



Missouri
Department of
Natural Resources

Use Attainability Analysis

for

WBID 0926 Pin Oak Creek

Submitted by

Missouri Department of Natural Resources Staff

To

Missouri Department of Natural Resources
Water Protection Program

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet A - Water Body Identification

RECEIVED

2005 JUL 11 PM 4: 32

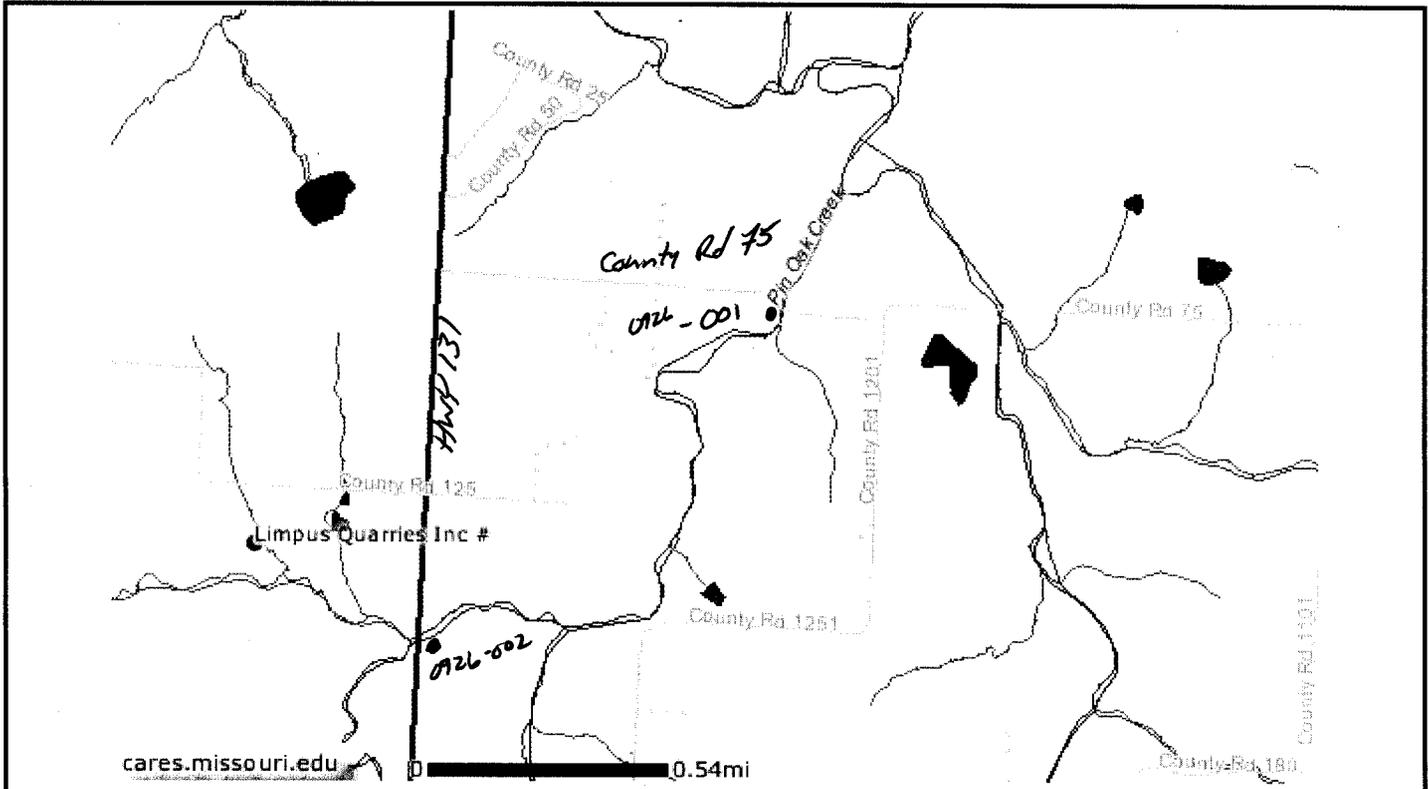
WATER PROTECTION DIVISION

Water Body Name (from USGS 7.5' quad):	<i>Pin Oak Cr.</i>
8-digit HUC:	<i>10300104</i>
Missouri WBID #:	<i>0926</i>
County:	<i>Johnson</i>
Upstream Legal Description:	<i>County Rd 200</i>
Downstream Legal Description:	<i>County Rd 75</i>
Upstream Coordinates:	<i>N 38.74037 W 093.99411</i>
Downstream Coordinates:	<i>N 38.75792 W 093.97689</i>
Discharger Facility Name(s):	<i>Holden WMTF</i>
Discharger Permit Number(s):	<i>MO 0057908</i>
Number of Sites Evaluated:	<i>3</i>
Name of Surveyor and Telephone Number:	<i>Aaron Bleiborn 816-622-7018</i>
Organization:	<i>MDNR</i>
Position:	<i>Env. Specialist</i>

