

Use Attainability Analysis  
for  
WBID 3202 Glendale Fork

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: Glendale Fork	WBID: 3202
8 digit HUC code: 11070207	County: Barton
Upstream Legal Description 31N 33W 13	
Downstream Legal Description 30N 33W 1	
Number of Sites Evaluated 3	
List all site numbers, listed upstream to downstream	1,2,3

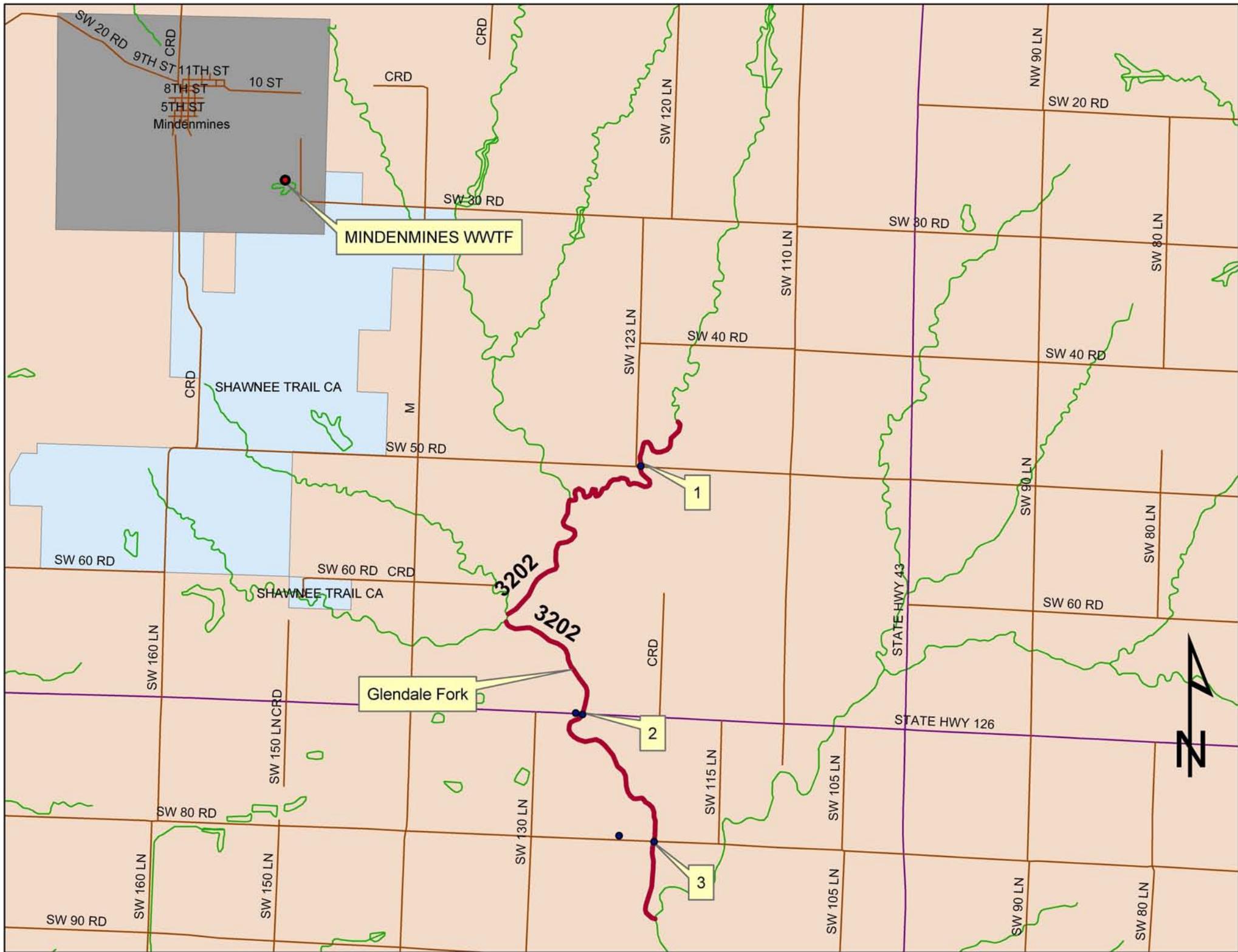
**Discharger Facility Information**

Discharger Facility Name(s): Mindenmines WWTF
Discharger Permit Number(s): MO0116581

