Recreational Use Attainability Analysis of Steele Creek (Segment 1209K)

Appendix 2

Field Data Sheets

*** The Microsoft Access database with field survey data is available as an electronic supplement on the CD insert found in Appendix 5**

Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information:	L. Ray, J. Wrast, C. Greene, K. Conda
Date & Time: 5/28/10 0947-1002	County Name: Limestone
Stream Name: Steele Creek	
Segment No. or nearest downstream Segment No.: 1209K	
Description of Site: #1 FM 147 @ Steele Creek	

At any point during the Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the use for the water body the investigator should stop conducting the UAA.

A. Stream Characteristics:

1. Check the following channel flow status that applies.

☐ dry ☐ no flow ☒ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:

Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.

☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.

☒ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.

☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.

☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. _____ cfs No Flow taken No access to water

4. Water Quality Data (Field Parameters)

Field parameters should be collected in accordance with the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1.

Air Temp 34.5 °C Water Temp 26.5 °C Secchi tube No access to water ___ m

5. Riparian Zone (Mark dominant categories with L (Left Bank) and R (Right Bank). Bank orientation is determined by the investigator facing downstream.)

L, R	Forest downstream		Urban		Rip rap
	Shrub dominated corridor	L, R	Pasture upstream		Concrete
	Herbaceous marsh		Row crops	Other (specify):	
	Mowed/maintained corridor		Denuded/Eroded bank		

6. Ease of bank access to the water body: ☐ Easy ☐ Moderately easy ☐ Moderately difficult ☒ Difficult

7. Please describe access opportunities or explain why the site is not easily accessible (Attach photos for documentation): No access to water, No flow, Shallow

8. Dominant Primary Substrate

☐ Cobble ☐ Sand ☐ Silt ☒ Mud/Clay ☐ Gravel ☐ Bedrock ☐ Rip rap ☐ Concrete

QC PL E MES

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #1 FM 147 @ Steele Creek
Date: 5/28/10 Time: 0947 – 1002

B. Primary Contact Water Recreation Evaluation:
- Primary contact recreation draft definition: Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, and whitewater kayaking, canoeing, and rafting, involving a significant risk of ingestion of water.

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?
☐ Yes ☒ No primary contact recreation activities were observed
a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).

☐ Wading-Children	☐ Tubing	☒ No primary contact activities that commonly occur were observed
☐ Wading-Adults	☐ Surfing	
☐ Swimming	☐ Whitewater-kayaking, canoeing, rafting	
☐ Water skiing	☐ Other: _____	
☐ Diving	☐ frequent public swimming-created by publicly owned land or commercial operations	

b. Check the number of individuals observed at the site: ☒ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Water in mouth or nose of the individual ☐ Primary touch: Individual's body (or portion) immersed in water
☐ Secondary touch: fishing, pets and related contact with water ☐ Individual is in a boat touching water
☐ Individual is on shore near water within 8 meters (25ft) of water ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☒ Not applicable

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
Fence Runs down Both Sides of bridge/Culvert upstream
Downstream – fence across water by bridge

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
ROADS ACROSS CREEK

4. Is an area with primary contact recreation activities or a bathing beach (e.g. state/local parks with swimming, etc.) located near (e.g. within 5 miles upstream and downstream) this site? ~~N/A~~ NO No

C. Secondary Contact Water Recreation Evaluation:
- Secondary contact recreation 1: Water recreation activities, such as fishing, commercial and recreational boating, and limited body contact incidental to shoreline activity, not involving a significant risk of water ingestion and that commonly occur.
- Secondary contact recreation 2: Water recreation activities, such as fishing, commercial and recreational boating, and limited body contact incidental to shoreline activity, not involving a significant risk of water ingestion but that occur less frequently than for secondary contact recreation 1 due to (1) physical characteristics of the water body and/or (2) limited public access.

1. Were water recreation activities observed at the site, but the nature of the recreation does not involve a significant risk of ingestion (e.g. secondary contact recreation activities)? ☐ Yes ☒ No secondary contact recreation activities were observed
a. Check the following boxes of secondary contact recreation activities that were observed at the time of the sampling event at the site (Attach photos of activities or lack of activities).
☐ Fishing
☐ Boating-commercial, recreational
☐ Non-whitewater-kayaking, rafting, canoeing
☒ No secondary contact recreation activities were observed
☐ Other secondary contact activities: _____

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #1
Date: 5/28/10 Time: 0947 - 1002

b. Check the number of individuals observed at the site.
X None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body. N/A
☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body well away from water between 8 and 30 meters (100 ft)

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
Same

3. If secondary contact recreation activities are observed, how often do water recreational activities occur that do not involve a significant risk of water ingestion? ☐ frequently ☐ infrequently
Please describe how often the activities occur? X Unknown ☐ Never ☐ Daily ☐ Monthly ☐ Yearly

4. If infrequently, what is the reason? ☐ physical characteristics of the water body X limited public access ☐ other
If other, list reasons: _____

5. Describe the physical characteristics of the water body that hinders the frequency of secondary contact recreation (depth, etc.) (Attach photos or depth measurements, etc. for documentation).
Same

6. Describe why there is limited public access (e.g. lack of roads, river or stream banks overgrown, etc.) (Attach photos, maps, etc. for documentation).
Same

D. Noncontact Recreation Evaluation
Noncontact recreation applies to water bodies where recreation activities do not involve a significant risk of water ingestion, and where primary and secondary contact recreation uses do not occur because of unsafe conditions, such as barge traffic.

1. Provide site-specific information and documentation (including photographs) regarding unsafe conditions, recreation activities, and presence or absence of water recreation activities.

N/A

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #1
Date: 5/28/10 ~~FDS Page 3 of 8~~ Time: 9:47 – 10:02

E. Stream Channel and Substantial Pools
Please check the following which best describes the river or stream: X Wadeable ☐ Non-wadeable

1. Wadeable Streams
Determine whether or not the average depth at the thalweg is greater than 0.5 meters and if there are substantial pools with a depth of 1 meter or greater. Walk an approximately 300 meter reach (total) at the site and take the following measurements within the 300 meter reach. Measurements should be taken during base flow conditions (sustained or typical dry, warm-weather flows between rainfall events, excluding unusual antecedent conditions of drought or wet weather

Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters.
Photos #s (30 meters) Upstream____ Downstream____ Left Bank____ Right Bank____
Photos #s (150 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓ @bridge
Photos #s (300 meters) Upstream____ Downstream____ Left Bank____ Right Bank____

a) Substantial pools - Measure the length of each pool (if > 10 pools only measure 10 pools), the width (at the widest point), and the deepest depth. A substantial pool is considered a pool greater than 10 meters in length for the purposes of a Basic RUAA Survey. If depth and/or width measurements were not attainable, explain why.
N/A

	Length (meters)	Width (meters)	Depth (meters)
Pool 1			
Pool 2			
Pool 3			
Pool 4			
Pool 5			
Pool 6			
Pool 7			
Pool 8			
Pool 9			
Pool 10			

b)Average depth at the thalweg –Take depth measurements approximately every 30 meters to calculate an average depth at the thalweg (at least 10 measurements needed). If depth and/or width measurements were not attainable, explain why.
Can see 91m upstream & 41m downstream

Distance	Depth (meters)
30 meters	
60 meters	
90 meters	
120 meters	
150 meters	1.0 ft (0.30m) Depth taken at Bridge
180 meters	
210 meters	
240 meters	
270 meters	
300 meters	
Average	

Not able to access the water, fenced to edges of water, ~~bridge~~ fence across water downstream of bridge

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #1
Date: 5/28/10 Time: 947-1002

c) Stream width - Measure (1) the width at one point which represents the typical average width of the 300 meter reach; (2) the width at the narrowest point of the stream within the 300 meter reach; and (3) the width at the widest point of the stream within the 300 meter reach.

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	14.3 ft @ bridge 4.358 m
Width at narrowest point of the stream within 300 meter reach	
Width at the widest point of the stream within 300 meter reach	

d) Is there sufficient water within a 300 meter stream reach during base flow conditions to support primary contact recreation? ☐ Yes ☒ No
COMMENTS:

2. Non-wadeable Streams N/A
If accessible, take 10 width measurements which represent typical widths of the 300 meter reach. If the water is too deep and not accessible record the estimated average width of the water body.

Also, take photos facing upstream, downstream, left bank, and right bank at .
Photos #s (30 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (150 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

# Measurements	Width (meters)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #1
Date: 5/28/10 Time: 0947 - 1002

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

- ☐ Drinking or water in mouth
- ☐ Bathing
- ☐ Walking
- ☐ Jogging/running
- ☐ Bicycling
- ☐ Standing
- ☐ Sitting
- ☐ Lying down/sleeping
- ☐ Playing on shoreline
- ☐ Picnicking
- ☐ Motorcycle/ATV
- ☐ Hunting/Trapping
- ☐ Wildlife watching
- ☒ None
- ☐ Other: _____

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☐ Yes ☒ No (If yes, please provide supporting documentation and photos.)
Comments: LR 5/28/10

3. Check any channel obstructions that apply (Attach photos).

- ☐ Culverts
- ☒ Fences
- ☐ Log jams
- ☐ Rip rap
- Water control structure
- ☐ Barbed wire
- ☐ Dams
- ☐ Thick vegetation
- ☐ Low bridges
- ☐ None
- ☐ Utility pipe
- ☐ Other (specify): _____

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest).

- ☐ Campgrounds
- ☐ Playgrounds
- ☒ Rural area
- ☐ Residential
- ☐ National forests
- ☐ Urban/suburban location
- ☐ Golf Course
- ☐ Sports Field
- ☐ Stairs/walkway
- ☐ Boating access (ramps)
- ☐ Beach
- ☒ Bridge crossing
- ☐ Commercial boating
- ☐ Trails/paths (hiking/biking)
- ☐ Paved parking lot
- ☐ Unimproved parking lot
- ☒ Roads (paved/unpaved)
- ☐ Populated area
- ☐ Docks or rafts
- ☐ Commercial outfitter
- ☐ Nearby school
- ☐ Power Line Corridor
- ☐ Parks (national/city/county/state)
- ☐ Public Property
- ☐ Other: _____
- ☐ None of the Above

Comments: _____

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).

- ☐ Private Property
- ☐ No trespass sign
- ☐ Wildlife
- ☐ Steep slopes
- ☐ No public access
- ☐ No roads
- ☒ Fence
- ☐ Barge/ship traffic
- ☐ Industrial
- ☐ None of the Above
- ☐ Other: _____

Comments: _____

6. Check any indications of human use (Attach photos).

- ☒ Roads
- ☐ Rope swings
- ☐ Dock/platform
- ☐ Foot paths/prints
- ☐ Other: _____
- ☐ RV/ATV Tracks
- ☐ Camping Sites
- ☐ Fire pit/ring
- ☐ Fishing Tackle
- ☐ NPDES Discharge
- ☐ Gates on corridor
- ☐ Children's toys
- ☐ Remnant's of Kid's play
- ☐ Organized event
- ☐ No Human Presence

Comments: _____

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #1
Date: 5/28/10 Time: 0947 – 1002

7. Check all water characteristics that apply (Attach photos).

Aquatic Vegetation: X absent ☐ rare ☐ common ☐ abundant
Algae Cover: X absent ☐ rare ☐ common ☐ abundant
Odor: X none ☐ rare ☐ common ☐ abundant
Color: ☐ clear ☐ green ☐ red X brown ☐ black
Bottom Deposit: ☐ sludge ☐ solids X fine sediments ☐ none ☐ other
Water Surface: X clear ☐ scum ☐ foam ☐ debris ☐ oil
Other:

8. Vertebrates Observed within 300 meter reach

Snakes ☐ None X slight presence ☐ moderate presence ☐ large presence
Water Dependent Birds X None ☐ slight presence ☐ moderate presence ☐ large presence
Alligators X None ☐ slight presence ☐ moderate presence ☐ large presence
Comments:

9. Mammals Observed within 300 meter reach

Wild X None ☐ slight presence ☐ moderate presence ☐ large presence
Domesticated Pets X None ☐ slight presence ☐ moderate presence ☐ large presence
Livestock X None ☐ slight presence ☐ moderate presence ☐ large presence
Feral Hogs X None ☐ slight presence ☐ moderate presence ☐ large presence
Comments:

10. Evidence of wild animals or evidence of birds, cattle, hogs, etc.

X Tracks ☐ Fecal droppings ☐ Bird nests

11. Garbage Observed

Large garbage in the channel X None ☐ Rare ☐ Common ☐ Abundant
Small garbage in the channel ☐ None X Rare ☐ Common ☐ Abundant
Bank Garbage ☐ None X Rare ☐ Common ☐ Abundant
Briefly describe the kinds of garbage observed: Beer box, vehicle bumper on Bank, trash

12. Is the site located in a wildlife preserve with large wildlife (i.e waterfowl) population? ☐ Yes X No

13. Please document any other relevant information regarding recreational activities and the water body in general (for example, area outside of the stream reach evaluated).

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream: Steele Creek Date: 5/28/10

Site: #1 Site

Description: FM 147 @ Steele Creek

Time Begin: _____ Time End: _____ Meter Type: Sontek Flow Tracker

Observers: _____ Stream Width*: _____ Section Width (W): _____

Observations: Water in pools, stagnent

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V) At Point (ft/s)(m/s)	Velocity (V) Average (ft/s)(m/s)	Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)

NO FLOW

Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: L. Ray, J. Weast, K. Cordra, C. Greene	
Date & Time: 5/29/2010 1020 - 1057	County Name: Limestone
Stream Name: Steele Creek	
Segment No. or nearest downstream Segment No.: 1209 K	
Description of Site: #2 LCR 648 @ Steele Creek	

At any point during the Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the use for the water body the investigator should stop conducting the UAA.

A. Stream Characteristics:

1. Check the following channel flow status that applies.

☐ dry ☐ no flow ☑ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:

Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.

☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.

☑ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.

☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.

☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. _____ cfs No Flow taken

4. Water Quality Data (Field Parameters)

Field parameters should be collected in accordance with the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1.

Air Temp 27 °C Water Temp 23 °C Secchi 0.271 m

5. Riparian Zone (Mark dominant categories with L (Left Bank) and R (Right Bank). Bank orientation is determined by the investigator facing downstream.)

L/R	Forest	_____ Urban	_____ Rip rap
L/R	Shrub dominated corridor	_____ Pasture	_____ Concrete
_____	Herbaceous marsh	_____ Row crops	Other (specify): _____
_____	Mowed/maintained corridor	_____ Denuded/Eroded bank	

6. Ease of bank access to the water body: ☐ Easy ☒ Moderately easy ☐ Moderately difficult ☐ Difficult

X. Please describe access opportunities or explain why the site is not easily accessible (Attach photos for documentation):

Park in ditch next to bridge (NO PARKING spot) banks fairly steep and covered in poison ivy, but accessible

8. Dominant Primary Substrate

☐ Cobble ☒ Sand ☐ Silt ☐ Mud/Clay ☐ Gravel ☐ Bedrock ☐ Rip rap ☐ Concrete

QC PL

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #2
Date: 5/28/10 Time: 1020-1057

B. Primary Contact Water Recreation Evaluation:
- Primary contact recreation draft definition: Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, and whitewater kayaking, canoeing, and rafting, involving a significant risk of ingestion of water.

