

Use Attainability Analysis

for

WBID 2582 Howell 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:	Howell Creek	WBID:	2582
8 digit HUC code:	11010010	County:	Howell
Upstream Legal Description	24N 8W 21		
Downstream Legal Description	23N 6W 8		
Number of Sites Evaluated	7		
List all site numbers, listed upstream to downstream	6,7,4,5,3,2,1		

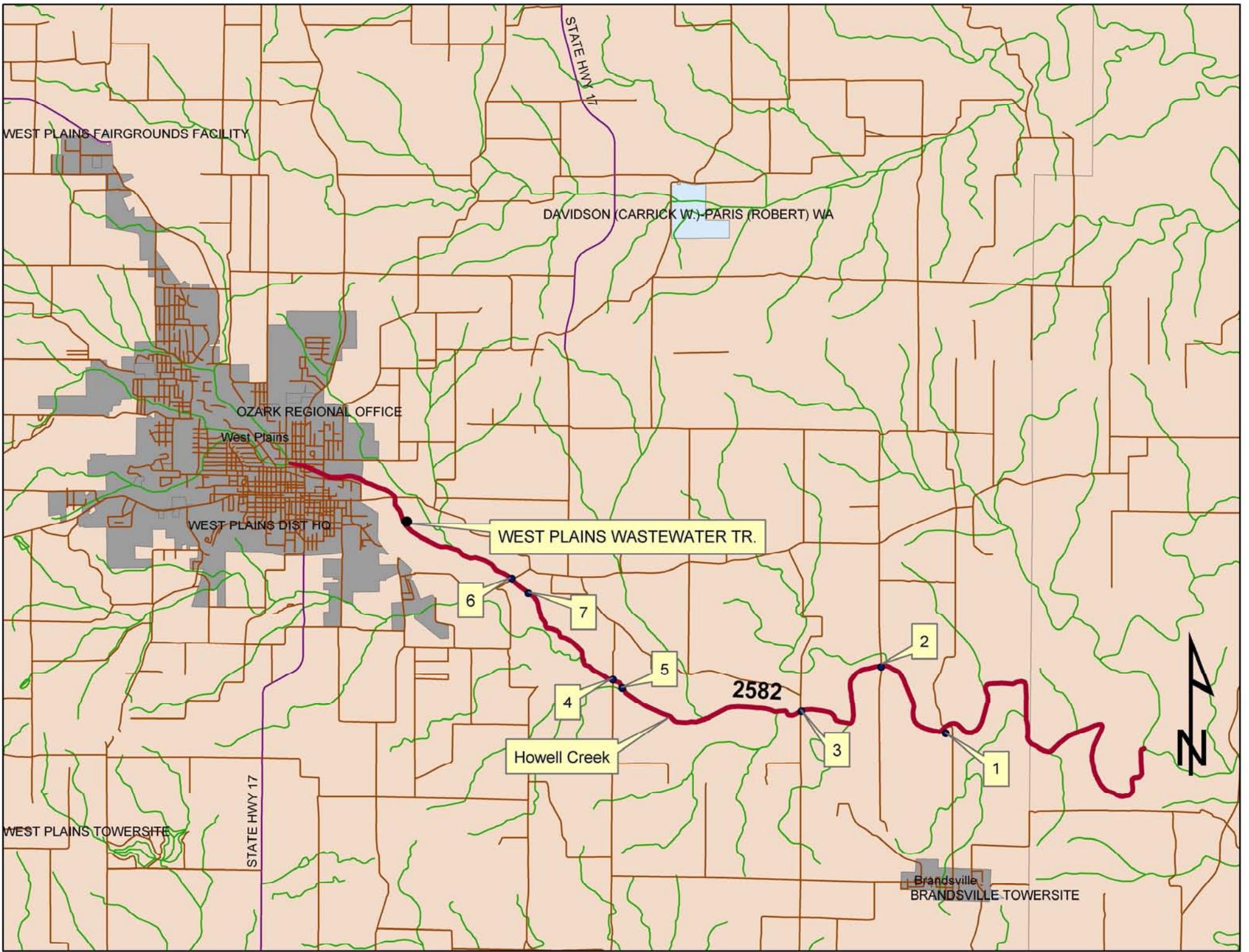
Discharger Facility Information

Discharger Facility Name(s):	West Plains WWTF
Discharger Permit Number(s):	MO 0096610

