Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information:	C. Gilliat, A. Martinez, M. Brown
Date & Time: 18 Jul 12 0941	County Name: Frio
Stream Name:	Leona River
Segment No. or nearest downstream Segment No.:	Au 01_01 Berry #1
Description of Site:	dry bed, heavy wood debris, no vegetation in creek

A. Stream Characteristics:

1. Check the following channel flow status that applies
   ☑ dry ☐ no flow ☐ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:
   ☑ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.
   ☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.
   ☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.
   ☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.
   ☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow
   Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites.
   0 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: 29.4 °C (85°F) Water Temp: _____ °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,R Forest	_____ Urban	_____ Rip rap
_____ Shrub dominated corridor	_____ Pasture	_____ Concrete
_____ Herbaceous marsh	_____ Row crops	Other (specify): _____
_____ Mowed/maintained corridor	_____ Denuded/Eroded bank	

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name: _____ Site: _____
Date: _____ Time: _____

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 ☐ Diving ☐ 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 ☐ >50

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

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation)
   no water

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

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: _____

Stream Name _____ Site _____
Date _____ Time _____

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)

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).
no water

3. If secondary contact recreation activities are observed, how often do water recreational activities occur that do not involve a significant risk of water ingestion? ☐ frequently ☐ infrequently
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).
no water

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).
L.P.

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: _____ Site: _____
Date: _____ Time: _____

E. Stream Channel and Substantial Pools Measurements

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 1 Downstream 1 Left Bank 1 Right Bank 1
Photos #s (150 meters) Upstream 1 Downstream 1 Left Bank 1 Right Bank 1
Photos #s (300 meters) Upstream 1 Downstream 1 Left Bank 1 Right Bank 1

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

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

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

0 meters

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

← 4 pics (ULDR) 1st

← 4 pics (ULDR) 2nd

← 1 pic log obstruction (278m) 3rd

← 4 pics (ULDR) 4th

13 pics

Stream Name: _____ Site _____
Date: _____ Time _____

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

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	2
Width at narrowest point of the stream within 300 meter reach	0
Width at the widest point of the stream within 300 meter reach	8

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

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

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

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

Stream Name: _____ Site _____
Date _____ Time: _____

F. Additional RUAA Information

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

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

3. Check any channel obstructions that apply (Attach photos).
   - ☐ Culverts
   - ☐ Barbed wire
   - ☐ Utility pipe
   - ☐ Fences
   - ☐ Dams
   - ☐ Other (specify): _____
   - ☑ Log jams
   - ☐ Thick vegetation
   - ☐ Rip rap
   - ☐ Low bridges
   - ☐ Water control structure
   - ☐ None

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

   Comments: _____

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

   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: _____

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Stream Name _____ Site: _____
Date: _____ 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
   - 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:
    tires, bottles

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:_____ Date:_____

Site:_____ Site Description:_____

Time Begin:_____ Time End:_____ Meter Type:_____

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

Observations:_____

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

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information:	C. Goffinet, A. Martinez, M. Brown
Date & Time: 18 Jul 12	County Name: Frio
Stream Name: Leona River 0950	
Segment No. or nearest downstream Segment No.: Au01-02	Berry #2
Description of Site:	

A. Stream Characteristics:

1. Check the following channel flow status that applies:
   ☑ dry ☐ no flow ☐ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:
   ☑ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.
   ☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.
   ☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.
   ☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.
   ☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow
   Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites.
   0 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: 30.0 °C (86 °F) Water Temp: _____ °C

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

LR Forest 50%	_____ Urban	_____ Rip rap
LR Shrub dominated corridor 50%	_____ Pasture	_____ Concrete
_____ Herbaceous marsh	_____ Row crops	Other (specify): _____
_____ Mowed/maintained corridor	_____ Denuded/Eroded bank	

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name _____ Site _____
Date _____ Time _____

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 ☐ Diving ☐ 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 ☐ >50

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

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation)
   no water

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

Stream Name: _____ Site: _____
Date: _____ Time: _____

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)

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).
no water, heavy veg.

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)
no water, heavily veg.

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)
N.A.

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: _____ Site: _____
Date: _____ Time: _____

E. Stream Channel and Substantial Pools Measurements

Please check the following which best describes the river or stream: ☐ Wadeable ☐ Non-wadeable

1. Wadeable Streams

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

Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters.

Photos #s (30 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓
Photos #s (150 meters) Upstream ___ Downstream ✓ Left Bank ___ Right Bank ___
Photos #s (300 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓

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

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

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

0 meters

4 pics (4LDR) 2nd

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

4 pics (4LDR) 3rd

4 pics (4LDR) 1st

12 pics

Stream Name: _____ Site: _____
Date: _____ Time: _____

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

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	0
Width at narrowest point of the stream within 300 meter reach	0
Width at the widest point of the stream within 300 meter reach	0

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

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name: _____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

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

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

3. Check any channel obstructions that apply (Attach photos).
   - ☑ Culverts
   - ☐ Barbed wire
   - ☐ Utility pipe
   - ☐ Fences
   - ☐ Dams
   - ☐ Other (specify): _____
   - ☑ Log jams
   - ☐ Thick vegetation
   - ☐ Rip rap
   - ☐ Low bridges
   - ☐ Water control structure
   - ☐ None

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

   Comments: _____

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

   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: pasture road, not public

Field Data Sheets – Basic RUAA Survey

Stream Name: _____ Site: _____
Date: _____ 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: N/A ☐ 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:
    bottles, tires, cars

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).
    site is located 1.2 miles behind a locked gate

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream: _____ Date: _____

Site: _____ Site Description: _____

Time Begin: _____ Time End: _____ Meter Type: _____

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

Observations _____

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

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information:	C. Goffinet, A. Martinez, M. Brown
Date & Time:	18 Jul 12 10:38 County Name: Frio
Stream Name:	Leona River
Segment No. or nearest downstream Segment No.:	AU01_03 RU006
Description of Site:	

A. Stream Characteristics:

1. Check the following channel flow status that applies:
   ☐ dry ☑ no flow ☐ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:
   ☑ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.
   ☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.
   ☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.
   ☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.
   ☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow
   Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites.
   0 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: 30.0 °C (86 °F) Water Temp: 27.0 °C

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

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

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

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

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

Stream Name: _____ Site _____
Date _____ Time _____

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 ☐ Diving ☐ 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 ☐ >50

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

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
   no water

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

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: _____

Stream Name _____ Site: _____
Date: _____ Time _____

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)

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)
no water, heavy debris (wood)

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).
no water

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).
P.P.

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: _____ Site: _____
Date: _____ Time: _____

E. Stream Channel and Substantial Pools Measurements

Please check the following which best describes the river or stream: ☐ Wadeable ☐ Non-wadeable

1. Wadeable Streams

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

Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters.

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

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

	Length (meters)	Width (meters)	Depth (meters)
Pool 1	140 + (continues past 0)	0-4 (varies)	0.24
Pool 2			
Pool 3			
Pool 4			
Pool 5			
Pool 6			
Pool 7			
Pool 8			
Pool 9			
Pool 10			

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

0 meters 0.24 4pics (ULDR) (1st)

Distance	Depth (meters)	
30 meters	0.10	log obstruction/irrigation pip (20m) (2nd)
60 meters	0.12	
90 meters	0.10	log obstruction (70m) (3rd)
120 meters	0.06	
150 meters	0	4pics(ULDR) (4th)
180 meters	0	log obstruction (5th)
210 meters	0	
240 meters	0	
270 meters	0	
300 meters	0	4pics(ULDR) (6th)
Average		

15 ft

Stream Name: _____ Site: _____
Date: _____ Time: _____

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

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	4.0
Width at narrowest point of the stream within 300 meter reach	0.0
Width at the widest point of the stream within 300 meter reach	3.0

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

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

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

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

Stream Name: _____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

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

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

3. Check any channel obstructions that apply (Attach photos).
   - ☐ Culverts
   - ☐ Barbed wire
   - ☐ Utility pipe
   - ☐ Fences
   - ☐ Dams
   - ☐ Other (specify): _____
   - ☒ Log jams
   - ☐ Thick vegetation
   - ☐ Rip rap
   - ☐ Low bridges
   - ☐ Water control structure
   - ☐ None

