



Missouri
Department of
Natural Resources

Use Attainability Analysis

for

WBID 1030 Sugar Branch

Submitted by
SES, Inc.

To
Missouri Department of Natural Resources
Water Protection Program

Date Received: June 3, 2007

Field Data Sheets for Recreation Use Stream Surveys
Data Sheet A - Water Body Identification
 (For water body being surveyed)

Water Body Information

Water Body Name:	Sugar Branch	WBID:	1030
8 digit HUC code:	10300102	County:	Boone
Upstream Legal Description	48N14W3		
Downstream Legal Description	48N13W18		
Number of Sites Evaluated	3		
List all site numbers, listed upstream to downstream			
	1	2	3

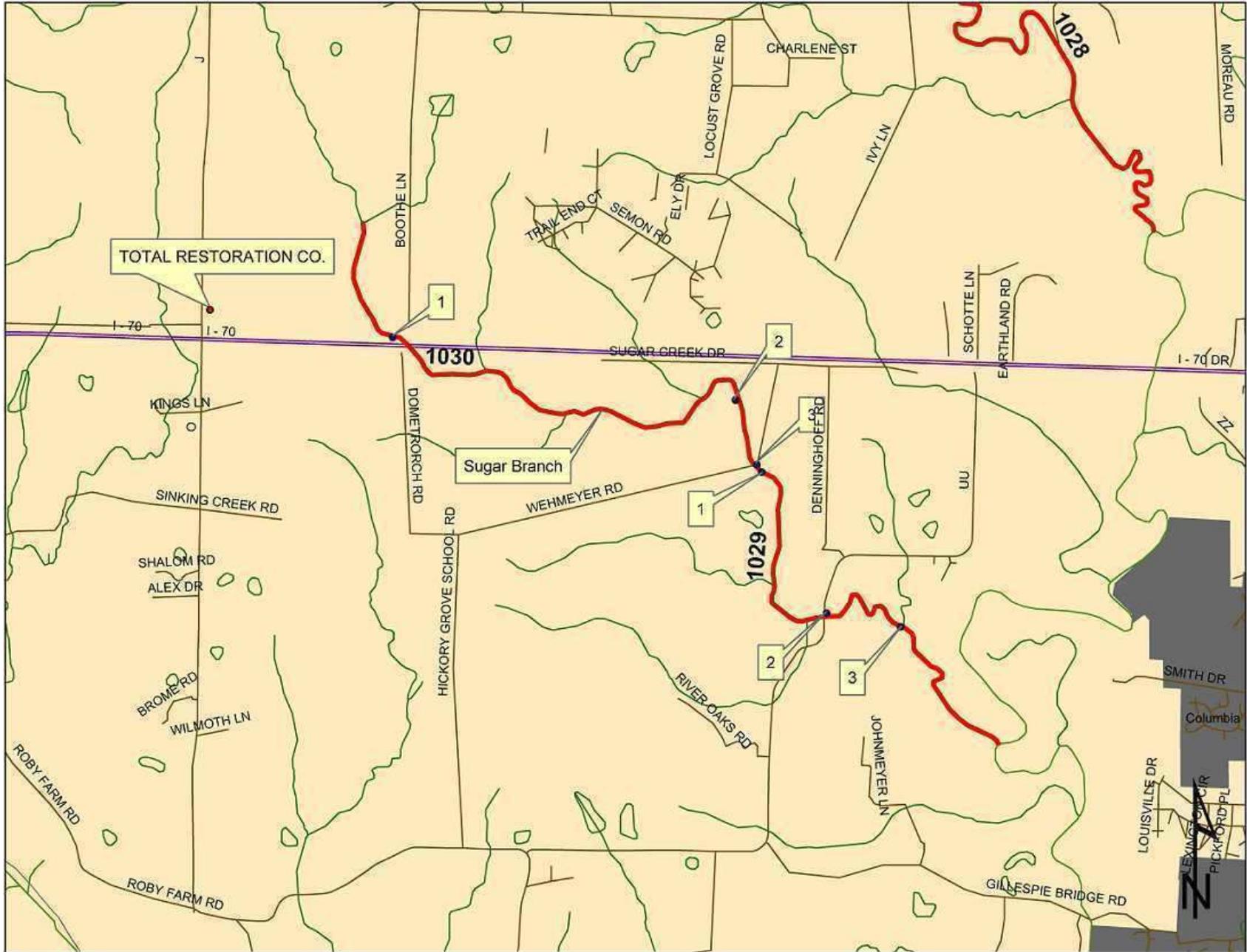
Discharger Facility Information

Discharger Facility Name(s):	Total Restoration Co.
Discharger Permit Number(s):	MO 01024711