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?
☐ Yes ☑ No primary contact recreation activities were observed
a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).

☐ Wading-Children	☐ Tubing	☒ No primary contact activities that commonly occur were observed
☐ Wading-Adults	☐ Surfing	
☐ Swimming	☐ Whitewater-kayaking, canoeing, rafting	
☐ Water skiing	☐ Other: _____	
☐ Diving	☐ frequent public swimming-created by publicly owned land or commercial operations	

b. Check the number of individuals observed at the site: ☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Water in mouth or nose of the individual ☐ Primary touch: Individual's body (or portion) immersed in water
☐ Secondary touch: fishing, pets and related contact with water ☐ Individual is in a boat touching water
☐ Individual is on shore near water within 8 meters (25ft) of water ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☑ Not applicable

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
Oil floating on water surface, poison ivy thick along banks, tree debris in/out water, hay twine in/out of water

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
Park in ditch next to bridge, No parking places or place to pull-off the vehicle

4. Is an area with primary contact recreation activities or a bathing beach (e.g. state/local parks with swimming, etc.) located near (e.g. within 5 miles upstream and downstream) this site? N/A

C. Secondary Contact Water Recreation Evaluation:
- Secondary contact recreation 1: Water recreation activities, such as fishing, commercial and recreational boating, and limited body contact incidental to shoreline activity, not involving a significant risk of water ingestion and that commonly occur.
- Secondary contact recreation 2: Water recreation activities, such as fishing, commercial and recreational boating, and limited body contact incidental to shoreline activity, not involving a significant risk of water ingestion but that occur less frequently than for secondary contact recreation 1 due to (1) physical characteristics of the water body and/or (2) limited public access.

1. Were water recreation activities observed at the site, but the nature of the recreation does not involve a significant risk of ingestion (e.g. secondary contact recreation activities)? ☐ Yes ☒ No secondary contact recreation activities were observed
a. Check the following boxes of secondary contact recreation activities that were observed at the time of the sampling event at the site (Attach photos of activities or lack of activities).
☐ Fishing
☐ Boating-commercial, recreational
☐ Non-whitewater-kayaking, rafting, canoeing
☒ No secondary contact recreation activities were observed
☐ Other secondary contact activities: _____

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #2
Date: 5/28/10 Time: 1020-1057

b. Check the number of individuals observed at the site.
✓ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body well away from water between 8 and 30 meters (100 ft) N/A

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
Same

3. If secondary contact recreation activities are observed, how often do water recreational activities occur that do not involve a significant risk of water ingestion? ☐ frequently ☐ infrequently N/A
Please describe how often the activities occur? ☒ Unknown ☐ Never ☐ Daily ☐ Monthly ☐ Yearly

4. If infrequently, what is the reason? ☐ physical characteristics of the water body ☐ limited public access ☐ other
If other, list reasons: N/A

5. Describe the physical characteristics of the water body that hinders the frequency of secondary contact recreation (depth, etc.) (Attach photos or depth measurements, etc. for documentation).
Same

6. Describe why there is limited public access (e.g. lack of roads, river or stream banks overgrown, etc.) (Attach photos, maps, etc. for documentation).
Fences up to the bank on both banks, private property, lack of parking on 1 lane bridge

D. Noncontact Recreation Evaluation

Noncontact recreation applies to water bodies where recreation activities do not involve a significant risk of water ingestion, and where primary and secondary contact recreation uses do not occur because of unsafe conditions, such as barge traffic.

1. Provide site-specific information and documentation (including photographs) regarding unsafe conditions, recreation activities, and presence or absence of water recreation activities.
N/A

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #2
Date: 5/20/10 ~~FDS Page 3 of 8~~ Time: 1020-1057

E. Stream Channel and Substantial Pools
Please check the following which best describes the river or stream: X Wadeable X Non-wadeable

74ft. up to ~~125m~~ 115m upstream, 158m down

upstream of 115 m too deep to wade
downstream of 158 m too deep to wade

1. Wadeable Streams
Determine whether or not the average depth at the thalweg is greater than 0.5 meters and if there are substantial pools with a depth of 1 meter or greater. Walk an approximately 300 meter reach (total) at the site and take the following measurements within the 300 meter reach. Measurements should be taken during base flow conditions (sustained or typical dry, warm-weather flows between rainfall events, excluding unusual antecedent conditions of drought or wet weather

Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters.
Photos #s (30 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (150 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓
Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

115 m U/D/L/R, oil sheen, at bridge 150, 158 m ~~U/D/L/R~~ KC
large pool, hay twine 6/7/10

a) Substantial pools - Measure the length of each pool (if > 10 pools only measure 10 pools), the width (at the widest point), and the deepest depth. A substantial pool is considered a pool greater than 10 meters in length for the purposes of a Basic RUAA Survey. If depth and/or width measurements were not attainable, explain why.

	Length (meters)	Width (meters)	Depth (meters)
Pool 1			
Pool 2			
Pool 3			
Pool 4			
Pool 5			
Pool 6			
Pool 7			
Pool 8			
Pool 9			
Pool 10			

b)Average depth at the thalweg –Take depth measurements approximately every 30 meters to calculate an average depth at the thalweg (at least 10 measurements needed). If depth and/or width measurements were not attainable, explain why.

Distance	Depth (meters)
30 meters	
60 meters	
90 meters	
120 meters	3.4 ft 1.036m
150 meters	0.6 ft 0.182m
180 meters	
210 meters	
240 meters	
270 meters	
300 meters	
Average	0.609m

pics at 115m >4ft, can't continue

pics at 158m >4ft, tree debris in water, large pool

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #2
Date: 5/28/10 Time: 1020-1057

c) Stream width - Measure (1) the width at one point which represents the typical average width of the 300 meter reach; (2) the width at the narrowest point of the stream within the 300 meter reach; and (3) the width at the widest point of the stream within the 300 meter reach.

Measurement Type	5.4 ft	Width (meters) KC 6/7/10
Typical Average Width of 300 meter reach	~~18.3 ft~~	~~5.58 m~~ 1.65m
Width at narrowest point of the stream within 300 meter reach	1 ft	.30
Width at the widest point of the stream within 300 meter reach	18.3 ft	5.58 m

d) Is there sufficient water within a 300 meter stream reach during base flow conditions to support primary contact recreation? ☒ Yes ☐ No
COMMENTS:

2. Non-wadeable Streams
If accessible, take 10 width measurements which represent typical widths of the 300 meter reach. If the water is too deep and not accessible record the estimated average width of the water body.

Also, take photos facing upstream, downstream, left bank, and right bank at .
Photos #s (30 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (150 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

# Measurements	Width (meters)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #2
Date: 5/28/10 Time: 1020-1057

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

- ☐ Drinking or water in mouth
- ☐ Bathing
- ☐ Walking
- ☐ Jogging/running
- ☐ Bicycling
- ☐ Standing
- ☐ Sitting
- ☐ Lying down/sleeping
- ☐ Playing on shoreline
- ☐ Picnicking
- ☐ Motorcycle/ATV
- ☐ Hunting/Trapping
- ☐ Wildlife watching
- ☒ None
- ☐ Other: _____

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☐ Yes ☒ No (If yes, please provide supporting documentation and photos.)
Comments: _____

3. Check any channel obstructions that apply (Attach photos).

- ☐ Culverts
- ☐ Barbed wire
- ☐ Utility pipe
- ☐ Fences
- ☐ Dams
- ☐ Other (specify): _____
- ☒ Log jams
- ☐ Thick vegetation
- ☐ Rip rap
- ☐ Low bridges
- ☐ Water control structure
- ☐ None

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest).

- ☐ Campgrounds
- ☐ Playgrounds
- ☒ Rural area
- ☐ Residential
- ☐ National forests
- ☐ Urban/suburban location
- ☐ Golf Course
- ☐ Sports Field
- ☐ Stairs/walkway
- ☐ Boating access (ramps)
- ☐ Beach
- ☒ Bridge crossing
- ☐ Commercial boating
- ☐ Trails/paths (hiking/biking)
- ☐ Paved parking lot
- ☐ Unimproved parking lot
- ☒ Roads (paved/unpaved)
- ☐ Populated area
- ☐ Docks or rafts
- ☐ Commercial outfitter
- ☐ Nearby school
- ☐ Power Line Corridor
- ☐ Parks (national/city/county/state)
- ☐ Public Property
- ☐ Other: _____
- ☐ None of the Above

Comments: _____

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).

- ☒ Private Property
- ☐ No trespass sign
- ☐ Wildlife
- ☐ Steep slopes
- ☐ No public access
- ☐ No roads
- ☒ Fence
- ☐ Barge/ship traffic
- ☐ Industrial
- ☐ None of the Above
- ☐ Other: _____

Comments: _____

6. Check any indications of human use (Attach photos).

- ☐ Roads
- ☐ Rope swings
- ☐ Dock/platform
- ☐ Foot paths/prints
- ☐ Other: _____
- ☐ RV/ATV Tracks
- ☐ Camping Sites
- ☐ Fire pit/ring
- ☒ Fishing Tackle
- ☐ NPDES Discharge
- ☐ Gates on corridor
- ☐ Children's toys
- ☐ Remnant's of Kid's play
- ☐ Organized event
- ☐ No Human Presence

Comments: _____

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #2
Date: 5/28/10 Time: 1020 – 1057

7. Check all water characteristics that apply (Attach photos).

Aquatic Vegetation: X absent ☐ rare ☐ common ☐ abundant
Algae Cover: X absent ☐ rare ☐ common ☐ abundant
Odor: ☐ none ☐ rare X common ☐ abundant
Color: ☐ clear ☐ green ☐ red X brown ☐ black
Bottom Deposit: ☐ sludge ☐ solids X fine sediments ☐ none ☐ other
Water Surface: ☐ clear ☐ scum ☐ foam ☐ debris X oil
Other:
Smelt oil while in water

8. Vertebrates Observed within 300 meter reach

Snakes ☐ None X slight presence ☐ moderate presence ☐ large presence 1 small snake
Water Dependent Birds X None ☐ slight presence ☐ moderate presence ☐ large presence
Alligators X None ☐ slight presence ☐ moderate presence ☐ large presence
Comments:

9. Mammals Observed within 300 meter reach

Wild X None ☐ slight presence ☐ moderate presence ☐ large presence
Domesticated Pets X None ☐ slight presence ☐ moderate presence ☐ large presence
Livestock X None ☐ slight presence ☐ moderate presence ☐ large presence
Feral Hogs X None ☐ slight presence ☐ moderate presence ☐ large presence
Comments:

10. Evidence of wild animals or evidence of birds, cattle, hogs, etc.
☐ Tracks ☐ Fecal droppings ☐ Bird nests Animal Bones in Stream

11. Garbage Observed
Large garbage in the channel ☐ None X Rare ☐ Common ☐ Abundant
Small garbage in the channel ☐ None X Rare ☐ Common ☐ Abundant
Bank Garbage ☐ None X Rare ☐ Common ☐ Abundant
Briefly describe the kinds of garbage observed: toilet, hay twine, fishing twine

12. Is the site located in a wildlife preserve with large wildlife (i.e waterfowl) population? ☐ Yes X No

13. Please document any other relevant information regarding recreational activities and the water body in general (for example, area outside of the stream reach evaluated).
Thick with poison ivy along road & banks

Field Data Sheet - Basic RUAA Survey
Stream Flow (Discharge) Measurement

Stream: Steele Creek Date: 5/28/10
Site: #2 Site
Description: LCR 648
Time Begin: 1020 Time End: Meter Type: SonTek FlowTracker
Observers: L. Ray, C. Greene Stream Width*: 5.4 ft Section Width (W): 1.28
Observations:

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V)		Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
			At Point (ft/s)(m/s)	Average (ft/s)(m/s)	

*Large amount of debris at only flow area. Unable to complete, water flow at slow trickle

Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: K. Condra, L. Ray, J. Wrast, C. Green	
Date & Time: 5/28/10 11:00-1112	County Name: Limestone
Stream Name: Steele Creek	
Segment No. or nearest downstream Segment No.: 1209 K	
Description of Site: #3 LCR 656 @ Steele Creek	

At any point during the Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the use for the water body the investigator should stop conducting the UAA.

A. Stream Characteristics:

1. Check the following channel flow status that applies.

☐ dry ☐ no flow ☒ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:

Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.

☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.

☒ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.

☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.

☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. _____ cfs No Flow taken No access to water

4. Water Quality Data (Field Parameters)

Field parameters should be collected in accordance with the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1.

Air Temp 27.0 °C Water Temp 24.0 C Secchi tube No water access m

5. Riparian Zone (Mark dominant categories with L (Left Bank) and R (Right Bank). Bank orientation is determined by the investigator facing downstream.)

L/R Forest	_____ Urban	_____ Rip rap
_____ Shrub dominated corridor	_____ Pasture	_____ Concrete
_____ Herbaceous marsh	_____ Row crops	Other (specify): _____
_____ Mowed/maintained corridor	_____ Denuded/Eroded bank	

6. Ease of bank access to the water body: ☐ Easy ☐ Moderately easy ☐ Moderately difficult ☒ Difficult – No access

7. Please describe access opportunities or explain why the site is not easily accessible (Attach photos for documentation):

Can't access water. Fencing along road up to bridge. Steep banks

8. Dominant Primary Substrate

☐ Cobble ☒ Sand ☐ Silt ☐ Mud/Clay ☐ Gravel ☐ Bedrock ☐ Rip rap ☐ Concrete

E AH QC PL

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #3
Date: 5/28/10 Time: 11:00-1112

B. Primary Contact Water Recreation Evaluation:
- Primary contact recreation draft definition: Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, and whitewater kayaking, canoeing, and rafting, involving a significant risk of ingestion of water.

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?
☐ Yes ☒ No primary contact recreation activities were observed
a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).

☐ Wading-Children	☐ Tubing	☒ No primary contact activities that commonly occur were observed
☐ Wading-Adults	☐ Surfing	
☐ Swimming	☐ Whitewater-kayaking, canoeing, rafting	
☐ Water skiing	☐ Other: _____	
☐ Diving	☐ frequent public swimming-created by publicly owned land or commercial operations	

b. Check the number of individuals observed at the site: ☒ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Water in mouth or nose of the individual ☐ Primary touch: Individual's body (or portion) immersed in water
☐ Secondary touch: fishing, pets and related contact with water ☐ Individual is in a boat touching water
☐ Individual is on shore near water within 8 meters (25ft) of water ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☒ Not applicable

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
~~Fenced up to the bridge~~, on ~~both banks, up & downstream~~ steep banks. ~~No access~~
over-grown vegetation

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
Road over bridge. No access to water from banks, fenced to bridge, on both banks, upstream & downstream of bridge

4. Is an area with primary contact recreation activities or a bathing beach (e.g. state/local parks with swimming, etc.) located near (e.g. within 5 miles upstream and downstream) this site?

C. Secondary Contact Water Recreation Evaluation:
- Secondary contact recreation 1: Water recreation activities, such as fishing, commercial and recreational boating, and limited body contact incidental to shoreline activity, not involving a significant risk of water ingestion and that commonly occur.
- Secondary contact recreation 2: Water recreation activities, such as fishing, commercial and recreational boating, and limited body contact incidental to shoreline activity, not involving a significant risk of water ingestion but that occur less frequently than for secondary contact recreation 1 due to (1) physical characteristics of the water body and/or (2) limited public access.

