

Use Attainability Analysis

for

WBID 3190 Opossum Creek

Submitted by
SES Inc.

to

Missouri Department of Natural Resources
Water Protection Program

Date received: June 4, 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: Opposum Creek	WBID: 3190
8 digit HUC code: 11070207	County: Jasper
Upstream Legal Description 30N 30W 28	
Downstream Legal Description 30N 31W 22	
Number of Sites Evaluated 3	
List all site numbers, listed upstream to downstream	1,3,2

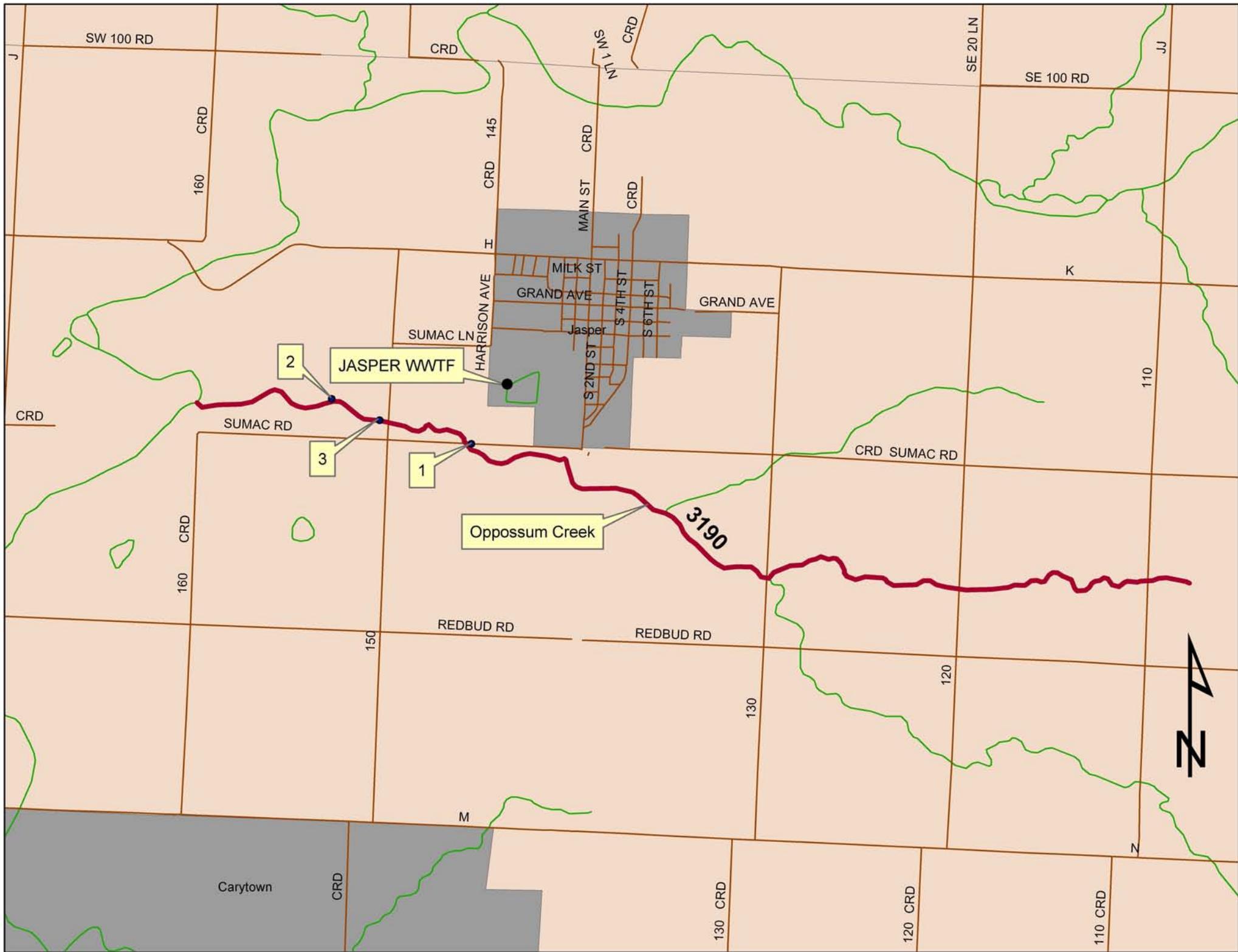
Discharger Facility Information

Discharger Facility Name(s): Jasper WWTF
Discharger Permit Number(s): MO0044202

UAA Surveyor

Name of Surveyor: Nolan Pringle	Telephone Number: (913)307-0046
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 3190
Site # 1

Date and Time: 5/16/2007 10:00

Current Weather Conditions sunny, clear skies

Weather Conditions for Past 10 days: Rained about 1.5 total inches in the local area

Drought Conditions? No

Site Location (e.g. road crossing) Road crossing at creek and Sumac Rd.