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 2582
 Site # 1

Date and Time: 5/19/2007 14:00

Current Weather Conditions sunny, clear

Weather Conditions for Past 10 days: Rain showers on 5/11, 5/12, and 5/15

Drought Conditions? No

Site Location (e.g. road crossing) At road crossing on 9790

GPS Mark: 33

Upstream Photo 66 Downstream Photo 65

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 # 33

	Depth (m)
Transect 1	0.00
Substrate:	0.00
gravel/cobble	0.00
Water Clarity:	0.00
	0.00
Channel Feature:	0.00
	0.00
Channel Width:	0.00
	0.00
0.00	0.00
Transect 2	0.00
Substrate:	0.00
cobble/gravel	0.00
Water Clarity:	0.00
	0.00
Channel Feature:	0.00
	0.00
Channel Width:	0.00
	0.00
0.00	0.00
Transect 3	0.25
Substrate:	0.45
mud/cobble	0.50
Water Clarity:	0.50
murky	0.45
Channel Feature:	0.40
pool	0.40
Channel Width:	0.65
13 yards	0.60
0.45	0.30
Transect 4	0.25
Substrate:	0.25
mud/cobble	0.30
Water Clarity:	0.30
murky	0.45
Channel Feature:	0.50
pool	0.35
Channel Width:	0.30
12 yards	0.30
0.30	0.30

	Depth (m)
Transect 5	0.00
Substrate:	0.00
gravel/cobble	0.00
Water Clarity:	0.00
	0.00
Channel Feature:	0.00
	0.00
Channel Width:	0.00
	0.00
0.00	0.00
Transect 6	0.00
Substrate:	0.00
gravel/cobble	0.00
Water Clarity:	0.00
	0.00
Channel Feature:	0.00
	0.00
Channel Width:	0.00
	0.00
0.00	0.00
Transect 7	0.00
Substrate:	0.00
gravel/cobble	0.00
Water Clarity:	0.00
	0.00
Channel Feature:	0.00
	0.00
Channel Width:	0.00
	0.00
0.00	0.00
Transect 8	0.00
Substrate:	0.00
gravel/cobble	0.00
Water Clarity:	0.00
	0.00
Channel Feature:	0.00
	0.00
Channel Width:	0.00
	0.00
0.00	0.00

	Depth (m)
Transect 9	0.00
Substrate:	0.00
gravel/cobble	0.00
Water Clarity:	0.00
	0.00
Channel Feature:	0.00
	0.00
Channel Width:	0.00
	0.00
0.00	0.00
Transect 10	0.05
Substrate:	0.05
gravel/mud/cobble	0.05
Water Clarity:	0.05
clear	0.05
Channel Feature:	0.00
pool	0.00
Channel Width:	0.00
1 yard	0.05
0.05	0.05
Transect 11	0.00
Substrate:	0.00
gravel/cobble	0.00
Water Clarity:	0.00
	0.00
Channel Feature:	0.00
	0.00
Channel Width:	0.00
	0.00
0.00	0.00

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

WBID 2582
 Site # 2

Date and Time: 5/19/2007 14:45

Current Weather Conditions sunny, clear

Weather Conditions for Past 10 days: Rain showers on 5/11, 5/12, and 5/15

Drought Conditions? No

Site Location (e.g. road crossing) At road crossing 9690

GPS Mark: 34

Upstream Photo 67 Downstream Photo 68

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: Gate across stream; See Pics 67&68	