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: *Aaron Bleiborn* Date: *7/5/05*

0926 - Pin Oak Cr.



Legend

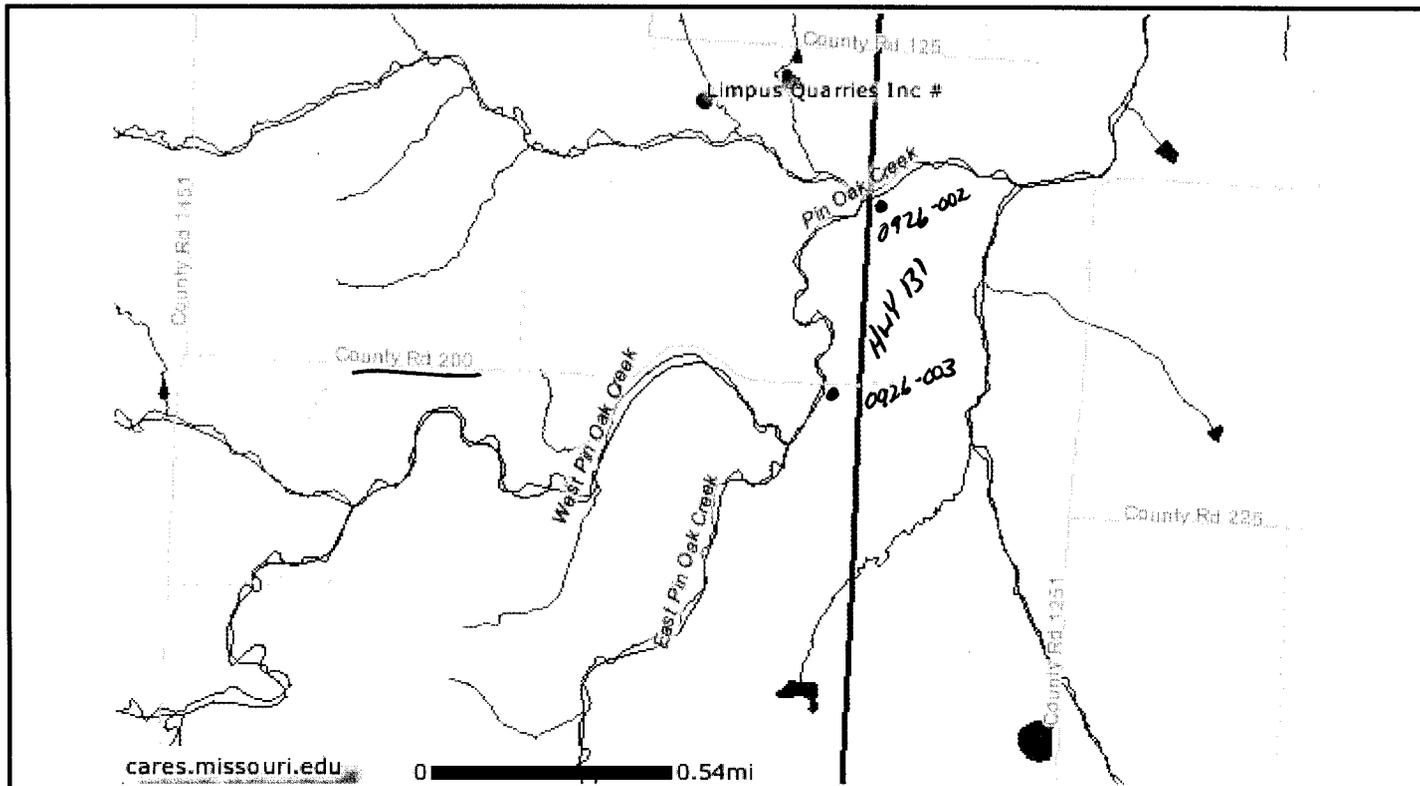
- Water Quality Information System (WQIS)
- Roads and Highways**
 - ▬ Interstate
 - ▬ U.S. Highway
 - ▬ State Numbered Highway
 - ▬ State Lettered Highway
 - ▬ Principal Road
 - ▬ Road or Street
 - ▬ Private Road or Drive
- ▭ County Boundaries
- 1:24,000 Rivers and Streams**
 - ▬ Perennial Stream/River
 - ▬ Intermittent Stream/River
 - ▬ Artificial Path (Approx. Centerline)
 - ▬ Undifferentiated Stream/River
 - ▬ Canal or Ditch
 - ▬ Other Hydrologic Feature
- NHD Rivers and Streams**
 - ▬ Perennial Stream/River
 - ▬ Intermittent Stream/River
 - ▬ Canal or Ditch
 - (cont)
- ▬ Artificial Path (Approx. Centerline)
- ▬ Other Hydrologic Feature
- Incorporated Areas**
 - ▭ City
 - ▭ Town
 - ▭ Village
 - ▭ Census Designated Place
 - ▭ Other
- 1:24,000 Water Bodies**
 - ▭ Lake or Pond
 - ▭ Lake or Pond (Intermittent)
 - ▭ Reservoir
 - ▭ Stream or River
 - ▭ Swamp or Marsh
 - ▭ Canal or Ditch
 - ▭ Other Water Body
- NHD Water Bodies**
 - ▭ Lake or Pond
 - ▭ Lake or Pond (Intermittent)
 - ▭ Reservoir
 - ▭ Stream or River
 - ▭ Swamp or Marsh
 - (cont)