UAA Surveyor

Name of Surveyor:	Gilisa Gould	Telephone Number:	913-307-0046 ext. 19
Organization/Employer:	SES, Inc.		
Position:	Field Team Leader		

Signed: _____ Date: _____



Data Sheet C: Cross-Sectional Depth Measurements (for estimation of median depth)
(Median Depth Shown in Bold)

Site # 1

Mark # 3

WBID # 1030

	Depth (m)
Transect 1	0.25
Substrate:	0.45
cobbly silt	0.45
Water Clarity:	0.45
none	0.45
Channel Feature:	0.40
pool	0.40
Channel Width:	0.35
5.00	0.30
0.40	0.25
Transect 2	0.05
Substrate:	0.45
gravel	0.50
Water Clarity:	0.55
none	0.60
Channel Feature:	0.55
pool	0.55
Channel Width:	0.50
5.00	0.40
0.50	0.40
Transect 3	0.35
Substrate:	0.40
gravel	0.50
Water Clarity:	0.55
none	0.55
Channel Feature:	0.60
pool	0.50
Channel Width:	0.55
6.00	0.60
0.55	0.65
Transect 4	0.20
Substrate:	0.45
gravel	0.40
Water Clarity:	0.40
none	0.40
Channel Feature:	0.40
pool	0.30
Channel Width:	0.25
6.00	0.25
0.35	0.15

	Depth (m)
Transect 5	0.15
Substrate:	0.10
gravel	0.10
Water Clarity:	0.20
cloudy	0.25
Channel Feature:	0.25
pool	0.20
Channel Width:	0.30
6.00	0.25
0.23	0.25
Transect 6	0.05
Substrate:	0.10
cobble gravel	0.10
Water Clarity:	0.10
cloudy	0.20
Channel Feature:	0.15
pool	0.15
Channel Width:	0.15
6.00	0.10
0.10	0.10
Transect 7	0.00
Substrate:	0.00
cobble	0.05
Water Clarity:	0.05
clear	0.00
Channel Feature:	0.00
rifle	0.00
Channel Width:	0.00
2.00	0.50
0.00	0.00
Transect 8	0.00
Substrate:	0.00
cobble	0.00
Water Clarity:	0.05
clear	0.00
Channel Feature:	0.05
riffle	0.05
Channel Width:	0.05
3.00	0.05
0.05	0.05

	Depth (m)
Transect 9	0.20
Substrate:	0.30
cobble,sand	0.40
Water Clarity:	0.55
none	0.55
Channel Feature:	0.50
pool	0.40
Channel Width:	0.30
4.00	0.25
0.35	0.05
Transect 10	0.00
Substrate:	0.00
cobble	0.01
Water Clarity:	0.01
clear	0.01
Channel Feature:	0.01
pool	0.01
Channel Width:	0.01
3.00	0.05
0.01	0.00
Transect 11	0.00
Substrate:	0.00
cobble	0.10
Water Clarity:	0.05
cloudy	0.05
Channel Feature:	0.00
pool	0.15
Channel Width:	0.10
3.00	0.00
0.03	0.00
Site Median	0.20
Site Maximum	0.65

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

WBID 1030
Site # 2

Date and Time: 7.31.07 9:30am

Current Weather Conditions clear

Weather Conditions for Past 10 days: clear

Drought Conditions? No

Site Location (e.g. road crossing) South of I-70

GPS Mark: 1

Upstream Photo 2 Downstream Photo 1

Uses Observed (Uses actually observed at time of survey) Circle

Swimming	Skin Diving	SCUBA diving	Tubing
Water Skiing	Wind Surfing	Kayaking	Boating
Wading	Rafting	Hunting	Trapping
Fishing	<u>None of the Above</u>	Other	

Surrounding Conditions

City/county parks	Playgrounds	MDC conservation lands	<u>Urban areas</u>
Campgrounds	Boating accesses	State parks	National Forests
Nature trails	Stairs/walkway	No trespass sign	Fence
Steep slopes	None of the Above	<u>Other</u>	<u>sitting bench</u>

Indications of Human Use

Roads	Rope swings	Foot paths/prints	Dock/platform
Livestock Watering	RV/ATV Tracks	Camping Sites	Fire pit/ring
NPDES Discharge	Fishing Tackle	Other:	

WBID # 1030 **Site #** 2
Mark # 1 **Dissolved Oxygen (ppm)** 5
Upstream Views Physical Dimensions: Is there any water present at this view? no

If so, is there an obvious current?