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

Site # 2

Mark # 34

	Depth (m)
Transect 1	0.10
Substrate:	0.10
cobble/gravel/silt	0.00
Water Clarity:	0.00
clear to murky	0.00
Channel Feature:	0.00
pool	0.00
Channel Width:	0.00
10 yards	0.00
0.00	0.15
Transect 2	0.05
Substrate:	0.10
silt/mud/cobble	0.15
Water Clarity:	0.25
murky	0.25
Channel Feature:	0.30
pool	0.25
Channel Width:	0.20
8 yards	0.10
0.18	0.10
Transect 3	0.10
Substrate:	0.15
silt/cobble/gravel	0.25
Water Clarity:	0.30
murky	0.25
Channel Feature:	0.45
pool	0.50
Channel Width:	0.45
11 yards	0.30
0.28	0.25
Transect 4	0.25
Substrate:	0.65
silt/cobble/gravel	0.70
Water Clarity:	0.75
murky	0.75
Channel Feature:	0.75
pool	0.70
Channel Width:	0.65
10 yards	0.50
0.68	0.30

	Depth (m)
Transect 5	0.30
Substrate:	0.45
cobble/gravel/silt	0.60
Water Clarity:	0.65
murky	0.80
Channel Feature:	0.80
pool	0.60
Channel Width:	0.55
17 yards	0.45
0.58	0.30
Transect 6	0.30
Substrate:	0.35
silt/cobble/gravel/mud	0.50
Water Clarity:	0.65
murky	0.55
Channel Feature:	0.60
pool	0.65
Channel Width:	0.45
14 yards	0.40
0.48	0.40
Transect 7	0.20
Substrate:	0.25
silt/cobble/gravel/mud	0.50
Water Clarity:	0.60
murky	0.60
Channel Feature:	0.60
pool	0.65
Channel Width:	0.45
10 yards	0.35
0.48	0.35
Transect 8	0.30
Substrate:	0.40
silt/cobble/gravel/mud	0.45
Water Clarity:	0.40
murky	0.35
Channel Feature:	0.30
pool	0.30
Channel Width:	0.30
13 yards	0.30
0.30	0.30

	Depth (m)
Transect 9	0.25
Substrate:	0.25
silt/cobble/gravel/mud	0.30
Water Clarity:	0.35
murky	0.35
Channel Feature:	0.35
pool	0.25
Channel Width:	0.30
12 yards	0.20
0.28	0.20
Transect 10	0.25
Substrate:	0.30
gravel/cobble	0.00
Water Clarity:	0.00
clear	0.00
Channel Feature:	0.00
pool	0.40
Channel Width:	0.30
15 yards	0.30
0.20	0.15
Transect 11	0.20
Substrate:	0.30
cobble/gravel	0.30
Water Clarity:	0.30
clear to murky	0.30
Channel Feature:	0.30
pool	0.20
Channel Width:	0.25
14 yards	0.30
0.30	0.20

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

WBID 2582
 Site # 3

Date and Time: 5/19/2007 15:40

Current Weather Conditions sunny, clear

Weather Conditions for Past 10 days: Rain showers on 5/11, 5/12, and 5/15

Drought Conditions? No

Site Location (e.g. road crossing) 50 yards downstream of road crossing 9510

GPS Mark: 35

Upstream Photo 69 Downstream Photo 70

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 # 3

Mark # 35

	Depth (m)
Transect 1	0.10
Substrate:	0.25
silt/cobble/gravel	0.30
Water Clarity:	0.25
clear	0.30
Channel Feature:	0.25
pool	0.25
Channel Width:	0.25
9 yards	0.10
0.25	0.10
Transect 2	0.10
Substrate:	0.15
silt/gravel/cobble	0.20
Water Clarity:	0.30
clear	0.30
Channel Feature:	0.25
pool	0.20
Channel Width:	0.10
4 yards	0.05
0.18	0.05
Transect 3	0.05
Substrate:	0.05
silt/gravel/cobble	0.05
Water Clarity:	0.15
clear	0.20
Channel Feature:	0.30
pool	0.30
Channel Width:	0.35
4 yards	0.20
0.18	0.15
Transect 4	0.05
Substrate:	0.20
silt/gravel/cobble/be	0.20
Water Clarity:	0.60
clear	0.60
Channel Feature:	0.55
pool	0.45
Channel Width:	0.45
8 yards	0.30
0.38	0.25

