Missouri
Department of
Natural Resources

Use Attainability Analysis

for

WBID 1461 Owens Creek

Submitted by
MEC Water Resources

To
Missouri Department of Natural Resources
Water Protection Program

On
October 17, 2008

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet A – Water Body Identification

I. Water Body Information (for water body being surveyed)

Water Body Name (from USGS 7.5' quad): Owens Cr.
Missouri Water Body Identification (WBID) Number: 1461
8-digit HUC: 10290203
County(ies), Listed Upstream to Downstream: Osage
Upstream Legal Description (from Table H): 12, 42N, 8W
Downstream Legal Description (from Table H): mouth
Number of sites evaluated: 3
List all site numbers, consecutively upstream to downstream: Site 1: 150m. dnstream of County Rd 807 crossing Site 2: 1000m (~0.62 miles) dnstream of Site 1 Site 3: County rd. 806 crossing
Include a Site Location Map(s). The map must include all requirements detailed in the *Missouri Recreational Use Attainability Analyses: Water Body Survey and Assessment Protocol* (Section IV.D.8.a).

II. Facility Information (list all permitted discharges to this water body segment)

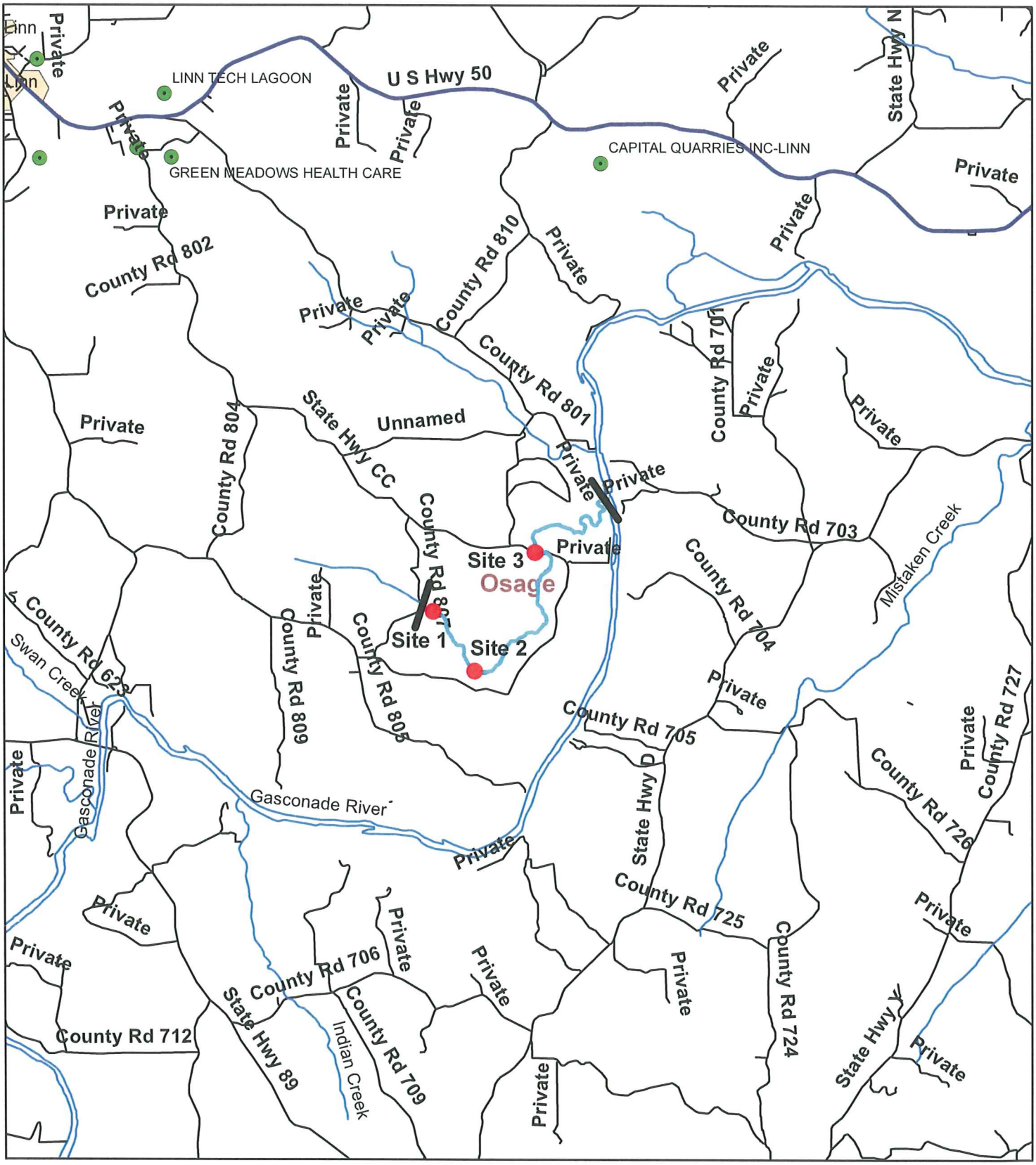
Facility Name(s) and Permit Number(s): Green Acres Subd. MO 0101541