**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                    3202  
Site #                    1

Date and Time:            5/21/2007 14:40

Current Weather Conditions            sunny, clear

Weather Conditions for Past 10 days:    Rained about 1.25 inches in the area

Drought Conditions? No

Site Location (e.g. road crossing)            At road crossing 50 & 123

GPS Mark:            57

Upstream Photo                            110                            Downstream Photo                            111

**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>



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

Site # 1

Mark # 57

	Depth (m)
<b>Transect 1</b>	0.10
Substrate:	0.20
silt/mud	0.35
Water Clarity:	0.45
murky	0.45
Channel Feature:	0.45
pool	0.45
Channel Width:	0.30
7 yards	0.25
<b>0.33</b>	<b>0.25</b>
<b>Transect 2</b>	0.05
Substrate:	0.15
silt/mud	0.25
Water Clarity:	0.35
murky	0.25
Channel Feature:	0.20
pool	0.20
Channel Width:	0.25
6 yards	0.25
<b>0.23</b>	<b>0.10</b>
<b>Transect 3</b>	0.05
Substrate:	0.10
silt/mud	0.15
Water Clarity:	0.20
murky	0.25
Channel Feature:	0.25
pool	0.15
Channel Width:	0.10
5 yards	0.10
<b>0.13</b>	<b>0.05</b>
<b>Transect 4</b>	0.05
Substrate:	0.05
mud/silt	0.10
Water Clarity:	0.15
clear to murky	0.15
Channel Feature:	0.15
pool	0.10
Channel Width:	0.10
3 yards	0.05
<b>0.10</b>	<b>0.05</b>

	Depth (m)
<b>Transect 5</b>	0.10
Substrate:	0.15
mud/silt	0.20
Water Clarity:	0.20
murky	0.25
Channel Feature:	0.25
pool	0.20
Channel Width:	0.15
4 yards	0.05
<b>0.18</b>	<b>0.05</b>
<b>Transect 6</b>	0.05
Substrate:	0.05
mud/gravel/silt	0.05
Water Clarity:	0.10
clear to murky	0.05
Channel Feature:	0.05
pool	0.05
Channel Width:	0.05
2 yards	0.05
<b>0.05</b>	<b>0.05</b>
<b>Transect 7</b>	0.05
Substrate:	0.15
mud/silt	0.15
Water Clarity:	0.15
murky	0.10
Channel Feature:	0.10
pool	0.05
Channel Width:	0.05
4 yards	0.05
<b>0.08</b>	<b>0.05</b>
<b>Transect 8</b>	0.05
Substrate:	0.15
mud/silt	0.15
Water Clarity:	0.20
murky	0.20
Channel Feature:	0.15
pool	0.15
Channel Width:	0.10
4 yards	0.05
<b>0.15</b>	<b>0.05</b>

	Depth (m)
<b>Transect 9</b>	0.05
Substrate:	0.10
silt/mud	0.10
Water Clarity:	0.15
murky	0.25
Channel Feature:	0.20
pool	0.20
Channel Width:	0.10
3 yards	0.05
<b>0.10</b>	<b>0.05</b>
<b>Transect 10</b>	0.05
Substrate:	0.05
silt/mud/gravel	0.10
Water Clarity:	0.10
clear to murky	0.15
Channel Feature:	0.15
pool	0.15
Channel Width:	0.10
2 yards	0.10
<b>0.10</b>	<b>0.10</b>
<b>Transect 11</b>	0.05
Substrate:	0.10
silt/mud/gravel	0.15
Water Clarity:	0.25
clear to murky	0.40
Channel Feature:	0.45
pool	0.45
Channel Width:	0.40
5 yards	0.30
<b>0.28</b>	<b>0.15</b>

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

WBID                    3202  
Site #                    2

Date and Time:            5/21/2007 15:30

Current Weather Conditions            sunny, clear

Weather Conditions for Past 10 days:    Rained about 1.25 inches in the area

Drought Conditions? No

Site Location (e.g. road crossing)            At crossing state HWY 126

GPS Mark:            58

Upstream Photo                            113                            Downstream Photo                            112

**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	<b>None of the Above</b>	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	<b>None of the Above</b>	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: <b>None of the Above</b>	

**WBID #** 3202      **Site #** 2  
**Mark #** 58      **Dissolved Oxygen (ppm)** 7.1  
**Upstream Views Physical Dimensions:** Is there any water present at this view?      yes

If so, is there an obvious current?      yes, barely

**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
20	20	0	20
% Mud/Clay	% Bedrock		
20	20		

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

Vegetation along banks. No floating algae.

