Missouri
Department of
Natural Resources

Use Attainability Analysis

for

WBID 132 Coon Creek

Submitted by

MoDNR

To

Missouri Department of Natural Resources
Water Protection Program

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet A - Water Body Identification

I. Water Body Information (For water body being surveyed) Coon Creek

Water Body Name (from USGS 7.5' quad):	
Missouri Water Body Identification (WBID) Number:	132
8-digit HUC: 07110006	County: Randolph, Monroe
Upstream Legal Description (from Table H):	8, 53N, 13W
Downstream Legal Description(from Table H):	Mouth
Number of sites evaluated	3
List all sites numbers, listed cnsequantly upstream to downstream: 1,2,3	1 → County Road 176 2 → County Road 122 3 → Highway YY

II. Subegmentation (fill this section out only in cases where subesgmentation is being proposed)

LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION, IN METERS)	
Upstream Coordinates: UTM X Y	Downstream Coordinates: UTM X Y

HORIZONTAL COLLECTION METHOD (Indicate the method used to determine the locational data.)			
Global Positioning System (GPS)		Interpolation	
Static Mode		Topographic Map or DRG	
Dynamic Mode (Kinematic)		Aerial Photograph or DOQQ	
Precise Positioning Service		Satellite Imagery	
Signal Averaging		Interpolation Other	
Real-Time Differential Processing			

HORIZONTAL ACCURACY ESTIMATE		
GPS Data Quality		Interpolation Data Quality
FOM	± _____ Meters	Source Map Scale: 1:24,000 1:100,000 Other _____
EPE	± _____ Feet or ± _____ Meters	
PDOP		± _____ Feet or ± _____ Meters

III. Discharger Facility Information (list all permitted dischargers on the stream)

Discharger Facility Name(s):	Moberly East WWTP
Discharger Permit Number(s):	MO 0117960

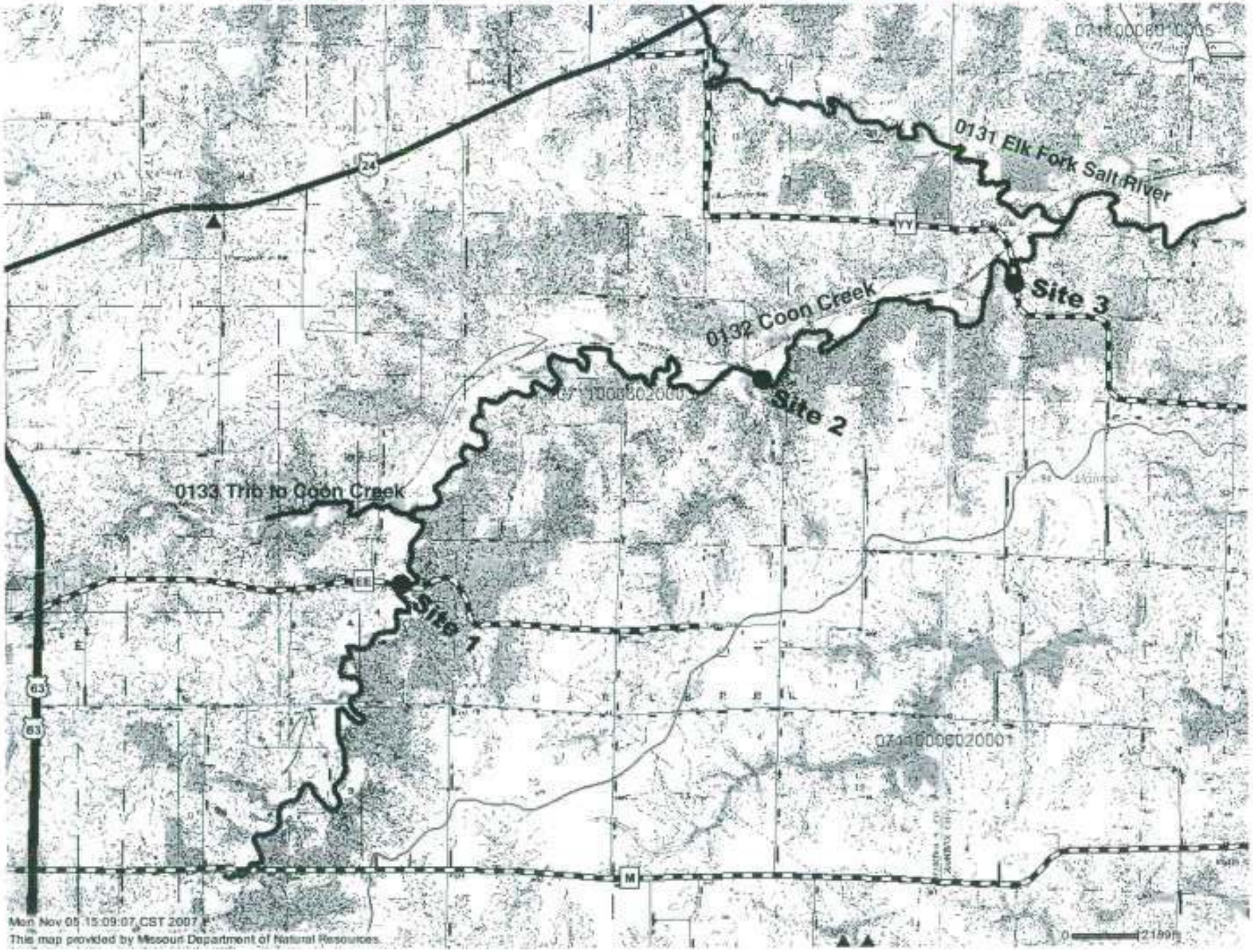
IV. UAA Surveyor (please print legibly)