III. UAA Surveyor (please **PRINT** legibly)

Name of Surveyor: Renee Martin	Telephone Number: 573-875-7844
Organization/Employer: Applied Environmental Solutions	

Please verify that you have completed all sections of all data sheets, checked all applicable boxes, provided a map (that includes all requirments listed in the *Missouri Recreational Use Attainability Analysies: Water Body Survey and Assessment Protocol*) and that this form is complete.

Signed: Renee Mart **Date:** 7/17/08



Owens Creek
WBID 1461
Osage County

Meters

0 875 1,750 3,500 5,250

N
W E
S

WBID # 1461

Site # 01

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (Page 1 of 3)

(must be completed for each site)

Date & Time: 7/10/08 1110	Location Description (e.g., road crossing):
Stream Name: Owens Cr.	~~50~~ 150 m dnstream of Cty Rd 807 Crossing
Current Weather Conditions: sunny + clear	Facility Name(s): Green Acres Subd.
Weather Conditions for Past 10 days: 1.94" precipitation	Permit Number(s): MO 0101541
Official Drought Conditions at time of this survey (search DNR home page for "drought"): No drought ☒; Phase I ☐; Phase II ☐; Phase III ☐; Phase IV ☐; Unknown ☐	

Site Location:

LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION, IN METERS)				
Site 01	Easting (UTM X): 0607567	Northing (UTM Y): 4251483	Horizontal Accuracy: (EPE / FOM / PDOP) 26	~~Meters~~ ft
Site 11	Easting (UTM X): 0607686	Northing (UTM Y): 4251403	Horizontal Accuracy: (EPE / FOM / PDOP) 17	~~Meters~~ ft

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
001	upstream site1	002	dnstream site1		
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

Uses Observed*: (Uses actually observed at the 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.)

N/A

Stream Name & WBID # Owens Creek #1461 Date of Survey 7/10/08

Site # 01

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (Page 2 of 3)

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	☐ Rural Residential
☐ Campgrounds	☐ State parks	☐ National forests	☐ Nature trails	☐ Stairs/walkway
☐ Boating accesses	☐ Fence	☐ No trespass sign	☐ Steep slopes	☐ Other:
Comments: private property				

Evidence of Human Use*: (Attach photos and reference in "Photos" section.)

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

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

15 % Cobble	85 % Gravel	— % Sand	— % Silt	— % Mud/Clay	— % Bedrock

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

Benthic algae

Water Characteristics*: (Mark all that apply.)

Odor:	☐ Sewage	☐ Musky	☐ Chemical	☒ None	☐ Other:
Color:	☒ Clear	☐ Green	☐ Gray	☐ Milky	☐ Other:
Bottom Deposit:	☐ Sludge	☐ Solids	☒ Fine sediments	☐ None	☐ Other:
Surface Deposit:	☐ Oil	☐ Scum	☐ Foam	☒ None	☐ Other:

*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.

