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. Wroost, C. Greene, K. Conda
Date & Time: 5/26/10 0947-1002  County Name: Limestone
Stream Name: Steele Creek
Segment No. or nearest downstream Segment No.: 1209 K
Description of Site: #1 PA 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  X 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.
   X 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  30.5 °C  Water Temp  26.5 °C  Secchi tube

5. Riparian Zone (Mark dominant categories with L (Left Bank) and R (Right Bank). Bank orientation is determined by the investigator facing downstream.)
   X L, R Forest
   □ L, R Shrub dominated corridor
   □ L, R Herbaceous marsh
   □ L, R Mowed/maintained corridor
   X L, R Urban
   □ L, R Pasture
   □ L, R Hay
   □ L, R Row crops
   □ L, R Other (specify):
   □ L, R Concrete
   □ L, R 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

FDS Page 1 of 8
Field Data Sheets – Basic RUAA Survey

Stream Name: Steele Creek

Date: 5/18/10

Site: #1 FM 187 e Steele Creek

Time: 0947 - 1000

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

b. Check the number of individuals observed at the site: X None □ 1-10 □ 11-20 □ 21-50 □ 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 on boat touching water
   □ Individual is on shore near water within 8 meters (25 ft) of water □ Individual is well away from water between 8 and 30 meters (100 ft) X 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
   Fence runs 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? X 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 X 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:

FDS Page 2 of 8
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).


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? X 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).


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).

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
Date: 7/28/10
Site: #1
Time: 9:47 - 10:02

E. Stream Channel and Substantial Pool

Please check the following which best describes the river or stream: X Wadable 

1. Wadable 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 #1 (30 meters) Upstream ✓ Downstream ✗ Left Bank ✗ Right Bank ✓
Photos #2 (150 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓
Photos #3 (300 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓

Bridge

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.

<table>
<thead>
<tr>
<th>Pool 1</th>
<th>Length (meters)</th>
<th>Width (meters)</th>
<th>Depth (meters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pool 2</td>
<td></td>
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<tr>
<td>Pool 3</td>
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<td>Pool 4</td>
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<td>Pool 5</td>
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<td>Pool 6</td>
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<td>Pool 7</td>
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<td>Pool 8</td>
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<td>Pool 9</td>
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<td></td>
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<tr>
<td>Pool 10</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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 91 m upstream & 41 m downstream

<table>
<thead>
<tr>
<th>Distance</th>
<th>Depth (meters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 meters</td>
<td></td>
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<tr>
<td>60 meters</td>
<td></td>
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<tr>
<td>90 meters</td>
<td></td>
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<tr>
<td>120 meters</td>
<td></td>
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<tr>
<td>150 meters</td>
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<tr>
<td>180 meters</td>
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<tr>
<td>210 meters</td>
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<tr>
<td>240 meters</td>
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<tr>
<td>270 meters</td>
<td></td>
</tr>
<tr>
<td>300 meters</td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td></td>
</tr>
</tbody>
</table>

Depth taken at Bridge

Not able to access the water, fenced 400 meters on sides of bridge.

FDS Page 4 of 8
Field Data Sheets – Basic RUAA Survey

Stream Name: Steele Creek  |  Site: #1
Date: 5/28/10  |  Time: 4:17-10:02

(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.

<table>
<thead>
<tr>
<th>Measurement Type</th>
<th>Width (meters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical Average Width of 300 meter reach</td>
<td>19.3 ± 0.61</td>
</tr>
<tr>
<td>Width at narrowest point of the stream within 300 meter reach</td>
<td>4.35 ± 0.4</td>
</tr>
<tr>
<td>Width at the widest point of the stream within 300 meter reach</td>
<td></td>
</tr>
</tbody>
</table>

(d) Is there sufficient water within a 300 meter stream reach during base flow conditions to support primary contact recreation?  □ Yes  X 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

<table>
<thead>
<tr>
<th># Measurements</th>
<th>Width (meters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
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<td>3</td>
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<td>9</td>
<td></td>
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<tr>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>
F. Additional RUAA Information

1. Check the following activities observed over the site reach.
   - Drinking or water in mouth
   - Playing on shoreline
   - Bathing
   - Picnicking
   - Walking
   - Motorcycle/ATV
   - Jogging/running
   - Hunting/Trapping
   - Bicycling
   - Wildlife watching
   - Standing
   - Sitting
   - Lying down/sleeping
   - Other: None

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 5/29/10

3. Check any channel obstructions that apply (Attach photos).
   - Culverts
   - Fences
   - Log jams
   - Rip rap
   - Barbed wire
   - Dams
   - Thick vegetation
   - Low bridges
   - Utility pipe
   - Other (specify): 

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest).
   - Campgrounds
   - Playgrounds
   - Stairs/walkway
   - Boating access (ramps)
   - Roads (paved/ unpaved)
   - Residential
   - Beach
   - Bridge crossing
   - Commercial boating
   - Nearby school
   - National forests
   - Commercial outfitter
   - Urban/suburban location
   - Trails/paths (hiking/biking)
   - Power Line Corridor
   - Golf Course
   - Paved parking lot
   - Parks (national/city/county/state)
   - Sports Field
   - Unimproved parking lot
   - Public Property
   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
   - Industrial
   - Steep slopes
   - None of the Above
   - No public access
   - Other:
   - No roads
   Comments: 

6. Check any indications of human use (Attach photos).
   - Roads
   - Rope swings
   - Dock/platform
   - Foot paths/prints
   - 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: 

FDS Page 6 of 8
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: ☑ 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:

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: Beer box, vehicle bumper in bank.

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).

FDS Page 7 of 8
**Field Data Sheet - Basic RUAA Survey**

**Stream Flow (Discharge) Measurement**

- **Stream:** Steele Creek
- **Site:** #1
- **Date:** 5/28/10
- **Description:** FM 147 e Steele Creek
- **Time Begin:**
- **Time End:**
- **Meter Type:** FlowTracer
- **Stream Width:**
- **Observed Depth:**
- **Section Width (W):**
- **Observations:** Water in pools, stagnant

<table>
<thead>
<tr>
<th>Section Midpoint (ft/m)</th>
<th>Section Depth (ft/m cm) (D)</th>
<th>Observational Depth** (ft/m)</th>
<th>Velocity (V)</th>
<th>Flow (Q) (m³/s ft³/s)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>At Point (ft/s)(m/s)</td>
<td>Average (ft/s)(m/s)</td>
</tr>
</tbody>
</table>

Note: The table contains placeholders and handwritten notes: "flow", "NO", "flow".
Field Data Sheets – Basic RUAA Survey
(should be completed for each site)

Data Collectors & Contact Information: L. Ray, J. M. Astr, K. C. Ahl, C. Greene

Date & Time: 52912010 10:20 - 10:31  County Name: Limestone
Stream Name: Steele Creek
Segment No. or nearest downstream Segment No.: 1209 K
Description of Site: #2 LCR 648 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 RUAA.