1. Were water recreation activities observed at the site, but the nature of the recreation does not involve a significant risk of ingestion (e.g. secondary contact recreation activities)? ☐ Yes ☒ No secondary contact recreation activities were observed
a. Check the following boxes of secondary contact recreation activities that were observed at the time of the sampling event at the site (Attach photos of activities or lack of activities).
☐ Fishing
☐ Boating-commercial, recreational
☐ Non-whitewater-kayaking, rafting, canoeing
☒ No secondary contact recreation activities were observed
☐ Other secondary contact activities: _____

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #3
Date: 5/28/10 Time: 1100-1112

b. Check the number of individuals observed at the site.
x None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body well away from water between 8 and 30 meters (100 ft) N/A

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
Same

3. If secondary contact recreation activities are observed, how often do water recreational activities occur that do not involve a significant risk of water ingestion? ☐ frequently ☐ infrequently N/A
Please describe how often the activities occur? x Unknown ☐ Never ☐ Daily ☐ Monthly ☐ Yearly

4. If infrequently, what is the reason? ☐ physical characteristics of the water body ☐ limited public access ☐ other
If other, list reasons: N/A

5. Describe the physical characteristics of the water body that hinders the frequency of secondary contact recreation (depth, etc.) (Attach photos or depth measurements, etc. for documentation).
Same

6. Describe why there is limited public access (e.g. lack of roads, river or stream banks overgrown, etc.) (Attach photos, maps, etc. for documentation).
Fenced (barbwire) up to bridge, steep banks, banks overgrown

D. Noncontact Recreation Evaluation

Noncontact recreation applies to water bodies where recreation activities do not involve a significant risk of water ingestion, and where primary and secondary contact recreation uses do not occur because of unsafe conditions, such as barge traffic.

1. Provide site-specific information and documentation (including photographs) regarding unsafe conditions, recreation activities, and presence or absence of water recreation activities.
N/A

Field Data Sheets – Basic RUAA Survey

Stream Name ~~Steele~~ Steele Creek Site: #3
Date: 5/28/10 ~~FDS Page 3 of 8~~ Time: 11:00-11:12

E. Stream Channel and Substantial Pool:
Please check the following which best describes the river or stream: ☒ Wadeable ☐ Non-wadeable
NO ACCESS

1. Wadeable Streams
Determine whether or not the average depth at the thalweg is greater than 0.5 meters and if there are substantial pools with a depth of 1 meter or greater. Walk an approximately 300 meter reach (total) at the site and take the following measurements within the 300 meter reach. Measurements should be taken during base flow conditions (sustained or typical dry, warm-weather flows between rainfall events, excluding unusual antecedent conditions of drought or wet weather

Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters.
Photos #s (30 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (150 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓ Taken at bridge
Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

a) Substantial pools - Measure the length of each pool (if > 10 pools only measure 10 pools), the width (at the widest point), and the deepest depth. A substantial pool is considered a pool greater than 10 meters in length for the purposes of a Basic RUAA Survey. If depth and/or width measurements were not attainable, explain why.

	Length (meters)	Width (meters)	Depth (meters)
Pool 1			
Pool 2			
Pool 3			
Pool 4			
Pool 5			
Pool 6			
Pool 7			
Pool 8			
Pool 9			
Pool 10			

b)Average depth at the thalweg –Take depth measurements approximately every 30 meters to calculate an average depth at the thalweg (at least 10 measurements needed). If depth and/or width measurements were not attainable, explain why.

Distance	Depth (meters)
30 meters	
60 meters	
90 meters	
120 meters	
150 meters	
180 meters	
210 meters	
240 meters	
270 meters	
300 meters	
Average	

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #3
Date: 5/28/10 Time: 1100 - 1112

c) Stream width - Measure (1) the width at one point which represents the typical average width of the 300 meter reach; (2) the width at the narrowest point of the stream within the 300 meter reach; and (3) the width at the widest point of the stream within the 300 meter reach.

Measurement Type	Width (meters)	
Typical Average Width of 300 meter reach	11.5 ft	3.51 m
Width at narrowest point of the stream within 300 meter reach		
Width at the widest point of the stream within 300 meter reach		

d) Is there sufficient water within a 300 meter stream reach during base flow conditions to support primary contact recreation? ☒ Yes ☐ No
COMMENTS:

2. Non-wadeable Streams
If accessible, take 10 width measurements which represent typical widths of the 300 meter reach. If the water is too deep and not accessible record the estimated average width of the water body.

Also, take photos facing upstream, downstream, left bank, and right bank at .
Photos #s (30 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (150 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

# Measurements	Width (meters)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Stream with upstream of bridge - 11.5 ft

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #3
Date: 5/28/10 Time: 1100-1112

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

- ☐ Drinking or water in mouth
- ☐ Bathing
- ☐ Walking
- ☐ Jogging/running
- ☐ Bicycling
- ☐ Standing
- ☐ Sitting
- ☐ Lying down/sleeping
- ☐ Playing on shoreline
- ☐ Picnicking
- ☐ Motorcycle/ATV
- ☐ Hunting/Trapping
- ☐ Wildlife watching
- ☒ None
- ☐ Other: _____

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☐ Yes ☒ No (If yes, please provide supporting documentation and photos.)
Comments: _____

3. Check any channel obstructions that apply (Attach photos).

- ☐ Culverts
- ☐ Barbed wire
- ☐ Utility pipe
- ☐ Fences
- ☐ Dams
- ☐ Other (specify): _____
- ☐ Log jams
- ☐ Thick vegetation
- ☐ Rip rap
- ☐ Low bridges
- Water control structure
- ☒ None

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest).

- ☐ Campgrounds
- ☐ Playgrounds
- ☒ Rural area
- ☐ Residential
- ☐ National forests
- ☐ Urban/suburban location
- ☐ Golf Course
- ☐ Sports Field
- ☐ Stairs/walkway
- ☐ Boating access (ramps)
- ☐ Beach
- ☒ Bridge crossing
- ☐ Commercial boating
- ☐ Trails/paths (hiking/biking)
- ☐ Paved parking lot
- ☐ Unimproved parking lot
- ☒ Roads (paved/unpaved)
- ☐ Populated area
- ☐ Docks or rafts
- ☐ Commercial outfitter
- ☐ Nearby school
- ☐ Power Line Corridor
- ☐ Parks (national/city/county/state)
- ☐ Public Property
- ☐ Other: _____
- ☐ None of the Above

Comments: _____

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).

- ☒ Private Property
- ☐ No trespass sign
- ☐ Wildlife
- ☒ Steep slopes
- ☒ No public access
- ☐ No roads
- ☒ Fence
- ☐ Barge/ship traffic
- ☐ Industrial
- ☐ None of the Above
- ☐ Other: _____

Comments: fenced to bridge on all sides. No water access.

6. Check any indications of human use (Attach photos).

- ☒ Roads
- ☐ Rope swings
- ☐ Dock/platform
- ☐ Foot paths/prints
- ☐ Other: _____
- ☐ RV/ATV Tracks
- ☐ Camping Sites
- ☐ Fire pit/ring
- ☐ Fishing Tackle
- ☐ NPDES Discharge
- ☐ Gates on corridor
- ☐ Children's toys
- ☐ Remnant's of Kid's play
- ☐ Organized event
- ☐ No Human Presence

Comments: _____

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #3
Date: 5/28/10 Time: 1100-1112

7. Check all water characteristics that apply (Attach photos).
Aquatic Vegetation: X absent ☐ rare ☐ common ☐ abundant
Algae Cover: X absent ☐ rare ☐ common ☐ abundant
Odor: X none ☐ rare ☐ common ☐ abundant
Color: ☐ clear ☐ green ☐ red X brown ☐ black
Bottom Deposit: ☐ sludge ☐ solids X fine sediments ☐ none ☐ other
Water Surface: ☐ clear ☐ scum ☐ foam ☐ debris X oil
Other: Slight oily film on surface. (less than Steele Creek #2

8. Vertebrates Observed within 300 meter reach
Snakes X None ☐ slight presence ☐ moderate presence ☐ large presence
Water Dependent Birds X None ☐ slight presence ☐ moderate presence ☐ large presence
Alligators X None ☐ slight presence ☐ moderate presence ☐ large presence
Comments:

9. Mammals Observed within 300 meter reach
Wild X None ☐ slight presence ☐ moderate presence ☐ large presence
Domesticated Pets X None ☐ slight presence ☐ moderate presence ☐ large presence
Livestock X None ☐ slight presence ☐ moderate presence ☐ large presence
Feral Hogs X None ☐ slight presence ☐ moderate presence ☐ large presence
Comments:

10. Evidence of wild animals or evidence of birds, cattle, hogs, etc.
☐ Tracks ☐ Fecal droppings ☐ Bird nests

11. Garbage Observed
Large garbage in the channel ☐ None X Rare ☐ Common ☐ Abundant
Small garbage in the channel X None ☐ Rare ☐ Common ☐ Abundant
Bank Garbage X None ☐ Rare ☐ Common ☐ Abundant
Briefly describe the kinds of garbage observed:
tire in water

12. Is the site located in a wildlife preserve with large wildlife (i.e waterfowl) population? ☐ Yes X No

13. Please document any other relevant information regarding recreational activities and the water body in general (for example, area outside of the stream reach evaluated).

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream: Steele Creek Date: 5/28/10

Site: #3 Site

Description: LCR 656 e Steele Creek

Time Begin: _____ Time End: _____ Meter Type: Sontek Flow tracker

Observers: _____ Stream Width*: _____ Section Width (W): _____

Observations: _____

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V)		Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
			At Point (ft/s)(m/s)	Average (ft/s)(m/s)	

NO FLOW

No access to the water from bridge. Barb-wire fenced on both sides on bridge & banks

Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: L. Ray, J. Wrast, C. Greene, K. Conda	
Date & Time: 5/28/10 1128-1228	County Name: Limestone
Stream Name: Steele Creek	
Segment No. or nearest downstream Segment No.: 1209 K	
Description of Site: #4 SH 14 @ Steele Creek	

At any point during the Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the use for the water body the investigator should stop conducting the UAA.

A. Stream Characteristics:

1. Check the following channel flow status that applies.

☐ dry ☐ no flow ☒ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:

Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.

☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.

☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.

☒ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.

☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. ~~-0.124~~ cfs No flow KC 6/7/10

4. Water Quality Data (Field Parameters)

Field parameters should be collected in accordance with the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1.

Air Temp 26 °C Water Temp 27 °C

Secchi tube ~~.291~~ m

5. Riparian Zone (Mark dominant categories with L (Left Bank) and R (Right Bank). Bank orientation is determined by the investigator facing downstream.)

L, R Forest	Urban	Rip rap	
Shrub dominated corridor	Pasture	Concrete	
Herbaceous marsh	Row crops	Other (specify):	
Mowed/maintained corridor	Denuded/Eroded bank		

6. Ease of bank access to the water body: ☒ Easy ☐ Moderately easy ☐ Moderately difficult ☐ Difficult

7. Please describe access opportunities or explain why the site is not easily accessible (Attach photos for documentation):

Easy gradient down to stream, but no place to park – Barbed wire fence on downstream side.

8. Dominant Primary Substrate

☐ Cobble ☒ Sand ☐ Silt ☐ Mud/Clay ☐ Gravel ☐ Bedrock ☐ Rip rap ☐ Concrete

E RC Alt

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #4
Date: 5/28/10 Time: 1128-1228

B. Primary Contact Water Recreation Evaluation:
- Primary contact recreation draft definition: Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, and whitewater kayaking, canoeing, and rafting, involving a significant risk of ingestion of water.

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?
☐ Yes ☒ No primary contact recreation activities were observed
a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).

☐ Wading-Children	☐ Tubing	☒ No primary contact activities that commonly occur were observed
☐ Wading-Adults	☐ Surfing	
☐ Swimming	☐ Whitewater-kayaking, canoeing, rafting	
☐ Water skiing	☐ Other: _____	
☐ Diving	☐ frequent public swimming-created by publicly owned land or commercial operations	

b. Check the number of individuals observed at the site: ☒ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Water in mouth or nose of the individual ☐ Primary touch: Individual's body (or portion) immersed in water
☐ Secondary touch: fishing, pets and related contact with water ☐ Individual is in a boat touching water
☐ Individual is on shore near water within 8 meters (25ft) of water ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☒ Not applicable

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
No flow – log jam – water is muddy
heavy vegetation on banks (except under bridge = sand)

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
Road across Creek, No public parking, have to park on shoulder

4. Is an area with primary contact recreation activities or a bathing beach (e.g. state/local parks with swimming, etc.) located near (e.g. within 5 miles upstream and downstream) this site?

C. Secondary Contact Water Recreation Evaluation:
- Secondary contact recreation 1: Water recreation activities, such as fishing, commercial and recreational boating, and limited body contact incidental to shoreline activity, not involving a significant risk of water ingestion and that commonly occur.
- Secondary contact recreation 2: Water recreation activities, such as fishing, commercial and recreational boating, and limited body contact incidental to shoreline activity, not involving a significant risk of water ingestion but that occur less frequently than for secondary contact recreation 1 due to (1) physical characteristics of the water body and/or (2) limited public access.

1. Were water recreation activities observed at the site, but the nature of the recreation does not involve a significant risk of ingestion (e.g. secondary contact recreation activities)? ☐ Yes ☒ No secondary contact recreation activities were observed
a. Check the following boxes of secondary contact recreation activities that were observed at the time of the sampling event at the site (Attach photos of activities or lack of activities).
☐ Fishing
☐ Boating-commercial, recreational
☐ Non-whitewater-kayaking, rafting, canoeing
☒ No secondary contact recreation activities were observed
☐ Other secondary contact activities: _____

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #4
Date: 5/20/10 Time: 1120- 1220

b. Check the number of individuals observed at the site.
X None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body. NA
☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body well away from water between 8 and 30 meters (100 ft)

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
Same

3. If secondary contact recreation activities are observed, how often do water recreational activities occur that do not involve a significant risk of water ingestion? ☐ frequently ☐ infrequently
Please describe how often the activities occur? X Unknown ☐ Never ☐ Daily ☐ Monthly ☐ Yearly

4. If infrequently, what is the reason? ☐ physical characteristics of the water body ☐ limited public access ☐ other
If other, list reasons: N/A

5. Describe the physical characteristics of the water body that hinders the frequency of secondary contact recreation (depth, etc.) (Attach photos or depth measurements, etc. for documentation).
Same

6. Describe why there is limited public access (e.g. lack of roads, river or stream banks overgrown, etc.) (Attach photos, maps, etc. for documentation).
Same

D. Noncontact Recreation Evaluation

Noncontact recreation applies to water bodies where recreation activities do not involve a significant risk of water ingestion, and where primary and secondary contact recreation uses do not occur because of unsafe conditions, such as barge traffic.

1. Provide site-specific information and documentation (including photographs) regarding unsafe conditions, recreation activities, and presence or absence of water recreation activities.