**Water Characteristics**

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

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

Site # 2

Mark # 58

	Depth (m)		Depth (m)		Depth (m)
<b>Transect 1</b>	0.25	<b>Transect 5</b>	0.05	<b>Transect 9</b>	0.15
Substrate:	0.40	Substrate:	0.05	Substrate:	0.35
mud/gravel/bedrock	0.50	mud/gravel/bedrock/silt	0.10	bedrock/cobble/gravel	0.40
Water Clarity:	0.60	Water Clarity:	0.20	Water Clarity:	0.40
murky	0.65	murky	0.15	murky	0.35
Channel Feature:	0.55	Channel Feature:	0.15	Channel Feature:	0.40
pool	0.70	pool	0.15	pool	0.35
Channel Width:	0.60	Channel Width:	0.20	Channel Width:	0.35
21 yards	0.45	6 yards	0.15	5 yards	0.30
<b>0.53</b>	<b>0.40</b>	<b>0.15</b>	<b>0.05</b>	<b>0.35</b>	<b>0.20</b>
<b>Transect 2</b>	0.30	<b>Transect 6</b>	0.15	<b>Transect 10</b>	0.25
Substrate:	0.50	Substrate:	0.20	Substrate:	0.40
bedrock/silt/mud/gravel	0.60	bedrock/gravel/cobble	0.25	bedrock/cobble/gravel	0.50
Water Clarity:	0.60	Water Clarity:	0.25	Water Clarity:	0.45
murky	0.60	murky	0.25	murky	0.45
Channel Feature:	0.60	Channel Feature:	0.25	Channel Feature:	0.40
pool	0.65	pool	0.36	pool	0.45
Channel Width:	0.60	Channel Width:	0.20	Channel Width:	0.45
11 yards	0.55	8 yards	0.15	6 yards	0.45
<b>0.60</b>	<b>0.45</b>	<b>0.23</b>	<b>0.15</b>	<b>0.45</b>	<b>0.45</b>
<b>Transect 3</b>	0.25	<b>Transect 7</b>	0.25	<b>Transect 11</b>	0.35
Substrate:	0.40	Substrate:	0.25	Substrate:	0.55
mud/gravel/bedrock	0.50	bedrock/cobble/gravel	0.30	bedrock/cobble/gravel	0.50
Water Clarity:	0.60	Water Clarity:	0.35	Water Clarity:	0.60
murky	0.70	murky	0.40	murky	0.45
Channel Feature:	0.65	Channel Feature:	0.40	Channel Feature:	0.45
pool	0.65	pool	0.40	pool	0.35
Channel Width:	0.50	Channel Width:	0.35	Channel Width:	0.30
10 yards	0.30	18 yards	0.30	6 yards	0.30
<b>0.50</b>	<b>0.25</b>	<b>0.33</b>	<b>0.20</b>	<b>0.40</b>	<b>0.20</b>
<b>Transect 4</b>	0.20	<b>Transect 8</b>	0.20		
Substrate:	0.40	Substrate:	0.35		
cobble/gravel/bedrock	0.45	bedrock/cobble/gravel	0.35		
Water Clarity:	0.50	Water Clarity:	0.30		
murky	0.55	murky	0.30		
Channel Feature:	0.50	Channel Feature:	0.25		
pool	0.50	pool	0.25		
Channel Width:	0.50	Channel Width:	0.25		
10 yards	0.45	5 yards	0.05		
<b>0.48</b>	<b>0.30</b>	<b>0.25</b>	<b>0.05</b>		

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

WBID                    3202  
Site #                    3

Date and Time:            5/21/2007 16:15

Current Weather Conditions

Weather Conditions for Past 10 days:    Rained about 1.25 inches in the area

Drought Conditions? No

Site Location (e.g. road crossing)        At road crossing road 80

GPS Mark:                59

Upstream Photo                                114                                Downstream Photo                                115