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.
   - [x] 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, indicate that information as an attachment and list the streamflow on the sampling date below. If the streamflow 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 I.

Air Temp: 87 °C  Water Temp: 23 °C  Secchi: 1.27 m

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

<table>
<thead>
<tr>
<th>L/R</th>
<th>Forest</th>
<th>Urban</th>
<th>Rip rap</th>
</tr>
</thead>
<tbody>
<tr>
<td>L/R</td>
<td>Shrub dominated corridor</td>
<td>Pasture</td>
<td>Concrete</td>
</tr>
<tr>
<td>L/R</td>
<td>Herbaceous marsh</td>
<td>Row crops</td>
<td>Other (specify):</td>
</tr>
<tr>
<td>L/R</td>
<td>Mowed/ maintained corridor</td>
<td>Denuded/Eroded bank</td>
<td></td>
</tr>
</tbody>
</table>

6. Ease of bank access to the water body: [ ] Easy [X] 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) - BANKS FAIRLY STEEP AND COVERED IN POISON IVY, BUT ACCESSIBLE

8. Dominant Primary Substrate
   - [ ] Cobble
   - [ ] Sand
   - [ ] Silt
   - [ ] Mud/Clay
   - [ ] Gravel
   - [ ] Bedrock
   - [ ] Rip rap
   - [ ] Concrete
Field Data Sheets – Basic RUAA Survey

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, very thin ice in love 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, no place to pull up 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:

FDS Page 2 of 8
Field Data Sheets – Basic RUAA Survey

Stream Name: Steele Creek  Site: #2
Date: 09/20/10  Time: 10:20–10:57

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: 5/28/10 Time: 1020-1057

E. Stream Channel and Substantial Pool

Please check the following which best describes the river or stream:

- Wadeable
- Non-wadeable

I. 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.

<table>
<thead>
<tr>
<th>Pool</th>
<th>Length (meters)</th>
<th>Width (meters)</th>
<th>Depth (meters)</th>
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</tbody>
</table>

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.

<table>
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<th>Distance</th>
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<td>240 meters</td>
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<td>270 meters</td>
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<tr>
<td>300 meters</td>
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<tr>
<td>Average</td>
<td>0.609 m</td>
</tr>
</tbody>
</table>

Pics at 115 m >4 ft, cant continue
Pics at 158 m >4 ft, tree debris in water, large pool

FDS Page 4 of 8
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.

<table>
<thead>
<tr>
<th>Measurement Type</th>
<th>Width (meters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical Average Width of 300 meter reach</td>
<td>5.58 ± 1.65m</td>
</tr>
<tr>
<td>Width at narrowest point of the stream within 300 meter reach</td>
<td>1.30 m</td>
</tr>
<tr>
<td>Width at the widest point of the stream within 300 meter reach</td>
<td>5.58 m</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th># Measurements</th>
<th>Width (meters)</th>
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<tbody>
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<td>10</td>
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</tbody>
</table>
F. Additional RUAA Information

1. Check the following activities observed over the site reach.
   - Drinking or water in mouth
   - Playing on shoreline
   - Bathing
   - Picnicking
   - Walking
   - Motorcycle/ATV
   - Jogging/running
   - Hunting/Trapping
   - Bicycling
   - Wildlife watching
   - Standing
     - None
   - Sitting
     - Other; __________
   - Lying down/sleeping

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
   - 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
   - Stairs/walkway
   - Boating access (ramps)
   - Beach
   - Commercial boating
   - Residential
   - Bridge crossing
   - Populated area
   - Commercial outfitter
   - Rural area
   - Other: ________________________________
   - National forests
   - Nearby school
   - Low bridges
   - Power Line Corridor
   - Urban/suburban location
   - Parks (national/city/county/state)
   - Trails/paths (hiking/biking)
   - Golf Course
   - Paved parking lot
   - Sports Field
   - Unimproved parking lot
   Comments: ____________________________________________________________

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).
   - Private Property
   - Fence
   - No trespass sign
   - Barge/ship traffic
   - Wildlife
   - Industrial
   - Steep slopes
   - None of the Above
   - No public access
   - Other: ________________________________
   - No roads
   Comments: ____________________________________________________________

6. Check any indications of human use (Attach photos).
   - Roads
   - RV/ATV Tracks
   - NPDES Discharge
   - Organized event
   - Rope swings
   - Camping Sites
   - Gates on corridor
   - No Human Presence
   - Dock/platform
   - Fire pit/ering
   - Children’s toys
   - Foot paths/prints
   - Fishing Tackle
   - Remnant’s of Kid’s play
   - Other: ________________________________
   Comments: ____________________________________________________________

FDS Page 6 of 8
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: 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:  Smell oil while in water

8. Vertebrates Observed within 300 meter reach
   Snakes  Yes: Small Snake  No: None  Slight Presence  Moderate Presence  Large Presence
   Water Dependent Birds  Yes: None  Slight Presence  Moderate Presence  Large Presence
   Alligators  Yes: None  Slight Presence  Moderate Presence  Large Presence
   Comments:

9. Mammals Observed within 300 meter reach
   Wild  Yes: None  Slight Presence  Moderate Presence  Large Presence
   Domesticated Pets  Yes: None  Slight Presence  Moderate Presence  Large Presence
   Livestock  Yes: None  Slight Presence  Moderate Presence  Large Presence
   Feral Hogs  Yes: 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  Yes: None  Rare  Common  Abundant
    Small garbage in the channel  Yes: None  Rare  Common  Abundant
    Bank Garbage  Yes: None  Rare  Common  Abundant
    Briefly describe the kinds of garbage observed:  Toilet, Hay, Twine, Fishing

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).
    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: **9:20**
Time End: 

Meter Type: **SonTek FlowTracker**

Observers: **L. Ray, C. Greene**

Stream Width*: **5.4 ft**
Section Width (W): **1.28**

Observations:

<table>
<thead>
<tr>
<th>Section Midpoint (ft) (m)</th>
<th>Section Depth (ft) (m) (cm) (D)</th>
<th>Observational Depth** (ft)(m)</th>
<th>Velocity (V) At Point (ft/s)(m/s)</th>
<th>Average (ft/s)(m/s)</th>
<th>Flow (Q) (m³/s) (ft³/s)</th>
<th>Q = (W)(D)(V)</th>
</tr>
</thead>
<tbody>
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*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. Wrost, C. Green
Date & Time: 5/28/10 11:00-11:12 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 Xlow □ 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
     refuges 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 I, 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 I.
Air Temp 27.0 °C Water Temp 24.0 °C Secchi tube