N/A

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #4
Date: 5/28/10 ~~FDS Page 3 of 8~~ Time: 1128-1228

E. Stream Channel and Substantial Pools
Please check the following which best describes the river or stream: ☒ Wadeable ☐ Non-wadeable

1. Wadeable Streams
Determine whether or not the average depth at the thalweg is greater than 0.5 meters and if there are substantial pools with a depth of 1 meter or greater. Walk an approximately 300 meter reach (total) at the site and take the following measurements within the 300 meter reach. Measurements should be taken during base flow conditions (sustained or typical dry, warm-weather flows between rainfall events, excluding unusual antecedent conditions of drought or wet weather

Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters.
Photos #s (30 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓
Photos #s (150 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓
Photos #s (300 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓

beaver evidence, log jam
extra picture of tributary @ 150

a) Substantial pools - Measure the length of each pool (if > 10 pools only measure 10 pools), the width (at the widest point), and the deepest depth. A substantial pool is considered a pool greater than 10 meters in length for the purposes of a Basic RUAA Survey. If depth and/or width measurements were not attainable, explain why.

	Length (meters)	Width (meters)	Depth (meters)
Pool 1			
Pool 2			
Pool 3			
Pool 4			
Pool 5			
Pool 6			
Pool 7			
Pool 8			
Pool 9			
Pool 10			

b)Average depth at the thalweg –Take depth measurements approximately every 30 meters to calculate an average depth at the thalweg (at least 10 measurements needed). If depth and/or width measurements were not attainable, explain why.

Distance	Depth (meters)		
30 meters	1.15 ft		.35m - under bridge, at log jam
60 meters	3.3 ft		1.01 m
90 meters	1.8 ft		.55 m
120 meters	1.48 ft		.43 m
150 meters	1.16 ft	Log Jam	.35 m
180 meters	0.14 ft		.04 m
210 meters	0.52 ft		.16 m
240 meters	1.12 ft		.34 m
270 meters	2.36 ft		.72 m
300 meters	2.16 ft		.66 m
Average			.461 m

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #4
Date: 9/28/10 Time: 1128 - 1228

c) Stream width - Measure (1) the width at one point which represents the typical average width of the 300 meter reach; (2) the width at the narrowest point of the stream within the 300 meter reach; and (3) the width at the widest point of the stream within the 300 meter reach.

Measurement Type	Width (meters)	
Typical Average Width of 300 meter reach	8 ft	2.44 m
Width at narrowest point of the stream within 300 meter reach	1.8 ft	.55 m
Width at the widest point of the stream within 300 meter reach	23.8 ft	7.25 m

d) Is there sufficient water within a 300 meter stream reach during base flow conditions to support primary contact recreation? ☒ Yes ☐ No
COMMENTS:

2. Non-wadeable Streams
If accessible, take 10 width measurements which represent typical widths of the 300 meter reach. If the water is too deep and not accessible record the estimated average width of the water body.

Also, take photos facing upstream, downstream, left bank, and right bank at .
Photos #s (30 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (150 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

# Measurements	Width (meters)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #4
Date: 5/18/10 Time: 1128 - 1228

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

- ☐ Drinking or water in mouth
- ☐ Bathing
- ☐ Walking
- ☐ Jogging/running
- ☐ Bicycling
- ☐ Standing
- ☐ Sitting
- ☐ Lying down/sleeping
- ☐ Playing on shoreline
- ☐ Picnicking
- ☐ Motorcycle/ATV
- ☐ Hunting/Trapping
- ☐ Wildlife watching
- ☒ None
- ☐ Other: _____

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☒ Yes ☐ No (If yes, please provide supporting documentation and photos.)

Comments: _____

Barbed wire to bridge... not in water

3. Check any channel obstructions that apply (Attach photos).

- ☐ Culverts
- ☒ Barbed wire
- ☐ Utility pipe
- ☐ Fences
- ☐ Dams
- ☐ Other (specify): _____
- ☒ Log jams
- ☐ Thick vegetation
- ☐ Rip rap
- ☐ Low bridges
- Water control structure
- ☐ None

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest).

- ☐ Campgrounds
- ☐ Playgrounds
- ☒ Rural area
- ☐ Residential
- ☐ National forests
- ☐ Urban/suburban location
- ☐ Golf Course
- ☐ Sports Field
- ☐ Stairs/walkway
- ☐ Boating access (ramps)
- ☐ Beach
- ☒ Bridge crossing
- ☐ Commercial boating
- ☐ Trails/paths (hiking/biking)
- ☐ Paved parking lot
- ☐ Unimproved parking lot
- ☒ Roads (paved/unpaved)
- ☐ Populated area
- ☐ Docks or rafts
- ☐ Commercial outfitter
- ☐ Nearby school
- ☐ Power Line Corridor
- ☐ Parks (national/city/county/state)
- ☐ Public Property
- ☐ Other: _____
- ☐ None of the Above

Comments: _____

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).

- ☐ Private Property
- ☐ No trespass sign
- ☐ Wildlife
- ☐ Steep slopes
- ☐ No public access
- ☐ No roads
- ☒ Fence
- ☐ Barge/ship traffic
- ☐ Industrial
- ☐ None of the Above
- ☐ Other: _____

Comments: _____

6. Check any indications of human use (Attach photos).

- ☒ Roads
- ☐ Rope swings
- ☐ Dock/platform
- ☐ Foot paths/prints
- ☐ Other: _____
- ☐ RV/ATV Tracks
- ☐ Camping Sites
- ☐ Fire pit/ring
- ☐ Fishing Tackle
- ☐ NPDES Discharge
- ☐ Gates on corridor
- ☐ Children's toys
- ☐ Remnant's of Kid's play
- ☐ Organized event
- ☐ No Human Presence

Comments: _____

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #4
Date: 8/28/10 Time: 1120 - 1220

7. Check all water characteristics that apply (Attach photos).
Aquatic Vegetation: ☒ absent ☒ rare ☐ common ☐ abundant
Algae Cover: ☒ absent ☐ rare ☐ common ☐ abundant
Odor: ☒ none ☐ rare ☐ common ☐ abundant
Color: ☐ clear ☐ green ☐ red ☒ brown ☐ black
Bottom Deposit: ☐ sludge ☐ solids ☒ fine sediments ☐ none ☐ other w/ sticks on Bottom
Water Surface: ☐ clear ☐ scum ☐ foam ☐ debris ☒ oil – less than last site
Other: Surface mostly clear, duck weed

8. Vertebrates Observed within 300 meter reach
Snakes ☒ None ☐ slight presence ☐ moderate presence ☐ large presence
Water Dependent Birds ☒ None ☐ slight presence ☐ moderate presence ☐ large presence
Alligators ☒ None ☐ slight presence ☐ moderate presence ☐ large presence
Comments: Saw turtles ~5 red-ear sliders.

9. Mammals Observed within 300 meter reach
Wild ☒ None ☐ slight presence ☐ moderate presence ☐ large presence
Domesticated Pets ☒ None ☐ slight presence ☐ moderate presence ☐ large presence
Livestock ☒ None ☐ slight presence ☐ moderate presence ☐ large presence
Feral Hogs ☒ None ☐ slight presence ☐ moderate presence ☐ large presence
Comments:

10. Evidence of wild animals or evidence of birds, cattle, hogs, etc.
☒ Tracks ☐ Fecal droppings ☐ Bird nests ☐ beaver chewed tree (pic)

11. Garbage Observed
Large garbage in the channel ☒ None ☐ Rare ☐ Common ☐ Abundant
Small garbage in the channel ☒ None ☐ Rare ☐ Common ☐ Abundant
Bank Garbage ☐ None ☒ Rare ☐ Common ☐ Abundant
Briefly describe the kinds of garbage observed: Beer CANS, wrappers, trash bag, Honda motor bike pieces, plastic, orange, vice can!

12. Is the site located in a wildlife preserve with large wildlife (i.e waterfowl) population? ☐ Yes ☒ No

13. Please document any other relevant information regarding recreational activities and the water body in general (for example, area outside of the stream reach evaluated).

eroded bank, left bank downstream of 100m, right bank eroded from 270 m

Field Data Sheet - Basic RUAA Survey
Stream Flow (Discharge) Measurement

Stream: Steele Creek Date: 5/28/10
Site: #4 Site
Description: SH 14 @ Steele Creek
Time Begin: 1140 Time End: 1156 Meter Type: Sontek Flowtracker
Observers: J. Wrast, L. Ray Stream Width*: ~~9 ft.~~ 8 LR 5/28/10 Section Width (W): ~~0.9~~ 0.8 LR 5/28/10
Observations: debris in water way,

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V) At Point (ft/s)(m/s)	Velocity (V) Average (ft/s)(m/s)	Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
~~0.45~~				~~-0.02~~	
~~1.35~~					
~~2.25~~					
~~3.15~~					
~~4.05~~					
~~4.95~~					
~~5.85~~					
~~6.75~~					
~~7.65~~					
~~8.55~~					
0.40	0.35			-0.02	
1.20	0.80			-0.02	
2.0	1.20			-0.02	
2.8	1.50			-0.01	
3.6	1.60			0.01	
4.4	1.70			-0.01	
5.2	1.55			-0.03	
6.0	1.10			-0.03	
6.8	0.80			-0.01	
7.6	0.20			-0.02	

LR 5/28/10

Total Q -0.124

Due to amounts of debris in the water low water level the flow was determined to be Q. KC 6/7/10

Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information:	L. Ray, J. Wrast, K. Cindra, C. Greene
Date & Time: 5/28/10 1238-1251	County Name: Limestone
Stream Name: Steele Creek	
Segment No. or nearest downstream Segment No.: 1209K	
Description of Site: #5 LCR 722 @ Steele Creek	

At any point during the Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the use for the water body the investigator should stop conducting the UAA.

A. Stream Characteristics:

1. Check the following channel flow status that applies.

☐ dry ☐ no flow ☒ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:

☐ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.

☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.

☒ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.

☒ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.

☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. _____ cfs No Flow taken, no water access

4. Water Quality Data (Field Parameters)

Field parameters should be collected in accordance with the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1.

Air Temp 31 °C Water Temp 23 °C

Secchi tube No water access m

5. Riparian Zone (Mark dominant categories with L (Left Bank) and R (Right Bank). Bank orientation is determined by the investigator facing downstream.)

R, L Forest	_____ Urban	_____ Rip rap
_____ Shrub dominated corridor	_____ Pasture	_____ Concrete
_____ Herbaceous marsh	_____ Row crops	Other (specify): _____
_____ Mowed/maintained corridor	_____ Denuded/Eroded bank	

6. Ease of bank access to the water body: ☐ Easy ☐ Moderately easy ☐ Moderately difficult ☒ Difficult

7. Please describe access opportunities or explain why the site is not easily accessible (Attach photos for documentation):

Steep and full of debris, overgrown banks

8. Dominant Primary Substrate

☐ Cobble ☐ Sand ☒ Silt ☐ Mud/Clay ☐ Gravel ☐ Bedrock ☐ Rip rap ☐ Concrete

QC PL E MES

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #5
Date: 5/28/10 Time: 1238- 1251

B. Primary Contact Water Recreation Evaluation:
- Primary contact recreation draft definition: Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, and whitewater kayaking, canoeing, and rafting, involving a significant risk of ingestion of water.

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?
☐ Yes ☒ No primary contact recreation activities were observed
a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).

☐ Wading-Children	☐ Tubing	☒ No primary contact activities that commonly occur were observed
☐ Wading-Adults	☐ Surfing	
☐ Swimming	☐ Whitewater-kayaking, canoeing, rafting	
☐ Water skiing	☐ Other: _____	
☐ Diving	☐ frequent public swimming-created by publicly owned land or commercial operations	

b. Check the number of individuals observed at the site: ☒ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Water in mouth or nose of the individual ☐ Primary touch: Individual's body (or portion) immersed in water
☐ Secondary touch: fishing, pets and related contact with water ☐ Individual is in a boat touching water
☐ Individual is on shore near water within 8 meters (25ft) of water ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☒ Not applicable

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
log jams, full of garbage, very shallow, Banks are heavily overgrown

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
Bridge ACROSS @ Creek

4. Is an area with primary contact recreation activities or a bathing beach (e.g. state/local parks with swimming, etc.) located near (e.g. within 5 miles upstream and downstream) this site? No

C. Secondary Contact Water Recreation Evaluation:
- Secondary contact recreation 1: Water recreation activities, such as fishing, commercial and recreational boating, and limited body contact incidental to shoreline activity, not involving a significant risk of water ingestion and that commonly occur.
- Secondary contact recreation 2: Water recreation activities, such as fishing, commercial and recreational boating, and limited body contact incidental to shoreline activity, not involving a significant risk of water ingestion but that occur less frequently than for secondary contact recreation 1 due to (1) physical characteristics of the water body and/or (2) limited public access.

1. Were water recreation activities observed at the site, but the nature of the recreation does not involve a significant risk of ingestion (e.g. secondary contact recreation activities)? ☐ Yes ☒ No secondary contact recreation activities were observed
a. Check the following boxes of secondary contact recreation activities that were observed at the time of the sampling event at the site (Attach photos of activities or lack of activities).
☐ Fishing
☐ Boating-commercial, recreational
☐ Non-whitewater-kayaking, rafting, canoeing
☒ No secondary contact recreation activities were observed
☐ Other secondary contact activities: _____

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #5
Date: 5/20/10 Time: 1238-1251

b. Check the number of individuals observed at the site.
X None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body. N/A
☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body well away from water between 8 and 30 meters (100 ft)

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
Same

3. If secondary contact recreation activities are observed, how often do water recreational activities occur that do not involve a significant risk of water ingestion? ☐ frequently ☐ infrequently N/A
Please describe how often the activities occur? X Unknown ☐ Never ☐ Daily ☐ Monthly ☐ Yearly

4. If infrequently, what is the reason? ☐ physical characteristics of the water body ☐ limited public access ☐ other
If other, list reasons: Unknown. N/A

5. Describe the physical characteristics of the water body that hinders the frequency of secondary contact recreation (depth, etc.) (Attach photos or depth measurements, etc. for documentation).
Same

6. Describe why there is limited public access (e.g. lack of roads, river or stream banks overgrown, etc.) (Attach photos, maps, etc. for documentation).
Same

D. Noncontact Recreation Evaluation
Noncontact recreation applies to water bodies where recreation activities do not involve a significant risk of water ingestion, and where primary and secondary contact recreation uses do not occur because of unsafe conditions, such as barge traffic.

1. Provide site-specific information and documentation (including photographs) regarding unsafe conditions, recreation activities, and presence or absence of water recreation activities.

N/A

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #5
Date: 5/28/10 ~~FDS Page 3 of 8~~ Time: 1238 – 1251

E. Stream Channel and Substantial Pools
Please check the following which best describes the river or stream: X Wadeable ☐ Non-wadeable
But No Access

1. Wadeable Streams
Determine whether or not the average depth at the thalweg is greater than 0.5 meters and if there are substantial pools with a depth of 1 meter or greater. Walk an approximately 300 meter reach (total) at the site and take the following measurements within the 300 meter reach. Measurements should be taken during base flow conditions (sustained or typical dry, warm-weather flows between rainfall events, excluding unusual antecedent conditions of drought or wet weather

Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters.
Photos #s (30 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (150 meters) Upstream__✓__ Downstream__✓__ Left Bank __✓__ Right Bank__✓__
Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

@ bridge and trash piles. log jam piles.

a) Substantial pools - Measure the length of each pool (if > 10 pools only measure 10 pools), the width (at the widest point), and the deepest depth. A substantial pool is considered a pool greater than 10 meters in length for the purposes of a Basic RUAA Survey. If depth and/or width measurements were not attainable, explain why.

