

Missouri
Department of
Natural Resources

Use Attainability Analysis

for

WBID 0035 Bob's Creek

Submitted by

Pickett Ray & Silver

Civil Engineers Land Surveyors Natural Resources

To

Missouri Department of Natural Resources

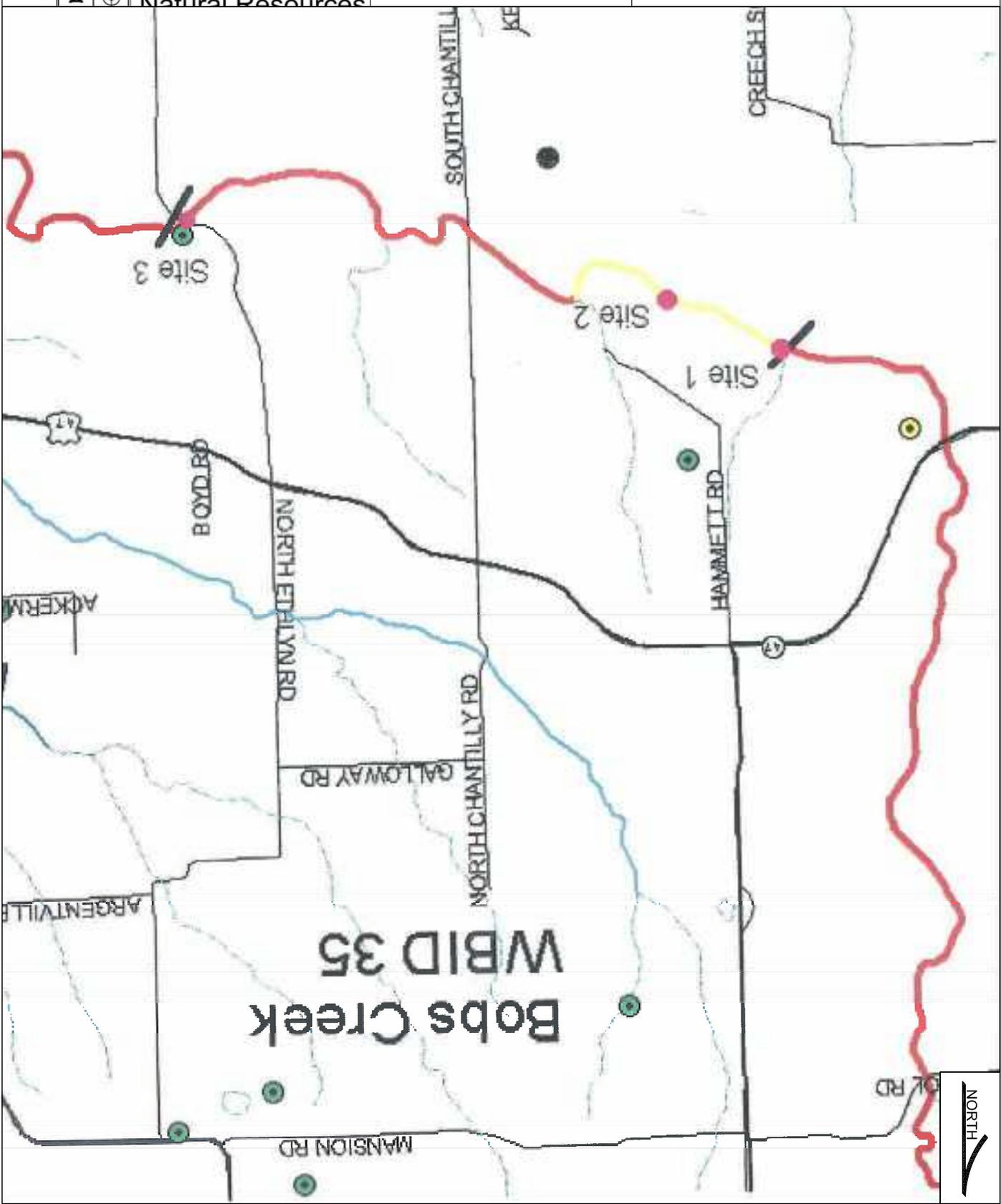
Water Protection Program

Date Received: June 5, 2007

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WBID #: 0035
 Name: Bob's Creek
 GIS MAP

PRs Job Number: 07031.MODN.00E
 Drawn By: M.C. Date: 05-21-07
 Checked By: J.V. Date: 05-21-07
 Missouri
 Department of
 Natural Resources
 NOT TO SCALE