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 XDifficult
No access

7. Please describe access opportunities or explain why the site is not easily accessible (Attach photos for
documentation):
   Cant access water. Fencing along road up to bridge. Steep banks

8. Dominant Primary Substrate
   □ Cobble □ Sand □ Silt □ Mud/Clay □ Gravel □ Bedrock □ Rip rap □ Concrete

FDS Page 1 of 8
Field Data Sheets – Basic RUAA Survey

Stream Name: Steele Creek
Date: 5/28/10
Site: #3
Time: 11:00-11:12

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 ☐ Whitewater-kayaking, canoeing, rafting
   ☐ Swimming ☐ Other:
   ☐ Water skiing ☐ 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, steep banks, no access

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, banks, fences, etc. upstream and 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:

FDS Page 2 of 8
Stream Name: Steele Creek
Date: 5/28/10
Site: #3
Time: 11:00-11:12

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 (25 ft) 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).

Fenced (barbed wire) up to bridge, steep 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
E. Stream Channel and Substantial Pool:
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 □ Taken at bridge
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.

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<td>Pool 10</td>
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</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Distance</th>
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<td>300 meters</td>
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<td>Average</td>
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</tr>
</tbody>
</table>
Field Data Sheets – Basic RUAA Survey

Stream Name: Steele Creek  
Date: 5/28/10  
Site: #3  
Time: 1:00 - 1:12

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.

<table>
<thead>
<tr>
<th>Measurement Type</th>
<th>Width (meters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical Average Width of 300 meter reach</td>
<td>11.5 ft. 3.51 m</td>
</tr>
<tr>
<td>Width at narrowest point of the stream within 300 meter reach</td>
<td></td>
</tr>
<tr>
<td>Width at the widest point of the stream within 300 meter reach</td>
<td></td>
</tr>
</tbody>
</table>

d) Is there sufficient water within a 300 meter stream reach during base flow conditions to support primary contact recreation? X 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_

<table>
<thead>
<tr>
<th># Measurements</th>
<th>Width (meters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<td>2</td>
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</tbody>
</table>

Stream with upstream of bridge - 11.5 ft
Field Data Sheets – Basic RUAA Survey

Stream Name: Steele Creek
Date: 5/11/90
Site: #3
Time: 1100-1112

F. Additional RUAA Information

1. Check the following activities observed over the site reach.
   - ☐ Drinking or water in mouth
   - ☐ Playing on shoreline
   - ☐ Bathing
   - ☐ Picnicking
   - ☐ Walking
   - ☐ Motorcycle/ATV
   - ☐ Jogging/running
   - ☐ Hunting/Trapping
   - ☐ Bicycling
   - ☐ Wildlife watching
   - ☐ Standing
   - ☐ None
   - ☐ Sitting
   - ☐ Other: ________________________
   - ☐ Lying down/sleeping

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
   - ☐ 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)
   - ☐ Other: ________________________________
   - ☐ Populated area
   - ☐ Docks or rafts
   - ☐ Commercial outfitter
   - ☐ Nearby school
   - ☐ Power Line Corridor
   - ☐ Parks (national/city/county/state)
   - ☐ Public Property

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
   ☐ Other: ________________________________
   Comments: ________________________________

6. Check any indications of human use (Attach photos).
   ☐ Roads
   ☐ Rope swings
   ☐ Dock/platform
   ☐ Foot paths/prints
   ☐ Other:
   Comments: ___________________________________________
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: Slight oily film or surface. (Please list Steele Creek #2)

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

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: Oil in water

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).
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. Weast, C. Greene, K. Clark
Date & Time: 5/28/10 11:28 AM - 12:28 PM
County Name: Limestone
Stream Name: Steele Creek
Segment No. or nearest downstream Segment No.: 309 K
Description of Site: #9 5H 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  X 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.

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 29 °C  Water Temp 27 °C

5. Riparian Zone (Mark dominant categories with L (Left Bank) and R (Right Bank). Bank orientation is determined by the investigator facing downstream.)
   - L: K Forest
   - Shrub dominated corridor
   - Herbaceous marsh
   - Mowed/maintained corridor
   - Urban
   - Pasture
   - Row crops
   - Other (specify):
   - Rip rap
   - Concrete
   - Denuded/Eroded bank

6. Ease of bank access to the water body: X 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 - Bordered wire fence on down stream side.

8. Dominant Primary Substrate
   - Cobble □ Sand □ Silt □ Mud/Clay □ Gravel □ Bedrock □ Rip rap □ Concrete

FDS Page 1 of 8
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 (25 ft) 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 - small)

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
Date: 5/28/20
Site: #4
Time: 1128-1228

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. 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).

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?  ✔ 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:  NA

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).

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).

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: 3/28/10
Time: 11:28-12:28

E. Stream Channel and Substantial Pool:
Please check the following which best describes the river or stream: X Wadeable

I. 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.

<table>
<thead>
<tr>
<th>Pool 1</th>
<th>Length (meters)</th>
<th>Width (meters)</th>
<th>Depth (meters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pool 2</td>
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<td>Pool 3</td>
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<tr>
<td>Pool 10</td>
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</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Distance</th>
<th>Depth (meters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 meters</td>
<td>1.15 ft</td>
</tr>
<tr>
<td>60 meters</td>
<td>3.27 ft</td>
</tr>
<tr>
<td>90 meters</td>
<td>1.01 m</td>
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<tr>
<td>120 meters</td>
<td>1.06 ft</td>
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<tr>
<td>150 meters</td>
<td>3.65 ft</td>
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<tr>
<td>180 meters</td>
<td>5.43 m</td>
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<tr>
<td>210 meters</td>
<td>1.60 m</td>
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<tr>
<td>240 meters</td>
<td>1.62 m</td>
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<tr>
<td>270 meters</td>
<td>1.72 m</td>
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<tr>
<td>300 meters</td>
<td>1.86 m</td>
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<tr>
<td>Average</td>
<td>4.61 m</td>
</tr>
</tbody>
</table>

under bridge, at log jam
Field Data Sheets – Basic RUAA Survey

Stream Name: Steele Creek  Site: #4
Date: 5/28/10  Time: 12:28, 12:28

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.

<table>
<thead>
<tr>
<th>Measurement Type</th>
<th>Width (meters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical Average Width of 300 meter reach</td>
<td>2.44 m</td>
</tr>
<tr>
<td>Width at narrowest point of the stream within 300 meter reach</td>
<td>1.44 m</td>
</tr>
<tr>
<td>Width at the widest point of the stream within 300 meter reach</td>
<td>7.25 m</td>
</tr>
</tbody>
</table>


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

COMMENTS:

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 ...