	Length (meters)	Width (meters)	Depth (meters)
Pool 1			
Pool 2			
Pool 3			
Pool 4			
Pool 5			
Pool 6			
Pool 7			
Pool 8			
Pool 9			
Pool 10			

b)Average depth at the thalweg –Take depth measurements approximately every 30 meters to calculate an average depth at the thalweg (at least 10 measurements needed). If depth and/or width measurements were not attainable, explain why.

Depth @ bridge ~1.0 ft = .30 m

Distance	Depth (meters)
30 meters	
60 meters	
90 meters	
120 meters	
150 meters	
180 meters	
210 meters	
240 meters	
270 meters	
300 meters	
Average	

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #5
Date: 5/28/10 Time: 1238 - 1251

c) Stream width - Measure (1) the width at one point which represents the typical average width of the 300 meter reach; (2) the width at the narrowest point of the stream within the 300 meter reach; and (3) the width at the widest point of the stream within the 300 meter reach.

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	10.4 ft = 3.17m @ bridge
Width at narrowest point of the stream within 300 meter reach	
Width at the widest point of the stream within 300 meter reach	

d) Is there sufficient water within a 300 meter stream reach during base flow conditions to support primary contact recreation? ☒ Yes ☐ No
COMMENTS:

2. Non-wadeable Streams
If accessible, take 10 width measurements which represent typical widths of the 300 meter reach. If the water is too deep and not accessible record the estimated average width of the water body.

Also, take photos facing upstream, downstream, left bank, and right bank at .
Photos #s (30 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (150 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

# Measurements	Width (meters)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #5
Date: 5/28/10 Time: 1238 - 1251

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

- ☐ Drinking or water in mouth
- ☐ Bathing
- ☐ Walking
- ☐ Jogging/running
- ☐ Bicycling
- ☐ Standing
- ☐ Sitting
- ☐ Lying down/sleeping
- ☐ Playing on shoreline
- ☐ Picnicking
- ☐ Motorcycle/ATV
- ☐ Hunting/Trapping
- ☐ Wildlife watching
- ☒ None
- ☐ Other: _____

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☐ Yes ☒ No (If yes, please provide supporting documentation and photos.)
Comments: _____

3. Check any channel obstructions that apply (Attach photos).

- ☐ Culverts
- ☐ Barbed wire
- ☐ Utility pipe
- ☐ Fences
- ☐ Dams
- ☒ Other (specify): trash piles
- ☒ Log jams
- ☐ Thick vegetation
- ☐ Rip rap
- ☐ Low bridges
- ☐ Water control structure
- ☐ None

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest).

- ☐ Campgrounds
- ☐ Playgrounds
- ☒ Rural area
- ☐ Residential
- ☐ National forests
- ☐ Urban/suburban location
- ☐ Golf Course
- ☐ Sports Field
- ☐ Stairs/walkway
- ☐ Boating access (ramps)
- ☐ Beach
- ☒ Bridge crossing
- ☐ Commercial boating
- ☐ Trails/paths (hiking/biking)
- ☐ Paved parking lot
- ☐ Unimproved parking lot
- ☒ Roads (paved/unpaved)
- ☐ Populated area
- ☐ Docks or rafts
- ☐ Commercial outfitter
- ☐ Nearby school
- ☐ Power Line Corridor
- ☐ Parks (national/city/county/state)
- ☐ Public Property
- ☐ Other: _____
- ☐ None of the Above

Comments: _____

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).

- ☐ Private Property
- ☐ No trespass sign
- ☐ Wildlife
- ☒ Steep slopes
- ☐ No public access
- ☐ No roads
- ☐ Fence
- ☐ Barge/ship traffic
- ☐ Industrial
- ☐ None of the Above
- ☒ Other: Overgrown banks

Comments: x log jams and trash debris

6. Check any indications of human use (Attach photos).

- ☒ Roads
- ☐ Rope swings
- ☐ Dock/platform
- ☐ Foot paths/prints
- ☐ Other: _____
- ☐ RV/ATV Tracks
- ☐ Camping Sites
- ☐ Fire pit/ring
- ☐ Fishing Tackle
- ☐ NPDES Discharge
- ☐ Gates on corridor
- ☐ Children's toys
- ☐ Remnant's of Kid's play
- ☐ Organized event
- ☐ No Human Presence

Comments: _____

Field Data Sheets – Basic RUAA Survey

Stream Name: Steele Creek Site: #5
Date: 5/28/10 Time: 1238 - 1251

7. Check all water characteristics that apply (Attach photos).
Aquatic Vegetation: ☒ absent ☒ rare ☐ common ☐ abundant
Algae Cover: ☒ absent ☐ rare ☐ common ☐ abundant
Odor: ☐ none ☒ rare ☐ common ☐ abundant
Color: ☒ clear ☐ green ☐ red ☐ brown ☐ black
Bottom Deposit: ☐ sludge ☐ solids ☒ fine sediments ☐ none ☐ other
Water Surface: ☒ clear ☐ scum ☐ foam ☐ debris ☐ oil
Other: duck weed

8. Vertebrates Observed within 300 meter reach

Snakes	☒ None	☐ slight presence	☐ moderate presence	☐ large presence
Water Dependent Birds	☒ None	☐ slight presence	☐ moderate presence	☐ large presence
Alligators	☒ None	☐ slight presence	☐ moderate presence	☐ large presence

Comments:

9. Mammals Observed within 300 meter reach

Wild	☒ None	☐ slight presence	☐ moderate presence	☐ large presence
Domesticated Pets	☒ None	☐ slight presence	☐ moderate presence	☐ large presence
Livestock	☒ None	☐ slight presence	☐ moderate presence	☐ large presence
Feral Hogs	☒ None	☐ slight presence	☐ moderate presence	☐ large presence

Comments:

10. Evidence of wild animals or evidence of birds, cattle, hogs, etc.
☐ Tracks ☐ Fecal droppings ☐ Bird nests ☒ Skeleton

11. Garbage Observed

Large garbage in the channel	☐ None	☐ Rare	☐ Common	☒ Abundant
Small garbage in the channel	☐ None	☐ Rare	☐ Common	☒ Abundant
Bank Garbage	☐ None	☐ Rare	☐ Common	☒ Abundant

Briefly describe the kinds of garbage observed: Shell casings
trash Dump

12. Is the site located in a wildlife preserve with large wildlife (i.e waterfowl) population? ☐ Yes ☒ No

13. Please document any other relevant information regarding recreational activities and the water body in general (for example, area outside of the stream reach evaluated).

Field Data Sheet - Basic RUAA Survey
Stream Flow (Discharge) Measurement

Stream: Steele Creek Date: 5/28/10

Site: # 5 Site

Description: LCR 722 e Steele Creek

Time Begin: ______ Time End: ______ Meter Type: Sontek Flow tracker

Observers: ______ Stream Width*: ______ Section Width (W): ______

Observations: No water Access (little flow)

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V)		Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
			At Point (ft/s)(m/s)	Average (ft/s)(m/s)	
		NO FLOW			

Couldn't reach the water. Steep slopes, overgrown vegetation

Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: L. Roy, J. Wrast, K. Condra, C. Greene	
Date & Time: 5/28/10 1310-1400	County Name: Limestone
Stream Name: Steele Creek	
Segment No. or nearest downstream Segment No.: 1209 K	
Description of Site: #6 FM 2749 @ Steele Creek	

At any point during the Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the use for the water body the investigator should stop conducting the UAA.

A. Stream Characteristics:

1. Check the following channel flow status that applies.

☐ dry ☐ no flow ☒ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:

Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.

☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.

☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.

☒ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.

☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. _____ cfs too shallow to take 3 readings, only 1 flow taken

4. Water Quality Data (Field Parameters)

Field parameters should be collected in accordance with the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1.

Air Temp 30 °C Water Temp 24 °C

Secchi tube 0.578 m

5. Riparian Zone (Mark dominant categories with L (Left Bank) and R (Right Bank). Bank orientation is determined by the investigator facing downstream.)

L, R Forest	_____ Urban	_____ Rip rap
_____ Shrub dominated corridor	_____ Pasture	_____ Concrete
_____ Herbaceous marsh	_____ Row crops	Other (specify): _____
_____ Mowed/maintained corridor	_____ Denuded/Eroded bank	

6. Ease of bank access to the water body: ☐ Easy ☐ Moderately easy ☒ Moderately difficult ☐ Difficult

7. Please describe access opportunities or explain why the site is not easily accessible (Attach photos for documentation):

No place to park on Road, you have to pull off on the side, a short walk to creek, Banks are sandy, heavily eroded and steep. Barb wire fence under bridge

8. Dominant Primary Substrate

☐ Cobble ☒ Sand ☐ Silt ☐ Mud/Clay ☐ Gravel ☐ Bedrock ☐ Rip rap ☐ Concrete

RC EMES
PC

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #6
Date: 5/28/10 Time: 1310 – 1400

B. Primary Contact Water Recreation Evaluation:
- Primary contact recreation draft definition: Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, and whitewater kayaking, canoeing, and rafting, involving a significant risk of ingestion of water.

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?
☐ Yes ☒ No primary contact recreation activities were observed
a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).

☐ Wading-Children	☐ Tubing	☒ No primary contact activities that commonly occur were observed
☐ Wading-Adults	☐ Surfing	
☐ Swimming	☐ Whitewater-kayaking, canoeing, rafting	
☐ Water skiing	☐ Other: _____	
☐ Diving	☐ frequent public swimming-created by publicly owned land or commercial operations	

b. Check the number of individuals observed at the site: ☒ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Water in mouth or nose of the individual ☐ Primary touch: Individual's body (or portion) immersed in water
☐ Secondary touch: fishing, pets and related contact with water ☐ Individual is in a boat touching water
☐ Individual is on shore near water within 8 meters (25ft) of water ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☒ Not applicable

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
Narrow and shallow, banks are steep and sandy and eroded, numerous trees are down along the banks.

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
Road across creek.

4. Is an area with primary contact recreation activities or a bathing beach (e.g. state/local parks with swimming, etc.) located near (e.g. within 5 miles upstream and downstream) this site? ~~N/A~~ ~~Yes~~ No

C. Secondary Contact Water Recreation Evaluation:
- Secondary contact recreation 1: Water recreation activities, such as fishing, commercial and recreational boating, and limited body contact incidental to shoreline activity, not involving a significant risk of water ingestion and that commonly occur.
- Secondary contact recreation 2: Water recreation activities, such as fishing, commercial and recreational boating, and limited body contact incidental to shoreline activity, not involving a significant risk of water ingestion but that occur less frequently than for secondary contact recreation 1 due to (1) physical characteristics of the water body and/or (2) limited public access.

1. Were water recreation activities observed at the site, but the nature of the recreation does not involve a significant risk of ingestion (e.g. secondary contact recreation activities)? ☐ Yes ☒ No secondary contact recreation activities were observed
a. Check the following boxes of secondary contact recreation activities that were observed at the time of the sampling event at the site (Attach photos of activities or lack of activities).
☐ Fishing
☐ Boating-commercial, recreational
☐ Non-whitewater-kayaking, rafting, canoeing
☒ No secondary contact recreation activities were observed
☐ Other secondary contact activities: _____

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #6
Date: 5/28/10 Time: 1310-1400

b. Check the number of individuals observed at the site.
X None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body. N/A
☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body well away from water between 8 and 30 meters (100 ft)

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
Same

3. If secondary contact recreation activities are observed, how often do water recreational activities occur that do not involve a significant risk of water ingestion? ☐ frequently ☐ infrequently N/A
Please describe how often the activities occur? X Unknown ☐ Never ☐ Daily ☐ Monthly ☐ Yearly

4. If infrequently, what is the reason? ☐ physical characteristics of the water body ☐ limited public access ☐ other
If other, list reasons: N/A

5. Describe the physical characteristics of the water body that hinders the frequency of secondary contact recreation (depth, etc.) (Attach photos or depth measurements, etc. for documentation).
Same

6. Describe why there is limited public access (e.g. lack of roads, river or stream banks overgrown, etc.) (Attach photos, maps, etc. for documentation).
Same

D. Noncontact Recreation Evaluation
Noncontact recreation applies to water bodies where recreation activities do not involve a significant risk of water ingestion, and where primary and secondary contact recreation uses do not occur because of unsafe conditions, such as barge traffic.

1. Provide site-specific information and documentation (including photographs) regarding unsafe conditions, recreation activities, and presence or absence of water recreation activities.
N/A

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #6
Date: 5/28/10 ~~FDS Page 3 of 8~~ Time: ~~[illegible]~~ 1310-1400

E. Stream Channel and Substantial Pools
Please check the following which best describes the river or stream: ☑ Wadeable ☐ Non-wadeable

1. Wadeable Streams
Determine whether or not the average depth at the thalweg is greater than 0.5 meters and if there are substantial pools with a depth of 1 meter or greater. Walk an approximately 300 meter reach (total) at the site and take the following measurements within the 300 meter reach. Measurements should be taken during base flow conditions (sustained or typical dry, warm-weather flows between rainfall events, excluding unusual antecedent conditions of drought or wet weather

Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters.
Photos #s (30 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓
Photos #s (150 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓
Photos #s (300 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓

a) Substantial pools - Measure the length of each pool (if > 10 pools only measure 10 pools), the width (at the widest point), and the deepest depth. A substantial pool is considered a pool greater than 10 meters in length for the purposes of a Basic RUAA Survey. If depth and/or width measurements were not attainable, explain why.

	Length (meters)	Width (meters)	Depth (meters)
Pool 1			
Pool 2			
Pool 3			
Pool 4			
Pool 5			
Pool 6			
Pool 7			
Pool 8			
Pool 9			
Pool 10			

b)Average depth at the thalweg –Take depth measurements approximately every 30 meters to calculate an average depth at the thalweg (at least 10 measurements needed). If depth and/or width measurements were not attainable, explain why.

Distance	Depth (meters)	
30 meters	1.16 ft	.35 m
60 meters	2.2	.67
90 meters	.36	.11
120 meters	.36	.11
150 meters	.20	.06
180 meters	1.2	.37
210 meters	.9	.27
240 meters	.5	.15
270 meters	.4	.12
300 meters	.65	.20
Average		0.241 m

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #6
Date: 5/28/10 Time: 1310-1400

c) Stream width - Measure (1) the width at one point which represents the typical average width of the 300 meter reach; (2) the width at the narrowest point of the stream within the 300 meter reach; and (3) the width at the widest point of the stream within the 300 meter reach.

Measurement Type	Width (meters)	
Typical Average Width of 300 meter reach	8.5ft	2.59 m
Width at narrowest point of the stream within 300 meter reach	1.2	.36 m
Width at the widest point of the stream within 300 meter reach	15.8	4.81 m

d) Is there sufficient water within a 300 meter stream reach during base flow conditions to support primary contact recreation? ☒ Yes ☐ No
COMMENTS:

2. Non-wadeable Streams N/A
If accessible, take 10 width measurements which represent typical widths of the 300 meter reach. If the water is too deep and not accessible record the estimated average width of the water body.