Name of Surveyor Scott Goodin & Rich Burdge	Telephone Number:
Organization/Employer: MDNR	
Position: ES III s	

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

Signed: Scott Goodin **Date:** 10/16/07

Coon Creek WBID# 0132 UAA# 2551 - DNR Sites



WBID# 132
Site# All
Sites 1, 2, 3

Coon c1

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B - Site Characterization

(must be completed for each site) pg 1 of 2

Date & Time: 10/12/06	Site Location Description (e.g., road crossing): 1→CR 176, 2→CR 122, 3→Hwy YY
Personnel (Data Collectors): Scott & Rich → Goodin → Burdge	
Current Weather Conditions: Partly Cloudy low 60's	Facility Name: Moberly East WWTP
	Permit Number: MO 0117960
Weather Conditions for Past 10 days: unknown	
Drought Conditions?: No drought ☐; Phase I ☐; Phase II ☐; Phase III ☐; Phase IV ☐; Unknown ☑	

Site Locations:

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

Photos:

Upstream Photos		Downstream Photos		Other Photos	
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Site1→WBID132-S1-X5→P1020704					
Site2→WBID132-S2-X1→P1020707 ~ & WBID132-S2-X1→P1020708					
Site3→WBID 132-S3-X1→P1020710					

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

☐ Swimming	☐ Skin diving	☐ SCUBA diving	☐ Tubing	☐ Water skiing
☐ Wind surfing	☐ Kayaking	☐ Boating	☐ Wading	☐ Rafting
☐ Hunting	☐ Trapping	☐ Fishing	☑ None of the above	☐ Other:

Describe: (Include number of individuals recreating, photo-documentation of evidence of recreational uses, etc. Use *Data Sheet D- Recreational Use Interview* when conducting interviews.)

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

☐ 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:

Comments: Slopes did not preclude reasonable access

WBID# 132
Site# All
DNR Sites 1, 2, 3

Field Data Sheets for Recreational Use Stream Surveys

Coon Ck

Data Sheet B - Site Characterization

(must be completed for each site)

pg 2 of 2

Indications of Human Use*: (attach photos)

☐ Roads	☐ Rope swings	☐ Foot paths/prints	☐ Dock/platform	☐ Livestock Watering	☐ RV / ATV Tracks
☐ Camping Sites		☐ Fire pit/ring	☐ NPDES Discharge	☐ Fishing Tackle	☒ Other: none
Comments:					

Stream Morphology:

Upstream View's Physical Descriptions: 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					

Downstream View's Physical Descriptions: 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	% Sand	% Silt	% Mud/Clay	% Bedrock

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

Water Characteristics*: (Mark all that apply.)

ODOR:	☐ Sewage	☐ Musky	☐ Chemical	☑ None	☐ Other:
COLOR:	☐ Clear	☐ Green	☐ Gray	☐ Milky	☑ Other: Turbid
BOTTOM DEPOSIT:	☐ Sludge	☐ Solids	☐ Fine sediments	☑ None	☐ Other:
WATER SURFACE DEPOSITION:	☐ Oil	☐ Scum	☐ Foam	☑ None	☐ 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 affect another use.

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

Surveyor's Signature: Scott McCoard Date of Survey: 10/16/2007

Organization: MO DNR Position: ES III

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Coon Ck

Site Max >1.0

Median .34

Waterbody ID: 132 Site #: 1 CR 176

Estimated Channel Incision: _____ (m) (height between low bank width and water)

GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM)

01 UTM X: _____ UTM Y: _____ +/- _____ (meters)

11 UTM X: _____ UTM Y: _____ +/- _____ (meters)

Average Stream Width: _____ (meters) (To determne Length of Reach)

Length of Survey Segment: _____ (meters) (20x average stream width)

Field Staff: Scott Goodin & Rich Burdge, Mo DNR

Dissolved Oxygen

Date: 10-12-07 Time: _____

Dissolved Oxygen: _____ (mg/L)