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

   Comments: _____

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

   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: _____ Site: _____
Date: _____ 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
   - 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:

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)

    site is located more than 1.2 miles behind a locked gate

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream:_____ Date:_____

Site:_____ Site Description:_____

Time Begin:_____ Time End:_____ Meter Type:_____

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

Observations:_____

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

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information:	JS, IJ, GH
Date & Time: 18 July 12 1045 CT	County Name:
Stream Name:	
Segment No. or nearest downstream Segment No.:	
Description of Site: AU 01-04	

A. Stream Characteristics:

1. Check the following channel flow status that applies:
   ☒ dry ☐ no flow ☐ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:
   ☒ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.
   ☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.
   ☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.
   ☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.
   ☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow
   Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites.
   0 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: 30.0 °C 86 °F Water Temp: NA °C

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

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

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

7. Please describe access opportunities or explain why the site is not easily accessible (Attach photos for documentation):
   p.p., barb wire fence, steep slope

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

Field Data Sheets – Basic RUAA Survey

Stream Name _____ Site _____
Date _____ Time _____

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 ☐ Diving ☐ 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 ☐ >50

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

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
   no water

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

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: _____

Stream Name: _____ Site: _____
Date _____ Time _____

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)

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).
no water

3. If secondary contact recreation activities are observed, how often do water recreational activities occur that do not involve a significant risk of water ingestion? ☐ frequently ☐ infrequently
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).
no water

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).
n/a

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: _____ Site: _____
Date: _____ Time: _____

E. Stream Channel and Substantial Pools Measurements

Please check the following which best describes the river or stream: ☐ Wadeable ☐ Non-wadeable

1. Wadeable Streams

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

Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters.

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

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

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

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

0.0 0.0 5-8 ULDR

Distance	Depth (meters)
30 meters	
60 meters	
90 meters	
120 meters	
150 meters	
180 meters	
210 meters	
240 meters	
270 meters	
300 meters	0.0
Average	

ULDR 9-12

ULDR 1-4

Field Data Sheets – Basic RUAA Survey

Stream Name: _____ Site: _____
Date: _____ Time: _____

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

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

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

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name: _____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

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

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

3. Check any channel obstructions that apply (Attach photos)
   - ☐ Culverts
   - ☐ Barbed wire
   - ☐ Utility pipe
   - ☐ Fences
   - ☐ Dams
   - ☐ Other (specify): _____
   - ☒ Log jams
   - ☒ Thick vegetation
   - ☐ Rip rap
   - ☐ Low bridges
   - ☐ Water control structure
   - ☐ None

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest).
   - ☐ Campgrounds
   - ☐ Playgrounds
   - ☐ Rural area
   - ☐ Residential
   - ☐ National forests
   - ☐ Urban/suburban location
   - ☐ Golf Course
   - ☐ Sports Field
   - ☐ Stairs/walkway
   - ☐ Boating access (ramps)
   - ☐ Beach
   - ☐ Bridge crossing
   - ☐ Commercial boating
   - ☐ Trails/paths (hiking/biking)
   - ☐ Paved parking lot
   - ☐ Unimproved parking lot
   - ☐ Roads (paved/unpaved)
   - ☐ Populated area
   - ☐ Docks or rafts
   - ☐ Commercial outfitter
   - ☐ Nearby school
   - ☐ Power Line Corridor
   - ☐ Parks (national/city/county/state)
   - ☐ Public Property
   - ☐ Other _____
   - ☑ None of the Above

   Comments: _____

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

   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: _____ Site: _____
Date: _____ 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:	NA ☐ 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
deer rootin cattle

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).
most of stream kept fenced from livestock

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream:_____ Date _____

Site:_____ Site Description:_____

Time Begin:_____ Time End:_____ Meter Type:_____

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

Observations:_____

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

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information: JS, JJ, GH	
Date & Time: 18 July 12, 2015 CST	County Name:
Stream Name:	
Segment No. or nearest downstream Segment No.:	
Description of Site: A01-B05	

A. Stream Characteristics:

1. Check the following channel flow status that applies:
   ☒ dry ☐ no flow ☐ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:
   ☒ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.
   ☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.
   ☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.
   ☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.
   ☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow
   Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites.
   0 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: 30.0 °C 86 °F Water Temp: NA °C

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

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

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name: _____ Site: _____
Date: _____ Time: _____

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 ☐ Diving ☐ 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 ☐ >50

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

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
   no water

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

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: _____

Stream Name: _____ Site: _____
Date _____ Time: _____

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)

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).
no water

3. If secondary contact recreation activities are observed, how often do water recreational activities occur that do not involve a significant risk of water ingestion? ☐ frequently ☐ infrequently
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).
P.P.

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: _____ Site: _____
Date: _____ Time: _____

E. Stream Channel and Substantial Pools Measurements

Please check the following which best describes the river or stream: ☐ Wadeable ☐ Non-wadeable

1. Wadeable Streams

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

Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters.

Photos #s (30 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓
Photos #s (150 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓
Photos #s (300 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓

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

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

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

0 m 0 ULDR #1-4

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

ULDR #~~5-8~~ 7-10

ULDR-~~#13-16~~ 12-15

#5- Hog wallers
#6- trail
11 obstruction 275m
16 obstruction 210

Stream Name _____ Site _____
Date: _____ Time _____

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

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	0
Width at narrowest point of the stream within 300 meter reach	8
Width at the widest point of the stream within 300 meter reach	8

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

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

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

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

Stream Name: _____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

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

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

3. Check any channel obstructions that apply (Attach photos)
   - ☐ Culverts
   - ☐ Barbed wire
   - ☐ Utility pipe
   - ☐ Fences
   - ☐ Dams
   - ☐ Other (specify): _____
   - ☒ Log jams
   - ☐ Thick vegetation
   - ☐ Rip rap
   - ☐ Low bridges
   - ☐ Water control structure
   - ☐ None

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

   Comments: _____

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

   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: _____ Site: _____
Date: _____ 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
   - 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
    deer

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).
    lots of hog rooting located more than 0.2 miles in

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream: _____ Date: _____

Site: _____ Site Description: _____

Time Begin: _____ Time End: _____ Meter Type: _____

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

Observations: _____

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

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information: JS, JT, GH	
Date & Time: 18 July 12 915CST	County Name:
Stream Name:	
Segment No. or nearest downstream Segment No.:	
Description of Site: AU 01-06	

A. Stream Characteristics:

1. Check the following channel flow status that applies.
   ☑ dry ☐ no flow ☐ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:
   ☑ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.
   ☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.
   ☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.
   ☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.
   ☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow
   Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites.
   0 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 26.7 °C 80°F Water Temp NA °C

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

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

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name: _____ Site: _____
Date: _____ Time: _____

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 ☐ Diving ☐ 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 ☐ >50

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

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
   no water

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

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: _____

Stream Name _____ Site _____
Date _____ Time _____

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)

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).
no water

3. If secondary contact recreation activities are observed, how often do water recreational activities occur that do not involve a significant risk of water ingestion? ☐ frequently ☐ infrequently
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)
no water

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).
N/A

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: _____ Site: _____
Date: _____ Time: _____

E. Stream Channel and Substantial Pools Measurements

Please check the following which best describes the river or stream: ☐ Wadeable ☐ Non-wadeable

1. Wadeable Streams

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

Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters

Photos #s (30 meters) Upstream___ Downstream___ Left Bank___ Right Bank___
Photos #s (150 meters) Upstream___ Downstream___ Left Bank___ Right Bank___
Photos #s (300 meters) Upstream___ Downstream___ Left Bank___ Right Bank___

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

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

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

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

ULOR #4-7 #12-15

ULOR #8-11

ULOR #4-7 #12-15

#1 log waller
#2 obstruction 190m
#3 obstruction 245m
#16 obstruction 30m

Field Data Sheets – Basic RUAA Survey

Stream Name: _____ Site: _____
Date: _____ Time: _____

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

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	8
Width at narrowest point of the stream within 300 meter reach	8
Width at the widest point of the stream within 300 meter reach	8

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

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name: _____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