<table>
<thead>
<tr>
<th># Measurements</th>
<th>Width (meters)</th>
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<tr>
<td>10</td>
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</tbody>
</table>
F. Additional RUAA Information

1. Check the following activities observed over the site reach.
   - Drinking or water in mouth
   - Playing on shoreline
   - Bathing
   - Picnicking
   - Walking
   - Motorcycle/ATV
   - Jogging/running
   - Hunting/Trapping
   - Bicycling
   - Wildlife watching
   - Standing
   - None
   - Sitting
   - Other:
   - Lying down/sleeping

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
   - Log jams
   - Rip rap
   - Water control structure
   - Barbed wire
   - Dams
   - Thick vegetation
   - Low bridges
   - 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
   - Commercial boating
   - Bridge crossing
   - Commercial outfitter
   - Trails/path (hiking/biking)
   - Paved parking lot
   - Unimproved parking lot
   - Roads (paved/unpaved)
   - Population area
   - Docks or rafts
   - Near school
   - Power Line Corridor
   - Parks (national/city/county/state)
   - Other:

   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
   - RV/ATV Tracks
   - Camping Sites
   - Fire pit/ting
   - Fishing Tackle
   - NPDES Discharge
   - Gates on corridor
   - Children’s toys
   - Remnant’s of Kid’s play
   - Organized event
   - No Human Presence
   - Other:

   Comments:

FDS Page 6 of 8
Stream Name: Steele Creek  
Site: #4  
Time: 1120 - 1228

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 - 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 cooter 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: Brake pads, trash bags, plastic, orange juice 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 ~ 600 ft, right bank eroded ~ 200 ft

FDS Page 7 of 8
Field Data Sheet - Basic RUAA Survey
Stream Flow (Discharge) Measurement

Stream: Steele creek
Site: #4
Date: 5/28/10

Description: SH 14 @ Steele Creek

Time Begin: 11:40
Time End: 11:56
Meter Type: Steele Flowtracker

Observers: J. Wogast, L. Ray

Observations: Debris in water,

<table>
<thead>
<tr>
<th>Section Midpoint (ft)</th>
<th>Section Depth (ft)</th>
<th>Observational Depth** (ft)</th>
<th>Velocity (V)</th>
<th>Flow (Q) (m^3/s) (ft^3/s)</th>
<th>Q = (W)(D)(V)</th>
</tr>
</thead>
<tbody>
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<td>-0.02</td>
<td>-0.02</td>
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<td>5.85</td>
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<td>-0.02</td>
<td>-0.02</td>
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<tr>
<td>6.75</td>
<td></td>
<td></td>
<td>-0.01</td>
<td>-0.01</td>
<td></td>
</tr>
<tr>
<td>7.65</td>
<td></td>
<td></td>
<td>-0.01</td>
<td>-0.01</td>
<td></td>
</tr>
<tr>
<td>8.55</td>
<td></td>
<td></td>
<td>-0.02</td>
<td>-0.02</td>
<td></td>
</tr>
</tbody>
</table>

Total Q = 0.124

Due to amounts of debris in the water low water level, the flow was determined to be 0.

KC 4/7/10

FDS Page 8 of 8
Field Data Sheets – Basic RUAA Survey
(should be completed for each site)

Data Collectors & Contact Information: J. W. D. \\
Date & Time: 5/28/10 1238-1341  \\
Stream Name: Steele Creek  \\
Segment No. or nearest downstream Segment No.: 1209 K  \\
Description of Site: #8 LCR 7222 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.
   - [Y] 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 streamflow 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 streamflow measured at one site is different from another site, then streamflow 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  \\
   - Secchi tube: No water access  \\
   - Water Temp: 23 °C  \\
   - Water Temp: 23 °C

5. Riparian Zone (Mark dominant categories with L (Left Bank) and R (Right Bank). Bank orientation is determined by the investigator facing downstream.)
   - [L] Forest  \\
   - Shrub dominated corridor  \\
   - Herbaceous marsh  \\
   - Mowed/maintained corridor  \\
   - Urban  \\
   - Rip rap  \\
   - Pasture  \\
   - Row crops  \\
   - Concrete  \\
   - Other (specify):  \\
   - 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
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 ☐ Whitewater-kayaking, canoeing, rafting
      ☐ Swimming ☐ Other:
      ☑ Water skiing ☐ 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
   tree overgrown

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

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: ____________________________

FDS Page 2 of 8
Field Data Sheets – Basic RUAA Survey

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

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).

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:
☐ 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).

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).

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.
Field Data Sheets – Basic RUAA Survey

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

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

1. Wadable 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.

<table>
<thead>
<tr>
<th>Pool</th>
<th>Length (meters)</th>
<th>Width (meters)</th>
<th>Depth (meters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2</td>
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<tr>
<td>10</td>
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</tr>
</tbody>
</table>

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.

\[ \text{Depth at bridge} \approx 1.0 \text{ ft} = 0.30 \text{ m} \]

<table>
<thead>
<tr>
<th>Distance</th>
<th>Depth (meters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 meters</td>
<td></td>
</tr>
<tr>
<td>60 meters</td>
<td></td>
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<tr>
<td>90 meters</td>
<td></td>
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<tr>
<td>120 meters</td>
<td></td>
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<tr>
<td>150 meters</td>
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<tr>
<td>180 meters</td>
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<tr>
<td>210 meters</td>
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<tr>
<td>240 meters</td>
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<tr>
<td>270 meters</td>
<td></td>
</tr>
<tr>
<td>300 meters</td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td></td>
</tr>
</tbody>
</table>
Field Data Sheets – Basic RUAA Survey

Stream Name: Steele Creek  Site: #5
Date: 5/28/10  Time: 12:38 - 13:31

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.