**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	<b>None of the Above</b>	Other	

**Surrounding Conditions**

City/county parks	Playgrounds	MDC conservation lands	Urban areas
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Steep slopes	<b>None of the Above</b>	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:	<b>None of the Above</b>



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

Site # 3

Mark # 59

	Depth (m)		Depth (m)		Depth (m)
<b>Transect 1</b>	0.25	<b>Transect 5</b>	0.15	<b>Transect 9</b>	0.15
Substrate:	0.35	Substrate:	0.15	Substrate:	0.15
mud/silt/cobble/gravel	0.45	mud/silt/gravel/cobble	0.10	gravel/cobble/silt/mud	0.05
Water Clarity:	0.65	Water Clarity:	0.10	Water Clarity:	0.00
clear to murky	0.70	clear to murky	0.15	clear to murky	0.05
Channel Feature:	0.60	Channel Feature:	0.20	Channel Feature:	0.25
pool	0.60	pool	0.10	pool	0.25
Channel Width:	0.50	Channel Width:	0.10	Channel Width:	0.15
11 yards	0.25	13 yards	0.05	9 yards	0.10
<b>0.48</b>	<b>0.15</b>	<b>0.10</b>	<b>0.05</b>	<b>0.13</b>	<b>0.10</b>
<b>Transect 2</b>	0.15	<b>Transect 6</b>	0.25	<b>Transect 10</b>	0.10
Substrate:	0.20	Substrate:	0.30	Substrate:	0.15
mud/silt/gravel/cobble	0.20	gravel/cobble/silt/mud	0.45	gravel/cobble/silt/mud	0.40
Water Clarity:	0.25	Water Clarity:	0.50	Water Clarity:	0.40
clear to murky	0.25	clear to murky	0.50	clear to murky	0.30
Channel Feature:	0.15	Channel Feature:	0.55	Channel Feature:	0.15
pool	0.05	pool	0.35	pool	0.15
Channel Width:	0.05	Channel Width:	0.25	Channel Width:	0.05
12 yards	0.05	11 yards	0.10	5 yards	0.05
<b>0.15</b>	<b>0.05</b>	<b>0.33</b>	<b>0.10</b>	<b>0.15</b>	<b>0.05</b>
<b>Transect 3</b>	0.15	<b>Transect 7</b>	0.15	<b>Transect 11</b>	0.05
Substrate:	0.10	Substrate:	0.30	Substrate:	0.05
mud/silt/gravel/cobble	0.20	gravel/cobble/silt/mud	0.35	gravel/cobble/silt/mud	0.20
Water Clarity:	0.10	Water Clarity:	0.45	Water Clarity:	0.15
clear to murky	0.10	clear to murky	0.65	clear to murky	0.35
Channel Feature:	0.10	Channel Feature:	0.65	Channel Feature:	0.40
pool	0.10	pool	0.55	pool	0.40
Channel Width:	0.10	Channel Width:	0.35	Channel Width:	0.30
10 yards	0.10	11 yards	0.30	9 yards	0.25
<b>0.10</b>	<b>0.10</b>	<b>0.35</b>	<b>0.20</b>	<b>0.23</b>	<b>0.15</b>
<b>Transect 4</b>	0.05	<b>Transect 8</b>	0.10		
Substrate:	0.20	Substrate:	0.30		
mud/silt/gravel/cobble	0.20	gravel/cobble/silt/mud	0.40		
Water Clarity:	0.30	Water Clarity:	0.40		
clear to murky	0.05	clear to murky	0.40		
Channel Feature:	0.15	Channel Feature:	0.35		
pool	0.15	pool	0.15		
Channel Width:	0.05	Channel Width:	0.10		
14 yards	0.05	10 yards	0.10		
<b>0.10</b>	<b>0.05</b>	<b>0.23</b>	<b>0.10</b>		

**WBID# 3202**



**Site# 1 Photo ID# 110, Upstream**



**Site# 1 Photo ID# 111, Downstream**



**Site# 2 Photo ID# 113, Upstream**



**Site# 2 Photo ID# 112, Downstream**

**WBID# 3202**



**Site# 3 Photo ID# 114, Upstream**



**Site# 3 Photo ID# 115, Downstream**