



Missouri
Department of
Natural Resources

Use Attainability Analysis

for

WBID 1029 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: 1029
8 digit HUC code: 10300102	County: boone
Upstream Legal Description 48N14W3	
Downstream Legal Description 48N13W18	
Number of Sites Evaluated	
List all site numbers, listed upstream to downstream	
1	2 3

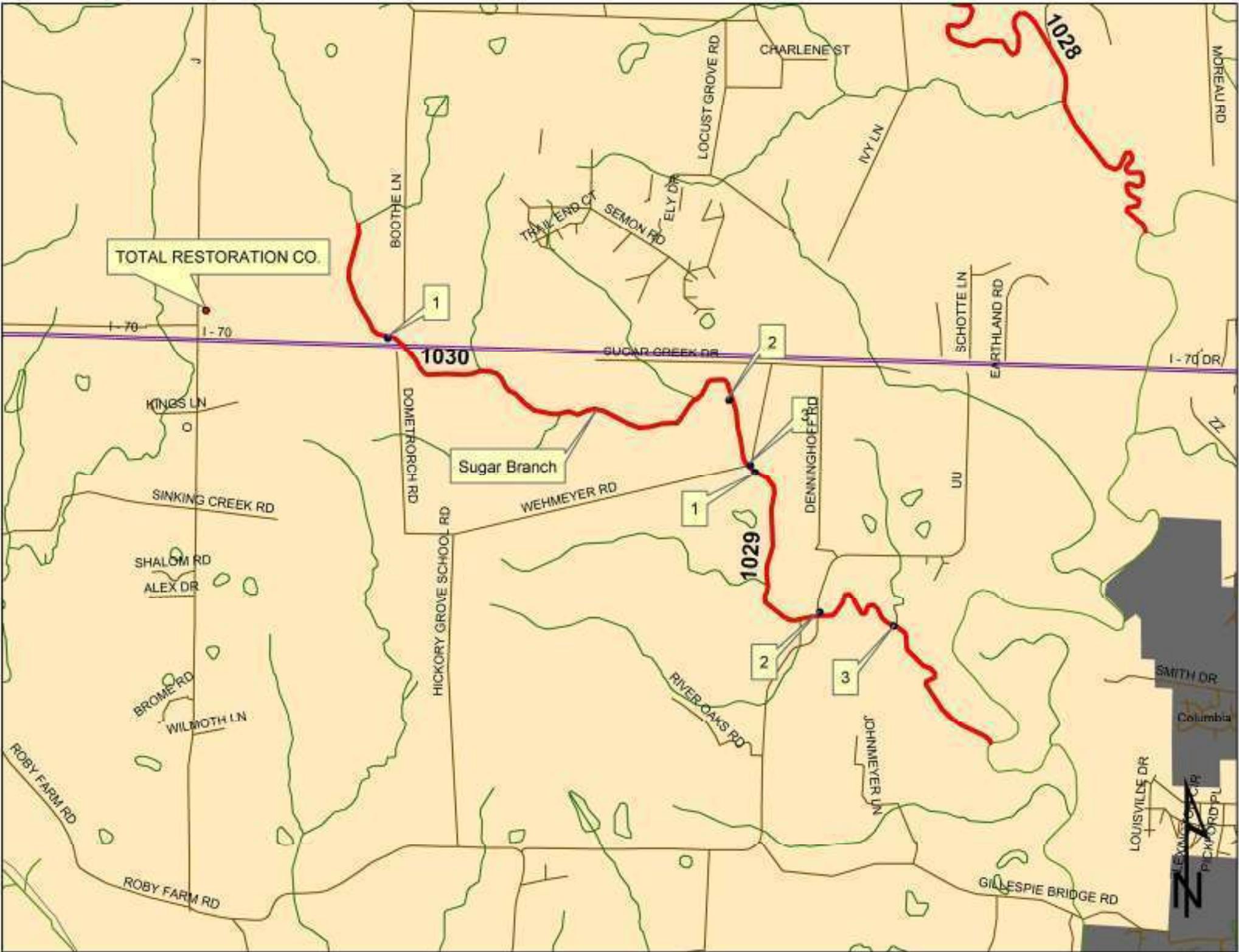
Discharger Facility Information

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: _____



TOTAL RESTORATION CO.