Location Map



Map prepared by:
<http://cares.missouri.edu>, 6/27/2005.

0926 - Pin Oak Cr.



Legend

● Water Quality Information System (WQIS)

Roads and Highways

- Interstate
- U.S. Highway
- State Numbered Highway
- State Lettered Highway
- Principal Road
- Road or Street
- Private Road or Drive

County Boundaries

- 1:24,000 Rivers and Streams
- Perennial Stream/River
- Intermittent Stream/River
- Artificial Path (Approx. Centerline)
- Undifferentiated Stream/River
- Canal or Ditch
- Other Hydrologic Feature

NHD Rivers and Streams

- Perennial Stream/River
 - Intermittent Stream/River
 - Canal or Ditch
- (cont)

- Artificial Path (Approx. Centerline)
 - Other Hydrologic Feature
- #### Incorporated Areas

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- Village
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1:24,000 Water Bodies

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NHD Water Bodies

- Lake or Pond
 - Lake or Pond (Intermittent)
 - Reservoir
 - Stream or River
 - Swamp or Marsh
- (cont)

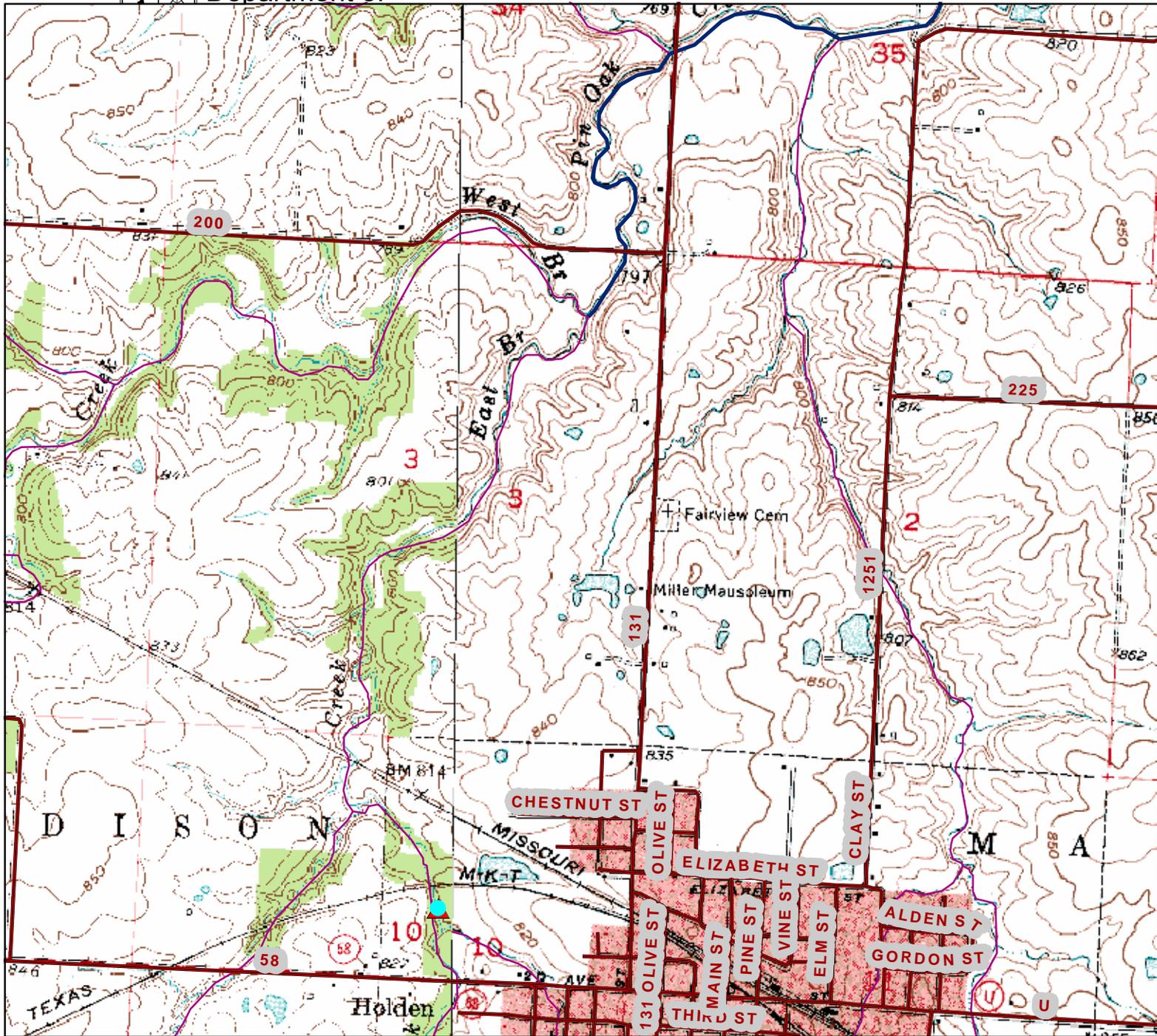
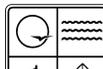
Location Map



Map prepared by:
<http://cares.missouri.edu>, 6/27/2005.

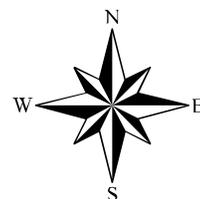
Holden WWTF Johnson County

1.87 miles from Pin Oak Creek (#0926)
Missouri Department of



Legend

- Roads
- Point Sources
- Classified Waterbodies
- Counties



Field Data Sheets for Recreational Use Stream Surveys

Note: 001 is DS - most site. 49

Data Sheet B - Site Characterization
(A separate data sheet must be completed for each site)