GPS Mark: 8

Upstream Photo 14 Downstream Photo 15

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 Pic #16	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 # 8

	Depth (m)
Transect 1	0.10
Substrate:	0.10
silt/gravel	0.20
Water Clarity:	0.40
clear/murky	0.45
Channel Feature:	0.50
pool	0.55
Channel Width:	0.55
12 yards	0.45
0.43	0.40
Transect 2	0.05
Substrate:	0.15
silt/gravel	0.25
Water Clarity:	0.30
clear/murky	0.35
Channel Feature:	0.35
pool	0.30
Channel Width:	0.25
12 yards	0.30
0.28	0.15
Transect 3	0.10
Substrate:	0.15
cobble/gravel	0.15
Water Clarity:	0.15
clear	0.15
Channel Feature:	0.15
riffle	0.10
Channel Width:	0.10
3 yards	0.10
0.13	0.10
Transect 4	0.15
Substrate:	0.10
gravel	0.15
Water Clarity:	0.05
clear	0.00
Channel Feature:	0.50
pool	0.15
Channel Width:	0.15
8 yards	0.15
0.15	0.15

	Depth (m)
Transect 5	0.15
Substrate:	0.15
gravel	0.25
Water Clarity:	0.45
clear/murky	0.50
Channel Feature:	0.50
pool	0.45
Channel Width:	0.40
7 yards	0.35
0.38	0.30
Transect 6	0.25
Substrate:	0.35
cobble/gravel	0.40
Water Clarity:	0.50
murky	0.45
Channel Feature:	0.45
pool	0.50
Channel Width:	0.55
7 yards	0.50
0.45	0.30
Transect 7	0.20
Substrate:	0.30
cobble/gravel	0.45
Water Clarity:	0.55
murky	0.65
Channel Feature:	0.65
pool	0.80
Channel Width:	0.70
8 yards	0.65
0.65	0.70
Transect 8	0.15
Substrate:	0.25
bedrock/gravel/cobble	0.35
Water Clarity:	0.55
murky	0.55
Channel Feature:	0.55
pool	0.55
Channel Width:	0.55
8 yards	0.45
0.53	0.50

	Depth (m)
Transect 9	0.45
Substrate:	0.55
bedrock/gravel	0.75
Water Clarity:	0.80
murky	0.85
Channel Feature:	0.75
pool	0.80
Channel Width:	0.75
10 yards	0.65
0.75	0.30
Transect 10	0.25
Substrate:	0.25
cobble/gravel	0.35
Water Clarity:	0.40
murky	0.45
Channel Feature:	0.55
pool	0.55
Channel Width:	0.50
12 yards	0.50
0.43	0.40
Transect 11	0.10
Substrate:	0.10
cobble/gravel	0.10
Water Clarity:	0.05
clear	0.05
Channel Feature:	0.05
riffle	0.10
Channel Width:	0.05
8 yards	0.05
0.05	0.05

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

WBID 3190
 Site # 3

Date and Time: 5/16/2007 11:50

Current Weather Conditions sunny, clear

Weather Conditions for Past 10 days: Rained about 1.5 total inches in the local area

Drought Conditions? No

Site Location (e.g. road crossing) 150 yards downstream of crossing at county road 150

GPS Mark: 10

Upstream Photo 21 Downstream Photo 20

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 Pic #22	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 # 10

	Depth (m)
Transect 1	0.10
Substrate:	0.40
cobble/bedrock	0.50
Water Clarity:	0.60
clear/murky	0.65
Channel Feature:	0.65
pool	0.60
Channel Width:	0.50
8 yards	0.25
0.50	0.20
Transect 2	0.15
Substrate:	0.15
bedrock	0.20
Water Clarity:	0.25
clear	0.20
Channel Feature:	0.30
riffle	0.30
Channel Width:	0.30
3 yards	0.25
0.23	0.05
Transect 3	0.05
Substrate:	0.15
gravel/bedrock	0.15
Water Clarity:	0.15
clear	0.05
Channel Feature:	0.05
riffle	0.10
Channel Width:	0.20
8 yards	0.15
0.13	0.10
Transect 4	0.15
Substrate:	0.15
gravel/cobble	0.35
Water Clarity:	0.25
clear	0.00
Channel Feature:	0.00
pool	0.00
Channel Width:	0.20
23 yards	0.25
0.15	0.15

	Depth (m)
Transect 5	0.10
Substrate:	0.10
gravel/cobble	0.00
Water Clarity:	0.00
clear	0.00
Channel Feature:	0.00
pool	0.00
Channel Width:	0.20
23 yards	0.40
0.05	0.10
Transect 6	0.30
Substrate:	0.40
gravel/cobble	0.40
Water Clarity:	0.50
clear to murky	0.50
Channel Feature:	0.40
pool	0.30
Channel Width:	0.25
15 yards	0.15
0.35	0.05
Transect 7	0.20
Substrate:	0.60
gravel/cobble	0.60
Water Clarity:	0.65
clear to murky	0.70
Channel Feature:	0.80
pool	0.80
Channel Width:	0.90
18 yards	1.00
0.68	0.40
Transect 8	0.25
Substrate:	0.25
gravel/cobble	0.30
Water Clarity:	0.35
clear to murky	0.30
Channel Feature:	0.35
pool	0.40
Channel Width:	0.55
15 yards	0.80
0.35	0.65