Select one of the following channel features:

	% of Channel Feature				
Riffle	10%				
Run	0%				
Pool	90%				

Downstream View's Physical Dimensions: Is there any water present at this view? yes

If so, is there an obvious current? no

riffle					
run					
pool					

Substrate:

59% Cobble	% Gravel	9% Sand	% Silt
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% Mud/Clay	32% Bedrock
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Aquatic Vegetation: (Note amount of vegetation or algal growth at the assessment site)

Vegetation along banks and on gravel bars. No floating aquatic vegetation.

Water Characteristics

Odor	Sewage	Musky	Chemical	<u>None</u>	Other
Color	Clear	Green	Gray	Milky	<u>Other</u> <u>brown murky</u>
Bottom Deposit	Sludge	Solids	Fine Sed.	<u>None</u>	Other
Surface Deposit	<u>Oil</u>	Scum	Foam	None	Other

Data Sheet C: Cross-Sectional Depth Measurements (for estimation of median depth)
(Median Depth Shown in Bold)

Site # 2

Mark # 1

WBID # 1030

	Depth (m)
Transect 1	0.05
Substrate:	0.20
cobbly sand	0.40
Water Clarity:	0.55
murky	0.50
Channel Feature:	0.45
pool	0.20
Channel Width:	0.20
6 yards	0.10
0.20	0.05
Transect 2	0.00
Substrate:	0.00
cobble	0.00
Water Clarity:	0.00
N/A	0.00
Channel Feature:	0.00
riffle	0.00
Channel Width:	0.00
10 yards	0.00
0.00	0.00
Transect 3	0.00
Substrate:	0.00
sandy cobble	0.00
Water Clarity:	0.00
murky	0.05
Channel Feature:	0.00
pool	0.00
Channel Width:	0.05
8 yards	0.05
0.00	0.00
Transect 4	0.00
Substrate:	0.00
cobble/bedrock	0.00
Water Clarity:	0.10
clear/murky	0.20
Channel Feature:	0.30
pool	0.40
Channel Width:	0.35
6 yards	0.40
0.15	0.10

	Depth (m)
Transect 5	0.00
Substrate:	0.00
cobble/bedrock	0.00
Water Clarity:	0.00
clear	0.00
Channel Feature:	0.00
pool	0.00
Channel Width:	0.05
7 yards	0.00
0.00	0.00
Transect 6	0.00
Substrate:	0.00
cobble	0.00
Water Clarity:	0.00
N/A	0.00
Channel Feature:	0.00
pool	0.00
Channel Width:	0.00
8 yards	0.00
0.00	0.00
Transect 7	0.00
Substrate:	0.00
cobble	0.00
Water Clarity:	0.00
clear	0.00
Channel Feature:	0.05
pool	0.15
Channel Width:	0.15
6 yards	0.10
0.00	0.00
Transect 8	0.00
Substrate:	0.00
bedrock	0.00
Water Clarity:	0.00
murky	0.05
Channel Feature:	0.00
pool	0.00
Channel Width:	0.00
6 yards	0.00
0.00	0.00

	Depth (m)	
Transect 9	0.00	
Substrate:	0.05	
bedrock	0.15	
Water Clarity:	0.20	
murky	0.05	
Channel Feature:	0.00	
pool	0.05	
Channel Width:	0.00	
7 yards	0.00	
0.03	0.00	
Transect 10	0.00	
Substrate:	0.00	
cobble	0.00	
Water Clarity:	0.00	
N/A	0.00	
Channel Feature:	0.00	
pool	0.00	
Channel Width:	0.00	
6 yards	0.00	
0.00	0.00	
Transect 11	0.00	
Substrate:	0.00	
cobble/bedrock	0.00	
Water Clarity:	0.00	
murky	0.05	
Channel Feature:	0.15	
pool	0.15	
Channel Width:	0.10	
5 yards	0.10	
0.05	0.05	
Site Median	0.00	Site Maximum
	0.00	0.55

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

WBID 1030
 Site # 3

Date and Time: 7.31.07 10:00am

Current Weather Conditions clear

Weather Conditions for Past 10 days: clear

Drought Conditions? No

Site Location (e.g. road crossing) 300 yards West of creek access, along north road

GPS Mark: 2

Upstream Photo 4 Downstream Photo 3

Uses Observed (Uses actually observed at time of survey) Circle

Swimming	Skin Diving	SCUBA diving	Tubing
Water Skiing	Wind Surfing	Kayaking	Boating
Wading	Rafting	Hunting	Trapping
Fishing	<u>None of the Above</u>	Other	

Surrounding Conditions

City/county parks	Playgrounds	MDC conservation lands	Urban areas
Campgrounds	Boating accesses	State parks	National Forests
Nature trails	Stairs/walkway	No trespass sign	Fence
Steep slopes	<u>None of the Above</u>	Other	