Missouri WBID #: <u>0926-001</u>	Site Location Description: <u>County U 75</u> <u>Johnson Co.</u>	
Site GPS Coordinates: <u>N 38.75782 W 93.97690</u>		
Date & Time: <u>7/5/05 8:24AM</u>	Facility Name: <u>Holden WWTF</u>	
Personnel: <u>Aaron Bleisner</u>	Permit Number: <u>MO 0057908</u>	
Current Weather Conditions: <u>Partly Cloudy 90°F</u>	Weather Conditions for Past 7 days: <u>Net</u>	
Photo Ids: Upstream: <u>1-3</u>	Downstream: <u>4-8</u>	Other:

Uses Observed*:

<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 type="checkbox"/> None of the above	<input checked="" type="checkbox"/> Other: <u>Tire Track</u>

Describe: (include number of individuals recreating, frequency of use, photo-documentation of evidence of recreational uses, etc.)

Dead Animals in stream
Oil residue on surface of water downstream

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 checked="" type="checkbox"/> Steep slopes	<input checked="" type="checkbox"/> Other: <u>Small farms</u>	

Evidence of Human Use*:

<input checked="" type="checkbox"/> Roads	<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"/> Rope swings	<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: <u>Track</u>				

Site Locations Map(s): Attach a map of entire segment with assessment sites clearly labeled. Mark any other items that may be of interest. (Include photographs)

*Some of this information is not intended to directly influence a decision on any one particular recreational use analysis but may point to conditions that need further analysis or that effect another use.