Stream Name & WBID # Owens Creek #1461 Date of Survey 7/10/08

Site # 01

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (Page 3 of 3)

Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses.)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)
		N/A			

Comments: (Please record any additional comments here.)

N/A

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

Printed Names of Personnel Collecting Data: Renee Martin + Jennifer Hrabik

Surveyor's Signature: Jennifer Hrabik Date of Survey: 7/10/08

Organization: AESolutions Position: Environmental Specialist

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: Owens Creek Waterbody ID: 1461 Site #: 1461_01

Estimated Channel Incision: 0.1 (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: 607567 UTM Y: 4251483 +/- 26 (feet)

11 UTM X: 607686 UTM Y: 4251403 +/- 17 (feet)

Average Stream Width: 5.20 (meters) (To determne Length of Reach)

Length of Survey Segment: 150 (meters) (20x average stream width)

Field Staff: Renee Martin and Jennifer Hrabik

Dissolved Oxygen

Date: 7/10/2008 Time: 11:10

Dissolved Oxygen: 6.31 (mg/L)

Dissolved Oxygen: 74.1 (% sat)

Specific Cond: 293.0 (µS/cm)

Water Temperature: 24.5 (°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	0.23	0.04	0.31	0.04	0.46	0.08	0.60	0.15	0.70	0.09	0.70	0.30	0.70	0.42	0.15	0.02	0.49	0.23	0.80	0.09	0.67	0.04
2	0.46	0.08	0.62	0.08	0.92	0.05	1.20	0.23	1.40	0.08	1.40	0.62	1.40	0.69	0.30	0.06	0.98	0.25	1.60	0.08	1.34	0.04
3	0.69	0.09	0.93	0.05	1.38	0.08	1.80	0.21	2.10	0.08	2.10	0.64	2.10	0.88	0.45	0.07	1.47	0.30	2.40	0.18	2.01	0.12
4	0.92	0.09	1.24	0.06	1.84	0.10	2.40	0.25	2.80	0.24	2.80	0.53	2.80	>1.00	0.60	0.09	1.96	0.25	3.20	0.17	2.68	0.12
5	1.15	0.09	1.55	0.05	2.30	0.21	3.00	0.19	3.50	0.32	3.50	0.51	3.50	0.90	0.75	0.08	2.45	0.25	4.00	0.13	3.35	0.16
6	1.38	0.04	1.86	0.08	2.76	0.23	3.60	0.27	4.20	0.38	4.20	0.39	4.20	0.66	0.90	0.06	2.94	0.21	4.80	0.08	4.02	0.19
7	1.61	0.10	2.17	0.06	3.22	0.25	4.20	0.18	4.90	0.37	4.90	0.31	4.90	0.45	1.05	0.06	3.43	0.17	5.60	0.15	4.69	0.23
8	1.84	0.13	2.48	0.02	3.68	0.20	4.80	0.12	5.60	0.37	5.60	0.17	5.60	0.27	1.20	0.07	3.92	0.04	6.40	0.12	5.36	0.21
9	2.07	0.08	2.79	0.01	4.14	0.16	5.40	0.06	6.30	0.30	6.30	0.15	6.30	0.10	1.35	0.01	4.41	0.01	7.20	0.04	6.03	0.04
Right Bank	2.30	0.00	3.10	0.00	4.60	0.00	6.00	0.00	7.00	0.00	7.00	0.00	7.00	0.00	1.50	0.00	4.90	0.00	8.00	0.00	6.70	0.00
Feature Type (riffle, run, or pool)	Riffle		Riffle		Run		Run		Pool		Pool		Pool		Riffle		Run		Run		Run	

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 bv dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.1 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Surveyor's Signature: _____ Date: _____

WBID # 1461

Site # 02

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (Page 1 of 3)

(must be completed for each site)