Also, take photos facing upstream, downstream, left bank, and right bank at .
Photos #s (30 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (150 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

# Measurements	Width (meters)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #6
Date: 5/28/10 Time: 1310-1700

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

- ☐ Drinking or water in mouth
- ☐ Bathing
- ☐ Walking
- ☐ Jogging/running
- ☐ Bicycling
- ☐ Standing
- ☐ Sitting
- ☐ Lying down/sleeping
- ☐ Playing on shoreline
- ☐ Picnicking
- ☐ Motorcycle/ATV
- ☐ Hunting/Trapping
- ☐ Wildlife watching
- ☒ None
- ☐ Other: _____

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☐ Yes ☒ No (If yes, please provide supporting documentation and photos.)

Comments: _____

3. Check any channel obstructions that apply (Attach photos).

- ☐ Culverts
- ☐ Barbed wire
- ☐ Utility pipe
- ☐ Fences
- ☐ Dams
- ☐ Other (specify): _____
- ☐ Log jams
- ☐ Thick vegetation
- ☐ Rip rap
- ☐ Low bridges
- ☐ Water control structure
- ☒ None

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest).

- ☐ Campgrounds
- ☐ Playgrounds
- ☒ Rural area
- ☐ Residential
- ☐ National forests
- ☐ Urban/suburban location
- ☐ Golf Course
- ☐ Sports Field
- ☐ Stairs/walkway
- ☐ Boating access (ramps)
- ☐ Beach
- ☒ Bridge crossing
- ☐ Commercial boating
- ☐ Trails/paths (hiking/biking)
- ☐ Paved parking lot
- ☐ Unimproved parking lot
- ☒ Roads (paved/unpaved)
- ☐ Populated area
- ☐ Docks or rafts
- ☐ Commercial outfitter
- ☐ Nearby school
- ☐ Power Line Corridor
- ☐ Parks (national/city/county/state)
- ☐ Public Property
- ☐ Other: _____
- ☐ None of the Above

Comments: _____

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).

- ☐ Private Property
- ☐ No trespass sign
- ☐ Wildlife
- ☒ Steep slopes
- ☐ No public access
- ☐ No roads
- ☒ Fence
- ☐ Barge/ship traffic
- ☐ Industrial
- ☐ None of the Above
- ☐ Other: _____

Comments: _____

6. Check any indications of human use (Attach photos).

- ☐ Roads
- ☐ Rope swings
- ☐ Dock/platform
- ☒ Foot paths/prints
- ☐ Other: _____
- ☐ RV/ATV Tracks
- ☐ Camping Sites
- ☐ Fire pit/ring
- ☐ Fishing Tackle
- ☐ NPDES Discharge
- ☐ Gates on corridor
- ☐ Children's toys
- ☐ Remnant's of Kid's play
- ☐ Organized event
- ☐ No Human Presence

Comments: _____

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #6
Date: 5/28/10 Time: 1310–1400

7. Check all water characteristics that apply (Attach photos).

Aquatic Vegetation: X absent ☐ rare ☐ common ☐ abundant
Algae Cover: X absent ☐ rare ☐ common ☐ abundant
Odor: X none ☐ rare ☐ common ☐ abundant
Color: X clear ☐ green ☐ red ☐ brown ☐ black
Bottom Deposit: ☐ sludge ☐ solids X fine sediments ☐ none ☐ other but packed down hard
Water Surface: X clear ☐ scum ☐ foam ☐ debris ☐ oil
Other:

8. Vertebrates Observed within 300 meter reach

Snakes	☐ None	X slight presence	☐ moderate presence	☐ large presence
Water Dependent Birds	X None	☐ slight presence	☐ moderate presence	☐ large presence
Alligators	X None	☐ slight presence	☐ moderate presence	☐ large presence

Comments:

9. Mammals Observed within 300 meter reach

Wild	X None	☐ slight presence	☐ moderate presence	☐ large presence
Domesticated Pets	X None	☐ slight presence	☐ moderate presence	☐ large presence
Livestock	X None	☐ slight presence	☐ moderate presence	☐ large presence
Feral Hogs	X None	☐ slight presence	☐ moderate presence	☐ large presence

Comments:

10. Evidence of wild animals or evidence of birds, cattle, hogs, etc.
X Tracks ☐ Fecal droppings ☐ Bird nests RACOONS, hooved animals

11. Garbage Observed

Large garbage in the channel	☐ None	X Rare	☐ Common	☐ Abundant
Small garbage in the channel	X None	☐ Rare	☐ Common	☐ Abundant
Bank Garbage	☐ None	X Rare	☐ Common	☐ Abundant

Briefly describe the kinds of garbage observed: metal pieces from an erosion control structure that was falling down, water bottles vehicle tire, bicycle trash

12. Is the site located in a wildlife preserve with large wildlife (i.e waterfowl) population? ☐ Yes X No

13. Please document any other relevant information regarding recreational activities and the water body in general (for example, area outside of the stream reach evaluated).

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream: Steele Creek Date: 7/28/10

Site: #6 Site

Description: FM 2749 @ Steele Creek

Time Begin: 1323 Time End: Meter Type: Sontek Flowtracker

Observers: L. Ray, J. Wrast Stream Width*: 1.5 Section Width (W): 0.5

Observations:

Section Midpoint (ft)(m)	Section Depth (ft)(m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V) At Point (ft/s)(m/s)	Velocity (V) Average (ft/s)(m/s)	Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
0.25					
* 0.75	0.2			1.70	
1.25					

* Too shallow to take 3 Readings, only took 1 Reading mid-stream.

Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: C. Gauthier, M. Shepard, R. Thompson, L. Benavidez	
Date & Time: 5-28-2010 1545-1605	County Name: Robertson
Stream Name: Steele Creek	
Segment No. or nearest downstream Segment No.: 1209 K	
Description of Site: #7 CR 477 @ Steele Creek	

At any point during the Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the use for the water body the investigator should stop conducting the UAA.

A. Stream Characteristics:

1. Check the following channel flow status that applies.

☐ dry ☐ no flow ☐ low X normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:

☐ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.

☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.

☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.

X Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.

☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. _____ cfs No Flow taken Non wadeable

4. Water Quality Data (Field Parameters)

Field parameters should be collected in accordance with the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1.

Air Temp 32 °C Water Temp 29 °C

Secchi tube 0.162 m

5. Riparian Zone (Mark dominant categories with L (Left Bank) and R (Right Bank). Bank orientation is determined by the investigator facing downstream.)

L,R	Forest	_____ Urban	_____ Rip rap
_____	Shrub dominated corridor	_____ Pasture	_____ Concrete
_____	Herbaceous marsh	_____ Row crops	Other (specify): _____
_____	Mowed/maintained corridor	_____ Denuded/Eroded bank	

6. Ease of bank access to the water body: ☐ Easy ☐ Moderately easy ☐ Moderately difficult X Difficult

7. Please describe access opportunities or explain why the site is not easily accessible (Attach photos for documentation):

steep banks except for right at bridge, sharp drop into water

8. Dominant Primary Substrate

☐ Cobble ☐ Sand ☐ Silt ☐ Mud/Clay ☐ Gravel ☐ Bedrock ☐ Rip rap ☐ Concrete N/A

no access, unable to determine

QCpl

EMKS

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #7
Date: 6-28-2010 Time: 1545-1605

B. Primary Contact Water Recreation Evaluation:
- Primary contact recreation draft definition: Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, and whitewater kayaking, canoeing, and rafting, involving a significant risk of ingestion of water.

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?
☐ Yes ☒ No primary contact recreation activities were observed
a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).

☐ Wading-Children	☐ Tubing	☒ No primary contact activities that commonly occur were observed
☐ Wading-Adults	☐ Surfing	
☐ Swimming	☐ Whitewater-kayaking, canoeing, rafting	
☐ Water skiing	☐ Other: _____	
☐ Diving	☐ frequent public swimming-created by publicly owned land or commercial operations	

b. Check the number of individuals observed at the site: ☒ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Water in mouth or nose of the individual ☐ Primary touch: Individual's body (or portion) immersed in water
☐ Secondary touch: fishing, pets and related contact with water ☐ Individual is in a boat touching water
☐ Individual is on shore near water within 8 meters (25ft) of water ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☒ Not applicable

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
fallen trees in water, steep banks

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
two-track rutted path to creek adjacent to bridge, barbed wire fences on land adjacent to stream and road.

4. Is an area with primary contact recreation activities or a bathing beach (e.g. state/local parks with swimming, etc.) located near (e.g. within 5 miles upstream and downstream) this site? N/A No

C. Secondary Contact Water Recreation Evaluation:
- Secondary contact recreation 1: Water recreation activities, such as fishing, commercial and recreational boating, and limited body contact incidental to shoreline activity, not involving a significant risk of water ingestion and that commonly occur.
- Secondary contact recreation 2: Water recreation activities, such as fishing, commercial and recreational boating, and limited body contact incidental to shoreline activity, not involving a significant risk of water ingestion but that occur less frequently than for secondary contact recreation 1 due to (1) physical characteristics of the water body and/or (2) limited public access.

1. Were water recreation activities observed at the site, but the nature of the recreation does not involve a significant risk of ingestion (e.g. secondary contact recreation activities)? ☐ Yes ☒ No secondary contact recreation activities were observed
a. Check the following boxes of secondary contact recreation activities that were observed at the time of the sampling event at the site (Attach photos of activities or lack of activities).
☐ Fishing
☐ Boating-commercial, recreational
☐ Non-whitewater-kayaking, rafting, canoeing
☒ No secondary contact recreation activities were observed
☐ Other secondary contact activities: _____

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #7
Date: 5-28-2010 Time: 1545-1605

b. Check the number of individuals observed at the site.
X None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body. N/A
☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body well away from water between 8 and 30 meters (100 ft)

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
steep banks, thick vegetation and fallen trees

3. If secondary contact recreation activities are observed, how often do water recreational activities occur that do not involve a significant risk of water ingestion? ☐ frequently ☐ infrequently ☒ unknown N/A
Please describe how often the activities occur? X Unknown ☐ Never ☐ Daily ☐ Monthly ☐ Yearly

4. If infrequently, what is the reason? ☐ physical characteristics of the water body ☐ limited public access ☐ other
If other, list reasons: N/A

5. Describe the physical characteristics of the water body that hinders the frequency of secondary contact recreation (depth, etc.) (Attach photos or depth measurements, etc. for documentation).
Same as above

6. Describe why there is limited public access (e.g. lack of roads, river or stream banks overgrown, etc.) (Attach photos, maps, etc. for documentation).
Same as above

D. Noncontact Recreation Evaluation

Noncontact recreation applies to water bodies where recreation activities do not involve a significant risk of water ingestion, and where primary and secondary contact recreation uses do not occur because of unsafe conditions, such as barge traffic.

1. Provide site-specific information and documentation (including photographs) regarding unsafe conditions, recreation activities, and presence or absence of water recreation activities.
N/A

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #7
Date: 5-28-2010 ~~FDS Page 3 of 8~~ Time: 1545-1605

E. Stream Channel and Substantial Pools
Please check the following which best describes the river or stream: ☐ Wadeable X Non-wadeable

1. Wadeable Streams
Determine whether or not the average depth at the thalweg is greater than 0.5 meters and if there are substantial pools with a depth of 1 meter or greater. Walk an approximately 300 meter reach (total) at the site and take the following measurements within the 300 meter reach. Measurements should be taken during base flow conditions (sustained or typical dry, warm-weather flows between rainfall events, excluding unusual antecedent conditions of drought or wet weather

Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters.
Photos #s (30 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (150 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

a) Substantial pools - Measure the length of each pool (if > 10 pools only measure 10 pools), the width (at the widest point), and the deepest depth. A substantial pool is considered a pool greater than 10 meters in length for the purposes of a Basic RUAA Survey. If depth and/or width measurements were not attainable, explain why.

	Length (meters)	Width (meters)	Depth (meters)
Pool 1			
Pool 2			
Pool 3			
Pool 4			
Pool 5			
Pool 6			
Pool 7			
Pool 8			
Pool 9			
Pool 10			

b)Average depth at the thalweg –Take depth measurements approximately every 30 meters to calculate an average depth at the thalweg (at least 10 measurements needed). If depth and/or width measurements were not attainable, explain why.

Distance	Depth (meters)
30 meters at bridge	4.1 ft = 1.25m
60 meters	
90 meters	
120 meters	
150 meters	
180 meters	
210 meters	
240 meters	
270 meters	
300 meters	
Average	

can see up 143m & down 166m

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #7
Date: 5-28-2010 Time: 1545-1605

c) Stream width - Measure (1) the width at one point which represents the typical average width of the 300 meter reach; (2) the width at the narrowest point of the stream within the 300 meter reach; and (3) the width at the widest point of the stream within the 300 meter reach.

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	
Width at narrowest point of the stream within 300 meter reach	
Width at the widest point of the stream within 300 meter reach	

d) Is there sufficient water within a 300 meter stream reach during base flow conditions to support primary contact recreation? ☒ Yes ☐ No
COMMENTS: though banks very steep/nearly vertical

2. Non-wadeable Streams
If accessible, take 10 width measurements which represent typical widths of the 300 meter reach. If the water is too deep and not accessible record the estimated average width of the water body.

Also, take photos facing upstream, downstream, left bank, and right bank at . ✓ above bridge
Photos #s (30 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓ up, down – below bridge
Photos #s (150 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

# Measurements	Width (meters)
1	14.8
2	
3	
4	
5	
6	
7	
8	
9	
10	

– at bridge

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #7
Date: 5·28·10 Time: 1545-1605

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

- ☐ Drinking or water in mouth
- ☐ Bathing
- ☐ Walking
- ☐ Jogging/running
- ☐ Bicycling
- ☐ Standing
- ☐ Sitting
- ☐ Lying down/sleeping
- ☐ Playing on shoreline
- ☐ Picnicking
- ☐ Motorcycle/ATV
- ☐ Hunting/Trapping
- ☐ Wildlife watching
- ☒ None
- ☐ Other: _____

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☐ Yes ☒ No (If yes, please provide supporting documentation and photos.)
Comments: _____

3. Check any channel obstructions that apply (Attach photos).

- ☐ Culverts
- ☐ Barbed wire
- ☐ Utility pipe
- ☐ Fences
- ☐ Dams
- ☐ Other (specify): fallen trees
- ☐ Log jams
- ☐ Thick vegetation
- ☐ Rip rap
- ☐ Low bridges
- Water control structure
- ☐ None

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest).

- ☐ Campgrounds
- ☐ Playgrounds
- ☑ Rural area
- ☐ Residential
- ☐ National forests
- ☐ Urban/suburban location
- ☐ Golf Course
- ☐ Sports Field
- ☐ Stairs/walkway
- ☐ Boating access (ramps)
- ☐ Beach
- ☑ Bridge crossing
- ☐ Commercial boating
- ☐ Trails/paths (hiking/biking)
- ☐ Paved parking lot
- ☐ Unimproved parking lot
- ☑ Roads (paved/unpaved)
- ☐ Populated area
- ☐ Docks or rafts
- ☐ Commercial outfitter
- ☐ Nearby school
- ☐ Power Line Corridor
- ☐ Parks (national/city/county/state)
- ☐ Public Property
- ☐ Other: _____
- ☐ None of the Above

Comments: two-track deep rutted ~~bed~~ path adjacent to bridge down to stream.