PICKETT RAY & SILVER

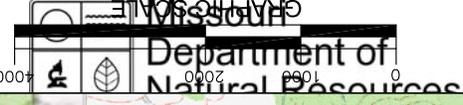
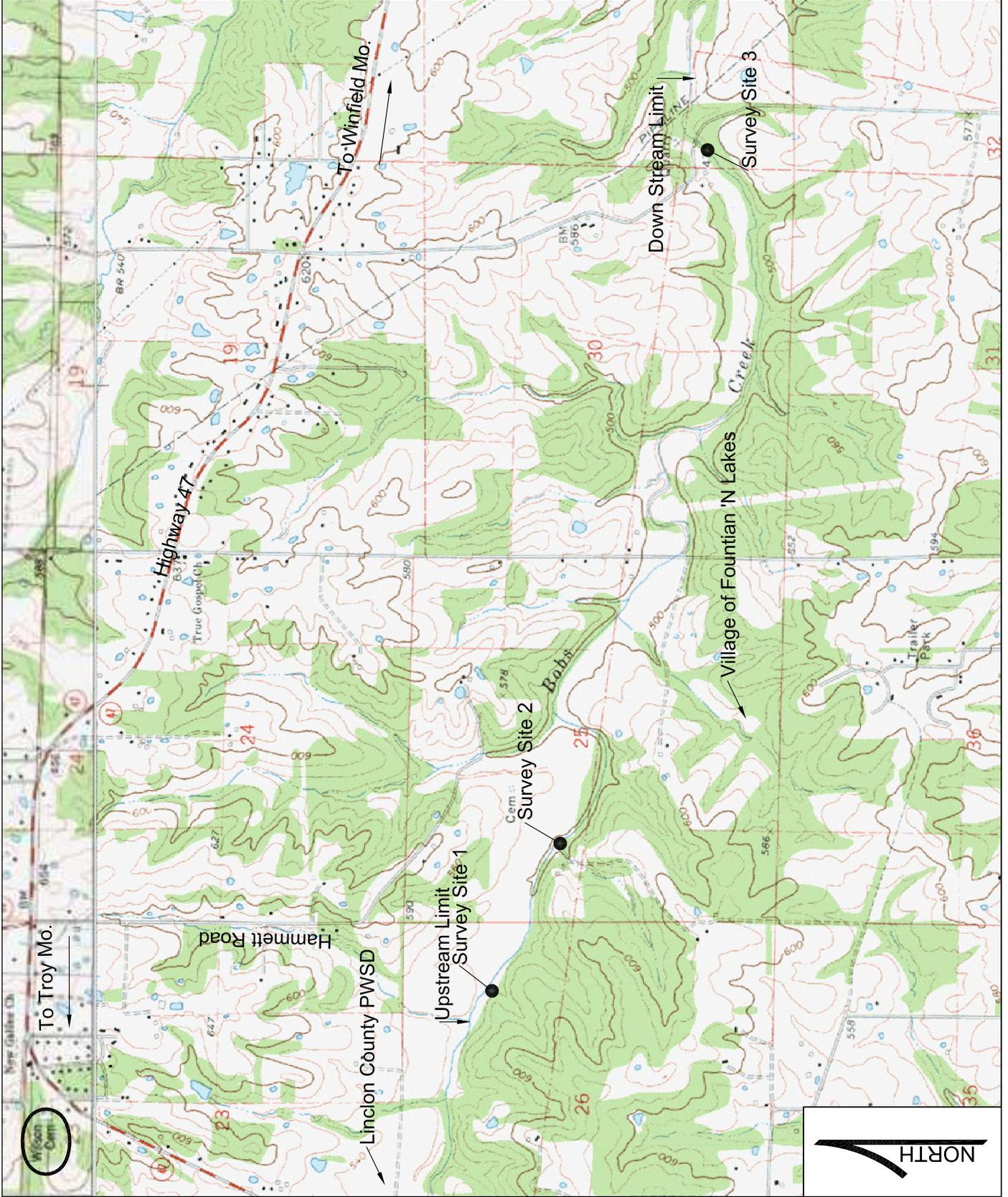
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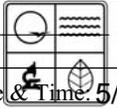
WBID #: 0035
Name: Bobs Creek
County: Lincoln
USGS Location Map

Department of Natural Resources
Checked By: J.V. Date: 05-21-07
Drawn By: M.C. Date: 05-21-07
PRS Job Number: 07031.MODN.00E
1 inch = 2000ft.