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

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

3. Check any channel obstructions that apply (Attach photos).
   - ☐ Culverts
   - ☒ Fences
   - ☒ Log jams
   - ☐ Rip rap
   - ☐ Water control structure
   - ☐ Barbed wire
   - ☐ Dams
   - ☐ Thick vegetation
   - ☐ Low bridges
   - ☐ None
   - ☐ Utility pipe
   - ☐ Other (specify): _____

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest).
   - ☐ Campgrounds
   - ☐ Playgrounds
   - ☐ Rural area
   - ☐ Residential
   - ☐ National forests
   - ☐ Urban/suburban location
   - ☐ Golf Course
   - ☐ Sports Field
   - ☐ Stairs/walkway
   - ☐ Boating access (ramps)
   - ☐ Beach
   - ☐ Bridge crossing
   - ☐ Commercial boating
   - ☐ Trails/paths (hiking/biking)
   - ☐ Paved parking lot
   - ☐ Unimproved parking lot
   - ☐ Roads (paved/unpaved)
   - ☐ Populated area
   - ☐ Docks or rafts
   - ☐ Commercial outfitter
   - ☐ Nearby school
   - ☐ Power Line Corridor
   - ☐ Parks (national/city/county/state)
   - ☐ Public Property
   - ☐ Other: _____
   - ☐ None of the Above

   Comments: _____

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

   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: _____ Site: _____
Date: _____ 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
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

raptor, hog

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:
cans, bottles

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 _____ Date _____

Site _____ Site Description: _____

Time Begin _____ Time End: _____ Meter Type _____

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

Observations: _____

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

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information:	TS, JJ, GH
Date & Time: 18 July 2012 0853	County Name:
Stream Name:	
Segment No. or nearest downstream Segment No.:	
Description of Site:	AU 01-07

A. Stream Characteristics:

1. Check the following channel flow status that applies:
   ☑ dry ☐ no flow ☐ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:
   ☑ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.
   ☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.
   ☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.
   ☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.
   ☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow
   Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites.
   0 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 22.2 °C 81°F Water Temp NA °C

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

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

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

7. Please describe access opportunities or explain why the site is not easily accessible (Attach photos for documentation)
   p. pb, steep banks, heavy veg.

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

Field Data Sheets – Basic RUAA Survey

Stream Name _____ Site _____
Date _____ Time _____

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 ☐ Diving ☐ 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 ☐ >50

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

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
   No water

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

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: _____

Stream Name: _____ Site: _____
Date _____ Time: _____

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)

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).
no water

3. If secondary contact recreation activities are observed, how often do water recreational activities occur that do not involve a significant risk of water ingestion? ☐ frequently ☐ infrequently
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).
no water

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).
n/a

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: _____ Site: _____
Date: _____ Time _____

E. Stream Channel and Substantial Pools Measurements

Please check the following which best describes the river or stream: ☐ Wadeable ☐ Non-wadeable

1. Wadeable Streams

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

Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters.

Photos #s (30 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓
Photos #s (150 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓
Photos #s (300 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓

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

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

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

0m 0

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

~~ULDR #4~~
ULDR 9-12

ULDR #5-8

ULDR #1-4

Stream Name _____ Site _____
Date _____ Time _____

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

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

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

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

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

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

Stream Name: _____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

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

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

3. Check any channel obstructions that apply (Attach photos).
   - ☐ Culverts
   - ☐ Barbed wire
   - ☐ Utility pipe
   - ☐ Fences
   - ☐ Dams
   - ☐ Other (specify): _____
   - ☒ Log jams
   - ☐ Thick vegetation
   - ☐ Rip rap
   - ☐ Low bridges
   - ☐ Water control structure
   - ☐ None

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

   Comments: _____

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

   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: _____ Site: _____
Date _____ 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
   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
    hog, deer, coyote

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: _____ Date: _____

Site: _____ Site Description: _____

Time Begin _____ Time End: _____ Meter Type _____

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

Observations: _____

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

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information:	C. Goffinet, A. Martinez, M. Brown
Date & Time: 18 Jul 12 0745	County Name:
Stream Name: Leona River	
Segment No. or nearest downstream Segment No.: 2401_OP	LR2
Description of Site:	

A. Stream Characteristics:

1. Check the following channel flow status that applies.
   ☑ dry ☐ no flow ☐ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:
   - ☑ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.
   - ☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.
   - ☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.
   - ☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.
   - ☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow
   Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites.
   0 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: 27.2 °C (81 °F) Water Temp: 24 °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/R Forest	_____ Urban	_____ Rip rap
_____ Shrub dominated corridor	_____ Pasture	_____ Concrete
_____ Herbaceous marsh	_____ Row crops	Other (specify): _____
_____ Mowed/maintained corridor	_____ Denuded/Eroded bank	

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

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

   _____

   _____

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

Field Data Sheets – Basic RUAA Survey

Stream Name _____ Site _____
Date _____ Time _____

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 ☐ Diving ☐ 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 ☐ >50

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

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
   no water

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

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: _____

Stream Name _____ Site _____
Date _____ Time _____

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)

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).
no water / dry

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: no water

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).
4 ft

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).
N.P.

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: _____ Site: _____
Date: _____ Time: _____

E. Stream Channel and Substantial Pools Measurements

Please check the following which best describes the river or stream: ☐ Wadeable ☐ Non-wadeable

1. Wadeable Streams

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

Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters.

Photos #s (30 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓
Photos #s (150 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓
Photos #s (300 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓

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

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

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

4 pics (ULDR) (5th) — 0 meters

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

4 pics (ULDR) (4th) — 150 meters

4 pics ULDR (1st) — 300 meters

14 pics total

crawfish trap (0m)

log obstruction (168m) (3rd)

log obstruction (195m) 1 pic (2nd) ← 180 meters

Stream Name: _____ Site: _____
Date: _____ Time _____

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

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

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

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name: _____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

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

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

3. Check any channel obstructions that apply (Attach photos).
   - ☐ Culverts
   - ☐ Barbed wire
   - ☐ Utility pipe
   - ☐ Fences
   - ☐ Dams
   - ☐ Other (specify): _____
   - ☑ Log jams
   - ☐ Thick vegetation
   - ☐ Rip rap
   - ☐ Low bridges
   - ☐ Water control structure
   - ☐ None

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

   Comments: _____

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

   Comments: _____

6. Check any indications of human use (Attach photos).
   - ☐ Roads
   - ☐ Rope swings
   - ☐ Dock/platform
   - ☐ Foot paths/prints
   - ☑ Other: Crawfish traps
   - ☐ 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: _____ Site: _____
Date: _____ 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
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:
tires, bottles

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:_____ Date:_____

Site:_____ Site Description:_____

Time Begin:_____ Time End:_____ Meter Type:_____

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

Observations:_____

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

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information:	JS JS, GH
Date & Time: 18 July 12 0917 CST	County Name:
Stream Name:	
Segment No. or nearest downstream Segment No.:	
Description of Site:	AU 01 09

A. Stream Characteristics:

1. Check the following channel flow status that applies.
   ☑ dry ☐ no flow ☐ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:
   ☑ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.
   ☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.
   ☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.
   ☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.
   ☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow
   Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites.
   0 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: 29.4 °C 85°F Water Temp: NA °C

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

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

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name _____ Site _____
Date _____ Time _____

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 ☐ Diving ☐ 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 ☐ >50

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

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
   no water

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

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: _____

Stream Name: _____ Site: _____
Date: _____ Time: _____

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)

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).
no water

3. If secondary contact recreation activities are observed, how often do water recreational activities occur that do not involve a significant risk of water ingestion? ☐ Frequently ☐ Infrequently
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).
no water

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).
n/a

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 _____ Site _____
Date _____ Time _____

E. Stream Channel and Substantial Pools Measurements

Please check the following which best describes the river or stream: ☐ Wadeable ☐ Non-wadeable

1. Wadeable Streams

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

Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters

Photos #s (30 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓
Photos #s (150 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓
Photos #s (300 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓

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

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

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

0M 0.0 VLOR #1-4

Distance	Depth (meters)
30 meters	0
60 meters	0
90 meters	0
120 meters	0
150 meters	0.9
180 meters	0
210 meters	0
240 meters	0
270 meters	0
300 meters	0
Average	

VLOR 5-8

VLOR 9-12

Stream Name: _____ Site: _____
Date: _____ Time _____

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

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	0
Width at narrowest point of the stream within 300 meter reach	0
Width at the widest point of the stream within 300 meter reach	0