	Depth (m)
Transect 5	0.00
Substrate:	0.00
gravel/cobble	0.00
Water Clarity:	0.00
	0.00
Channel Feature:	0.00
	0.00
Channel Width:	0.00
	0.00
0.00	0.00
Transect 6	0.00
Substrate:	0.00
gravel/cobble	0.00
Water Clarity:	0.00
	0.00
Channel Feature:	0.00
	0.00
Channel Width:	0.00
	0.00
0.00	0.00
Transect 7	0.00
Substrate:	0.00
gravel/bedrock/cobble	0.00
Water Clarity:	0.00
	0.00
Channel Feature:	0.00
	0.00
Channel Width:	0.00
	0.00
0.00	0.00
Transect 8	0.00
Substrate:	0.00
gravel/cobble	0.00
Water Clarity:	0.00
	0.00
Channel Feature:	0.00
	0.00
Channel Width:	0.00
	0.00
0.00	0.00

	Depth (m)
Transect 9	0.00
Substrate:	0.00
gravel/cobble	0.00
Water Clarity:	0.00
	0.00
Channel Feature:	0.00
	0.00
Channel Width:	0.00
	0.00
0.00	0.00
Transect 10	0.00
Substrate:	0.00
gravel/cobble	0.00
Water Clarity:	0.00
	0.00
Channel Feature:	0.00
	0.00
Channel Width:	0.00
	0.00
0.00	0.00
Transect 11	0.05
Substrate:	0.10
gravel/silt	0.10
Water Clarity:	0.00
clear	0.05
Channel Feature:	0.10
pool	0.10
Channel Width:	0.10
8 yards	0.10
0.10	0.10

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

WBID 2582
 Site # 4

Date and Time: 5/19/2007 16:00

Current Weather Conditions sunny, fair

Weather Conditions for Past 10 days: Rain showers on 5/11, 5/12, and 5/15

Drought Conditions? No

Site Location (e.g. road crossing) At crossing 9030

GPS Mark: 37

Upstream Photo 71 Downstream Photo 72

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	<i>None of the Above</i>	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	<i>None of the Above</i>	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: <i>None of the Above</i>	

WBID # 2582 **Site #** 4
Mark # 37 **Dissolved Oxygen (ppm)** 11.9
Upstream Views Physical Dimensions: Is there any water present at this view?

If so, is there an obvious current?

Select one of the following channel features:

	% of Channel Feature				
Riffle	0				
Run	0				
Pool	100				

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

If so, is there an obvious current?

Substrate:

% Cobble	% Gravel	% Sand	% Silt
35	35	0	20
% Mud/Clay	% Bedrock		
10	0		

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

Filamentous green algae. Vegetation along banks. Algae on rocks. Floating algae.