WBID# 0035

Site# 1



Missouri
Department of
Natural Resources

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B - Site Characterization

(must be completed for each site)

Date & Time: 5/24/2014	Site Location Description (e.g., road crossing): Hwy. 47 Road Crossing
Personnel (Data Collectors): R. Martin	
Current Weather Conditions: Clear	Facility Name: Lincoln Cty PWSD #1
Weather Conditions for Past 10 days: Unknown	Permit Number: MO 0127698
Drought Conditions?: No drought <input type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input checked="" type="checkbox"/>	

Site Locations:

LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION, IN METERS)	
Site GPS Coordinates: UTM X: 0684680	Y: 4317163
HORIZONTAL COLLECTION METHOD (Indicate the method used to determine the locational data.)	
Global Positioning System (GPS)	Interpolation
Static Mode <input checked="" type="checkbox"/>	Topographic Map or DRG
Dynamic Mode (Kinematic)	Aerial Photograph or DOQQ
Precise Positioning Service	Satellite Imagery
Signal Averaging	Interpolation Other Real Time Differential Correction with
Real Time Differential Processing	Post Processing
HORIZONTAL ACCURACY ESTIMATE	
GPS Data Quality	Interpolation Data Quality
FOM ± _____ Meters	Source Map Scale: 1:24,000 1:100,000 Other _____ ± _____ Feet or ± _____ Meters
EPE ± 14 _____ Feet or ± _____ Meters	
PDOP	

Photos:

Upstream Photos		Downstream Photos		Other Photos	
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
See Attached Photos					

Uses Observed*: (Uses actually observed at time of survey.)

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe: (Include number of individuals recreating, photo-documentation of evidence of recreational uses, etc. Use <i>Data Sheet D- Recreational Use Interview</i> when conducting interviews.)				

Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

<input type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input checked="" type="checkbox"/> Fence	<input type="checkbox"/> Steep slopes	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:

Comments: **Ag Field & Riparian Buffer**

Indications of Human Use*: (attach photos)

<input checked="" type="checkbox"/> Roads	<input type="checkbox"/> Rope swings	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input type="checkbox"/> RV / ATV Tracks
<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input checked="" type="checkbox"/> Other:	
Comments: N/A					

* Page Two – Data Sheet B for WBID # 0035 :

Stream Morphology:



Missouri Department of Natural Resources

Upstream View Physical Dimensions: Is there any water present at this view? Yes No
 If so, is there an obvious current? Yes No

Select one of the following **channel features**:

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE					
RUN	50	10.5	50	0.2	0.3
POOL					

Downstream View's Physical Dimensions: Is there any water present at this view? Yes No

If so, is there an obvious current? Yes No

Select one of the following **channel features**:

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE					
RUN					
POOL					

Substrate*: (These values should add up to 100%.)

-	% Cobble	5	% Gravel	15	% Sand	-	% Silt	-	% Mud/Clay	80	% Bedrock
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Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site)

Algae on majority of substrate

Water Characteristics*: (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

Comments: Please attach any additional comments () to this form.

*This information is not to be used solely for removal of a recreational use designation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that effect another use.

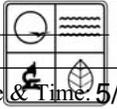
Please verify that you have completed all sections, checked all applicable boxes and that everything is complete.

Surveyor's Signature: Renee Martin Date of Survey: 5/7/07

Organization: AE Solutions Position: Env. Specialist

WBID# 0035

Site# 2



Missouri
Department of
Natural Resources

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B - Site Characterization

(must be completed for each site)

Date & Time: 5/10/10	Site Location Description (e.g., road crossing): Outfall near Hammett Rd.
Personnel (Data Collectors): Renee Martin	
Current Weather Conditions: Clear	Facility Name: Lincoln Cty PWSD #1
Weather Conditions for Past 10 days: Unknown	Permit Number: MO 0127698
Drought Conditions?: No drought <input type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input checked="" type="checkbox"/>	

Site Locations:

LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION, IN METERS)	
Site GPS Coordinates: UTM X: 0684468	Y: 4317175
HORIZONTAL COLLECTION METHOD (Indicate the method used to determine the locational data.)	
Global Positioning System (GPS)	Interpolation
Static Mode <input checked="" type="checkbox"/>	Topographic Map or DRG
Dynamic Mode (Kinematic)	Aerial Photograph or DOQQ
Precise Positioning Service	Satellite Imagery
Signal Averaging	Interpolation Other Real Time Differential Correction with
Real Time Differential Processing	Post Processing
HORIZONTAL ACCURACY ESTIMATE	
GPS Data Quality	Interpolation Data Quality
FOM ± _____ Meters	Source Map Scale: 1:24,000 1:100,000 Other _____ ± _____ Feet or ± _____ Meters
EPE ± 27 Feet or ± _____ Meters	
PDOP	

Photos:

Upstream Photos		Downstream Photos		Other Photos	
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
See Attached Photos					

Uses Observed*: (Uses actually observed at time of survey.)

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe: (Include number of individuals recreating, photo-documentation of evidence of recreational uses, etc. Use <i>Data Sheet D- Recreational Use Interview</i> when conducting interviews.)				

Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

<input type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Fence	<input type="checkbox"/> Steep slopes	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:

Comments: Agriculture fields nearby

Indications of Human Use*: (attach photos)

<input checked="" type="checkbox"/> Roads	<input type="checkbox"/> Rope swings	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input type="checkbox"/> RV / ATV Tracks
<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input checked="" type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Other:	
Comments:					

* Page Two – Data Sheet B for WBID # 0035 :

Stream Morphology:



Missouri Department of Natural Resources

Upstream View Physical Dimensions: Is there any water present at this view? Yes No
 If so, is there an obvious current? Yes No

Select one of the following **channel features**:

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE					
RUN	200	15	100	0.2	0.45
POOL					

Downstream View's Physical Dimensions: Is there any water present at this view? Yes No

If so, is there an obvious current? Yes No

Select one of the following **channel features**:

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE					
RUN					
POOL					

Substrate*: (These values should add up to 100%.)

-	% Cobble	5	% Gravel	10	% Sand	-	% Silt	-	% Mud/Clay	85	% Bedrock
---	----------	---	----------	----	--------	---	--------	---	------------	----	-----------

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

Algae on substrate

Water Characteristics*: (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

Comments: Please attach any additional comments () to this form.

*This information is not to be used solely for removal of a recreational use designation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that effect another use.

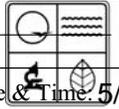
Please verify that you have completed all sections, checked all applicable boxes and that everything is complete.

Surveyor's Signature: Renee Martin Date of Survey: 5/7/07

Organization: AE Solutions Position: Env. Specialist

WBID# 0035

Site# 3



Missouri
Department of
Natural Resources

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B - Site Characterization

(must be completed for each site)

Date & Time: 5/20/2010	Site Location Description (e.g., road crossing): North Ethlyn Rd. Crossing
Personnel (Data Collectors): Renee Martin	
Current Weather Conditions: Clear	Facility Name: Lincoln Cty PWSD #1
Weather Conditions for Past 10 days: Unknown	Permit Number: MO 0127698
Drought Conditions?: No drought <input type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input checked="" type="checkbox"/>	

Site Locations:

LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION, IN METERS)	
Site GPS Coordinates: UTM X: 0688767	Y: 4316400
HORIZONTAL COLLECTION METHOD (Indicate the method used to determine the locational data.)	
Global Positioning System (GPS)	Interpolation
Static Mode <input checked="" type="checkbox"/>	Topographic Map or DRG
Dynamic Mode (Kinematic)	Aerial Photograph or DOQQ
Precise Positioning Service	Satellite Imagery
Signal Averaging	Interpolation Other Real Time Differential Correction with
Real Time Differential Processing	Post Processing
HORIZONTAL ACCURACY ESTIMATE	
GPS Data Quality	Interpolation Data Quality
FOM ± _____ Meters	Source Map Scale: 1:24,000 1:100,000 Other _____ ± _____ Feet or ± _____ Meters
EPE ± 18 _____ Feet or ± _____ Meters	
PDOP	

Photos:

Upstream Photos		Downstream Photos		Other Photos	
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
See Attached Photos					

Uses Observed*: (Uses actually observed at time of survey.)

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe: (Include number of individuals recreating, photo-documentation of evidence of recreational uses, etc. Use <i>Data Sheet D- Recreational Use Interview</i> when conducting interviews.)				

Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

<input type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Fence	<input type="checkbox"/> Steep slopes	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Comments:				

Indications of Human Use*: (attach photos)

<input type="checkbox"/> Roads	<input type="checkbox"/> Rope swings	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input type="checkbox"/> RV / ATV Tracks
<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Other:	
Comments: None					

* Page Two – Data Sheet B for WBID # 0035 :

Stream Morphology:



Upstream View Physical Dimensions: Is there any water present at this view? Yes No
 If so, is there an obvious current? Yes No

Select one of the following **channel features**:

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE					
RUN					
POOL	20	6.0	20	0.8	>1.0

Downstream View's Physical Dimensions: Is there any water present at this view? Yes No

If so, is there an obvious current? Yes No

Select one of the following **channel features**:

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE					
RUN					
POOL					

Substrate*: (These values should add up to 100%.)

-	% Cobble	-	% Gravel	80	% Sand	-	% Silt	-	% Mud/Clay	20	% Bedrock
---	----------	---	----------	----	--------	---	--------	---	------------	----	-----------

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

Algae on substrate

Water Characteristics*: (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

Comments: Please attach any additional comments () to this form.

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Please verify that you have completed all sections, checked all applicable boxes and that everything is complete.

Surveyor's Signature: Renee Martin Date of Survey: 5/7/07

Organization: AE Solutions Position: Env. Specialist