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B - Site Characterization

Page Two - WBID # 0926-001:

Stream Morphology:

Upstream View Physical Dimensions:

<input type="checkbox"/> Riffle	Width (ft):	Length (ft):	Avg. Depth (ft):	Max. Depth (ft):
<input type="checkbox"/> Run	Width (ft):	Length (ft):	Avg. Depth (ft):	Max. Depth (ft):
<input checked="" type="checkbox"/> Pool	Width (ft): <u>21</u>	Length (ft): <u>75</u>	Avg. Depth (ft): <u>1.4</u>	Max. Depth (ft): <u>1.75 ft</u>
<input checked="" type="checkbox"/> Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Estimated (ft ³ /sec): <u>25 ft³/sec</u>	

Downstream View Physical Dimensions:

<input type="checkbox"/> Riffle	Width (ft):	Length (ft):	Avg. Depth (ft):	Max. Depth (ft):
<input type="checkbox"/> Run	Width (ft):	Length (ft):	Avg. Depth (ft):	Max. Depth (ft):
<input checked="" type="checkbox"/> Pool	Width (ft): <u>21</u>	Length (ft): <u>20</u>	Avg. Depth (ft): <u>1.4</u>	Max. Depth (ft): <u>1.5 ft</u>
<input checked="" type="checkbox"/> Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Estimated (ft ³ /sec): <u>0.75 ft³/sec</u>	

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

<u>50</u> % Cobble	% Gravel	% Sand	% Silt	<u>50</u> % Mud/Clay	% Bedrock
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Aquatic Vegetation*: (note amount of vegetation or algal growth at the assessment site)

5% Algae

Water Characteristics*: (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input type="checkbox"/> None	<input checked="" type="checkbox"/> Other: <u>Dead Animals</u>
Color:	<input type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input checked="" type="checkbox"/> Other: <u>Muddy</u>
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 checked="" type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input type="checkbox"/> None	<input type="checkbox"/> Other:

Comments: Please attach additional comments (including information from interviews) to this form.

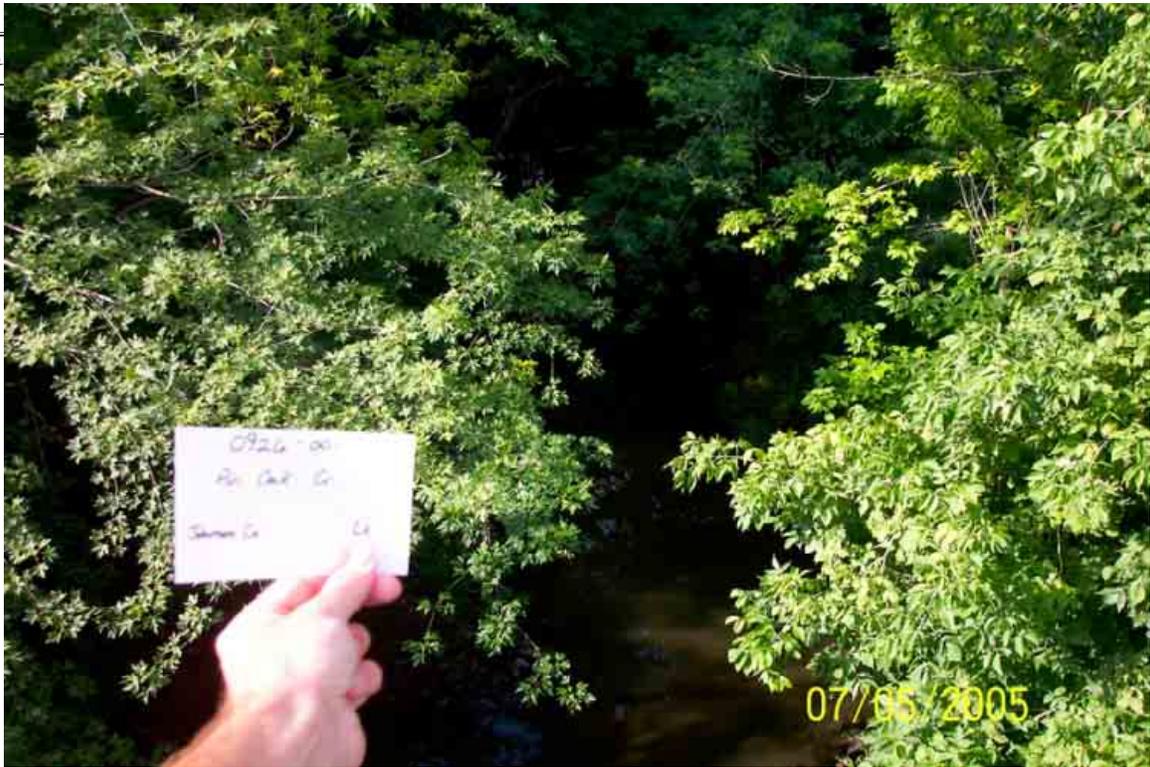
*This information is not to be used solely for removal of a recreational use designation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions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