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

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name: _____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

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

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

3. Check any channel obstructions that apply (Attach photos).
   - ☐ Culverts
   - ☐ Barbed wire
   - ☐ Utility pipe
   - ☐ Fences
   - ☐ Dams
   - ☐ Other (specify): _____
   - ☐ Log jams
   - ☐ Thick vegetation
   - ☐ Rip rap
   - ☐ Low bridges
   - ☐ Water control structure
   - ☒ None

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest).
   - ☐ Campgrounds
   - ☐ Playgrounds
   - ☐ Rural area
   - ☐ Residential
   - ☐ National forests
   - ☐ Urban/suburban location
   - ☐ Golf Course
   - ☐ Sports Field
   - ☐ Stairs/walkway
   - ☐ Boating access (ramps)
   - ☐ Beach
   - ☐ Bridge crossing
   - ☐ Commercial boating
   - ☐ Trails/paths (hiking/biking)
   - ☐ Paved parking lot
   - ☐ Unimproved parking lot
   - ☐ Roads (paved/unpaved)
   - ☐ Populated area
   - ☒ Docks or rafts
   - ☐ Commercial outfitter
   - ☐ Nearby school
   - ☐ Power Line Corridor
   - ☐ Parks (national/city/county/state)
   - ☐ Public Property
   - ☒ Other: rock frame
   - ☐ None of the Above

   Comments: _____

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

   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: landowner's campsite

Field Data Sheets – Basic RUAA Survey

Stream Name: _____ Site: _____
Date: _____ 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:	NA ☐ 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
coon coon

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:_____ Date:_____

Site:_____ Site Description:_____

Time Begin:_____ Time End:_____ Meter Type:_____

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

Observations:_____

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

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information:	C. Goffinet, A. Martinez, M. Brown
Date & Time: 18 Jul 12 0834	County Name: Frio
Stream Name: Leona River	
Segment No. or nearest downstream Segment No.:	2H 02_01 LR5
Description of Site:	

A. Stream Characteristics:

1. Check the following channel flow status that applies:
   ☒ dry ☐ no flow ☐ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:
   ☒ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.
   ☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.
   ☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.
   ☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.
   ☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow
   Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites.
   0 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: 27.2 °C (81°F) Water Temp: NA °C

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

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

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name: _____ Site: _____
Date: _____ Time: _____

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 ☐ Diving ☐ 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 ☐ >50

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

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
   no water

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

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: _____

Stream Name: _____ Site: _____
Date: _____ Time: _____

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)

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).
no water

3. If secondary contact recreation activities are observed, how often do water recreational activities occur that do not involve a significant risk of water ingestion? ☐ frequently ☐ infrequently
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).
no water

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).
P'P'

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 _____ Site _____
Date _____ Time _____

E. Stream Channel and Substantial Pools Measurements

Please check the following which best describes the river or stream: ☐ Wadeable ☐ Non-wadeable

1. Wadeable Streams

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

Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters.

Photos #s (30 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓
Photos #s (150 meters) Upstream ✓ Downstream ___ Left Bank ✓ Right Bank ___
Photos #s (300 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓

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

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

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

0 meters 0

Distance	Depth (meters)
30 meters	0
60 meters	0
90 meters	0
120 meters	0
150 meters	0
180 meters	0
210 meters	0
240 meters	0
270 meters	0
300 meters	0
Average	0

— 2pics (Au_02-01 1 upstream 1 downstream Au_02_02)

Stream Name _____ Site _____
Date _____ Time _____

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

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	10
Width at narrowest point of the stream within 300 meter reach	10
Width at the widest point of the stream within 300 meter reach	10

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

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

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

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

Stream Name: _____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

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

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

3. Check any channel obstructions that apply (Attach photos).
   - ☐ Culverts
   - ☐ Barbed wire
   - ☐ Utility pipe
   - ☐ Fences
   - ☐ Dams
   - ☐ Other (specify): _____
   - ☒ Log jams
   - ☐ Thick vegetation
   - ☐ Rip rap
   - ☐ Low bridges
   - ☐ Water control structure
   - ☐ None

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

   Comments: _____

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

   Comments: _____

6. Check any indications of human use (Attach photos).
   - ☐ Roads
   - ☐ Rope swings
   - ☐ Dock/platform
   - ☐ Foot paths/prints
   - ☒ Other: backpack
   - ☐ 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: _____ Site: _____
Date _____ 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
   - 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.
      cans, bottles, tires

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:_____ Date:_____

Site:_____ Site Description:_____

Time Begin:_____ Time End:_____ Meter Type:_____

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

Observations:_____

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

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information:	C. Coffinet, A. Martinez, M. Brown
Date & Time: 18 Jul 12 0840	County Name:
Stream Name: Leona River	
Segment No. or nearest downstream Segment No.: Au_02_02	RU 009
Description of Site:	

A. Stream Characteristics:

1. Check the following channel flow status that applies:
   ☒ dry ☐ no flow ☐ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:
   ☒ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.
   ☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.
   ☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.
   ☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.
   ☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow
   Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites.
   0 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: 27.2 °C (81°F) Water Temp: NA °C

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

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

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

7. Please describe access opportunities or explain why the site is not easily accessible (Attach photos for documentation)
   P1, P2

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

Field Data Sheets – Basic RUAA Survey

Stream Name _____ Site: _____
Date _____ Time _____

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 ☐ Diving ☐ 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 ☐ >50

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

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
   NO ~ case
   _____
   _____

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

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: _____

Stream Name: _____ Site: _____
Date: _____ Time: _____

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)

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).
no water

3. If secondary contact recreation activities are observed, how often do water recreational activities occur that do not involve a significant risk of water ingestion? ☐ frequently ☐ infrequently
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).
no water

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).
N.P.

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: _____ Site: _____
Date _____ Time: _____

E. Stream Channel and Substantial Pools Measurements

Please check the following which best describes the river or stream: ☐ Wadeable ☐ Non-wadeable

1. Wadeable Streams

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

Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters.

Photos #s (30 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓
Photos #s (150 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓
Photos #s (300 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓

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

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

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

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

1 picture from road
On Au_01_01 sheet

Stream Name _____ Site _____
Date: _____ Time _____

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

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	0
Width at narrowest point of the stream within 300 meter reach	0
Width at the widest point of the stream within 300 meter reach	0

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

2. Non-wadeable Streams

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name: _____ Site: _____
Date _____ Time: _____

F. Additional RUAA Information

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

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

3. Check any channel obstructions that apply (Attach photos).
   - ☐ Culverts
   - ☐ Barbed wire
   - ☐ Utility pipe
   - ☐ Fences
   - ☒ Dams
   - ☐ Other (specify): _____
   - ☐ Log jams
   - ☐ Thick vegetation
   - ☐ Rip rap
   - ☐ Low bridges
   - ☐ Water control structure
   - ☐ None

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

   Comments: _____

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

   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: _____ Site: _____
Date: _____ 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
   - 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: cans & bottles, etc.

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:_____ Date:_____

Site:_____ Site Description:_____

Time Begin:_____ Time End:_____ Meter Type:_____

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

Observations:_____

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

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information: JS JJ	
Date & Time: 3/21/12 0730 CST	County Name:
Stream Name: Leona	
Segment No. or nearest downstream Segment No.:	
Description of Site: AU 02_03	

A. Stream Characteristics:

1. Check the following channel flow status that applies.
   ☒ dry ☐ no flow ☐ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:
   ☒ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.
   ☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.
   ☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.
   ☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.
   ☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow
   Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites.
   0 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 26.1 °C 79 °F Water Temp ___ °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/L Forest	___ Urban	___ Rip rap
R/L Shrub dominated corridor	___ Pasture	___ Concrete
___ Herbaceous marsh	___ Row crops	Other (specify): ___
___ Mowed/maintained corridor	___ Denuded/Eroded bank	

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name: _____ Site: _____
Date: _____ Time: _____

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 ☐ Diving ☐ 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 ☐ >50

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

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
   No water

3. Describe if there is public access (e.g., parks, roads, etc.) (Attach photos, maps, etc. for documentation).
   No P.P.

