
	7	< 0.1		17	6.34
	8	< 0.1		18	ppm
	9	< 0.1		19	
	10	< 0.1		20	
T <sub>F</sub>	1 WETTED WIDTH	0.1		21	
	2 7.0 m	0.2		22	CHANNEL FEATURE :
	3	0.1		23	RUN
	4 MEASUREMENTS	< 0.1		24	
	5 0.70 m	< 0.1		25	DISSOLVED OXYGEN :
	6 APART	< 0.1		26	
	7	< 0.1		.	6.52
	8	< 0.1		.	ppm
	9	< 0.1		n	
	10	< 0.1			

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If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

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Signed: [Signature] Date: 7/13/07

Organization: BWR CORP. Position: ENV. SCI.

Data Sheet C - Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 482

Site # 4

Transect	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth	
Transect G	wetted width	< 0.1				
	4.0 m	< 0.1		1	Channel Feature:	
		0.1		2	RUN	
	measurements	< 0.1		3		
	0.90 m	< 0.1		4	Dissolved Oxygen:	
	apart	< 0.1		5		
		< 0.1		6	6.58	ppm
		< 0.1		7		%
		< 0.1		8		
		< 0.1		9		
Transect H	wetted width	< 0.1		10		
	8.0 m	< 0.1		11		
		< 0.1		12	Channel Feature:	
	measurements	< 0.1		13	RUN	
	0.80 m	< 0.1		14		
	apart	< 0.1		15	Dissolved Oxygen:	
		< 0.1		16		
		0.1		17	6.71	ppm
		< 0.1		18		%
		< 0.1		19		
Transect I	wetted width	< 0.1		20		
	6.0 m	< 0.1		21		
		< 0.1		22		
	measurements	< 0.1		23	Channel Feature:	
	m	< 0.1		24	RUN	
	apart	< 0.1		25		
		< 0.1		26	Dissolved Oxygen:	
		< 0.1		.		
		< 0.1		.	6.77	ppm
		< 0.1		.		%

If there is an odd number of entries find middle rank  $[(n+1)/2]$ . The corresponding sorted value depth to the middle rank is the median depth.  
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Signed: [Signature]

Date: 7/13/07

Organization: JWR CORP.

Position: ENV. SCI.

Data Sheet C - Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 482

Site # 4

Transect	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
1	wetted width	<0.1			
2	5.0 m	<0.1		1	Channel Feature:
3		<0.1		2	Run
4	measurements	<0.1		3	
5	0.50 m	0.1		4	Dissolved Oxygen:
6	apart	<0.1		5	
7		<0.1		6	6.73
8		<0.1		7	ppm
9		<0.1		8	%
10		<0.1		9	
				10	
ranked 1	wetted width	<0.1		11	
2	6.6 m	0.1		12	Channel Feature:
3		0.1		13	Run
4	measurements	<0.1		14	
5	0.66 m	<0.1		15	Dissolved Oxygen:
6	apart	<0.1		16	
7		<0.1		17	6.80
8		<0.1		18	ppm
9		<0.1		19	%
10		<0.1		20	
				21	
Transect 1	wetted width			22	
2	m			23	Channel Feature:
3				24	
4	measurements			25	
5	m			26	Dissolved Oxygen:
6	apart			.	
7				.	
8				.	ppm
9				.	%
10				n	

If there is an odd number of entries find middle rank  $[(n+1)/2]$ . The corresponding sorted value depth the middle rank is the median depth.  
 If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

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Signed: [Signature] Date: 7/13/07  
 Organization: ZWR Corp. Position: ENV. SCI.  
 February 5, 2007



Upstream (Site #1) of Wildcat Creek



Upstream (Site #1) of Wildcat Creek



Downstream (Site #1) of Wildcat Creek



Downstream (Site #1) of Wildcat Creek



Downstream (Site #2) of Wildcat Creek



Downstream (Site #2) of Wildcat Creek



Upstream (Site #2) of Wildcat Creek



Upstream (Site #2) of Wildcat Creek



Downstream (Site #3) of Wildcat Creek



Downstream (Site #3) of Wildcat Creek



Upstream (Site #3) of Wildcat Creek



Upstream (Site #3) of Wildcat Creek



Downstream (Site #4) of Wildcat Creek



Downstream (Site #4) of Wildcat Creek



Upstream (Site #4) of Wildcat Creek



Upstream (Site #4) of Wildcat Creek