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: [Signature] Date: 7/15/05

Organization: MDNR Position: Env. Specialist

0926_001_US



0926_001_US



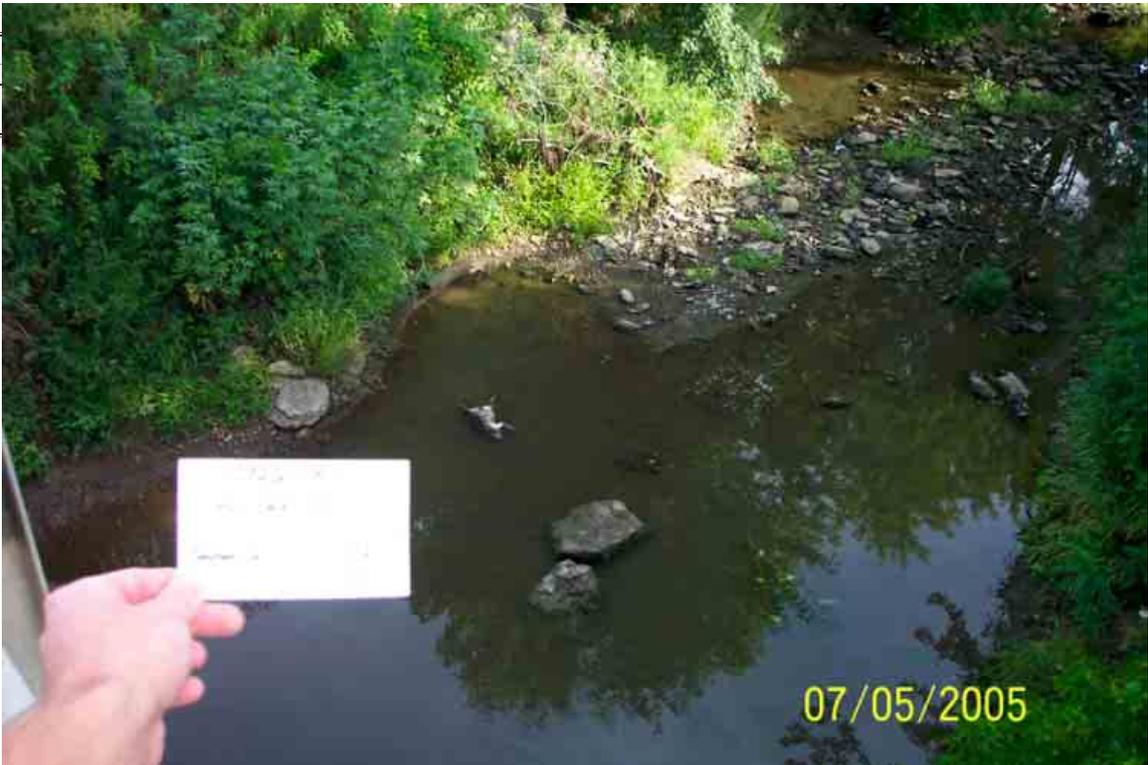
0926_001_US



0926_001_DS



0926_001_DS



0926_001_DS





Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B - Site Characterization

(A separate data sheet must be completed for each site)

Missouri WBID #: <i>0926-002</i>	Site Location Description:	
Site GPS Coordinates: <i>N 38.74656 L 1073.99186</i>	<i>Aug 13¹</i>	<i>Johnson Co.</i>
Date & Time: <i>7/5/05 8:42 AM</i>	Facility Name: <i>Holden WWTF</i>	
Personnel: <i>Aaron Blumberg</i>	Permit Number: <i>MO 0057908</i>	
Current Weather Conditions: <i>Partly Cloudy 80°F</i>	Weather Conditions for Past 7 days: <i>Wet</i>	
Photo Ids: Upstream: <i>9-10</i>	Downstream: <i>11-12</i>	Other:

Uses Observed*:

<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, frequency of use, photo-documentation of evidence of recreational uses, etc.)

