



Missouri
Department of
Natural Resources

Use Attainability Analysis

for

WBID 1000 Clark Fork

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:	Clark Fork	WBID:	1000
8 digit HUC code:	10300102	County:	Cole
Upstream Legal Description	43N 13W 34		
Downstream Legal Description	43N 13W 23		
Number of Sites Evaluated	3		
List all site numbers, listed upstream to downstream	3,2,1		

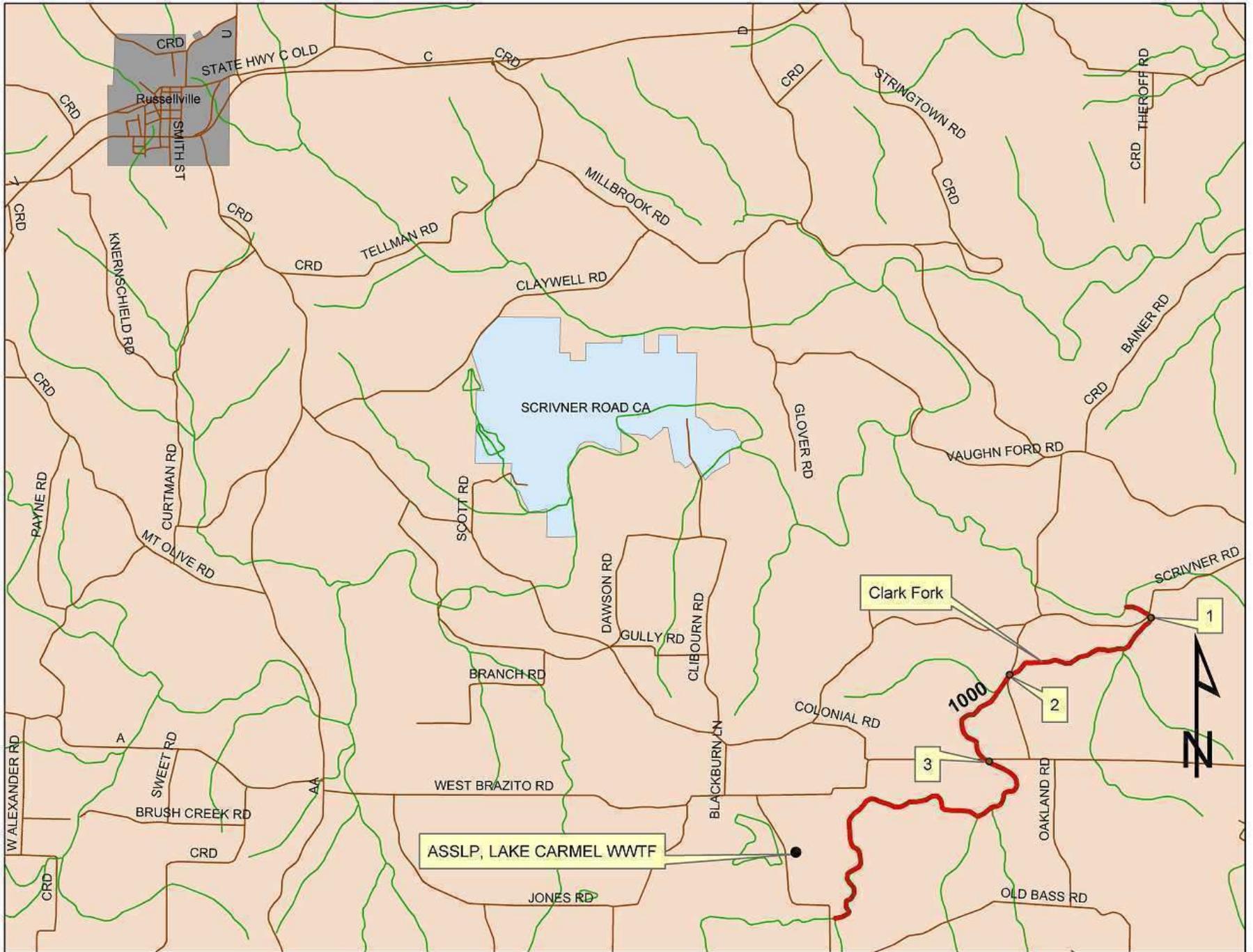
Discharger Facility Information

Discharger Facility Name(s):	CU, Lake Carmel WWTF
Discharger Permit Number(s):	MO0088986

UAA Surveyor

Name of Surveyor:	Gilisa Gould	Telephone Number:	(913)307-0054 Ext. 19
Organization/Employer:	SES, Inc.		
Position:	Field Team Leader		