Dissolved Oxygen: _____ (% sat)

Specific Cond: _____ (µS/cm)

Water Temperature: _____ (°C)

Transect Cross-Section

Station	1		2		3		4		5		6		7		8		9		.2		.1	
	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
Left Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	.52	.08	.73	.27	.61	.27	.61	.17	.85	.55	.61	.64	.79	.09	.79	.49	.73	.23	.46	.35	.34	.03
2	1.04	.23	1.46	.37	1.22	.43	1.26	.35	1.71	.88	1.23	.61	1.59	.32	1.61	.67	1.48	.40	.94	.47	.81	.03
3	1.55	.55	2.19	.34	1.83	.30	1.91	.55	2.56	.85	1.85	.64	2.39	.88	2.43	.78	2.22	.50	1.41	.52	1.28	.06
4	2.07	.58	2.93	.41	2.44	.21	2.56	.46	3.41	1.17	2.47	.61	3.19	.98	3.24	.61	2.96	.69	1.89	.64	1.75	.06
5	2.59	.61	3.66	.43	3.05	.20	3.21	.49	4.27	1.07	3.10	.52	3.99	.75	4.06	.43	3.71	.66	2.37	.67	2.23	.03
6	3.11	.56	4.39	.40	3.66	.14	3.86	.58	5.12	.76	3.72	.43	4.79	.56	4.88	.34	4.45	.47	2.85	.56	2.70	.05
7	3.63	.37	5.12	.38	4.27	.24	4.5	.56	5.97	.67	4.34	.35	5.58	.34	5.69	.27	5.19	.29	3.33	.37	3.17	.05
8	4.15	.24	5.85	.38	4.88	.24	5.15	.40	6.83	.41	4.96	.27	6.38	.17	6.51	.24	5.94	.21	3.81	.34	3.64	.11
9	4.66	.12	6.58	.27	5.49	.20	5.8	.21	7.68	.18	5.58	.18	7.18	.12	7.33	.20	6.68	.18	4.29	.34	4.11	.09
~~Right Bank~~	5.18	.11	7.32	.09	6.10	.10	6.45	.11	8.53	.08	6.21	.11	7.98	.11	8.14	.12	7.42	.08	4.76	.09	4.59	.08
Feature Type (riffle, run, or pool)																					Riffle	

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: Scott Goodin Date: 10/16/07

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Waterbody ID: 132 Site #: 2 CR 122

Estimated Channel Incision: _____ (m) (height between low bank width and water)

GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM)

01 UTM X: _____ UTM Y: _____ +/- _____ (meters)

11 UTM X: _____ UTM Y: _____ +/- _____ (meters)

Average Stream Width: _____ (meters) Length of Survey Segment: _____ (meters)

(To determine Length of Reach) (20x average stream width)

Field Staff: Scott Goodin & Rich Burdge, Mo DNR

Dissolved Oxygen

Date: 10/12/07 Time: _____

Dissolved Oxygen: _____ (mg/L)

Dissolved Oxygen: _____ (% sat)

Specific Cond: _____ (µS/cm)

Water Temperature: _____ (°C)

Transect Cross-Section

Station	01		02		03		04		05		06		07		08		09		10		11	
	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
Left Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1																						
2																						
3																						
4																						
5																						
6																						
7																						
8																						
9																						
Right Bank		0		0		0		0		0		0		0		0		0		0		0
Feature Type (riffle, run, or pool)																						

Too Deep to measure (see Photo, 4½ foot measuring stick, almost submerged)

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS location corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: [signature] Date: 10/16/07

Site Maximum .79

Median .18

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Waterbody ID: 132 Site #: 3 Hwy YY

Estimated Channel Incision: _____ (m) (height between low bank width and water)

GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM)

01 UTM X: _____ UTM Y: _____ +/- _____ (meters)

11 UTM X: _____ UTM Y: _____ +/- _____ (meters)

Average Stream Width: _____ (meters) (To determne Length of Reach)

Length of Survey Segment: _____ (meters) (20x average stream width)

Field Staff: Scott Goodin & Rich Burdge, MO DNR

Dissolved Oxygen

Date: 10/12/07 Time: _____

Dissolved Oxygen: _____ (mg/L)

Dissolved Oxygen: _____ (% sat)

Specific Cond: _____ (µS/cm)

Water Temperature: _____ (°C)