Small farms

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 checked="" type="checkbox"/> Steep slopes	<input type="checkbox"/> Other:	

Evidence of Human Use*:

<input checked="" type="checkbox"/> Roads	<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"/> Rope swings	<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:				

Site Locations Map(s): Attach a map of entire segment with assessment sites clearly labeled. Mark any other items that may be of interest. (Include photographs)

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Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B - Site Characterization

Page Two - WBID # 0926-002:

Stream Morphology:

Upstream View Physical Dimensions:

<input type="checkbox"/> Riffle	Width (ft):	Length (ft):	Avg. Depth (ft):	Max. Depth (ft):
<input type="checkbox"/> Run	Width (ft):	Length (ft):	Avg. Depth (ft):	Max. Depth (ft):
<input checked="" type="checkbox"/> Pool	Width (ft): <u>20</u>	Length (ft): <u>75</u>	Avg. Depth (ft): <u>1ft</u>	Max. Depth (ft): <u>1ft</u>
<input type="checkbox"/> Flow Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Estimated (ft ³ /sec):	

Downstream View Physical Dimensions:

<input type="checkbox"/> Riffle	Width (ft):	Length (ft):	Avg. Depth (ft):	Max. Depth (ft):
<input type="checkbox"/> Run	Width (ft):	Length (ft):	Avg. Depth (ft):	Max. Depth (ft):
<input checked="" type="checkbox"/> Pool	Width (ft): <u>24</u>	Length (ft): <u>100</u>	Avg. Depth (ft): <u>1ft</u>	Max. Depth (ft): <u>2ft</u>
<input checked="" type="checkbox"/> Flow Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Estimated (ft ³ /sec): <u>0.5 ft³/sec</u>	

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

<u>10</u> % Cobble	% Gravel	% Sand	% Silt	<u>90</u> % Mud/Clay	% Bedrock
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Aquatic Vegetation*: (note amount of vegetation or algal growth at the assessment site)

10% algae

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 type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input checked="" type="checkbox"/> Other: <u>murky</u>
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 additional comments (including information from interviews) to this form.

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I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Ryan Blunt Date: 7/15/05