Date & Time: 7/10/08 1205	Location Description (e.g., road crossing): (~0.62 miles) 1000 m dnstream of site 1
Stream Name: Owens Cr.	
Current Weather Conditions: Sunny & clear	Facility Name(s): Green Acres Subd.
Weather Conditions for Past 10 days: 1.94" precipitation	Permit Number(s): MO 0101541
Official Drought Conditions at time of this survey (search DNR home page for "drought"): No drought X; Phase I ☐; Phase II ☐; Phase III ☐; Phase IV ☐; Unknown ☐	

Site Location:

LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION, IN METERS)					
Site 01	Easting (UTM X): 0608130	Northing (UTM Y): 4250677	Horizontal Accuracy: (EPE / FOM / PDOP)	24	~~Meters~~ ft
Site 11	Easting (UTM X): 0608279	Northing (UTM Y): 4250605	Horizontal Accuracy: (EPE / FOM / PDOP)	23	~~Meters~~ ft

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
003	Upstream	004	dnstream		
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

Uses Observed*: (Uses actually observed at the 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.)

N/A

Stream Name & WBID # Owens Creek #1461 Date of Survey 7/10/08

Site # 02

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (Page 2 of 3)

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	☐ Rural Residential
☐ Campgrounds	☐ State parks	☐ National forests	☐ Nature trails	☐ Stairs/walkway
☐ Boating accesses	☒ Fence	☐ No trespass sign	☐ Steep slopes	☒ Other:
Comments: private property Fence on right descending bank + field				

Evidence of Human Use*: (Attach photos and reference in "Photos" section.)

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

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

10 % Cobble	90 % Gravel	— % Sand	— % Silt	— % Mud/Clay	— % Bedrock

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

Benthic algae

Water Characteristics*: (Mark all that apply.)

Odor:	☐ Sewage	☐ Musky	☐ Chemical	☒ None	☐ Other:
Color:	☒ Clear	☐ Green	☐ Gray	☐ Milky	☐ Other:
Bottom Deposit:	☐ Sludge	☐ Solids	☒ Fine sediments	☐ None	☐ Other:
Surface Deposit:	☐ Oil	☐ Scum	☐ Foam	☒ None	☐ Other:

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Stream Name & WBID # Owens Creek #1461 Date of Survey 7/10/08

Site # 02

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (Page 3 of 3)

Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses.)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)
		N/A			

Comments: (Please record any additional comments here.)

N/A

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

Printed Names of Personnel Collecting Data: Renee Martin + Jennifer Hrabik

Surveyor's Signature: Jennifer Hrabik Date of Survey: 7/10/08

Organization: AESolutions Position: Environmental Specialist

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: Owens Creek Waterbody ID: 1461 Site #: 1461_02

Estimated Channel Incision: 0.1 (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: 608130 UTM Y: 4250677 +/- 24 (feet)

11 UTM X: 608279 UTM Y: 4250665 +/- 23 (feet)

Average Stream Width: 5.0 (meters) (To determne Length of Reach)

Length of Survey Segment: 150 (meters) (20x average stream width)

Field Staff: Renee Martin and Jennifer Hrabik

Dissolved Oxygen

Date: 7/10/2008 Time: 12:05

Dissolved Oxygen: 5.62 (mg/L)

Dissolved Oxygen: 67.2 (% sat)

Specific Cond: 306.0 (µS/cm)