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 # 4

Mark # 37

	Depth (m)		Depth (m)		Depth (m)
Transect 1	0.05	Transect 5	0.10	Transect 9	0.35
Substrate:	0.10	Substrate:	0.50	Substrate:	0.55
gravel/cobble	0.15	cobble/silt/gravel	0.80	gravel/silt/mud/cobble	0.65
Water Clarity:	0.15	Water Clarity:	1.00	Water Clarity:	0.80
clear	0.05	clear	1.00	clear	0.80
Channel Feature:	0.20	Channel Feature:	1.00	Channel Feature:	0.65
pool	0.30	pool	0.70	pool	0.45
Channel Width:	0.20	Channel Width:	0.50	Channel Width:	0.40
4 yards	0.05	8 yards	0.50	8 yards	0.25
0.13	0.05	0.60	0.35	0.50	0.25
Transect 2	0.05	Transect 6	0.20	Transect 10	0.25
Substrate:	0.05	Substrate:	0.50	Substrate:	0.45
cobble/gravel	0.05	cobble/silt/gravel	0.60	cobble/gravel/silt/mud	0.65
Water Clarity:	0.00	Water Clarity:	0.70	Water Clarity:	1.00
clear	0.00	clear	1.00	clear to murky	1.00
Channel Feature:	0.15	Channel Feature:	1.00	Channel Feature:	1.00
pool	0.10	pool	1.00	pool	0.75
Channel Width:	0.05	Channel Width:	0.75	Channel Width:	0.70
6 yards	0.05	7 yards	0.50	11 yards	0.60
0.05	0.05	0.65	0.35	0.68	0.60
Transect 3	0.35	Transect 7	0.20	Transect 11	0.35
Substrate:	0.60	Substrate:	0.50	Substrate:	0.55
gravel/cobble/silt	0.70	cobble/silt/gravel	0.70	cobble/gravel/silt/mud	0.60
Water Clarity:	0.85	Water Clarity:	1.00	Water Clarity:	0.80
clear	0.90	clear	1.00	clear/murky	1.00
Channel Feature:	0.80	Channel Feature:	1.00	Channel Feature:	1.00
pool	0.70	pool	0.50	pool	0.90
Channel Width:	0.60	Channel Width:	0.50	Channel Width:	0.65
11 yards	0.50	9 yards	0.45	10 yards	0.45
0.65	0.30	0.50	0.30	0.63	0.30
Transect 4	0.40	Transect 8	0.20		
Substrate:	0.50	Substrate:	0.35		
cobble/silt/gravel	0.60	cobble/silt/gravel	0.50		
Water Clarity:	0.90	Water Clarity:	0.75		
clear	0.95	clear	1.00		
Channel Feature:	0.85	Channel Feature:	1.00		
pool	0.85	pool	0.60		
Channel Width:	0.70	Channel Width:	0.55		
9 yards	0.65	9 yards	0.35		
0.68	0.55	0.53	0.25		

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

WBID 2582
 Site # 5

Date and Time: 5/19/2007 17:00

Current Weather Conditions sunny, clear

Weather Conditions for Past 10 days: Rain showers on 5/11, 5/12, and 5/15

Drought Conditions? No

Site Location (e.g. road crossing) 300 yards downstream of crossing 9030

GPS Mark: 38

Upstream Photo 75 Downstream Photo 74

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
Pic # 73			
NPDES Discharge	Fishing Tackle	Other:	