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: _____

Stream Name: _____ Site: _____
Date: _____ Time: _____

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)

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).
No water

3. If secondary contact recreation activities are observed, how often do water recreational activities occur that do not involve a significant risk of water ingestion? ☐ frequently ☐ infrequently
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).
No water P.P.

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).
P.P.

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: _____ Site: _____
Date: _____ Time: _____

E. Stream Channel and Substantial Pools Measurements

Please check the following which best describes the river or stream: ☒ Wadeable ☐ Non-wadeable

1. Wadeable Streams

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

Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters.

Photos #s (30 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓
Photos #s (150 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓
Photos #s (300 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓

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

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

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

0 0

Distance	Depth (meters)
30 meters	0
60 meters	0
90 meters	0
120 meters	0
150 meters	0
180 meters	0
210 meters	0
240 meters	0
270 meters	0
300 meters	0
Average	0

ULDR 1-4

ULDR 5-8
#9 obs! Q TC

10-13

Field Data Sheets – Basic RUAA Survey

Stream Name: _____ Site: _____
Date: _____ Time: _____

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

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	0
Width at narrowest point of the stream within 300 meter reach	0
Width at the widest point of the stream within 300 meter reach	0

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

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

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

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

Stream Name: _____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

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

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

3. Check any channel obstructions that apply (Attach photos).
   - ☐ Culverts
   - ☒ Barbed wire
   - ☐ Utility pipe
   - ☒ Fences
   - ☐ Dams
   - ☐ Other (specify): _____
   - ☒ Log jams
   - ☐ Thick vegetation
   - ☐ Rip rap
   - ☐ Low bridges
   - ☐ Water control structure
   - ☐ None

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

   Comments: _____

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

   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: _____ Site: _____
Date: _____ 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: NA ☐ clear ☐ green ☐ red ☐ brown ☐ black
   - Bottom Deposit: NA ☐ sludge ☐ solids ☐ fine sediments ☐ none ☐ other
   - Water Surface: NA ☐ 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
    hogs

11. Garbage Observed
    - Large garbage in the channel: ☒ None ☐ Rare ☐ Common ☐ Abundant
    - Small garbage in the channel: ☐ None ☒ Rare ☐ Common ☐ Abundant bottles
    - 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)
    Site is 0.8 miles behind a locked gate on pvt.
    _____
    _____
    _____
    _____

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream _____ Date _____

Site _____ Site Description: _____

Time Begin _____ Time End: _____ Meter Type _____

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

Observations: _____

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

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information: JS JS	
Date & Time: 31 Jul 12 0810 CST	County Name:
Stream Name:	
Segment No. or nearest downstream Segment No.:	
Description of Site: AU02 04	

A. Stream Characteristics:

1. Check the following channel flow status that applies.
   ☒ dry ☐ no flow ☐ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:
   ☒ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.
   ☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.
   ☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.
   ☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.
   ☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow
   Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites.
   0 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. NA
   Air Temp 26.1 °C 79 °F Water Temp: ~~0~~ °C

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

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

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name: _____ Site: _____
Date: _____ Time: _____

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 ☐ Diving ☐ 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 ☐ >50

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

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation)
   No water
   _____
   _____

3. Describe if there is public access (e.g., parks, roads, etc.) (Attach photos, maps, etc. for documentation)
   None P.P.
   _____
   _____

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: _____

Stream Name _____ Site _____
Date _____ Time _____

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)

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).
No water

3. If secondary contact recreation activities are observed, how often do water recreational activities occur that do not involve a significant risk of water ingestion? ☐ Frequently ☐ Infrequently
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)
No water P.P.

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).
P.P.

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 _____ Site _____
Date _____ Time _____

E. Stream Channel and Substantial Pools Measurements

Please check the following which best describes the river or stream: ☐ Wadeable ☐ Non-wadeable

1. Wadeable Streams

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

Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters.

Photos #s (30 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓
Photos #s (150 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓
Photos #s (300 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓

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

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

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

0 0 1-4

Distance	Depth (meters)
30 meters	
60 meters	
90 meters	
120 meters	
150 meters	
180 meters	
210 meters	
240 meters	
270 meters	
300 meters	
Average	0

5-8

9-12

Stream Name: _____ Site: _____
Date _____ Time: _____

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

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	0
Width at narrowest point of the stream within 300 meter reach	0
Width at the widest point of the stream within 300 meter reach	0

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

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name: _____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

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

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

3. Check any channel obstructions that apply (Attach photos).
   - ☐ Culverts
   - ☐ Barbed wire
   - ☐ Utility pipe
   - ☐ Fences
   - ☐ Dams
   - ☐ Other (specify): _____
   - ☒ Log jams
   - ☐ Thick vegetation
   - ☐ Rip rap
   - ☐ Low bridges
   - ☐ Water control structure
   - ☐ None

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

   Comments: _____

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

   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: _____ Site: _____
Date: _____ 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: NA	☐ clear	☐ green	☐ red	☐ brown	☐ black
Bottom Deposit: NA	☐ sludge	☐ solids	☐ fine sediments	☐ none	☐ other
Water Surface: NA	☐ 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
deer, raccoon, hog

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: _____ Date: _____

Site: _____ Site Description: _____

Time Begin: _____ Time End: _____ Meter Type: _____

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

Observations: _____

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

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information:	CBaffinet, A. Martinez, M. Brown
Date & Time: 17 Jul 12 0842	County Name:
Stream Name: Leona River	
Segment No. or nearest downstream Segment No.:	LRIO AU02_05
Description of Site: pics from bridge - heavily vegetated	

A. Stream Characteristics:

1. Check the following channel flow status that applies:
   ☒ dry ☐ no flow ☐ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:
   ☒ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.
   ☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.
   ☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.
   ☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.
   ☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow
   Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites.
   0 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: 29.4 °C (85 °F) Water Temp: NA °C

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

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

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name _____ Site _____
Date _____ Time _____

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 ☐ Diving ☐ 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 ☐ >50

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

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
   no water

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

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: _____

Stream Name: _____ Site: _____
Date: _____ Time: _____

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)

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).
no water

3. If secondary contact recreation activities are observed, how often do water recreational activities occur that do not involve a significant risk of water ingestion? ☐ frequently ☐ infrequently
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).
no water

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).
P.P.

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: _____ Site: _____
Date: _____ Time: _____

E. Stream Channel and Substantial Pools Measurements

Please check the following which best describes the river or stream: ☐ Wadeable ☐ Non-wadeable

1. Wadeable Streams

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

Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters.

Photos #s (30 meters) Upstream ✓ Downstream ___ Left Bank ___ Right Bank ___
Photos #s (150 meters) Upstream ___ Downstream ___ Left Bank ___ Right Bank ___
Photos #s (300 meters) Upstream ___ Downstream ✓ Left Bank ___ Right Bank ___

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

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

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

Distance	Depth (meters)
30 meters	0
60 meters	0
90 meters	0
120 meters	0
150 meters	0
180 meters	0
210 meters	0
240 meters	0
270 meters	0
300 meters	0
Average	0

4 pics (ULDR) from bridge

Stream Name: _____ Site: _____
Date: _____ Time: _____

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

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	0
Width at narrowest point of the stream within 300 meter reach	0
Width at the widest point of the stream within 300 meter reach	0

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

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name: _____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

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

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

3. Check any channel obstructions that apply (Attach photos).
   - ☐ Culverts
   - ☐ Barbed wire
   - ☐ Utility pipe
   - ☐ Fences
   - ☐ Dams
   - ☐ Other (specify): _____
   - ☒ Log jams
   - ☒ Thick vegetation
   - ☐ Rip rap
   - ☐ Low bridges
   - ☐ Water control structure
   - ☐ None

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

   Comments: _____

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

   Comments: _____

6. Check any indications of human use (Attach photos).
   - ☐ Roads
   - ☐ Rope swings
   - ☐ Dock/platform
   - ☐ Foot paths/prints
   - ☒ Other: backpacks
   - ☐ 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: _____ Site: _____
Date _____ 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
   - 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: bottles, tires, backpacks

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:_____ Date:_____

Site _____ Site Description:_____

Time Begin:_____ Time End:_____ Meter Type:_____

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

Observations _____

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

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information:	GH, JS, JJ
Date & Time: 17 July 12	0910 CST County Name:
Stream Name:	
Segment No. or nearest downstream Segment No.:	2109
Description of Site:	AU 02-06

A. Stream Characteristics:

1. Check the following channel flow status that applies:
   ☑ dry ☐ no flow ☐ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:
   ☑ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.
   ☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.
   ☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.
   ☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.
   ☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow
   Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites.
   0 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 56 °C (92 °F) Water Temp: N/A °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/R Forest	____ Urban	____ Rip rap
L/R Shrub dominated corridor	____ Pasture	____ Concrete
____ Herbaceous marsh	____ Row crops	Other (specify): ____
____ Mowed/maintained corridor	____ Denuded/Eroded bank	

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

7. Please describe access opportunities or explain why the site is not easily accessible (Attach photos for documentation):
   priv. property, no water, steep banks, tall banks, heavy veg.