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).

- ☑ Private Property
- ☐ No trespass sign
- ☐ Wildlife
- ☑ Steep slopes
- ☐ No public access
- ☐ No roads
- ☑ Fence
- ☐ Barge/ship traffic
- ☐ Industrial
- ☐ None of the Above
- ☐ Other: _____

Comments: see above notes

6. Check any indications of human use (Attach photos).

- ☑ Roads
- ☐ Rope swings
- ☐ Dock/platform
- ☐ Foot paths/prints
- ☐ Other: _____
- ☐ RV/ATV Tracks
- ☐ Camping Sites
- ☐ Fire pit/ring
- ☐ Fishing Tackle
- ☐ NPDES Discharge
- ☐ Gates on corridor
- ☐ Children's toys
- ☐ Remnant's of Kid's play
- ☐ Organized event
- ☑ No Human Presence

Comments: _____

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #7
Date: 5.28.10 Time: 15:45-1605

7. Check all water characteristics that apply (Attach photos).

Aquatic Vegetation: X absent ☐ rare ☐ common ☐ abundant
Algae Cover: X absent ☐ rare ☐ common ☐ abundant
Odor: X none ☐ rare ☐ common ☐ abundant
Color: ☐ clear ☐ green ☐ red X brown ☐ black
Bottom Deposit: ☐ sludge ☐ solids ☐ fine sediments ☐ none ☐ other unknown
Water Surface: X clear ☐ scum ☐ foam ☐ debris ☐ oil
Other:

8. Vertebrates Observed within 300 meter reach

Snakes X None ☐ slight presence ☐ moderate presence ☐ large presence
Water Dependent Birds X None ☐ slight presence ☐ moderate presence ☐ large presence
Alligators X None ☐ slight presence ☐ moderate presence ☐ large presence
Comments:

9. Mammals Observed within 300 meter reach

Wild X None ☐ slight presence ☐ moderate presence ☐ large presence
Domesticated Pets X None ☐ slight presence ☐ moderate presence ☐ large presence
Livestock X None ☐ slight presence ☐ moderate presence ☐ large presence
Feral Hogs X None ☐ slight presence ☐ moderate presence ☐ large presence
Comments:

10. Evidence of wild animals or evidence of birds, cattle, hogs, etc.

☐ Tracks X Fecal droppings ☐ Bird nests
next to road away from bridge

11. Garbage Observed

Large garbage in the channel X None ☐ Rare ☐ Common ☐ Abundant
Small garbage in the channel X None ☐ Rare ☐ Common ☐ Abundant
Bank Garbage ☐ None X Rare ☐ Common ☐ Abundant
Briefly describe the kinds of garbage observed: 1 beer can on bank, water hose wrapped around vertical post (on guardrail).

12. Is the site located in a wildlife preserve with large wildlife (i.e waterfowl) population? ☐ Yes X No

13. Please document any other relevant information regarding recreational activities and the water body in general (for example, area outside of the stream reach evaluated).

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream: Steele Creek Date: 5-28-2016

Site: #7 Site

Description: CR 477 @ Steele Creek

Time Begin: _____ Time End: _____ Meter Type: Sontek Flowtracker

Observers: _____ Stream Width*: _____ Section Width (W): _____

Observations: _____

No flow taken because water non-wadeable

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V)		Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
			At Point (ft/s)(m/s)	Average (ft/s)(m/s)	

Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: C Gaythier, M. Shepard, R. Thompson, L. Benavides	
Date & Time: 5.28.10 1430-1535	County Name: Robertson
Stream Name: Steele Creek	
Segment No. or nearest downstream Segment No.: 1209K	
Description of Site: #8 SH7 e Steele Creek	

At any point during the Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the use for the water body the investigator should stop conducting the UAA.

A. Stream Characteristics:

1. Check the following channel flow status that applies.

☐ dry ☐ no flow ☒ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:

Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.

☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.

☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.

☒ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.

☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. 16.060 cfs

4. Water Quality Data (Field Parameters)

Field parameters should be collected in accordance with the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1.

Air Temp 33 °C Water Temp 26 °C

Secchi tube 0.114 m

5. Riparian Zone (Mark dominant categories with L (Left Bank) and R (Right Bank). Bank orientation is determined by the investigator facing downstream.)

downstream of bridge

L,R Forest	___ Urban	___ Rip rap
___ Shrub dominated corridor	R Pasture	___ Concrete
___ Herbaceous marsh	___ Row crops	Other (specify): ___
___ Mowed/maintained corridor	___ Denuded/Eroded bank	

6. Ease of bank access to the water body: ☐ Easy ☐ Moderately easy ☒ Moderately difficult ☐ Difficult

7. Please describe access opportunities or explain why the site is not easily accessible (Attach photos for documentation):

abundance of vegetation, steep slopes in ~~some~~ most places

8. Dominant Primary Substrate

☐ Cobble ☐ Sand ☐ Silt ☒ Mud/Clay ☐ Gravel ☐ Bedrock ☐ Rip rap ☐ Concrete

QC PL

E MES

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #8
Date: 5.28.10 Time: 1430-1535

B. Primary Contact Water Recreation Evaluation:
- Primary contact recreation draft definition: Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, and whitewater kayaking, canoeing, and rafting, involving a significant risk of ingestion of water.

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?
☐ Yes ☒ No primary contact recreation activities were observed
a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).

☐ Wading-Children	☐ Tubing	☒ No primary contact activities that commonly occur were observed
☐ Wading-Adults	☐ Surfing	
☐ Swimming	☐ Whitewater-kayaking, canoeing, rafting	
☐ Water skiing	☐ Other: _____	
☐ Diving	☐ frequent public swimming-created by publicly owned land or commercial operations	

b. Check the number of individuals observed at the site: ☒ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Water in mouth or nose of the individual ☐ Primary touch: Individual's body (or portion) immersed in water
☐ Secondary touch: fishing, pets and related contact with water ☐ Individual is in a boat touching water
☐ Individual is on shore near water within 8 meters (25ft) of water ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☒ Not applicable

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
steep banks, fences adjacent to water (used to cross but have fallen), debris in water

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
land adjacent to bridge cleared and mowed.

4. Is an area with primary contact recreation activities or a bathing beach (e.g. state/local parks with swimming, etc.) located near (e.g. within 5 miles upstream and downstream) this site?

C. Secondary Contact Water Recreation Evaluation:
- Secondary contact recreation 1: Water recreation activities, such as fishing, commercial and recreational boating, and limited body contact incidental to shoreline activity, not involving a significant risk of water ingestion and that commonly occur.
- Secondary contact recreation 2: Water recreation activities, such as fishing, commercial and recreational boating, and limited body contact incidental to shoreline activity, not involving a significant risk of water ingestion but that occur less frequently than for secondary contact recreation 1 due to (1) physical characteristics of the water body and/or (2) limited public access.

1. Were water recreation activities observed at the site, but the nature of the recreation does not involve a significant risk of ingestion (e.g. secondary contact recreation activities)? ☐ Yes ☒ No secondary contact recreation activities were observed
a. Check the following boxes of secondary contact recreation activities that were observed at the time of the sampling event at the site (Attach photos of activities or lack of activities).
☐ Fishing
☐ Boating-commercial, recreational
☐ Non-whitewater-kayaking, rafting, canoeing
☒ No secondary contact recreation activities were observed
☐ Other secondary contact activities: _____

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #8
Date: 5.28.10 Time: 1430-1535

b. Check the number of individuals observed at the site.
☒ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body. N/A
☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body well away from water between 8 and 30 meters (100 ft)

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
steep banks, debris in water

3. If secondary contact recreation activities are observed, how often do water recreational activities occur that do not involve a significant risk of water ingestion? ☐ frequently ☐ infrequently ☒ unknown
Please describe how often the activities occur? ☒ Unknown ☐ Never ☐ Daily ☐ Monthly ☐ Yearly

4. If infrequently, what is the reason? ☐ physical characteristics of the water body ☐ limited public access ☐ other
If other, list reasons: N/A

5. Describe the physical characteristics of the water body that hinders the frequency of secondary contact recreation (depth, etc.) (Attach photos or depth measurements, etc. for documentation).
same as above

6. Describe why there is limited public access (e.g. lack of roads, river or stream banks overgrown, etc.) (Attach photos, maps, etc. for documentation).
same as above

D. Noncontact Recreation Evaluation

Noncontact recreation applies to water bodies where recreation activities do not involve a significant risk of water ingestion, and where primary and secondary contact recreation uses do not occur because of unsafe conditions, such as barge traffic.

1. Provide site-specific information and documentation (including photographs) regarding unsafe conditions, recreation activities, and presence or absence of water recreation activities.
N/A

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ FDS Page 3 of 8 _____

E. Stream Channel and Substantial Pools
Please check the following which best describes the river or stream: ☒ Wadeable ☐ Non-wadeable

1. Wadeable Streams
Determine whether or not the average depth at the thalweg is greater than 0.5 meters and if there are substantial pools with a depth of 1 meter or greater. Walk an approximately 300 meter reach (total) at the site and take the following measurements within the 300 meter reach. Measurements should be taken during base flow conditions (sustained or typical dry, warm-weather flows between rainfall events, excluding unusual antecedent conditions of drought or wet weather

Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters.
Photos #s (30 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓ 1
Photos #s (150 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓ 3
Photos #s (300 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓ 2

a) Substantial pools - Measure the length of each pool (if > 10 pools only measure 10 pools), the width (at the widest point), and the deepest depth. A substantial pool is considered a pool greater than 10 meters in length for the purposes of a Basic RUAA Survey. If depth and/or width measurements were not attainable, explain why.

	Length (meters)	Width (meters)	Depth (meters)
Pool 1			
Pool 2			
Pool 3			
Pool 4			
Pool 5			
Pool 6			
Pool 7			
Pool 8			
Pool 9			
Pool 10			

b)Average depth at the thalweg –Take depth measurements approximately every 30 meters to calculate an average depth at the thalweg (at least 10 measurements needed). If depth and/or width measurements were not attainable, explain why.

Distance	(ft) Depth	(meters)
30 meters	1.4	0.43
60 meters	3.4	1.04
90 meters	2.2	0.67
120 meters	1.5	0.46
150 meters	1.8	0.55
180 meters	2.5	0.76
210 meters	1.9	0.58
240 meters	3.1	0.94
270 meters	2.0	0.61
300 meters	2.5	0.76
Average		0.68

used to be a barbed wire fence across, fallen (pic)

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

c) Stream width - Measure (1) the width at one point which represents the typical average width of the 300 meter reach; (2) the width at the narrowest point of the stream within the 300 meter reach; and (3) the width at the widest point of the stream within the 300 meter reach.

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	16.0ft 4.88m
Width at narrowest point of the stream within 300 meter reach	4.9m
Width at the widest point of the stream within 300 meter reach	6.8m

d) Is there sufficient water within a 300 meter stream reach during base flow conditions to support primary contact recreation? ☒ Yes ☐ No
COMMENTS:

_____

_____

2. Non-wadeable Streams N/A
If accessible, take 10 width measurements which represent typical widths of the 300 meter reach. If the water is too deep and not accessible record the estimated average width of the water body.

Also, take photos facing upstream, downstream, left bank, and right bank at .
Photos #s (30 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (150 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

# Measurements	Width (meters)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #8
Date: 5.28.10 Time: 1430-1535

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

- ☐ Drinking or water in mouth
- ☐ Bathing
- ☐ Walking
- ☐ Jogging/running
- ☐ Bicycling
- ☐ Standing
- ☐ Sitting
- ☐ Lying down/sleeping
- ☐ Playing on shoreline
- ☐ Picnicking
- ☐ Motorcycle/ATV
- ☐ Hunting/Trapping
- ☐ Wildlife watching
- ☒ None
- ☐ Other: _____

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☐ Yes ☒ No (If yes, please provide supporting documentation and photos.)
Comments: _____

3. Check any channel obstructions that apply (Attach photos).

- ☐ Culverts
- ☒ Fences see above
- ☐ Log jams
- ☐ Rip rap
- Water control structure
- ☐ Barbed wire
- ☐ Dams
- ☐ Thick vegetation
- ☐ Low bridges
- ☐ None
- ☐ Utility pipe
- ☒ Other (specify): Weeds and other debris

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest).

- ☐ Campgrounds
- ☐ Playgrounds
- ☑ Rural area
- ☐ Residential
- ☐ National forests
- ☐ Urban/suburban location
- ☐ Golf Course
- ☐ Sports Field
- ☐ Stairs/walkway
- ☐ Boating access (ramps)
- ☐ Beach
- ☑ Bridge crossing
- ☐ Commercial boating
- ☐ Trails/paths (hiking/biking)
- ☐ Paved parking lot
- ☐ Unimproved parking lot
- ☑ Roads (paved/unpaved)
- ☐ Populated area
- ☐ Docks or rafts
- ☐ Commercial outfitter
- ☐ Nearby school
- ☐ Power Line Corridor
- ☐ Parks (national/city/county/state)
- ☐ Public Property
- ☐ Other: _____
- ☐ None of the Above

Comments: _____

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).

- ☑ Private Property
- ☐ No trespass sign
- ☐ Wildlife
- ☑ Steep slopes
- ☐ No public access
- ☐ No roads
- ☑ Fence
- ☐ Barge/ship traffic
- ☐ Industrial
- ☐ None of the Above
- ☐ Other: _____

Comments: _____

6. Check any indications of human use (Attach photos).

- ☑ Roads
- ☐ Rope swings
- ☐ Dock/platform
- ☐ Foot paths/prints
- ☐ Other: _____
- ☐ RV/ATV Tracks
- ☐ Camping Sites
- ☐ Fire pit/ring
- ☐ Fishing Tackle
- ☐ NPDES Discharge
- ☐ Gates on corridor
- ☐ Children's toys
- ☐ Remnant's of Kid's play
- ☐ Organized event
- ☑ No Human Presence

Comments: _____

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #8
Date: 5·28·10 Time: 1430-1535

7. Check all water characteristics that apply (Attach photos).
Aquatic Vegetation: ☒ absent ☐ rare ☐ common ☐ abundant
Algae Cover: ☒ absent ☐ rare ☐ common ☐ abundant
Odor: ☒ none ☐ rare ☐ common ☐ abundant
Color: ☐ clear ☐ green ☐ red ☒ brown ☐ black
Bottom Deposit: ☐ sludge ☐ solids ☒ fine sediments ☐ none ☐ other
Water Surface: ☒ clear ☐ scum ☐ foam ☐ debris ☐ oil
Other:

8. Vertebrates Observed within 300 meter reach

Snakes	☐ None	☑ slight presence	☐ moderate presence	☐ large presence
Water Dependent Birds	☒ None	☐ slight presence	☐ moderate presence	☐ large presence
Alligators	☒ None	☐ slight presence	☐ moderate presence	☐ large presence

Comments: \ snake

9. Mammals Observed within 300 meter reach

Wild	☒ None	☐ slight presence	☐ moderate presence	☐ large presence
Domesticated Pets	☒ None	☐ slight presence	☐ moderate presence	☐ large presence
Livestock	☒ None	☐ slight presence	☐ moderate presence	☐ large presence
Feral Hogs	☒ None	☐ slight presence	☐ moderate presence	☐ large presence

Comments:

10. Evidence of wild animals or evidence of birds, cattle, hogs, etc.
☒ Tracks ☐ Fecal droppings ☐ Bird nests

11. Garbage Observed

Large garbage in the channel	☒ None	☐ Rare	☐ Common	☐ Abundant
Small garbage in the channel	☒ None	☐ Rare	☐ Common	☐ Abundant
Bank Garbage	☐ None	☑ Rare	☐ Common	☐ Abundant

Briefly describe the kinds of garbage observed: trash on mowed area.