1030

Sugar Branch

1029

1028

Columbia

LEWISVILLE
PICKFORD PL



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

WBID 1029
Site # 1

Date and Time: 5.22.07 4:00 PM

Current Weather Conditions clear

Weather Conditions for Past 10 days: cloudy

Drought Conditions? No

Site Location (e.g. road crossing) down stream wehemeyer road

GPS Mark: 6

Upstream Photo 13 Downstream Photo 14

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	None of the Above	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	None of the Above	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:	

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

Site # 1

Mark # 6

1029_Sugar Branch_Boone

	Depth (m)
Transect 1	0.05
Substrate:	0.10
gravel	0.30
Water Clarity:	0.60
clear	0.65
Channel Feature:	0.60
pool	0.40
Channel Width:	0.20
9.00	0.10
0.25	0.10
Transect 2	0.15
Substrate:	0.50
gravel, bedrock	0.80
Water Clarity:	1.00
clear	1.00
Channel Feature:	1.00
pool	0.60
Channel Width:	0.35
9.00	0.25
0.55	0.20
Transect 3	0.05
Substrate:	0.30
gravel	0.80
Water Clarity:	0.55
clear	0.20
Channel Feature:	0.00
pool	0.00
Channel Width:	0.00
10.00	0.00
0.03	0.00
Transect 4	0.00
Substrate:	0.00
gravel	0.05
Water Clarity:	0.00
clear	0.00
Channel Feature:	0.00
riffle	0.00
Channel Width:	0.00
3.00	0.00
0.00	0.00

	Depth (m)
Transect 5	0.00
Substrate:	0.05
gravel	0.10
Water Clarity:	0.10
clear	0.10
Channel Feature:	0.10
pool	0.20
Channel Width:	0.20
2.00	0.15
0.10	0.05
Transect 6	0.00
Substrate:	0.10
gravel	0.15
Water Clarity:	0.15
clear	0.10
Channel Feature:	0.05
pool	0.00
Channel Width:	0.00
5.00	0.00
0.05	0.05
Transect 7	0.00
Substrate:	0.00
gravel	0.05
Water Clarity:	0.10
clear	0.20
Channel Feature:	0.25
pool	0.20
Channel Width:	0.05
1.00	0.00
0.05	0.00
Transect 8	0.30
Substrate:	0.20
gravel	0.05
Water Clarity:	0.00
clear	0.00
Channel Feature:	0.00
pool	0.05
Channel Width:	0.20
10.00	0.40
0.13	0.50

	Depth (m)
Transect 9	0.00
Substrate:	0.25
gravel	0.20
Water Clarity:	0.05
clear	0.05
Channel Feature:	0.05
pool	0.30
Channel Width:	0.45
7.00	0.40
0.20	0.20
Transect 10	0.05
Substrate:	0.30
gravel	0.45
Water Clarity:	0.55
clear	0.70
Channel Feature:	0.75
pool	0.70
Channel Width:	0.65
4.00	0.60
0.58	0.45
Transect 11	0.05
Substrate:	0.05
gravel	0.10
Water Clarity:	0.10
clear	0.50
Channel Feature:	0.05
pool	0.10
Channel Width:	0.05
7.00	0.05
0.08	0.10

Site Median	0.10	Site Maximum	1.00
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**Field Data Sheets for Recreational Use Stream Surveys
Data Sheet B - Site Characterization
(must be completed for each site)**

WBID 1029
Site # 2

Date and Time: 5.22.07 5:00 PM

Current Weather Conditions cloudy

Weather Conditions for Past 10 days: cloudy

Drought Conditions? No

Site Location (e.g. road crossing) uu road crossing

GPS Mark: 7

Upstream Photo 15 Downstream Photo 16

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	None of the Above	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	None of the Above	Other	

Indications of Human Use

Roads	Rope swings	Foot paths/prints picture number 17	Dock/platform
Livestock Watering	RV/ATV Tracks	Camping Sites	Fire pit/ring
NPDES Discharge	Fishing Tackle	Other:	

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

Site # 2

Mark # 7

1029_Sugar Branch_Boone

	Depth (m)
Transect 1	0.00
Substrate:	0.00
gravel	0.00
Water Clarity:	0.05
clear	0.10
Channel Feature:	0.05
pool	0.05
Channel Width:	0.15
3.00	0.20
0.05	0.10
Transect 2	0.30
Substrate:	0.40
gravel	0.55
Water Clarity:	0.60
clear	0.60
Channel Feature:	0.50
pool	0.40
Channel Width:	0.25
7.00	0.25
0.40	0.10
Transect 3	0.00
Substrate:	0.00
gravel	0.05
Water Clarity:	0.05
clear	0.05
Channel Feature:	0.00
riffle	0.05
Channel Width:	0.05
3.00	0.05
0.05	0.05
Transect 4	0.15
Substrate:	0.30
gravel	0.45
Water Clarity:	0.50
clear	0.55
Channel Feature:	0.55
pool	0.40
Channel Width:	0.25
8.00	0.10
0.35	0.05

	Depth (m)
Transect 5	0.05
Substrate:	0.10
gravel	0.30
Water Clarity:	0.40
clear	0.50
Channel Feature:	0.50
pool	0.60
Channel Width:	0.70
8.00	0.70
0.50	0.60
Transect 6	0.05
Substrate:	0.05
gravel	0.10
Water Clarity:	0.05
clear	0.00
Channel Feature:	0.00
riffle	0.00
Channel Width:	0.05
5.00	0.05
0.05	0.00
Transect 7	0.00
Substrate:	0.00
gravel	0.05
Water Clarity:	0.05
clear	0.05
Channel Feature:	0.00
riffle	0.00
Channel Width:	0.00
5.00	0.00
0.00	0.00
Transect 8	0.00
Substrate:	0.05
silt	0.10
Water Clarity:	0.10
none	0.20
Channel Feature:	0.30
pool	0.30
Channel Width:	0.30
2.00	0.30
0.18	0.15