Organization: MDNR Position: Env. Specialist

0926_002_US



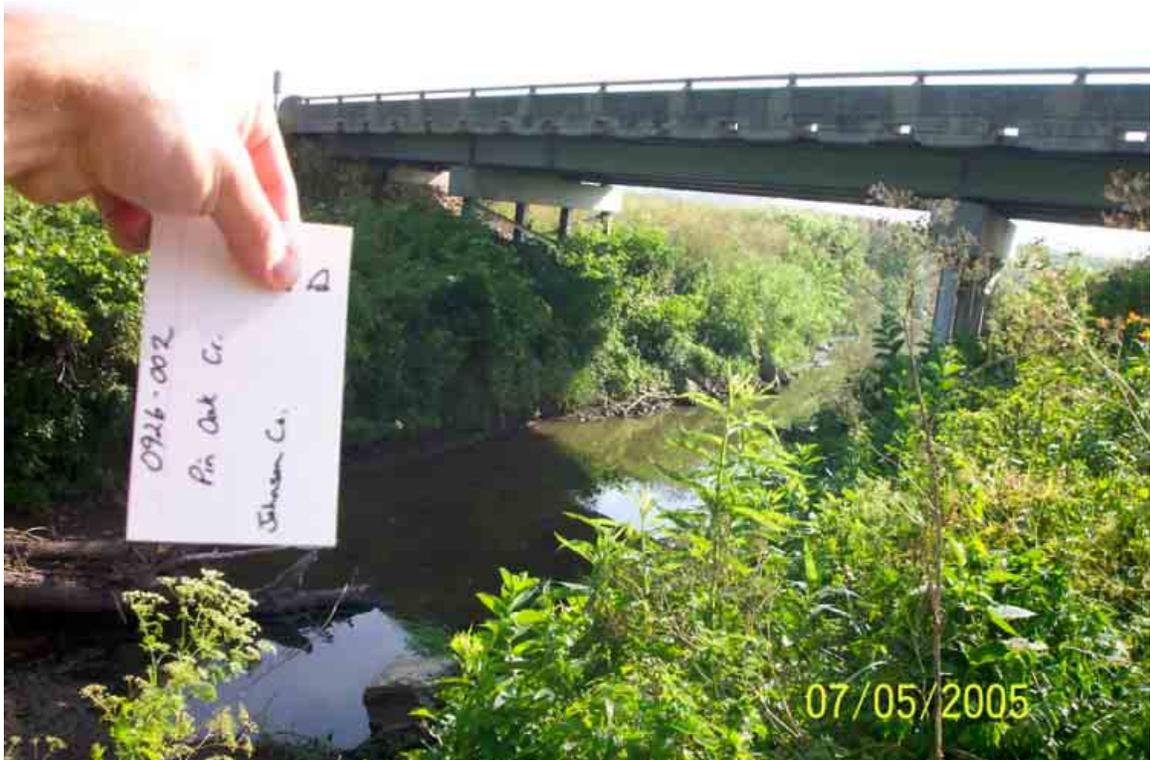
0926_002_US



0926_002_DS



0926_002_DS



Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B - Site Characterization

(A separate data sheet must be completed for each site)

Missouri WBID #: <i>0926-003</i>	Site Location Description:	
Site GPS Coordinates: <i>N38.74034 W093.79410</i>	<i>County Rd 200</i>	
Date & Time: <i>7/5/05 8:54 AM</i>	Facility Name: <i>Holder WWT</i>	
Personnel: <i>Aaron Bleibauer</i>	Permit Number: <i>MO 0057908</i>	
Current Weather Conditions: <i>Partly Cloudy 82°F</i>	Weather Conditions for Past 7 days: <i>Wet</i>	
Photo Ids: Upstream: <i>13-15</i>	Downstream: <i>16-18</i>	Other:

Uses Observed*:

<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, frequency of use, photo-documentation of evidence of recreational uses, etc.)

Small acreage farms, houses, nearby new house

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 checked="" type="checkbox"/> Steep slopes	<input checked="" type="checkbox"/> Other: <i>Trees</i>	

Evidence of Human Use*:

<input checked="" type="checkbox"/> Roads	<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"/> Rope swings	<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: <i>Trees, fire</i>				

Site Locations Map(s): Attach a map of entire segment with assessment sites clearly labeled. Mark any other items that may be of interest. (Include photographs)

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Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B - Site Characterization

Page Two - WBID # 0926-003

Stream Morphology:

Upstream View Physical Dimensions:

<input type="checkbox"/> Riffle	Width (ft):	Length (ft):	Avg. Depth (ft):	Max. Depth (ft):
<input type="checkbox"/> Run	Width (ft):	Length (ft):	Avg. Depth (ft):	Max. Depth (ft):
<input checked="" type="checkbox"/> Pool	Width (ft): <u>30</u>	Length (ft): <u>100</u>	Avg. Depth (ft): <u>1.5ft</u>	Max. Depth (ft): <u>2ft</u>
<input type="checkbox"/> Flow Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Estimated (ft ³ /sec):	

Downstream View Physical Dimensions:

<input type="checkbox"/> Riffle	Width (ft):	Length (ft):	Avg. Depth (ft):	Max. Depth (ft):
<input type="checkbox"/> Run	Width (ft):	Length (ft):	Avg. Depth (ft):	Max. Depth (ft):
<input checked="" type="checkbox"/> Pool	Width (ft): <u>30</u>	Length (ft): <u>45</u>	Avg. Depth (ft): <u>1ft</u>	Max. Depth (ft): <u>1.5ft</u>
<input type="checkbox"/> Flow Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Estimated (ft ³ /sec):	

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

<u>30</u> % Cobble	% Gravel	% Sand	% Silt	<u>30</u> % Mud/Clay	% Bedrock
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Aquatic Vegetation*: (note amount of vegetation or algal growth at the assessment site)

5% algae

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 type="checkbox"/> Clear	<input checked="" type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input checked="" type="checkbox"/> Other: <u>Muddy</u>
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 additional comments (including information from interviews) to this form.

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I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Ramon Blish Date: 7/5/05

Organization: MDNR Position: Env. Specialist

0926_003_US



0926_003_US



0926_003_US



0926_003_DS



0926_003_DS



0926_003_DS