Signed: _____ Date: _____



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

WBID 1000
 Site # 1

Date and Time: 5/16/2007 12:50

Current Weather Conditions clear

Weather Conditions for Past 10 days: Rained on 5/10 & 5/15, 1 inch total

Drought Conditions? No

Site Location (e.g. road crossing) Road crossing on Scrivner

GPS Mark: 29

Upstream Photo 61 Downstream Photo 62

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:	None of the Above

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

Site # 1

Mark # 29

1000_Clark Fork_Cole

	Depth (m)
Transect 1	0.05
Substrate:	0.10
gravel	0.20
Water Clarity:	0.35
clear	0.45
Channel Feature:	0.50
pool	0.55
Channel Width:	0.45
8 yards	0.25
0.30	0.10
Transect 2	0.05
Substrate:	0.15
gravel	0.30
Water Clarity:	0.40
clear	0.45
Channel Feature:	0.45
pool	0.55
Channel Width:	0.65
8 yards	0.60
0.43	0.00
Transect 3	0.05
Substrate:	0.10
cobble/gravel	0.25
Water Clarity:	0.35
clear	0.35
Channel Feature:	0.60
pool	0.50
Channel Width:	0.40
9 yards	0.45
0.35	0.30
Transect 4	0.00
Substrate:	0.00
cobble/gravel	0.05
Water Clarity:	0.10
clear	0.10
Channel Feature:	0.10
riffle	0.15
Channel Width:	0.05
8 yards	0.05
0.05	0.00

	Depth (m)
Transect 5	0.10
Substrate:	0.20
cobble	0.25
Water Clarity:	0.35
clear	0.25
Channel Feature:	0.25
pool	0.30
Channel Width:	0.30
8 yards	0.30
0.25	0.25
Transect 6	0.10
Substrate:	0.20
coble/gravel	0.25
Water Clarity:	0.30
clear	0.40
Channel Feature:	0.70
pool	0.90
Channel Width:	1.00
8 yards	0.90
0.48	0.55
Transect 7	0.00
Substrate:	0.10
gravel/cobble	0.15
Water Clarity:	0.25
clear	0.40
Channel Feature:	0.55
pool	0.70
Channel Width:	0.65
6 yards	0.50
0.35	0.30
Transect 8	0.00
Substrate:	0.00
cobble/gravel	0.10
Water Clarity:	0.15
clear	0.25
Channel Feature:	0.30
pool	0.40
Channel Width:	0.55
7 yards	0.15
0.20	0.25

	Depth (m)
Transect 9	0.10
Substrate:	0.05
cobble	0.00
Water Clarity:	0.00
clear	0.00
Channel Feature:	0.05
riffle	0.05
Channel Width:	0.10
10 yards	0.10
0.05	0.10
Transect 10	0.05
Substrate:	0.10
cobble	0.10
Water Clarity:	0.05
clear	0.05
Channel Feature:	0.10
riffle	0.05
Channel Width:	0.00
7 yards	0.00
0.05	0.00
Transect 11	0.05
Substrate:	0.15
cobble	0.15
Water Clarity:	0.15
clear	0.15
Channel Feature:	0.15
riffle	0.15
Channel Width:	0.10
7 yards	0.05
0.15	0.00
Site Median	Site Maximum
0.15	1.00

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

WBID 1000
 Site # 2

Date and Time: 5/16/2007 13:40

Current Weather Conditions clear

Weather Conditions for Past 10 days: Rained on 5/10 & 5/15, 1 inch total

Drought Conditions? No

Site Location (e.g. road crossing) crossing on Oakland

GPS Mark: 30

Upstream Photo 63 Downstream Photo 64

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:	None of the Above

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

Site # 2

Mark # 30

1000_Clark Fork_Cole

	Depth (m)
Transect 1	0.00
Substrate:	0.05
gravel	0.15
Water Clarity:	0.15
clear	0.20
Channel Feature:	0.20
pool	0.25
Channel Width:	0.25
6 yards	0.20
0.18	0.10
Transect 2	0.00
Substrate:	0.00
gravel	0.05
Water Clarity:	0.05
clear	0.05
Channel Feature:	0.10
pool	0.15
Channel Width:	0.20
7 yards	0.35
0.08	0.35
Transect 3	0.00
Substrate:	0.10
cobble/gravel	0.10
Water Clarity:	0.10
clear	0.25
Channel Feature:	0.25
pool	0.30
Channel Width:	0.30
9 yards	0.25
0.18	0.10
Transect 4	0.20
Substrate:	0.20
bedrock/gravel	0.30
Water Clarity:	0.40
clear/green	0.50
Channel Feature:	0.40
pool	0.30
Channel Width:	0.25
8 yards	0.25
0.28	0.10

	Depth (m)
Transect 5	0.20
Substrate:	0.40
bedrock/gravel	0.50
Water Clarity:	0.40
clear	0.50
Channel Feature:	0.45
pool	0.45
Channel Width:	0.40
8 yards	0.40
0.40	0.35
Transect 6	0.00
Substrate:	0.05
gravel	0.10
Water Clarity:	0.25
clear	0.25
Channel Feature:	0.25
riffle	0.20
Channel Width:	0.25
6 yards	0.20
0.20	0.10
Transect 7	0.25
Substrate:	0.50
bedrock/gravel	0.60
Water Clarity:	0.60
clear	0.55
Channel Feature:	0.40
pool	0.40
Channel Width:	0.40
6 yards	0.30
0.40	0.10
Transect 8	0.00
Substrate:	0.05
coble/gravel	0.10
Water Clarity:	0.15
clear	0.20
Channel Feature:	0.20
riffle	0.15
Channel Width:	0.10
3 yards	0.15
0.13	0.00