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

Site # 5

Mark # 38

Depth (m)		Depth (m)		Depth (m)	
Transect 1	0.15	Transect 5	0.55	Transect 9	0.05
Substrate:	0.60	Substrate:	0.55	Substrate:	0.05
gravel/silt/mud/cob	0.60	cobble/gravel/silt/mud	0.60	cobble/gravel/silt	0.10
Water Clarity:	0.40	Water Clarity:	0.60	Water Clarity:	0.10
murky to clear	0.30	clear to murky	0.35	clear	0.10
Channel Feature:	0.30	Channel Feature:	0.35	Channel Feature:	0.00
pool	0.25	pool	0.25	riffle	0.00
Channel Width:	0.20	Channel Width:	0.20	Channel Width:	0.05
7 yards	0.10	10 yards	0.20	8 yards	0.05
0.28	0.10	0.35	0.20	0.05	0.05
Transect 2	0.05	Transect 6	1.00	Transect 10	0.05
Substrate:	0.15	Substrate:	1.00	Substrate:	0.15
cobble/silt/gravel	0.45	cobble/mud/gravel/silt	1.00	cobble/gravel/silt	0.35
Water Clarity:	0.45	Water Clarity:	1.00	Water Clarity:	0.45
murky to clear	0.50	murky	1.00	clear	0.55
Channel Feature:	0.50	Channel Feature:	1.00	Channel Feature:	0.55
pool	0.50	pool	1.00	pool	0.60
Channel Width:	0.55	Channel Width:	1.00	Channel Width:	0.45
7 yards	0.35	10 yards	1.00	6 yards	0.30
0.45	0.25	1.00	1.00	0.40	0.30
Transect 3	0.15	Transect 7	0.40	Transect 11	0.20
Substrate:	0.30	Substrate:	0.70	Substrate:	0.20
cobble/gravel/silt/b	1.00	cobble/silt/gravel	0.90	cobble/gravel/silt	0.10
Water Clarity:	1.00	Water Clarity:	0.70	Water Clarity:	0.05
murky to clear	1.00	clear to murky	1.00	clear	0.05
Channel Feature:	1.00	Channel Feature:	0.90	Channel Feature:	0.10
pool	1.00	pool	0.90	pool	0.10
Channel Width:	1.00	Channel Width:	0.70	Channel Width:	0.05
8 yards	1.00	10 yards	0.65	9 yards	0.05
1.00	1.00	0.70	0.65	0.08	0.05
Transect 4	0.35	Transect 8	0.05		
Substrate:	0.90	Substrate:	0.05		
cobble/silt/mud/gra	1.00	gravel/silt/cobble/mud	0.05		
Water Clarity:	1.00	Water Clarity:	0.10		
murky	1.00	clear to murky	0.10		
Channel Feature:	0.95	Channel Feature:	0.10		
pool	0.80	semi-riffle	0.05		
Channel Width:	0.75	Channel Width:	0.05		
11 yards	0.60	6 yards	0.05		
0.85	0.55	0.05	0.05		

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

WBID 2582
 Site # 6

Date and Time: 5/19/2007 18:00

Current Weather Conditions sunny, clear skies

Weather Conditions for Past 10 days: Rain showers on 5/11, 5/12, and 5/15

Drought Conditions? No

Site Location (e.g. road crossing) At road crossing ZZ hwy.

GPS Mark: 39

Upstream Photo 77 Downstream Photo 76

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

WBID # 2582 **Site #** 6
Mark # 39 **Dissolved Oxygen (ppm)** 12.1
Upstream Views Physical Dimensions: Is there any water present at this view?

yes

 no, but
 occasional
 riffle shows
 flow

If so, is there an obvious current?

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?

If so, is there an obvious current?

Substrate:

% Cobble	% Gravel	% Sand	% Silt
33	34	0	33
% Mud/Clay	% Bedrock		
0	0		

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

Floating algae. Algae on rocks. Vegetation along banks.