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

Field Data Sheets – Basic RUAA Survey

Stream Name: _____ Site: _____
Date: _____ Time: _____

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 ☐ Diving ☐ 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 ☐ >50

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

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation)
   no water, P.P., steep banks, dense veg.

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

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: _____

Stream Name _____ Site _____
Date _____ Time _____

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)

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).
no water, ppl., dense veg., steep bank steep

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).
1' - 1'

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).
/ 1'

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: _____ Site: _____
Date: _____ Time: _____

E. Stream Channel and Substantial Pools Measurements

Please check the following which best describes the river or stream: ☐ Wadeable ☐ Non-wadeable

1. Wadeable Streams

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

Also, take photos facing upstream, downstream, left bank and right bank at the 30 meters, 150 meters, and 300 meters.

Photos #s (30 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓
Photos #s (150 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓
Photos #s (300 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓

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

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

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

0 meter

ULOR 13-16

Distance	Depth (meters)
30 meters	0
60 meters	0
90 meters	0
120 meters	0
150 meters	0
180 meters	0
210 meters	0
240 meters	0
270 meters	0
300 meters	0
Average	

ULOR 6-9

ULOR 1-4

#5 obstruction 210 m

#10 obstruction 135 m

#11 lil dam 135 m

#12 obstruction w/ dozer tracks

Field Data Sheets – Basic RUAA Survey

Stream Name: _____ Site: _____
Date: _____ Time: _____

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

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	0
Width at narrowest point of the stream within 300 meter reach	0
Width at the widest point of the stream within 300 meter reach	0

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

2. Non-wadeable Streams

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name: _____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

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

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

3. Check any channel obstructions that apply (Attach photos)
   - ☐ Culverts
   - ☐ Barbed wire
   - ☐ Utility pipe
   - ☐ Fences
   - ☐ Dams
   - ☐ Other (specify): _____
   - ☑ Log jams
   - ☑ Thick vegetation
   - ☐ Rip rap
   - ☐ Low bridges
   - ☐ Water control structure
   - ☐ None

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

   Comments: _____

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

   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: only pillars left, very old dock

Field Data Sheets – Basic RUAA Survey

Stream Name: _____ Site: _____
Date: _____ 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: N/A	☐ clear	☐ green	☐ red	☐ brown	☐ black
Bottom Deposit: N/A	☐ sludge	☐ solids	☐ fine sediments	☐ none	☐ other
Water Surface: N/A	☐ 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:
PVC pipe, net

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)
bull dozer tracks in stream

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream _____ Date _____

Site _____ Site Description _____

Time Begin _____ Time End _____ Meter Type _____

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

Observations _____

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

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information:	JS, JJ, GH
Date & Time: 17 July 12 0840CST	County Name:
Stream Name:	
Segment No. or nearest downstream Segment No.:	2109
Description of Site:	~~2109~~ AU 2-07

A. Stream Characteristics:

1. Check the following channel flow status that applies.
   ☑ dry ☐ no flow ☐ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:
   ☑ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.
   ☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.
   ☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.
   ☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.
   ☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow
   Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites.
   0.0 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: 29.4 °C (85°F) Water Temp: N/A °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	R Urban	____ Rip rap
✓ Shrub dominated corridor	____ Pasture	____ Concrete
____ Herbaceous marsh	____ Row crops	Other (specify): ____
____ Mowed/maintained corridor	____ Denuded/Eroded bank	

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

7. Please describe access opportunities or explain why the site is not easily accessible (Attach photos for documentation):
   high chain link fence, steep bank, no place to enter stream

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

Field Data Sheets – Basic RUAA Survey

Stream Name: _____ Site: _____
Date: _____ Time: _____

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 ☐ Diving ☐ 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 ☐ >50

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

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation)
   no water

3. Describe if there is public access (e.g., parks, roads, etc.) (Attach photos, maps, etc. for documentation)
   park, roads, in park, but stream is on opposite side of fence

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: _____

Stream Name _____ Site _____
Date _____ Time _____

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)

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).
no water

3. If secondary contact recreation activities are observed, how often do water recreational activities occur that do not involve a significant risk of water ingestion? ☐ Frequently ☒ Infrequently
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)
no water, steep banks, dense veg.

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).
" & chain link fence

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: _____ Site: _____
Date: _____ Time: _____

E. Stream Channel and Substantial Pools Measurements

Please check the following which best describes the river or stream: ☐ Wadeable ☐ Non-wadeable

1. Wadeable Streams

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

Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters.

Photos #s (30 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ____
Photos #s (150 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ____
Photos #s (300 meters) Upstream ✓ Downstream ✓ Left Bank ____ Right Bank ____

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

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

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

0 m

Distance	Depth (meters)
30 meters	0
60 meters	0
90 meters	0
120 meters	0
150 meters	0
180 meters	0
210 meters	0
240 meters	0
270 meters	0
300 meters	0
Average	

ULD 12-14

ULD 4-6

ULD 1-3

pic # 7 baseball field
pic #8 playground
pic #9 fence
pic #10 pavilion
pic #11 fence
#15 parking

Stream Name: _____ Site: _____
Date: _____ Time: _____

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

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

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

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

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

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

Stream Name: _____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

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

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

3. Check any channel obstructions that apply (Attach photos).
   - ☐ Culverts
   - ☐ Barbed wire
   - ☐ Utility pipe
   - ☒ Fences
   - ☐ Dams
   - ☐ Other (specify): _____
   - ☒ Log jams
   - ☒ Thick vegetation
   - ☐ Rip rap
   - ☐ Low bridges
   - ☐ Water control structure
   - ☐ None

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest).
   - ☐ Campgrounds
   - ☐ Playgrounds
   - ☐ Rural area
   - ☐ Residential
   - ☐ National forests
   - ☐ Urban/suburban location
   - ☐ Golf Course
   - ☐ Sports Field
   - ☐ Stairs/walkway
   - ☐ Boating access (ramps)
   - ☐ Beach
   - ☐ Bridge crossing
   - ☐ Commercial boating
   - ☐ Trails/paths (hiking/biking)
   - ☐ Paved parking lot
   - ☐ Unimproved parking lot
   - ☐ Roads (paved/unpaved)
   - ☐ Populated area
   - ☐ Docks or rafts
   - ☐ Commercial outfitter
   - ☐ Nearby school
   - ☐ Power Line Corridor
   - ☐ Parks (national/city/county/state)
   - ☐ Public Property
   - ☐ Other: _____
   - ☐ None of the Above

   Comments: chain link fence b/n stream & park

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

   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: _____ Site: _____
Date: _____ Time: _____

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

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).
    unable to enter stream

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream:_____ Date:_____

Site:_____ Site Description:_____

Time Begin:_____ Time End:_____ Meter Type:_____

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

Observations:_____

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

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information:	C. Gaffner, A. Martinez, M. Brown
Date & Time:	17 Jul 12 ~~0830~~ 0910 County Name:
Stream Name:	Leona River
Segment No. or nearest downstream Segment No.:	AU02_08 LR14
Description of Site:	

A. Stream Characteristics:

1. Check the following channel flow status that applies.
   ☒ dry ☐ no flow ☐ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:
   ☒ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.
   ☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.
   ☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.
   ☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.
   ☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow
   Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites.
   0 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: 85 °C 30° Water Temp: NA °C

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

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

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

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

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

Stream Name: _____ Site: _____
Date _____ Time _____

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 ☐ Diving ☐ 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 ☐ >50

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

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
   no water

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

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: _____

Stream Name: _____ Site: _____
Date: _____ Time: _____

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)

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).
no water

3. If secondary contact recreation activities are observed, how often do water recreational activities occur that do not involve a significant risk of water ingestion? ☐ frequently ☐ infrequently
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).
no water

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).
P.P

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 _____ Site _____
Date _____ Time _____

E. Stream Channel and Substantial Pools Measurements

Please check the following which best describes the river or stream: ☐ Wadeable ☐ Non-wadeable

1. Wadeable Streams

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

Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters.