<table>
<thead>
<tr>
<th>Measurement Type</th>
<th>Width (meters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical Average Width of 300 meter reach</td>
<td>0.4 ft = 3.17 m</td>
</tr>
<tr>
<td>Width at narrowest point of the stream within 300 meter reach</td>
<td></td>
</tr>
<tr>
<td>Width at the widest point of the stream within 300 meter reach</td>
<td></td>
</tr>
</tbody>
</table>

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 # (30 meters) Upstream____ Downstream____ Left Bank____ Right Bank____
Photos # (150 meters) Upstream____ Downstream____ Left Bank____ Right Bank____
Photos # (300 meters) Upstream____ Downstream____ Left Bank____ Right Bank____

<table>
<thead>
<tr>
<th># Measurements</th>
<th>Width (meters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
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<tr>
<td>2</td>
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<td>3</td>
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<tr>
<td>9</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>
F. Additional RUAA Information

1. Check the following activities observed over the site reach.
   - Drinking or water in mouth
   - Playing on shoreline
   - Bathing
   - Picnicking
   - Walking
   - Motorcycle/ATV
   - Jogging/running
   - Hunting/Trapping
   - Bicycling
   - Wildlife watching
   - Standing
   - Other: _______________________
   - Sitting
   - Lying down/sleeping

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
   - Log jams ✗
   - Rip rap
   - Water control structure
   - Barbed wire
   - Dams
   - Thick vegetation
   - Low bridges
   - None
   - Utility pipe
   - Other (specify): Trash piles

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
   - Commercial boating
   - Bridge crossing
   - Commercial outfitter
   - Trails/paths (hiking/biking)
   - Paved parking lot
   - Unimproved parking lot
   - Populated area
   - Docks or rafts
   - Nearby school
   - Power Line Corridor
   - Parks (national/city/county/state)
   - None of the Above
   - Roads (paved/unpaved)
   - Other: _______________________
   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 brush
   Comments: 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/ting
   - Fishing Tackle
   - NPDES Discharge
   - Gates on corridor
   - Children’s toys
   - Remnant’s of Kid’s play
   - Organized event
   - No Human Presence
   Comments: _______________________

FDS Page 6 of 8
Field Data Sheets – Basic RUAA Survey

Stream Name: Steele Creek  Site: #5
Date: 5/12/91  Time: 12:30-12:51

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

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).

[Blank lines for comments]
Field Data Sheet - Basic RUAA Survey
Stream Flow (Discharge) Measurement

Stream: Steele Creek
Site: # 5
Description: LCR 722 & Steele Creek
Time Begin: Time End: Meter Type: SonTek Flow tracker
Observers: Stream Width*: Section Width (W):
Observations: No water Access (little flow)

<table>
<thead>
<tr>
<th>Section Midpoint (ft) (m)</th>
<th>Section Depth (ft) (m) (cm) (D)</th>
<th>Observational Depth** (ft) (m)</th>
<th>Velocity (V)</th>
<th>Flow (Q) (m³/s) (ft³/s)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>At Point (ft/s)(m/s)</td>
<td>Average (ft/s)(m/s)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Q = (W)(D)(V)</td>
<td></td>
</tr>
</tbody>
</table>

- No Flow

Couldn't reach the water. Steep slopes, overgrown vegetation.
Field Data Sheets – Basic RUAA Survey  
(should be completed for each site)

<table>
<thead>
<tr>
<th>Data Collectors &amp; Contact Information:</th>
</tr>
</thead>
<tbody>
<tr>
<td>J. Dry, J. Wrast, K. Cauden, C. Greene</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Date &amp; Time:</th>
<th>5/28/11 13:10-14:00</th>
</tr>
</thead>
<tbody>
<tr>
<td>County Name:</td>
<td>Limestone</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stream Name:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steele Creek</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Segment No. or nearest downstream Segment No.:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1209 K</td>
</tr>
</tbody>
</table>

**Description of Site:**  
A steep embankment with an excess of water, particularly during springtime, would make this site difficult to access.

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 RUAA.

**A. Stream Characteristics:**

1. Check the following channel flow status that applies.
   - [ ] dry
   - [ ] no flow
   - [X] flow
   - [ ] 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 I, 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 I.

<table>
<thead>
<tr>
<th>Air Temp</th>
<th>Water Temp</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 °C</td>
<td>24 °C</td>
</tr>
</tbody>
</table>

   **Secchi Tube:** 0.576 m

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

<table>
<thead>
<tr>
<th>L R</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forest</td>
</tr>
<tr>
<td>Shrub dominated corridor</td>
</tr>
<tr>
<td>Herbaceous marsh</td>
</tr>
<tr>
<td>Mowed/maintained corridor</td>
</tr>
<tr>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

6. **Ease of bank access to the water body:**
   - [ ] Easy
   - [X] 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. Baffles are sandy, heavily eroded and steep.

8. **Dominant Primary Substrate**

   - [ ] Cobble
   - [X] Sand
   - [ ] Silt
   - [ ] Mud/Clay
   - [ ] Gravel
   - [ ] Bedrock
   - [ ] Rip rap
   - [ ] Concrete

FDS Page 1 of 8
Field Data Sheets – Basic RUAA Survey

Stream Name: Steele Creek
Date: 8/28/10
Site: #6
Time: 1310 – 1400

B. Primary Contact Water Recreation Evaluation:
- Primary contact recreation draft definition: Water recreation activities, such as wading by children, swimming, water sking, 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? ☐ 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:

FDS Page 2 of 8
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.
None □ 1-10 □ 11-20 □ 20-50 □ greater than 50

□ 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).

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? □ 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:

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).

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).

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  Time: 1300-1400

E. Stream Channel and Substantial Pool
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.

<table>
<thead>
<tr>
<th>Pool</th>
<th>Length (meters)</th>
<th>Width (meters)</th>
<th>Depth (meters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pool 1</td>
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<td>Pool 9</td>
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<tr>
<td>Pool 10</td>
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</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Distance</th>
<th>Depth (meters)</th>
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</thead>
<tbody>
<tr>
<td>30 meters</td>
<td>0.35 m</td>
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<tr>
<td>60 meters</td>
<td>0.67</td>
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<tr>
<td>90 meters</td>
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<td>120 meters</td>
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<tr>
<td>150 meters</td>
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<tr>
<td>180 meters</td>
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<tr>
<td>210 meters</td>
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<tr>
<td>240 meters</td>
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<tr>
<td>270 meters</td>
<td>1.2</td>
</tr>
<tr>
<td>300 meters</td>
<td>0.20</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>0.24 m</strong></td>
</tr>
</tbody>
</table>
Field Data Sheets – Basic RUAA Survey

Stream Name: Steele Creek  
Date: 5/28/10  
Site: #6  
Time: 13:00 - 14:00

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.