12. Is the site located in a wildlife preserve with large wildlife (i.e waterfowl) population? ☐ Yes ☑ No

13. Please document any other relevant information regarding recreational activities and the water body in general (for example, area outside of the stream reach evaluated).

Field Data Sheet - Basic RUAA Survey
Stream Flow (Discharge) Measurement

Stream: Steele Creek Date: 5.28.10
Site: #8 Site
Description: SH 7 @ Steele Creek
Time Begin: 1440 Time End: 15:04 Meter Type: Sontek Flowtracker
Observers: C Gauthier R Thompson Stream Width*: 16.0' Section Width (W): 0.8
Observations:

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V) At Point (ft/s) (m/s)	Velocity (V) Average (ft/s)(m/s)	Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
0.4	0.2	~~0.5~~	0.52		
1.2	0.35		0.67		
2.0	0.6		0.70		
2.8	1.0		0.68		
3.6	1.6		0.83		
4.4	1.8		0.79		
5.2	1.9		1.05		
6.0	2.2		0.89		
6.8	2.2		0.78		
7.6	2.2		0.87		
8.4	2.1		0.68		
9.2	2.2		0.48		
10.0	2.3		0.30		
10.8	2.3		0.23		
11.6	2.3		0.18		
12.4	2.0		-1.1		
13.2	1.7		-0.13		
14.0	1.2		-0.27		
14.8	1.0		0.01		
15.6	0.5		0.26		

← large eddie approx 2ft ~~from~~ across ~~by~~ near bank (looking at debris on water surface)

Total Q: 16.060

Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: CGauthier, M Shepard, R Thompson, L Benavides	
Date & Time: 5-28-10 1357-1418	County Name: Robertson
Stream Name: Steele Creek	
Segment No. or nearest downstream Segment No.: 1209K	
Description of Site: #9 CR472 @ Steele Creek	

At any point during the Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the use for the water body the investigator should stop conducting the UAA.

A. Stream Characteristics:

1. Check the following channel flow status that applies.

☐ dry ☐ no flow ☐ low X normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:

☐ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.

☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.

☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.

X Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.

☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. _____ cfs none taken, no water access

4. Water Quality Data (Field Parameters)

Field parameters should be collected in accordance with the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1.

Air Temp 30 °C Water Temp N/A °C

Secchi tube N/A m

5. Riparian Zone (Mark dominant categories with L (Left Bank) and R (Right Bank). Bank orientation is determined by the investigator facing downstream.)

R upstream & L,R Forest downstream

_____ Shrub dominated corridor

_____ Herbaceous marsh

_____ Mowed/maintained corridor

N/A Urban upstream of bridge

L,R Pasture

_____ Row crops

_____ Denuded/Eroded bank

_____ Rip rap

_____ Concrete

Other (specify): _____

6. Ease of bank access to the water body: ☐ Easy ☐ Moderately easy ☐ Moderately difficult X Difficult

7. Please describe access opportunities or explain why the site is not easily accessible (Attach photos for documentation):

Steep banks, barbed wire accross upstream

8. Dominant Primary Substrate

☐ Cobble ☐ Sand ☐ Silt ☐ Mud/Clay ☐ Gravel ☐ Bedrock ☐ Rip rap ☐ Concrete N/A

seemed like gravel at bridge when checking depth. QC pu

EMES

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #9
Date: 5-28-2010 Time: 1357-1418

B. Primary Contact Water Recreation Evaluation:
- Primary contact recreation draft definition: Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, and whitewater kayaking, canoeing, and rafting, involving a significant risk of ingestion of water.

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?
☐ Yes ☒ No primary contact recreation activities were observed
a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).

☐ Wading-Children	☐ Tubing	☒ No primary contact activities that commonly occur were observed
☐ Wading-Adults	☐ Surfing	
☐ Swimming	☐ Whitewater-kayaking, canoeing, rafting	
☐ Water skiing	☐ Other: _____	
☐ Diving	☐ frequent public swimming-created by publicly owned land or commercial operations	

b. Check the number of individuals observed at the site: ☒ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Water in mouth or nose of the individual ☐ Primary touch: Individual's body (or portion) immersed in water
☐ Secondary touch: fishing, pets and related contact with water ☐ Individual is in a boat touching water
☐ Individual is on shore near water within 8 meters (25ft) of water ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☒ Not applicable

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
steep banks, barbed wire accross upstream of bridge.

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
bridge

4. Is an area with primary contact recreation activities or a bathing beach (e.g. state/local parks with swimming, etc.) located near (e.g. within 5 miles upstream and downstream) this site? N/A

C. Secondary Contact Water Recreation Evaluation:
- Secondary contact recreation 1: Water recreation activities, such as fishing, commercial and recreational boating, and limited body contact incidental to shoreline activity, not involving a significant risk of water ingestion and that commonly occur.
- Secondary contact recreation 2: Water recreation activities, such as fishing, commercial and recreational boating, and limited body contact incidental to shoreline activity, not involving a significant risk of water ingestion but that occur less frequently than for secondary contact recreation 1 due to (1) physical characteristics of the water body and/or (2) limited public access.

1. Were water recreation activities observed at the site, but the nature of the recreation does not involve a significant risk of ingestion (e.g. secondary contact recreation activities)? ☐ Yes ☒ No secondary contact recreation activities were observed
a. Check the following boxes of secondary contact recreation activities that were observed at the time of the sampling event at the site (Attach photos of activities or lack of activities).
☐ Fishing
☐ Boating-commercial, recreational
☐ Non-whitewater-kayaking, rafting, canoeing
☒ No secondary contact recreation activities were observed
☐ Other secondary contact activities: _____

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #9
Date: 5-28-2010 Time: 1357-1418

b. Check the number of individuals observed at the site.
X None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body. N/A
☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body well away from water between 8 and 30 meters (100 ft)

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
steep banks, barbed wire accross stream upstream of bridge.

3. If secondary contact recreation activities are observed, how often do water recreational activities occur that do not involve a significant risk of water ingestion? ☐ frequently ☐ infrequently
Please describe how often the activities occur? X Unknown ☐ Never ☐ Daily ☐ Monthly ☐ Yearly

4. If infrequently, what is the reason? ☐ physical characteristics of the water body ☐ limited public access ☐ other
If other, list reasons: N/A

5. Describe the physical characteristics of the water body that hinders the frequency of secondary contact recreation (depth, etc.) (Attach photos or depth measurements, etc. for documentation).
same as above

6. Describe why there is limited public access (e.g. lack of roads, river or stream banks overgrown, etc.) (Attach photos, maps, etc. for documentation).
same as above

D. Noncontact Recreation Evaluation

Noncontact recreation applies to water bodies where recreation activities do not involve a significant risk of water ingestion, and where primary and secondary contact recreation uses do not occur because of unsafe conditions, such as barge traffic.

1. Provide site-specific information and documentation (including photographs) regarding unsafe conditions, recreation activities, and presence or absence of water recreation activities.
N/A

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #9
Date: 5-28-10 ~~FDS Page 3 of 8~~ Time: 1357-1418

E. Stream Channel and Substantial Pool:
Please check the following which best describes the river or stream: X Wadeable ~~X~~ Non-wadeable NES
Inaccessible

1. Wadeable Streams
Determine whether or not the average depth at the thalweg is greater than 0.5 meters and if there are substantial pools with a depth of 1 meter or greater. Walk an approximately 300 meter reach (total) at the site and take the following measurements within the 300 meter reach. Measurements should be taken during base flow conditions (sustained or typical dry, warm-weather flows between rainfall events, excluding unusual antecedent conditions of drought or wet weather

Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters.
Photos #s (30 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (150 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓ @ bridge
Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

a) Substantial pools - Measure the length of each pool (if > 10 pools only measure 10 pools), the width (at the widest point), and the deepest depth. A substantial pool is considered a pool greater than 10 meters in length for the purposes of a Basic RUAA Survey. If depth and/or width measurements were not attainable, explain why.

	Length (meters)	Width (meters)	Depth (meters)
Pool 1			
Pool 2			
Pool 3			
Pool 4			
Pool 5			
Pool 6			
Pool 7			
Pool 8			
Pool 9			
Pool 10			

b)Average depth at the thalweg –Take depth measurements approximately every 30 meters to calculate an average depth at the thalweg (at least 10 measurements needed). If depth and/or width measurements were not attainable, explain why.

Distance	Depth (meters)
30 meters	1.7ft (0.518m) ← at bridge
60 meters	
90 meters	
120 meters	
150 meters	
180 meters	
210 meters	
240 meters	
270 meters	
300 meters	
Average	

- could see 53m up & 53m down from bridge of water/channel

- possible deer stand ~65m down on right bank on private property

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #9
Date: 5/25/10 Time: 1357-1418

c) Stream width - Measure (1) the width at one point which represents the typical average width of the 300 meter reach; (2) the width at the narrowest point of the stream within the 300 meter reach; and (3) the width at the widest point of the stream within the 300 meter reach.

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	
Width at narrowest point of the stream within 300 meter reach	
Width at the widest point of the stream within 300 meter reach	

d) Is there sufficient water within a 300 meter stream reach during base flow conditions to support primary contact recreation? X Yes ☐ No
COMMENTS: Children wading or Wadable

2. Non-wadeable Streams N/A
If accessible, take 10 width measurements which represent typical widths of the 300 meter reach. If the water is too deep and not accessible record the estimated average width of the water body.

Also, take photos facing upstream, downstream, left bank, and right bank at .
Photos #s (30 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (150 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

# Measurements	Width (meters)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #9
Date: 5-28-2010 Time: 1357-1418

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

- ☐ Drinking or water in mouth
- ☐ Bathing
- ☐ Walking
- ☐ Jogging/running
- ☐ Bicycling
- ☐ Standing
- ☐ Sitting
- ☐ Lying down/sleeping
- ☐ Playing on shoreline
- ☐ Picnicking
- ☐ Motorcycle/ATV
- ☐ Hunting/Trapping
- ☐ Wildlife watching
- ☒ None
- ☐ Other: _____

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☐ Yes ☒ No (If yes, please provide supporting documentation and photos.)
Comments: _____

3. Check any channel obstructions that apply (Attach photos).

- ☐ Culverts
- ☒ Barbed wire
- ☐ Utility pipe
- ☐ Fences
- ☐ Dams
- ☒ Other (specify): debris
- ☒ Log jams
- ☐ Thick vegetation
- ☐ Rip rap
- ☐ Low bridges
- ☐ Water control structure
- ☐ None

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest).

- ☐ Campgrounds
- ☐ Playgrounds
- ☑ Rural area
- ☐ Residential
- ☐ National forests
- ☐ Urban/suburban location
- ☐ Golf Course
- ☐ Sports Field
- ☐ Stairs/walkway
- ☐ Boating access (ramps)
- ☐ Beach
- ☑ Bridge crossing
- ☐ Commercial boating
- ☐ Trails/paths (hiking/biking)
- ☐ Paved parking lot
- ☐ Unimproved parking lot
- ☑ Roads (paved/unpaved)
- ☐ Populated area
- ☐ Docks or rafts
- ☐ Commercial outfitter
- ☐ Nearby school
- ☐ Power Line Corridor
- ☐ Parks (national/city/county/state)
- ☐ Public Property
- ☐ Other: _____
- ☐ None of the Above

Comments: _____

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).

- ☐ Private Property
- ☐ No trespass sign
- ☐ Wildlife
- ☐ Steep slopes
- ☐ No public access
- ☐ No roads
- ☑ Fence barbed wire along and across stream
- ☐ Barge/ship traffic
- ☐ Industrial
- ☐ None of the Above
- ☐ Other: _____

Comments: _____

6. Check any indications of human use (Attach photos).

- ☐ Roads
- ☐ Rope swings
- ☐ Dock/platform
- ☐ Foot paths/prints
- ☐ Other: _____
- ☐ RV/ATV Tracks
- ☐ Camping Sites
- ☐ Fire pit/ring
- ☐ Fishing Tackle
- ☐ NPDES Discharge
- ☐ Gates on corridor
- ☐ Children's toys
- ☐ Remnant's of Kid's play
- ☐ Organized event
- ☒ No Human Presence

Comments: _____

Field Data Sheets – Basic RUAA Survey

Stream Name Steele Creek Site: #9
Date: 5·28·10 Time: 1357-1418

7. Check all water characteristics that apply (Attach photos).
Aquatic Vegetation: ☐ absent X rare ☐ common ☐ abundant duck weed around fallen tree
Algae Cover: X absent ☐ rare ☐ common ☐ abundant
Odor: ☐ none ☐ rare ☐ common ☐ abundant unknown
Color: ☐ clear ☐ green ☐ red X brown ☐ black
Bottom Deposit: ☐ sludge ☐ solids ☐ fine sediments ☐ none ☐ other unknown
Water Surface: ☐ clear ☐ scum ☐ foam X debris ☐ oil
Other:

8. Vertebrates Observed within 300 meter reach
Snakes X None ☐ slight presence ☐ moderate presence ☐ large presence
Water Dependent Birds X None ☐ slight presence ☐ moderate presence ☐ large presence
Alligators X None ☐ slight presence ☐ moderate presence ☐ large presence
Comments:

9. Mammals Observed within 300 meter reach
Wild X None ☐ slight presence ☐ moderate presence ☐ large presence
Domesticated Pets X None ☐ slight presence ☐ moderate presence ☐ large presence
Livestock X None ☐ slight presence ☐ moderate presence ☐ large presence
Feral Hogs X None ☐ slight presence ☐ moderate presence ☐ large presence
Comments:

10. Evidence of wild animals or evidence of birds, cattle, hogs, etc.
☐ Tracks ☐ Fecal droppings ☐ Bird nests N/A

11. Garbage Observed N/A
Large garbage in the channel X None X Rare ☐ Common ☐ Abundant tire
Small garbage in the channel ☐ None X Rare N/A Common ☐ Abundant beer can, other beverage containers
Bank Garbage ☐ None X Rare X Common ☐ Abundant tire, packaging material
Briefly describe the kinds of garbage observed:

12. Is the site located in a wildlife preserve with large wildlife (i.e waterfowl) population? ☐ Yes X No

13. Please document any other relevant information regarding recreational activities and the water body in general (for example, area outside of the stream reach evaluated).

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream: Steele Creek Date: 5-28-10

Site: #9 Site

Description: CR 472 @ Steele Creek

Time Begin: _____ Time End: _____ Meter Type: Sontek Flowtracker

Observers: _____ Stream Width*: 19.2' Section Width (W): _____

Observations: _____

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V)		Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
			At Point (ft/s)(m/s)	Average (ft/s)(m/s)	

No flow taken, water inaccessible