	Depth (m)
Transect 9	0.10
Substrate:	0.20
cobble	0.30
Water Clarity:	0.40
clear to murky	0.20
Channel Feature:	0.30
pool	0.30
Channel Width:	0.25
9 yards	0.20
0.23	0.20
Transect 10	0.05
Substrate:	0.15
cobble	0.20
Water Clarity:	0.20
clear to murky	0.25
Channel Feature:	0.35
pool	0.40
Channel Width:	0.35
11 yards	0.35
0.30	0.35
Transect 11	0.25
Substrate:	0.40
bedrock/cobble	0.45
Water Clarity:	0.35
clear to murky	0.45
Channel Feature:	0.50
pool	0.40
Channel Width:	0.25
13 yards	0.15
0.38	0.05

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

WBID 3190
Site # 2

Date and Time: 5/16/2007 11:10

Current Weather Conditions sunny, clear

Weather Conditions for Past 10 days: Rained about 1.5 total inches in the local area

Drought Conditions? No

Site Location (e.g. road crossing) 400 yards downstream county road 150

GPS Mark: 9

Upstream Photo 19 Downstream Photo 18

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 Pic #17	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 # 9

	Depth (m)
Transect 1	0.25
Substrate:	0.35
gravel/cobble	0.45
Water Clarity:	0.45
clear to murky	0.45
Channel Feature:	0.55
pool	0.60
Channel Width:	0.55
10 yards	0.30
0.45	0.15
Transect 2	0.15
Substrate:	0.40
bedrock	0.45
Water Clarity:	0.60
clear to murky	0.80
Channel Feature:	0.80
pool	0.80
Channel Width:	0.85
15 yards	0.80
0.78	0.75
Transect 3	0.20
Substrate:	0.30
gravel	0.45
Water Clarity:	0.70
murky	0.85
Channel Feature:	0.95
pool	1.00
Channel Width:	1.00
10 yards	1.00
0.78	0.40
Transect 4	0.40
Substrate:	0.50
gravel	0.60
Water Clarity:	0.65
murky	0.70
Channel Feature:	0.70
pool	0.80
Channel Width:	0.85
9 yards	0.65
0.65	0.30

	Depth (m)
Transect 5	0.25
Substrate:	0.20
gravel/cobble	0.20
Water Clarity:	0.30
clear to murky	0.25
Channel Feature:	0.20
pool	0.30
Channel Width:	0.30
11 yards	0.30
0.25	0.20
Transect 6	0.15
Substrate:	0.30
gravel/cobble	0.40
Water Clarity:	0.35
clear	0.30
Channel Feature:	0.25
pool	0.30
Channel Width:	0.40
14 yards	0.50
0.33	0.35
Transect 7	0.30
Substrate:	0.55
gravel/cobble	0.55
Water Clarity:	0.20
clear to murky	0.00
Channel Feature:	0.10
pool	0.45
Channel Width:	0.70
15 yards	0.70
0.50	0.60
Transect 8	0.10
Substrate:	0.20
gravel/cobble	0.30
Water Clarity:	0.50
clear to murky	0.65
Channel Feature:	0.55
pool	0.50
Channel Width:	0.40
12 yards	0.30
0.35	0.20

	Depth (m)
Transect 9	0.20
Substrate:	0.20
bedrock/gravel	0.20
Water Clarity:	0.20
clear	0.20
Channel Feature:	0.20
riffle	0.20
Channel Width:	0.20
4 yards	0.20
0.20	0.20
Transect 10	0.10
Substrate:	0.20
bedrock	0.20
Water Clarity:	0.20
clear	0.30
Channel Feature:	0.35
pool	0.30
Channel Width:	0.30
7 yards	0.30
0.30	0.30
Transect 11	0.25
Substrate:	0.35
bedrock	0.50
Water Clarity:	0.50
clear to murky	0.60
Channel Feature:	0.55
pool	0.60
Channel Width:	0.55
8 yards	0.50
0.50	0.20

WBID# 3190



Site# 1 Photo ID# 14, Upstream



Site# 1 Photo ID# 15, Downstream



Site# 1 Photo ID# 16, Livestock watering



Site# 3 Photo ID# 21, Upstream

WBID# 3190



Site# 3 Photo ID# 20, Downstream



Site# 3 Photo ID# 22, Livestock watering



Site# 2 Photo ID# 19, Upstream



Site# 2 Photo ID# 18, Downstream

WBID# 3190



Site# 2 Photo ID# 17, Livestock watering