<table>
<thead>
<tr>
<th>Measurement Type</th>
<th>Width (meters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical Average Width of 300 meter reach</td>
<td>8.5 ft, 2.59 m</td>
</tr>
<tr>
<td>Width at narrowest point of the stream within 300 meter reach</td>
<td>1 ft, 0.36 m</td>
</tr>
<tr>
<td>Width at the widest point of the stream within 300 meter reach</td>
<td>5 ft, 4.81 m</td>
</tr>
</tbody>
</table>

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/K
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___

<table>
<thead>
<tr>
<th># Measurements</th>
<th>Width (meters)</th>
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<td>10</td>
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</tbody>
</table>
Field Data Sheets – Basic RUAA Survey

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

F. Additional RUAA Information

1. Check the following activities observed over the site reach.
   - □ Drinking or water in mouth
   - □ Playing on shoreline
   - □ Bathing
   - □ Picnicking
   - □ Walking
   - □ Motorcycle/ATV
   - □ Jogging/running
   - □ Hunting/Trapping
   - □ Bicycling
   - □ Wildlife watching
   - □ Standing
     - X None
   - □ Sitting
     - □ Other: ___________
   - □ Lying down/sleeping

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

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  X 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
     - X Bridge crossing
   - □ Residential
   - □ National forests
   - □ Urban/suburban location
   - □ Golf Course
   - □ Sports Field
   - □ Stairs/walkway
   - □ Boating access (ramps)
   - □ Roads (paved/unpaved)
   - □ Other: _______________________________
   - □ Populated area
   - □ Docks or rafts
   - □ Commercial outfitter
   - □ Nearby school
   - □ Power Line Corridor
   - □ Parks (national/city/county/state)
   - □ Unimproved parking lot
   - □ Public Property

   Comments: __________________________________________________________

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).
   - □ Private Property
     - X Fence
   - □ No trespass sign
   - □ Wildlife
     - □ Industrial
   - □ Steep slopes
     - □ None of the Above
   - □ No public access
   - □ No roads
   - □ Other: ____________________________

   Comments: __________________________________________________________

6. Check any indications of human use (Attach photos).
   - □ Roads
   - □ RV/ATV Tracks
   - □ Entrance Points
   - □ NPDES Discharge
   - □ Organized event
   - □ Rope swings
   - □ Camping Sites
   - □ Gates on corridor
   - □ No Human Presence
   - □ Dock/platform
     - □ Fire pit/lantern
     - □ Fishing Tackle
   - □ Children’s toys
   - □ Remnant’s of Kid’s play
   - □ Other: ____________________________

   Comments: __________________________________________________________
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: 

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 ☐ Raccoons, hooved animals

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: ☐ Metal piece, Form an erosion control structure that was falling down, water bottle, vehicle tire, bicycle tire, bicycle trash

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).

   ☐

FDS Page 7 of 8
Field Data Sheet - Basic RUAA Survey
Stream Flow (Discharge) Measurement

Stream: Steele Creek
Site: #6
Date: 5/18/10
Description: FM 2749 @ Steele Creek

Time Begin: 13:23 Time End:    Meter Type: SonTek FlowTracker
Observers: L. Ray, J. Wraat Stream Width*: 1.5  Section Width (W): 0.5

Observations:

<table>
<thead>
<tr>
<th>Section Midpoint (ft/m)</th>
<th>Section Depth (ft/m) (cm) (D)</th>
<th>Observational Depth** (ft/m)</th>
<th>Velocity (V) At Point (ft/s)(m/s)</th>
<th>Average (ft/s)(m/s)</th>
<th>Flow (Q) (m³/s)(ft²/s) Q = (W)(D)(V)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.25</td>
<td></td>
<td></td>
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<tr>
<td>0.15</td>
<td>0.2</td>
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<tr>
<td>1.25</td>
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</tbody>
</table>

* 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: G. Gauthier, M. Sheppard, K. Thompson, L. Benavidez
Date & Time: 5/28-2017 1545-1605 County Name: Robertson
Stream Name: Steele Creek
Segment No. or nearest downstream Segment No.: 1209 K
Description of Site: # C R 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
   - 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
   - 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
   - Secchi depth: 162 cm
   - Water Temp: 29 °C

5. Riparian Zone (Mark dominant categories with L (Left Bank) and R (Right Bank). Bank orientation is determined by the investigator facing downstream.)
   - L: Forest
   - L: Shrub dominated corridor
   - L: Herbaceous marsh
   - L: Mowed/maintained corridor
   - R: Urban
   - R: Pasture
   - R: Row crops
   - Other (specify): 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 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

FDS Page 1 of 8
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, parked cars fence 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: 

FDS Page 2 of 8
Field Data Sheets – Basic RUAA Survey

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

b. Check the number of individuals observed at the site.
   - None □ 1-10 □ 11-20 □ 20-50 □ greater than 50
   - N/A

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 (25 ft) 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).
   - Strip 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 □ Never □ Daily □ Monthly □ Yearly
   - Unknown
   - N/A

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
E. Stream Channel and Substantial Pool

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.

<table>
<thead>
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<th>Pool</th>
<th>Length (meters)</th>
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<td>Pool 7</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Pool 8</td>
<td></td>
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<td>Pool 9</td>
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<td></td>
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<tr>
<td>Pool 10</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Distance</th>
<th>Depth (meters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 meters</td>
<td>at bridge</td>
</tr>
<tr>
<td>60 meters</td>
<td></td>
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<tr>
<td>90 meters</td>
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<td>120 meters</td>
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<td>150 meters</td>
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<td>180 meters</td>
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<td>210 meters</td>
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<tr>
<td>240 meters</td>
<td></td>
</tr>
<tr>
<td>270 meters</td>
<td></td>
</tr>
<tr>
<td>300 meters</td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td></td>
</tr>
</tbody>
</table>

4.1 ft = 1.25 m

Can see up 143 m at down limb.
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.

<table>
<thead>
<tr>
<th>Measurement Type</th>
<th>Width (meters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical Average Width of 300 meter reach</td>
<td></td>
</tr>
<tr>
<td>Width at narrowest point of the stream within 300 meter reach</td>
<td></td>
</tr>
<tr>
<td>Width at widest point of the stream within 300 meter reach</td>
<td></td>
</tr>
</tbody>
</table>

d) Is there sufficient water within a 300 meter stream reach during base flow conditions to support primary contact recreation? X 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 .
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

<table>
<thead>
<tr>
<th># Measurements</th>
<th>Width (meters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>14.8</td>
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<tr>
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<tr>
<td>9</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>
F. Additional RUAA Information

1. Check the following activities observed over the site reach.
   □ Drinking or water in mouth □ Playing on shoreline
   □ Bathing □ Picnicking
   □ Walking □ Motorcycle/ATV
   □ Jogging/running □ Hunting/Trapping
   □ Bicycling □ Wildlife watching
   □ Standing
   □ Sitting
   □ Lying down/sleeping

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 □ Log jams □ Rip rap □ Other (specify): fallen trees
   □ Barbed wire □ Dams □ Thick vegetation □ Low bridges □ None
   □ Utility pipe

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest).
   □ Campgrounds □ Stairs/walkway □ Roads (paved/unpaved)
   □ Playgrounds □ Boating access (ramps) □ Populated area □ None of the Above
   □ Residential
   □ Commercial boating □ Nearby school
   □ National forests □ Commercial outfitter
   □ Urban/suburban location □ Power Line Corridor
   □ Golf Course □ Parks (national/city/county/state)
   □ Sports Field
   □ Unimproved parking lot □ Public Property
   Comments: two-track dirt road before path adjacent to bridge

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).
   □ Private Property □ Fence
   □ No trespass sign □ Barge/ship traffic
   □ Wildlife □ Industrial
   □ Steep slopes □ None of the Above
   □ No public access
   □ Other:
   □ No roads
   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: #7
Date: **5/28/10** Time: **15:45-16:05**

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 [ ] unknown
   - 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:

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: hose wrapped around vertical post (con guardrail), beer can on bank, water

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).