Photos #s (30 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓
Photos #s (150 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓
Photos #s (300 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓

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

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

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

start (bridge) → end

4 pics (LLDR) → 0 meters

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

4 pics (LLDR) — 150 meters

1 pic log obstruction (245 m)

4 pics (LLDR) — Average

13 pics total

Stream Name: _____ Site: _____
Date: _____ Time: _____

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

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	0
Width at narrowest point of the stream within 300 meter reach	0
Width at the widest point of the stream within 300 meter reach	0

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

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

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

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

Stream Name: _____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

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

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

3. Check any channel obstructions that apply (Attach photos).
   - ☐ Culverts
   - ☐ Barbed wire
   - ☐ Utility pipe
   - ☐ Fences
   - ☐ Dams
   - ☐ Other (specify): _____
   - ☐ Log jams
   - ☒ Thick vegetation
   - ☐ Rip rap
   - ☐ Low bridges
   - ☐ Water control structure
   - ☐ None

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

   Comments: _____

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

   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: _____ Site: _____
Date: _____ 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
   - 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: bottles & cans

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:_____ Date:_____

Site:_____ Site Description:_____

Time Begin:_____ Time End:_____ Meter Type:_____

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

Observations _____

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

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information:	C. Goffinet, A. Martinez, M. Brown
Date & Time: 17 July 12	0939 County Name: Zavala
Stream Name: Leona River	
Segment No. or nearest downstream Segment No.: Au 02-09	Ru 011
Description of Site:	

A. Stream Characteristics:

1. Check the following channel flow status that applies.
   ☑ dry ☐ no flow ☐ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:
   ☑ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.
   ☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.
   ☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.
   ☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.
   ☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow
   Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites.
   0 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: 91F °C 33 Water Temp: N/A °C

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

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

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name _____ Site _____
Date _____ Time _____

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 ☐ Diving ☐ 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 ☐ >50

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

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
   no water, steep sides

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

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: _____

Stream Name: _____ Site: _____
Date: _____ Time: _____

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)

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).
no water

3. If secondary contact recreation activities are observed, how often do water recreational activities occur that do not involve a significant risk of water ingestion? ☐ frequently ☐ infrequently
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).
no water, steep sides

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).
P.P.

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 _____ Site _____
Date _____ Time _____

E. Stream Channel and Substantial Pools Measurements

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 0

Photos #s (~~30~~ meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓
Photos #s (150 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓
Photos #s (300 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓

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

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

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

4 pics (ULDR) 0 meters

END

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

4 pics (ULDR)

4 pics (ULDR)

Start

saw deer - no pic

Backpack / Ball (250m)

13 pics

Stream Name: _____ Site _____
Date: _____ Time _____

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

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

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

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

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

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

Stream Name _____ Site _____
Date _____ Time _____

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	☐ Roads (paved/unpaved)	☐ Other: _____
☐ Playgrounds	☐ Boating access (ramps)	☐ Populated area	☒ None of the Above
☐ Rural area	☐ Beach	☐ Docks or rafts	
☐ Residential	☐ Bridge crossing	☐ Commercial outfitter	
☐ National forests	☐ Commercial boating	☐ Nearby school	
☐ 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	☐ 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: backpacks			

Comments: _____

Field Data Sheets – Basic RUAA Survey

Stream Name: _____ Site: _____
Date: _____ 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
   - 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:
    bottles, cans, tires, backpacks

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).
    backpack site

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream:_____ Date:_____

Site:_____ Site Description:_____

Time Begin:_____ Time End:_____ Meter Type:_____

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

Observations:_____

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

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information: CH, TS, JJ	
Date & Time: 17 July 12 0945 CST	County Name:
Stream Name:	
Segment No. or nearest downstream Segment No.: 2109	
Description of Site: AU 2-10	

A. Stream Characteristics:

1. Check the following channel flow status that applies:
   ☐ dry ☐ no flow ☐ low ☐ normal ☐ high ☐ flooded

   Site Site dry

2. Check the following stream type that applies on the day of the survey:
   ☑ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.
   ☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.
   ☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.
   ☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.
   ☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow
   Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites.
   0 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: ~~22~~ 92°F °C Water Temp: _____ °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	_____ Urban	_____ Rip rap
L R Shrub dominated corridor	_____ Pasture	_____ Concrete
_____ Herbaceous marsh	_____ Row crops	Other (specify): _____
_____ Mowed/maintained corridor	_____ Denuded/Eroded bank	

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

7. Please describe access opportunities or explain why the site is not easily accessible (Attach photos for documentation):
   primarily 1 location to enter stream

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

Field Data Sheets – Basic RUAA Survey

Stream Name: _____ Site: _____
Date: _____ Time: _____

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 ☐ Diving ☐ 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 ☐ >50

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

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
   No water
   _____

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

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: _____

Stream Name: _____ Site: _____
Date: _____ Time: _____

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)

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).
no water

3. If secondary contact recreation activities are observed, how often do water recreational activities occur that do not involve a significant risk of water ingestion? ☐ frequently ☐ infrequently
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).
no water, steep slope

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.

Stream Name: _____ Site: _____
Date _____ Time: _____

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

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

Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters

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

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

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

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

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

Stream Name: _____ Site: _____
Date: _____ Time: _____

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

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	0
Width at narrowest point of the stream within 300 meter reach	0
Width at the widest point of the stream within 300 meter reach	0

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

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name: _____ Site: _____
Date: _____ Time: _____

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: dam

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	☐ Roads (paved/unpaved)	☐ Other: _____
☐ Playgrounds	☐ Boating access (ramps)	☐ Populated area	☐ None of the Above
☐ Rural area	☐ Beach	☐ Docks or rafts	
☐ Residential	☐ Bridge crossing	☐ Commercial outfitter	
☐ National forests	☐ Commercial boating	☐ Nearby school	
☐ 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: gravel parking lot

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: graffiti, beer bottles

Field Data Sheets – Basic RUAA Survey

Stream Name: _____ Site: _____
Date: _____ 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
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: coon poop

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: plastics, bottles, tires, shells, backpacks

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).
found about 10 backpacks under a bush, unknown contents

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream _____ Date: _____

Site: _____ Site Description: _____

Time Begin _____ Time End: _____ Meter Type _____

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

Observations _____

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

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information: C. Goffinet, A. Martinez, M. Brown	
Date & Time: 17 Jul 12 1024	County Name:
Stream Name: Leona River	
Segment No. or nearest downstream Segment No.: Au 02-11	LR15
Description of Site:	

A. Stream Characteristics:

1. Check the following channel flow status that applies.
   ☑ dry ☐ no flow ☐ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:
   ☑ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.
   ☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.
   ☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.
   ☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.
   ☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow
   Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites.
   0 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: 34.4 °C (94°F) Water Temp: NA °C

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

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

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name: _____ Site: _____
Date: _____ Time: _____

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 ☐ Diving ☐ 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 ☐ >50

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

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
   no water

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

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: _____

Stream Name: _____ Site: _____
Date: _____ Time: _____

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)

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).
no water, heavy veg.

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).
no water, heavy veg.