Water Temperature: 24.1 (°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	0.25	0.01	0.60	0.15	0.60	0.44	0.50	0.13	0.20	0.06	0.51	>1.00	0.12	0.02	0.37	0.06	0.70	0.24	0.70	0.30	0.70	0.37
2	0.50	0.06	1.20	0.43	1.20	0.54	1.00	0.40	0.40	0.04	1.02	>1.00	0.24	0.06	0.74	0.24	1.40	0.36	1.40	0.30	1.40	0.34
3	0.75	0.10	1.80	0.58	1.80	0.63	1.50	0.67	0.60	0.04	1.53	>1.00	0.36	0.06	1.11	0.27	2.10	0.40	2.10	0.26	2.10	0.32
4	1.00	0.12	2.40	0.71	2.40	0.62	2.00	>1.00	0.80	0.02	2.04	0.81	0.48	0.08	1.48	0.31	2.80	0.39	2.80	0.19	2.80	0.31
5	1.25	0.13	3.00	0.65	3.00	0.64	2.50	>1.00	1.00	0.01	2.55	0.52	0.60	0.04	1.85	0.34	3.50	0.50	3.50	0.17	3.50	0.27
6	1.50	0.10	3.60	0.65	3.60	0.62	3.00	>1.00	1.20	0.01	3.06	0.36	0.72	0.08	2.22	0.32	4.20	0.68	4.20	0.12	4.20	0.24
7	1.75	0.06	4.20	0.62	4.20	0.65	3.50	>1.00	1.40	0.01	3.57	0.31	0.84	0.04	2.59	0.24	4.90	0.65	4.90	0.13	4.90	0.27
8	2.00	0.04	4.80	0.53	4.80	0.68	4.00	>1.00	1.60	0.01	4.08	0.15	0.96	0.02	2.96	0.01	5.60	0.40	5.60	0.07	5.60	0.17
9	2.25	0.01	5.40	0.26	5.40	0.59	4.50	0.82	1.80	0.01	4.59	0.02	1.08	0.01	3.33	0.01	6.30	0.20	6.30	0.02	6.30	0.02
Right Bank	2.50	0.00	6.00	0.00	6.00	0.00	5.00	0.00	2.00	0.00	5.10	0.00	1.20	0.00	3.70	0.00	7.00	0.00	7.00	0.00	7.00	0.00
Feature Type (riffle, run, or pool)	Riffle		Pool		Pool		Pool		Riffle		Pool		Riffle		Run		Pool		Run		Run	

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 bv dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.1 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Surveyor's Signature: _____ Date: _____

WBID # 1461

Site # 03

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (Page 1 of 3)

(must be completed for each site)

Date & Time: 7/10/08 1310	Location Description (e.g., road crossing): City Rd 806 Crossing
Stream Name: Owens Cr.	
Current Weather Conditions: partly cloudy	Facility Name(s): Green Acres Subd.
Weather Conditions for Past 10 days: 1.94" precipitation	Permit Number(s): MO 0101541
Official Drought Conditions at time of this survey (search DNR home page for "drought"): No drought ☒; Phase I ☐; Phase II ☐; Phase III ☐; Phase IV ☐; Unknown ☐	

Site Location:

LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION, IN METERS)					
Site 01	Easting (UTM X): 0608993	Northing (UTM Y): 4252289	Horizontal Accuracy: (EPE / FOM / PDOP)	16	Meters ~~ft~~
Site 11	Easting (UTM X): 0608924	Northing (UTM Y): 4252441	Horizontal Accuracy: (EPE / FOM / PDOP)	20	Meters ~~ft~~

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
005	Upstream	006	~~dnstream~~ upstream ~~ft~~	007	upstream
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
008	dnstream				
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

Uses Observed*: (Uses actually observed at the 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.)

N/A

Stream Name & WBID # Owens Creek #1461 Date of Survey 7/10/08

Site # 03

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (Page 2 of 3)

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	☐ Rural Residential
☐ Campgrounds	☐ State parks	☐ National forests	☐ Nature trails	☐ Stairs/walkway
☐ Boating accesses	☒ Fence	☐ No trespass sign	☐ Steep slopes	☐ Other:
Comments: private property - fields				

Evidence of Human Use*: (Attach photos and reference in "Photos" section.)

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

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

5 % Cobble	70 % Gravel	— % Sand	— % Silt	25 % Mud/Clay	— % Bedrock

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

Benthic Algae

Water Characteristics*: (Mark all that apply.)

Odor:	☐ Sewage	☐ Musky	☐ Chemical	☒ None	☐ Other:
Color:	☒ Clear	☐ Green	☐ Gray	☐ Milky	☐ Other:
Bottom Deposit:	☐ Sludge	☐ Solids	☒ Fine sediments	☐ None	☐ Other:
Surface Deposit:	☐ Oil	☐ Scum	☐ Foam	☒ None	☐ Other:

*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.