FDS Page 7 of 8
<table>
<thead>
<tr>
<th>Section Midpoint (ft) (m)</th>
<th>Section Depth (ft) (m) (cm) (D)</th>
<th>Observational Depth** (ft)(m)</th>
<th>Velocity (V)</th>
<th>Flow (Q) (m³/s) (ft³/s)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>At Point (ft/s)(m/s)</td>
<td>Average (ft/s)(m/s)</td>
</tr>
</tbody>
</table>

*No flow taken because water non-wadeable*
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: | 5/28/20 | 1430-1535 |
| Stream Name: | Steele Creek |
| Segment No. or nearest downstream Segment No.: | 1209K |
| Description of Site: | #8 5147 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 RUAA.

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 streamflow 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 streamflow measured at one site is different from another site, then streamflow should be taken at both sites. 16.050 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: 83 °C
   - Water Temp: 86 °C

5. Riparian Zone (Mark dominant categories with L. (Left Bank) and R. (Right Bank). Bank orientation is determined by the investigator facing downstream.)
   - L: Forest
   - L: Shrub dominated corridor
   - L: Herbaceous marsh
   - L: Mowed/maintained corridor
   - R: Urban downstream of bridge
   - R: Pasture
   - R: Row crops
   - R: 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 places

8. Dominant Primary Substrate
   - Cobble
   - Sand
   - Silt
   - Mud/Clay
   - Gravel
   - Bedrock
   - Rip rap
   - Concrete
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 ☐ Whitewater-kayaking, canoeing, rafting
     - Swimming ☐ Other: ☒ 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).

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

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: 14:30-15:35

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

2. 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)

3. 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).

[Handwritten: steep banks, debris in water]

4. 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

5. If infrequently, what is the reason?  
- Physical characteristics of the water body  
- Limited public access  
- Other  
If other, list reasons: 

[Handwritten: N/A]

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

[Handwritten: 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.

[Handwritten: N/A]
Field Data Sheets – Basic RUAA Survey

Stream Name ___________________________ Site: ___________________________
Date: ___________________________ FDS Page 3 of 8

E. Stream Channel and Substantial Pool
Please check the following which best describes the river or stream: ☒ Wadable ☐ Non-wadable

1. Wadable 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 #1 (30 meters) Upstream ☒ Downstream ☐ Left Bank ☒ Right Bank ☐
Photos #2 (150 meters) Upstream ☐ Downstream ☒ Left Bank ☒ Right Bank ☒
Photos #3 (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.

<table>
<thead>
<tr>
<th>Pool</th>
<th>Length (meters)</th>
<th>Width (meters)</th>
<th>Depth (meters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
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<tr>
<td>10</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Distance</th>
<th>Depth (meters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 meters</td>
<td>1.4</td>
</tr>
<tr>
<td>60 meters</td>
<td>3.4</td>
</tr>
<tr>
<td>90 meters</td>
<td>2.2</td>
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<tr>
<td>120 meters</td>
<td>1.5</td>
</tr>
<tr>
<td>150 meters</td>
<td>1.8</td>
</tr>
<tr>
<td>180 meters</td>
<td>2.6</td>
</tr>
<tr>
<td>210 meters</td>
<td>1.4</td>
</tr>
<tr>
<td>240 meters</td>
<td>3.2</td>
</tr>
<tr>
<td>270 meters</td>
<td>3.0</td>
</tr>
<tr>
<td>300 meters</td>
<td>2.5</td>
</tr>
</tbody>
</table>

Average depth used to be a barbed wire fence across fallen tree.
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.

<table>
<thead>
<tr>
<th>Measurement Type</th>
<th>Width (meters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical Average Width of 300 meter reach</td>
<td>10.0 ft, 4.8 m</td>
</tr>
<tr>
<td>Width at narrowest point of the stream within 300 meter reach</td>
<td>4.9 m</td>
</tr>
<tr>
<td>Width at the widest point of the stream within 300 meter reach</td>
<td>6.8 m</td>
</tr>
</tbody>
</table>


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____

<table>
<thead>
<tr>
<th># Measurements</th>
<th>Width (meters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
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<tr>
<td>3</td>
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<tr>
<td>9</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>
F. Additional RUAA Information

1. Check the following activities observed over the site reach.
   - Drinking or water in mouth
   - Playing on shoreline
   - Bathing
   - Picnicking
   - Walking
   - Motorcycle/ATV
   - Jogging/running
   - Hunting/Trapping
   - Bicycling
   - Wildlife watching
   - Standing
   - None
   - Sitting
   - Other: __________
   - Lying down/sleeping

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
   - 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
   - Stairs/walkway
   - Boating access (ramps)
   - Roads (paved/unpaved)
   - Other: __________
   - Rural area
   - Residential
   - Beach
   - Bridge crossing
   - Commercial boating
   - Commercial outfitter
   - National forests
   - Nearby school
   - Urban/suburban location
   - Trails/paths (hiking/biking)
   - Power Line Corridor
   - Golf Course
   - Parks (national/city/county/state)
   - Unimproved parking lot
   - Public Property
   Comments: ________________________________________________________________

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).
   - Private Property
   - Fence
   - No trespass sign
   - Barge/ship traffic
   - Wildlife
   - Industrial
   - Steep slopes
   - None of the Above
   - No public access
   - Other: __________
   - No roads
   Comments: ________________________________________________________________

6. Check any indications of human use (Attach photos).
   - Roads
   - RV/ATV Tracks
   - NPDES Discharge
   - Organized event
   - Rope swings
   - Camping Sites
   - Gates on corridor
   - No Human Presence
   - Dock/platform
   - Fire pit/ring
   - Children's toys
   - Foot paths/prints
   - Fishing Tackle
   - Remnant's of Kid's play
   - Other: ________________________________________________________________
   Comments: ____________________________________________________________________

FDS Page 6 of 8
Field Data Sheets – Basic RUA Survey

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

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

8. Vertebrates Observed within 300 meter reach
   - Snakes: [ ] 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: [X] snail

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: [X] None  [ ] Rare  [ ] Common  [ ] Abundant
    - Bank Garbage: [ ] None  [X] 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 [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).