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 # 6

Mark # 39

	Depth (m)		Depth (m)		Depth (m)
Transect 1	0.40	Transect 5	0.15	Transect 9	0.05
Substrate:	0.45	Substrate:	0.15	Substrate:	0.05
silt/gravel/cobble	0.45	cobble/silt/gravel	0.25	cobble/gravel/silt	0.05
Water Clarity:	0.40	Water Clarity:	0.25	Water Clarity:	0.05
clear	0.40	clear	0.20	clear	0.10
Channel Feature:	0.30	Channel Feature:	0.20	Channel Feature:	0.10
pool	0.25	pool	0.15	riffle	0.10
Channel Width:	0.15	Channel Width:	0.10	Channel Width:	0.10
11 yards	0.15	11 yards	0.15	6 yards	0.10
0.35	0.10	0.15	0.15	0.10	0.10
Transect 2	0.35	Transect 6	0.10	Transect 10	0.10
Substrate:	0.45	Substrate:	0.10	Substrate:	0.10
cobble/gravel/silt	0.50	cobble/silt/gravel	0.10	cobble/silt/gravel	0.10
Water Clarity:	0.40	Water Clarity:	0.25	Water Clarity:	0.10
clear	0.45	clear	0.25	clear	0.05
Channel Feature:	0.30	Channel Feature:	0.20	Channel Feature:	0.05
pool	0.15	pool	0.15	riffle	0.10
Channel Width:	0.15	Channel Width:	0.15	Channel Width:	0.20
14 yards	0.10	13 yards	0.15	4 yards	0.20
0.33	0.15	0.15	0.15	0.10	0.30
Transect 3	0.35	Transect 7	0.20	Transect 11	0.15
Substrate:	0.35	Substrate:	0.25	Substrate:	0.20
cobble/gravel/silt	0.35	cobble/silt/gravel	0.30	gravel/silt/cobble	0.25
Water Clarity:	0.40	Water Clarity:	0.35	Water Clarity:	0.30
clear	0.30	clear	0.30	clear	0.25
Channel Feature:	0.30	Channel Feature:	0.30	Channel Feature:	0.40
pool	0.25	pool	0.30	pool	0.40
Channel Width:	0.15	Channel Width:	0.20	Channel Width:	0.45
14 yards	0.15	14 yards	0.20	6 yards	0.30
0.30	0.15	0.28	0.10	0.28	0.20
Transect 4	0.25	Transect 8	0.25		
Substrate:	0.20	Substrate:	0.45		
cobble/gravel/silt	0.20	cobble/silt/gravel	0.45		
Water Clarity:	0.20	Water Clarity:	0.35		
clear	0.25	clear	0.30		
Channel Feature:	0.25	Channel Feature:	0.30		
pool	0.20	pool	0.30		
Channel Width:	0.20	Channel Width:	0.15		
13 yards	0.20	14 yards	0.05		
0.20	0.20	0.30	0.05		

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

WBID 2582
 Site # 7

Date and Time: 5/19/2007 18:30

Current Weather Conditions sunny, clear

Weather Conditions for Past 10 days: Rain showers on 5/11, 5/12, and 5/15

Drought Conditions? No

Site Location (e.g. road crossing) 500 yards downstream of crossing ZZ hwy.

GPS Mark: 40

Upstream Photo 79 Downstream Photo 78

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

WBID # 2582 **Site #** 7
Mark # 40 **Dissolved Oxygen (ppm)** 11.6
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	10				
Run	0				
Pool	90				

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

If so, is there an obvious current?

Substrate:

% Cobble	% Gravel	% Sand	% Silt
25	35	0	29
% Mud/Clay	% Bedrock		
0	11		

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

Algae on rocks. Some filamentous algae. Vegetation along banks.