Indications of Human Use

Roads	Rope swings	Foot paths/prints	Dock/platform
Livestock Watering	RV/ATV Tracks	Camping Sites	Fire pit/ring
NPDES Discharge	Fishing Tackle	Other:	

WBID # 1030 **Site #** 3
Mark # 2 **Dissolved Oxygen (ppm)** 6.1
Upstream Views Physical Dimensions: Is there any water present at this view? yes

If so, is there an obvious current? no

Select one of the following channel features:

	% of Channel Feature				
Riffle	18%				
Run	0%				
Pool	82%				

Downstream View's Physical Dimensions: Is there any water present at this view? yes

If so, is there an obvious current? yes

riffle					
run					
pool					

Substrate:

9% Cobble	86% Gravel	% Sand	% Silt
% Mud/Clay	5% Bedrock		

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

aquatic vegetation along bank and gravel bars. No aquatic vegetation or significant algal growth in water

Water Characteristics

Odor Sewage Musky Chemical **None** Other
 Color **Clear** Green Gray Milky Other
 Bottom Deposit Sludge Solids Fine Sed. **None** Other
 Surface Deposit Oil Scum Foam **None** Other

Data Sheet C: Cross-Sectional Depth Measurements (for estimation of median depth)
(Median Depth Shown in Bold)

Site # 3

Mark # 2

WBID # 1030

	Depth (m)
Transect 1	0.05
Substrate:	0.05
cobble	0.05
Water Clarity:	0.10
clear	0.15
Channel Feature:	0.10
pool	0.20
Channel Width:	0.15
3 yards	0.10
0.10	0.05
Transect 2	0.00
Substrate:	0.00
gravel/bedrock	0.00
Water Clarity:	0.00
clear	0.00
Channel Feature:	0.05
rifle	0.05
Channel Width:	0.00
4 yards	0.00
0.00	0.00
Transect 3	0.00
Substrate:	0.00
gravel	0.50
Water Clarity:	0.50
clear	0.50
Channel Feature:	0.00
pool	0.00
Channel Width:	0.00
8 yards	0.00
0.00	0.00
Transect 4	0.05
Substrate:	0.30
gravel	0.55
Water Clarity:	0.60
clear	0.90
Channel Feature:	1.00
pool	1.00
Channel Width:	1.00
6 yards	0.65
0.63	0.20

	Depth (m)
Transect 5	0.00
Substrate:	0.05
gravel	0.15
Water Clarity:	0.15
clear	0.20
Channel Feature:	0.15
pool	0.10
Channel Width:	0.05
4 yards	0.00
0.08	0.00
Transect 6	0.00
Substrate:	0.00
gravel	0.05
Water Clarity:	0.05
clear	0.00
Channel Feature:	0.05
pool	0.00
Channel Width:	0.05
4 yards	0.10
0.05	0.10
Transect 7	0.00
Substrate:	0.00
gravel	0.00
Water Clarity:	0.05
clear	0.00
Channel Feature:	0.00
rifle	0.00
Channel Width:	0.00
11 yards	0.00
0.00	0.00
Transect 8	0.10
Substrate:	0.45
gravel	0.20
Water Clarity:	0.00
clear	0.05
Channel Feature:	0.05
pool	0.10
Channel Width:	0.15
12 yards	0.15
0.13	0.15

	Depth (m)	
Transect 9	0.05	
Substrate:	0.25	
gravel	0.40	
Water Clarity:	0.10	
clear	0.00	
Channel Feature:	0.00	
pool	0.00	
Channel Width:	0.00	
11 yards	0.00	
0.00	0.00	
Transect 10	0.00	
Substrate:	0.05	
gravel	0.05	
Water Clarity:	0.00	
clear	0.00	
Channel Feature:	0.00	
pool	0.00	
Channel Width:	0.00	
13 yards	0.00	
0.00	0.00	
Transect 11	0.00	
Substrate:	0.00	
gravel	0.05	
Water Clarity:	0.00	
clear	0.05	
Channel Feature:	0.00	
pool	0.00	
Channel Width:	0.00	
5 yards	0.00	
0.00	0.00	
Site Median	0.05	Site Maximum
		1.00

WBID# 1030



Site# 1 Photo ID# 6, Upstream



Site# 1 Photo ID# 7, Downstream



Site# 2 Photo ID# 2, Upstream



Site# 2 Photo ID# 1, Downstream

WBID# 1030



Site# 3 Photo ID# 4, Upstream



Site# 3 Photo ID# 3, Downstream