Stream Name & WBID # Owens Creek #1461 Date of Survey 7/10/08

Site # 03

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization (Page 3 of 3)

Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses.)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)
		N/A			

Comments: (Please record any additional comments here.)

N/A

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

Printed Names of Personnel Collecting Data: Renee Martin & Jennifer Hrabik

Surveyor's Signature: Jennifer Hrabik Date of Survey: 7/10/08

Organization: AESolutions Position: Environmental Specialist

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Stream Name: Owens Creek Waterbody ID: 1461 Site #: 1461_03

Estimated Channel Incision: 0.1 (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: 608993 UTM Y: 4252289 +/- 16 (feet)

11 UTM X: 608974 UTM Y: 4252441 +/- 20 (feet)

Average Stream Width: 6.1 (meters) Length of Survey Segment: 150 (meters)

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

Field Staff: Renee Martin and Jennifer Hrabik

Dissolved Oxygen

Date: 7/10/2008 Time: 13:10

Dissolved Oxygen: 6.77 (mg/L)

Dissolved Oxygen: 83.9 (% sat)

Specific Cond: 307.0 (µS/cm)

Water Temperature: 26.2 (°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	0.30	0.02	0.59	0.12	0.68	0.37	0.70	0.19	0.83	0.26	0.50	0.09	0.37	0.18	0.46	0.04	0.79	0.07	0.66	0.01	0.83	0.24
2	0.60	0.04	1.18	0.41	1.36	0.73	1.40	0.26	1.66	0.27	1.00	0.17	0.74	0.20	0.92	0.02	1.58	0.15	1.32	0.05	1.66	0.36
3	0.90	0.06	1.77	0.44	2.04	0.68	2.10	0.23	2.49	0.40	1.50	0.17	1.11	0.20	1.38	0.03	2.37	0.15	1.98	0.04	2.49	0.34
4	1.20	0.08	2.36	0.20	2.72	0.50	2.80	0.17	3.32	0.32	2.00	0.10	1.48	0.20	1.84	0.08	3.16	0.13	2.64	0.07	3.32	0.37
5	1.50	0.08	2.95	0.15	3.40	0.39	3.50	0.10	4.15	0.32	2.50	0.15	1.85	0.19	2.30	0.13	3.95	0.13	3.30	0.13	4.15	0.32
6	1.80	0.08	3.54	0.10	4.08	0.42	4.20	0.23	4.98	0.36	3.00	0.15	2.22	0.15	2.76	0.17	4.74	0.13	3.96	0.15	4.98	0.22
7	2.10	0.05	4.13	0.08	4.76	0.38	4.90	0.25	5.81	0.34	3.50	0.16	2.59	0.15	3.22	0.17	5.53	0.18	4.62	0.20	5.81	0.20
8	2.40	0.02	4.72	0.04	5.44	0.25	5.60	0.16	6.64	0.27	4.00	0.09	2.96	0.04	3.68	0.03	6.32	0.23	5.28	0.24	6.64	0.28
9	2.70	0.01	5.31	0.02	6.12	0.08	6.30	0.03	7.47	0.17	4.50	0.08	3.33	0.01	4.14	0.04	7.11	0.27	5.94	0.26	7.47	0.23
Right Bank	3.00	0.00	5.90	0.00	6.80	0.00	7.00	0.00	8.30	0.00	5.00	0.00	3.70	0.00	4.60	0.00	7.90	0.00	6.60	0.00	8.30	0.00
Feature Type (riffle, run, or pool)	Riffle		Run		Pool		Run		Run		Run		Run		Run		Run		Run		Run	

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 bv dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.1 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Surveyor's Signature: _____ Date: _____

WBID #1461
Site #1

Downstream

WBID #1461
Site #2

Downstream

WBID #1461
Site #1

Upstream

WBID #1461
Site #2

Upstream

WBID #1461
Site #3

Upstream

WBID #1461
Site #3

Downstream

WBID #1461
Site #3

Upstream

WBID #1461
Site #3

Upstream