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 # 7

Mark # 40

	Depth (m)		Depth (m)		Depth (m)
Transect 1	0.05	Transect 5	0.05	Transect 9	0.15
Substrate:	0.10	Substrate:	0.10	Substrate:	0.20
gravel/cobble	0.15	silt/gravel/cobble	0.30	bedrock/silt	0.20
Water Clarity:	0.10	Water Clarity:	0.30	Water Clarity:	0.25
clear	0.05	clear	0.30	clear	0.30
Channel Feature:	0.00	Channel Feature:	0.25	Channel Feature:	0.40
pool	0.00	pool	0.20	pool	0.40
Channel Width:	0.00	Channel Width:	0.10	Channel Width:	0.30
6 yards	0.10	6 yards	0.10	12 yards	0.20
0.05	0.05	0.15	0.10	0.23	0.20
Transect 2	0.20	Transect 6	0.15	Transect 10	0.10
Substrate:	0.20	Substrate:	0.10	Substrate:	0.20
cobble/gravel	0.15	gravel/silt/cobble	0.10	bedrock/gravel/silt	0.20
Water Clarity:	0.05	Water Clarity:	0.00	Water Clarity:	0.25
clear	0.05	clear	0.00	clear	0.35
Channel Feature:	0.00	Channel Feature:	0.00	Channel Feature:	0.35
pool	0.05	pool	0.00	pool	0.35
Channel Width:	0.05	Channel Width:	0.05	Channel Width:	0.30
7 yards	0.05	9 yards	0.05	10 yards	0.30
0.05	0.05	0.05	0.05	0.30	0.30
Transect 3	0.05	Transect 7	0.05	Transect 11	0.15
Substrate:	0.10	Substrate:	0.10	Substrate:	0.40
gravel/cobble	0.10	cobble/silt/gravel	0.10	bedrock/silt/gravel	0.40
Water Clarity:	0.05	Water Clarity:	0.25	Water Clarity:	0.45
clear	0.05		0.25	clear	0.50
Channel Feature:	0.05	Channel Feature:	0.20	Channel Feature:	0.50
rifle	0.10		0.15	pool	0.40
Channel Width:	0.10	Channel Width:	0.30	Channel Width:	0.45
3 yards	0.05		0.10	15 yards	0.30
0.08	0.15	0.13	0.10	0.40	0.15
Transect 4	0.05	Transect 8	0.05		
Substrate:	0.05	Substrate:	0.10		
silt/gravel	0.05	gravel/silt/cobble	0.15		
Water Clarity:	0.10	Water Clarity:	0.20		
clear	0.10	clear	0.25		
Channel Feature:	0.10	Channel Feature:	0.25		
pool	0.30	pool	0.30		
Channel Width:	0.25	Channel Width:	0.25		
3 yards	0.25	11 yards	0.25		
0.10	0.20	0.23	0.20		

WBID# 2582



Site# 1 Photo ID# 66, Upstream



Site# 1 Photo ID# 65, Downstream



Site# 2 Photo ID# 67, Upstream



Site# 2 Photo ID# 68, Downstream

WBID# 2582



Site# 3 Photo ID# 69, Upstream



Site# 3 Photo ID# 70, Downstream



Site# 4 Photo ID# 71, Upstream

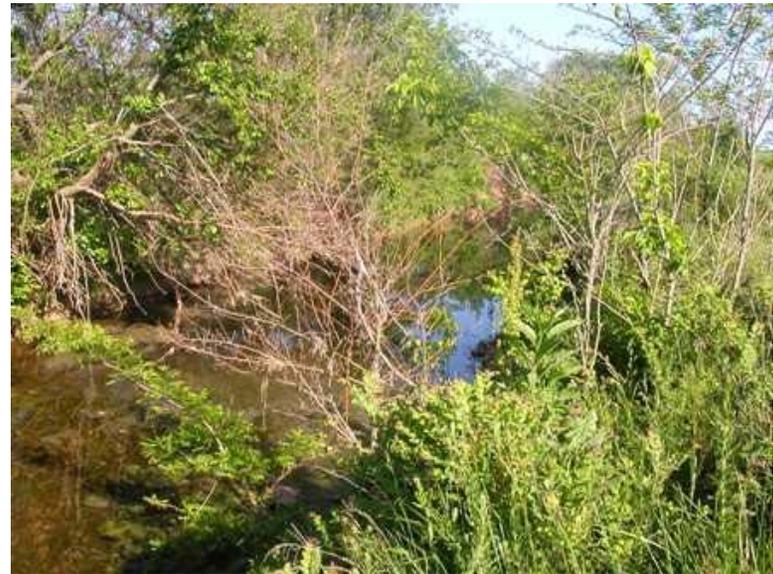


Site# 4 Photo ID# 72, Downstream

WBID# 2582



Site# 5 Photo ID# 75, Upstream



Site# 5 Photo ID# 74, Downstream



Site# 5 Photo ID# 73, Livestock watering



Site# 6 Photo ID# 77, Upstream

WBID# 2582



Site# 6 Photo ID# 76, Downstream



Site# 7 Photo ID# 79, Upstream



Site# 7 Photo ID# 78, Downstream