FDS Page 7 of 8
### Field Data Sheet - Basic RUAA Survey

**Stream Flow (Discharge) Measurement**

**Stream:** Steele Creek  
**Site:** #3  
**Date:** 5/29/10

**Time Begin:** 14:40  
**Time End:** 15:04  
**Meter Type:** SonTek FlowTracker

**Observers:** Gautier, K. Thompson  
**Stream Width:** 16.0'  
**Section Width (W):** 0.8

<table>
<thead>
<tr>
<th>Section Midpoint (ft/m)</th>
<th>Section Depth (ft/m cm)</th>
<th>Observational Depth** (ft/m)</th>
<th>Velocity (V)</th>
<th>Flow (Q) (m³/s ft²/s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.4</td>
<td>0.2</td>
<td>0.51</td>
<td>0.52</td>
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<tr>
<td>2.8</td>
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<td>0.98</td>
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<td>0.30</td>
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</tr>
<tr>
<td>12.4</td>
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<td>0.00</td>
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</tr>
<tr>
<td>15.6</td>
<td>0.5</td>
<td></td>
<td>0.00</td>
<td></td>
</tr>
</tbody>
</table>

---

*Large eddy approx 2 ft across near bank (looking at debris on water surface)*

**Total Q:** 16.060

FDS Page 8 of 8
Field Data Sheets – Basic RUAA Survey
(should be completed for each site)

Data Collectors & Contact Information: C. Sauk, M. Sheard, R. Thompson, L. Berguido
Date & Time: 5/28-10 135:7 - 14:18 County Name: Robertson
Stream Name: Steele Creek
Segment or nearest downstream Segment No.: 100K
Description of Site: #9 CR 7472 & 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 RUAA.

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,
   then stream flow should be taken at both sites. 975.0 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  50 °C Water Temp  76 °C
   Secchi Tube: N/A

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 corridor
   L R Shrub dominated corridor
   L R Herbaceous marsh
   L R Mowed/maintained corridor
   L R Bare ground
   L R Pasture
   L R Row crops
   L R Rip rap
   L R Concrete
   L R Other (specify): 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 banks, barbed wire across 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.
Field Data Sheets – Basic RUAA Survey

Stream Name: Steele Creek
Date: 5-28-2010
Site: #9
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).

   Stream banks, barbed wire access 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:

FDS Page 2 of 8
Field Data Sheets – Basic RUAA Survey

Stream Name: Steele Creek
Date: 5-28-2010
Site: #9
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 (25 ft) 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 across 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  Date: 5-28-10  Site: #9

Time: 1357-1418

E. Stream Channel and Substantial Pool

Please check the following which best describes the river or stream:

- Wadable
- Non-wadable
- **Accessible**

1. Wadable 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

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.

<table>
<thead>
<tr>
<th>Pool</th>
<th>Length (meters)</th>
<th>Width (meters)</th>
<th>Depth (meters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pool 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pool 2</td>
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<td>Pool 3</td>
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</tr>
<tr>
<td>Pool 10</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Distance</th>
<th>Depth (meters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 meters</td>
<td>1.74 ft (0.518m)</td>
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<tr>
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<td>90 meters</td>
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<td>120 meters</td>
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<td>210 meters</td>
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<td>240 meters</td>
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</tr>
<tr>
<td>270 meters</td>
<td></td>
</tr>
<tr>
<td>300 meters</td>
<td></td>
</tr>
</tbody>
</table>

Average

Eat bridge

-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
Date: 5/28/10
Site: #9
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.

<table>
<thead>
<tr>
<th>Measurement Type</th>
<th>Width (meters)</th>
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</thead>
<tbody>
<tr>
<td>Typical Average Width of 300 meter reach</td>
<td></td>
</tr>
<tr>
<td>Width at narrowest point of stream within 300 meter reach</td>
<td></td>
</tr>
<tr>
<td>Width at widest point of stream within 300 meter reach</td>
<td></td>
</tr>
</tbody>
</table>

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

COMMENTS: [Handwritten notes]

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____

<table>
<thead>
<tr>
<th># Measurements</th>
<th>Width (meters)</th>
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<tbody>
<tr>
<td>1</td>
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</tr>
<tr>
<td>9</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>
Field Data Sheets – Basic RUAA Survey

Stream Name: Steele Creek  
Date: 5.28.2016  
Site: #9  
Time: 1357-1418

F. Additional RUAA Information

1. Check the following activities observed over the site reach.
   - [ ] Drinking or water in mouth  
   - [ ] Playing on shoreline  
   - [ ] Bathing  
   - [ ] Picnicking  
   - [ ] Walking  
   - [ ] Motorcycle/ATV  
   - [ ] Jogging/running  
   - [ ] Hunting/Trapping  
   - [ ] Bicycling  
   - [ ] Wildlife watching  
   - [ ] Standing  
   - [x] None  
   - [ ] Sitting  
   - [ ] Other: ________  
   - [ ] Lying down/sleeping

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

3. Check any channel obstructions that apply (Attach photos).
   - [ ] Culverts  
   - [ ] Fences  
   - [x] Log jams  
   - [ ] Rip rap  
   - Water control structure  
   - [ ] Barbed wire  
   - [ ] Dams  
   - [x] Thick vegetation  
   - [ ] Low bridges  
   - [ ] None  
   - [ ] 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: _____________________________________________________________________________________________

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).
   - [ ] Private Property  
   - [x] 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: _____________________________________________________________________________________________

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: _____________________________________________________________________________________________

FDS Page 6 of 8
Field Data Sheets – Basic RUAA Survey
Stream Name: Steele Creek Site: 
Date: 5.28.10 Site: 1357 — 1418
Time: 

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 ☐ unknown
   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:

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 ☐ N/A

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:

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**
Site: #9
Date: 5-28-10

Description: **CR 472 @ Steele Creek**

Time Begin: ____________  Time End: ____________  Meter Type: **SonTek FlowTracker**

Observers: ____________  Stream Width*: **19.2**

Section Width (W): ____________

Observations: ____________

<table>
<thead>
<tr>
<th>Section Midpoint (ft/m)</th>
<th>Section Depth (ft/m cm) (D)</th>
<th>Observational Depth** (ft/m)</th>
<th>Velocity (V) At Point (ft/s)(m/s)</th>
<th>Average (ft/s)(m/s)</th>
<th>Flow (Q) (m³/s) (ft³/s)</th>
<th>Q = (W)(D)(V)</th>
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*no-flow taken, water inaccessible*