	Depth (m)
Transect 9	0.00
Substrate:	0.10
cobble/gravel	0.15
Water Clarity:	0.20
clear	0.15
Channel Feature:	0.20
riffle	0.15
Channel Width:	0.10
2 yards	0.10
0.13	0.10
Transect 10	0.00
Substrate:	0.00
	0.00
Water Clarity:	0.05
	0.10
Channel Feature:	0.10
	0.05
Channel Width:	0.10
9 yards	0.15
0.08	0.10
Transect 11	0.05
Substrate:	0.15
	0.10
Water Clarity:	0.10
	0.15
Channel Feature:	0.15
	0.15
Channel Width:	0.15
10 yards	0.30
0.15	0.15

Site Median	0.15	Site Maximum	0.60
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Field Data Sheets for Recreational Use Stream Surveys
Data Sheet B - Site Characterization
(must be completed for each site)

WBID 1000
 Site # 3

Date and Time: 5/16/2007 14:20

Current Weather Conditions clear

Weather Conditions for Past 10 days: Rained on 5/10 & 5/15, 1 inch total

Drought Conditions? No

Site Location (e.g. road crossing) crossing on Brazito Rd

GPS Mark: 31

Upstream Photo 65 Downstream Photo 66

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:	

WBID # 1000 **Site #** 3
Mark # 31 **Dissolved Oxygen (ppm)** 11.8
Upstream Views Physical Dimensions: Is there any water present at this view? yes

If so, is there an obvious current? yes

Select one of the following channel features:

	% of Channel Feature				
Riffle	30				
Run	0				
Pool	70				

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

If so, is there an obvious current? yes

Substrate:

% Cobble	% Gravel	% Sand	% Silt
46	54	0	0
% Mud/Clay	% Bedrock		
0	0		

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

0

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 # 31

1000_Clark Fork_Cole

	Depth (m)		Depth (m)		Depth (m)
Transect 1	0.00	Transect 5	0.00	Transect 9	0.00
Substrate:	0.10	Substrate:	0.05	Substrate:	0.05
gravel	0.10	cobble	0.05	cobble/gravel	0.10
Water Clarity:	0.25	Water Clarity:	0.05	Water Clarity:	0.10
clear	0.30	clear	0.05	clear	0.15
Channel Feature:	0.50	Channel Feature:	0.10	Channel Feature:	0.15
pool	0.45	riffle	0.05	riffle	0.10
Channel Width:	0.45	Channel Width:	0.10	Channel Width:	0.05
9 yards	0.25	7 yards	0.10	5 yards	0.00
0.25	0.10	0.05	0.05	0.08	0.00
Transect 2	0.10	Transect 6	0.05	Transect 10	0.00
Substrate:	0.25	Substrate:	0.00	Substrate:	0.05
gravel	0.35	cobble	0.00		0.10
Water Clarity:	0.35	Water Clarity:	0.00	Water Clarity:	0.10
clear	0.40	clear	0.00		0.15
Channel Feature:	0.40	Channel Feature:	0.00	Channel Feature:	0.20
pool	0.25	pool	0.20		0.30
Channel Width:	0.25	Channel Width:	0.20	Channel Width:	0.30
10 yards	0.20	12 yards	0.10	6 yards	0.25
0.25	0.10	0.03	0.05	0.15	0.15
Transect 3	0.00	Transect 7	0.10	Transect 11	0.10
Substrate:	0.20	Substrate:	0.15	Substrate:	0.20
gravel	0.25	clear	0.20	gravel	0.20
Water Clarity:	0.30	Water Clarity:	0.25	Water Clarity:	0.30
clear	0.25	gravel/cobble	0.20	clear	0.45
Channel Feature:	0.30	Channel Feature:	0.10	Channel Feature:	0.55
pool	0.25	pool	0.05	pool	0.50
Channel Width:	0.25	Channel Width:	0.00	Channel Width:	0.50
8 yards	0.15	11 yards	0.10	6 yards	0.35
0.25	0.05	0.10	0.05	0.33	0.10
Transect 4	0.00	Transect 8	0.20	Site Median	Site Maximum
Substrate:	0.05	Substrate:	0.65	0.10	0.65
cobble	0.10	gravel/cobble	0.50		
Water Clarity:	0.10	Water Clarity:	0.40		
clear	0.00	clear	0.40		
Channel Feature:	0.00	Channel Feature:	0.30		
riffle	0.10	pool	0.20		
Channel Width:	0.05	Channel Width:	0.40		
7 yards	0.10	9 yards	0.25		
0.08	0.10	0.35	0.25		

WBID# 1000



Site# 1 Photo ID# 61, Upstream



Site# 1 Photo ID# 62, Downstream



Site# 2 Photo ID# 63, Upstream



Site# 2 Photo ID# 64, Downstream

WBID# 1000



Site# 3 Photo ID# 65, Upstream



Site# 3 Photo ID# 66, Downstream