Transect Cross-Section

Station	11		10		9		8		7		06		5		4		3		2		1	
	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
Left Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	.79	.46	.40	.59	.58	.35	.64	.18	.49	.20	.70	.21	.43	.18	.52	.03	.30	.06	.85	Ø	.82	.18
2	1.61	.38	.82	.70	1.19	.34	1.3	.14	.98	.27	1.41	.29	.86	.15	1.05	Ø	.61	.06	1.71	.03	1.66	.34
3	2.43	.76	1.24	.79	1.79	.29	1.97	.09	1.47	.32	2.12	.21	1.3	.12	1.58	.09	.91	.05	2.56	.03	2.5	.34
4	3.24	.76	1.66	.73	2.40	.26	2.63	.09	1.96	.32	2.83	.18	1.73	.15	2.12	.12	1.22	.06	3.41	.09	3.33	.43
5	4.06	.72	2.08	.49	3.01	.30	3.3	.05	2.45	.34	3.54	.20	2.17	.15	2.65	.12	1.52	.06	4.27	.06	4.16	.43
6	4.88	.58	2.5	.32	3.61	.34	3.96	.03	2.94	.34	4.25	.15	2.61	.12	3.19	.27	1.83	.03	5.12	.03	5.0	.43
7	5.69	.49	2.9	.24	4.22	.37	4.68	.08	3.43	.32	4.96	.17	3.04	.11	3.72	.34	2.13	.03	5.97	Ø	5.83	.40
8	6.51	.37	3.34	.18	4.82	.37	5.3	.12	3.92	.30	5.67	.18	3.48	.11	4.25	.30	2.44	.06	6.83	Ø	6.67	.40
9	7.33	.26	3.76	.09	5.43	.26	6.0	.14	4.41	.23	6.38	.21	3.91	.09	4.79	.09	2.74	.06	7.68	Ø	7.5	.37
	8.14	.17	4.18	.06	6.04	.11	6.62	.11	4.9	.09	7.1	.17	4.35	.06	5.32	.06	3.05	.03	8.53	.03	8.34	.34
Feature Type (riffle, run, or pool)																						

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS location corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: _____ Date: 10/16/07

Coon Creek WBID#1032 UAA# 2551

Site 1

Site 2 4.5 foot Measuring Stick is almost submerged

Site 2

Site 3

Electronic copy
of letterhead

STATE OF MISSOURI
Matt Blunt, Governor • Doyle Childers, Director
DEPARTMENT OF NATURAL RESOURCES

www.dnr.mo.gov

Memorandum

DATE: October 16, 2007

TO: John Hoke, Chief, TMDL Unit

FROM: Scott W. Goodin,

SUBJECT: UAA for Coon Creek & Tributary (City of Moberly)

On Friday, October 12, 2007 a Use Attainability Analysis was performed by Rich Burdge and Scott W. Goodin of the Missouri Department of Natural Resources for Coon Creek and "Tributary to Coon Creek" WBID #132 and #133 respectively. "'Geri Ann Blakey'" of the City of Moberly WWTP accompanied Messrs. Burdge and Goodin to both site locations for WBID #133, and to site 1 and site 2 for WBID #132. Ms. Blakey did not enjoin in the surveys, but observed as she was able from afar.

Messrs. Burdge and Goodin encountered no significant difficulty accessing the waters surveyed at any site despite being encumbered by waders and field equipment. Conditions for all sites were such that becoming fully immersed was a safety concern on account of cool temperatures and risks associated with wearing waders. There was no question that WBC was attainable as in some places it would have been advisable for a non-swimmer to wear a personal flotation device. The stream channel, bed and observed structures appeared intact and undisturbed. The bed was firm clay, sand or rocky and the probe used for data collection had a substantial foot to prevent taking measurements that might include sediment depth. A summary of depths and characteristics supporting attainment of WBC use is as follows:

WBID #133, Tributary To Coon Creek, *upstream* from City of Moberly WWTP:
Site 1 maximum depth >1 meter, approximate pool area >1 meter was 15 meters by 5 meters. Downstream flow observed below survey area, above WWTP discharge.

WBID #133, Tributary To Coon Creek, *downstream* from City of Moberly WWTP:
Site 2 maximum depth 0.6 meter, approximate pool area >0.5 meter was 5 meters by 3 meters.
Messrs. Burdge and Goodin concurred that one could easily recreate in the pool at site 1.

WBID #132, Coon Creek, *upstream* from confluence with WBID #133, *above* Afrassiab property:
Site 1 maximum depth >1 meter, approximate pool area >1 meter was 5 meters by 3 meters. Cross sections #10 & #11 had to be performed above #1 & #2 due to the presence of a large (7 meters by 15 meters) pool below #9 having depths >1 meter.
WBID #132, Coon Creek, *downstream* from confluence with WBID #133:
Site 2 maximum depth >1 meter for significant portion of thalweg, transect measurements aborted due to depth >1 meter, approximate pool area >1 meter was estimated at 30 meters by 10 meters.
WBID #132, Coon Creek, *near mouth*:
Site 3 maximum depth 0.79 meter, approximate pool area >0.5 meter was 30 meters by 3 meters.

:S.W.G.

CC: R.B., D.M.