	Depth (m)
Transect 9	0.20
Substrate:	0.50
silt	0.55
Water Clarity:	0.60
clear	0.60
Channel Feature:	0.60
pool	0.60
Channel Width:	0.50
6.00	0.30
0.53	0.30
Transect 10	0.10
Substrate:	0.40
clay	0.50
Water Clarity:	0.30
clear	0.40
Channel Feature:	0.35
pool	0.30
Channel Width:	0.20
7.00	0.10
0.30	0.10
Transect 11	0.10
Substrate:	0.40
silt	1.00
Water Clarity:	1.00
clear	1.00
Channel Feature:	1.00
pool	0.55
Channel Width:	0.45
7.00	0.30
0.50	0.30
Site Median	0.20
Site Maximum	1.00

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

WBID 1029
Site # 3

Date and Time: 5.22.07 6:00 PM

Current Weather Conditions cloudy

Weather Conditions for Past 10 days: cloudy

Drought Conditions? No

Site Location (e.g. road crossing) downstream 1000 yards from site # 2

GPS Mark: 8

Upstream Photo 20 Downstream Photo 19

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	None of the Above	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	None of the Above	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:	

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

Site # 3

Mark # 8

1029_Sugar Branch_Boone

	Depth (m)
Transect 1	0.00
Substrate:	0.10
silt	0.20
Water Clarity:	0.25
none	0.35
Channel Feature:	0.40
pool	0.50
Channel Width:	0.40
5.00	0.20
0.23	0.10
Transect 2	0.10
Substrate:	0.20
gravel, silt	0.20
Water Clarity:	0.30
none	0.20
Channel Feature:	0.25
pool	0.20
Channel Width:	0.30
6.00	0.30
0.20	0.20
Transect 3	0.10
Substrate:	0.20
clay	0.20
Water Clarity:	0.20
none	0.30
Channel Feature:	0.30
pool	0.35
Channel Width:	0.30
7.00	0.40
0.30	0.40
Transect 4	0.00
Substrate:	0.05
silt, clay	0.10
Water Clarity:	0.20
none	0.20
Channel Feature:	0.20
pool	0.30
Channel Width:	0.30
6.00	0.35
0.20	0.20

	Depth (m)
Transect 5	0.00
Substrate:	0.05
sand, silt	0.10
Water Clarity:	0.10
cloudy	0.05
Channel Feature:	0.00
riffle	0.00
Channel Width:	0.10
6.00	0.15
0.08	0.15
Transect 6	0.05
Substrate:	0.15
silt, sand	0.10
Water Clarity:	0.15
clear	0.15
Channel Feature:	0.15
pool	0.20
Channel Width:	0.20
7.00	0.20
0.15	0.15
Transect 7	0.05
Substrate:	0.20
sand, silt	0.30
Water Clarity:	0.30
none	0.30
Channel Feature:	0.30
pool	0.40
Channel Width:	0.40
5.00	0.35
0.30	0.30
Transect 8	0.00
Substrate:	0.00
gravel. Snd	0.05
Water Clarity:	0.05
clear	0.10
Channel Feature:	0.10
riffle	0.00
Channel Width:	0.00
1.00	0.00
0.00	0.00

	Depth (m)	
Transect 9	0.05	
Substrate:	0.10	
cobb;e, silt	0.10	
Water Clarity:	0.10	
clear	0.20	
Channel Feature:	0.10	
riffle	0.10	
Channel Width:	0.05	
7.00	0.00	
0.10	0.10	
Transect 10	0.20	
Substrate:	0.05	
clay	0.35	
Water Clarity:	0.40	
none	0.45	
Channel Feature:	0.50	
pool	0.40	
Channel Width:	0.40	
7.00	0.30	
0.38	0.20	
Transect 11	0.10	
Substrate:	0.40	
clay	0.40	
Water Clarity:	0.50	
none	0.50	
Channel Feature:	0.60	
pool	0.60	
Channel Width:	0.60	
8.00	0.50	
0.50	0.20	
Site Median	0.20	Site Maximum
		0.60

WBID# 1029



Site# 1 Photo ID# 13, Upstream



Site# 1 Photo ID# 14, Downstream



Site# 2 Photo ID# 15, Upstream



Site# 2 Photo ID# 16, Downstream

WBID# 1029



Site# 2 Photo ID# 17, Footpath/prints



Site# 3 Photo ID# 20, Upstream



Site# 3 Photo ID# 19, Downstream