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).
Private

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: _____ Site: _____
Date _____ Time: _____

E. Stream Channel and Substantial Pools Measurements

Please check the following which best describes the river or stream ☐ Wadeable ☐ Non-wadeable

1. Wadeable Streams

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

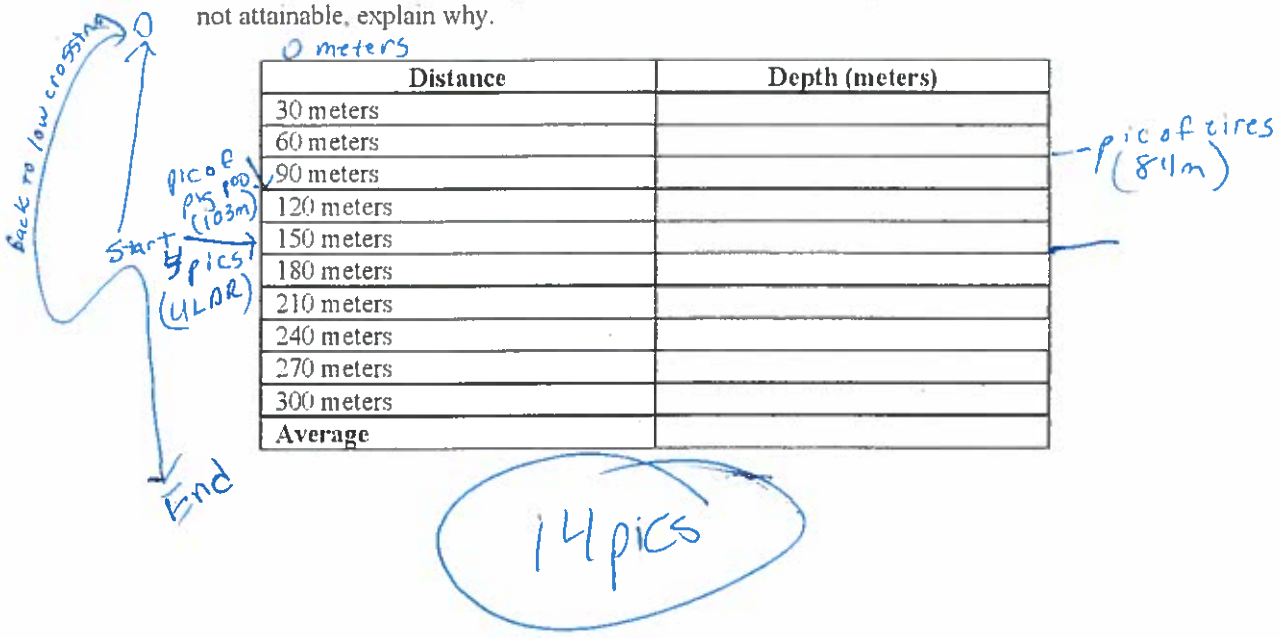
Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters

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

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

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

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



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

Stream Name: _____ Site: _____
Date: _____ Time: _____

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

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	0
Width at narrowest point of the stream within 300 meter reach	0
Width at the widest point of the stream within 300 meter reach	0

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

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name _____ Site _____
Date _____ Time _____

F. Additional RUAA Information

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

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

3. Check any channel obstructions that apply (Attach photos).
   - ☐ Culverts
   - ☑ Barbed wire
   - ☐ Utility pipe
   - ☑ Fences
   - ☐ Dams
   - ☐ Other (specify): _____
   - ☑ Log jams
   - ☑ Thick vegetation
   - ☐ Rip rap
   - ☐ Low bridges
   - ☐ Water control structure
   - ☐ None

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

   Comments: _____

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

   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: _____ Site: _____
Date: _____ 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
   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:

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 _____ Date _____

Site _____ Site Description: _____

Time Begin: _____ Time End: _____ Meter Type _____

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

Observations: _____

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

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information:	CH, JF, JJ
Date & Time: 17 July 12 1015 CST	County Name:
Stream Name:	
Segment No. or nearest downstream Segment No.:	2109
Description of Site:	AU 03-01

A. Stream Characteristics:

1. Check the following channel flow status that applies:
   ☑ dry ☐ no flow ☐ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:
   ☑ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.
   ☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.
   ☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.
   ☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.
   ☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow
   Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites.
   0 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 34.4 °C = 94 °F Water Temp N/A °C

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

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

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name _____ Site _____
Date _____ Time _____

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 ☐ Diving ☐ 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 ☐ >50

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

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation)
   no water, rip., steep slope

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

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: _____

Stream Name _____ Site _____
Date _____ Time _____

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)

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)
no water, dry.

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)
no water

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)
private property, steep banks

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

Stream Name: _____ Site: _____
Date _____ Time: _____

E. Stream Channel and Substantial Pools Measurements

Please check the following which best describes the river or stream ☐ Wadeable ☐ Non-wadeable

1. Wadeable Streams

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

Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters

Photos #s (30 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓
Photos #s (150 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓
Photos #s (300 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓

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

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

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

Distance	Depth (meters)
30 meters	0
60 meters	0
90 meters	0
120 meters	0
150 meters	0
180 meters	0
210 meters	0
240 meters	0
270 meters	0
300 meters	0
Average	

VLOR 10-13 # pic 1; wildlife trail
VLOR 6-9
VLOR 2-5

Field Data Sheets – Basic RUAA Survey

Stream Name _____ Site _____
Date _____ Time _____

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

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	3
Width at narrowest point of the stream within 300 meter reach	3
Width at the widest point of the stream within 300 meter reach	0

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

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

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

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

Stream Name: _____ Site: _____
Date: _____ Time: _____

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	☐ Roads (paved/unpaved)	☐ Other: _____
☐ Playgrounds	☐ Boating access (ramps)	☐ Populated area	☒ None of the Above
☐ Rural area	☐ Beach	☐ Docks or rafts	
☐ Residential	☐ Bridge crossing	☐ Commercial outfitter	
☐ National forests	☐ Commercial boating	☐ Nearby school	
☐ 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	☐ Fence	☐ No trespass sign
☐ Barge/slip 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: _____

Field Data Sheets – Basic RUAA Survey

Stream Name _____ Site: _____
Date: _____ 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: NA ☐ 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 rabbits
   - 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
    hog deer, wildhog rooting evidence

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:_____ Date:_____

Site:_____ Site Description:_____

Time Begin:_____ Time End:_____ Meter Type:_____

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

Observations:_____

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

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information:	GH, JS, JJ
Date & Time: 9/17/12	0740 CST County Name:
Stream Name:	Leona
Segment No. or nearest downstream Segment No.:	
Description of Site:	AU 03-02

A. Stream Characteristics:

1. Check the following channel flow status that applies.
   ☑ dry ☐ no flow ☐ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:
   ☑ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.
   ☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.
   ☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.
   ☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.
   ☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow
   Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites.
   0.0 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: ~~N/A~~ °C -19 °F Water Temp: N/A °C

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

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

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

7. Please describe access opportunities or explain why the site is not easily accessible (Attach photos for documentation): PP., fence, steep banks dense veg.

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

Stream Name _____ Site _____
Date _____ Time _____

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 ☐ Diving ☐ 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 ☐ >50

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

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
   No water, private property

3. Describe if there is public access (e.g., parks, roads, etc.) (Attach photos, maps, etc. for documentation).
   None P.P.

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: _____

Stream Name _____ Site _____
Date _____ Time _____

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).
no water, prk. prop.

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)
No water

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).
P.P. 3.2 mi/l with 3 gates

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: _____ Site: _____
Date: _____ Time: _____

E. Stream Channel and Substantial Pools Measurements

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~~ 0) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓
Photos #s (150 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓
Photos #s (300 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓

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

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

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

0m 0 uldr 11-14

Distance	Depth (meters)
30 meters	0
60 meters	0
90 meters	0
120 meters	0
150 meters	0.0
180 meters	0
210 meters	0
240 meters	0
270 meters	0
300 meters	0.0
Average	0

uldr-6-9

uldr-1-4

-pic 5 obstruction approx 270m 17 July 12

-obstruction at 65m pic #10

Field Data Sheets – Basic RUAA Survey

Stream Name: _____ Site: _____
Date: _____ Time: _____

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

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	0
Width at narrowest point of the stream within 300 meter reach	0
Width at the widest point of the stream within 300 meter reach	0

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

2. Non-wadeable Streams

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name: _____ Site: _____
Date _____ Time: _____

F. Additional RUAA Information

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

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

3. Check any channel obstructions that apply (Attach photos).
   - ☐ Culverts
   - ☑ Fences
   - ☑ Log jams
   - ☐ Rip rap
   - ☐ Water control structure
   - ☑ Barbed wire
   - ☐ Dams
   - ☑ Thick vegetation
   - ☐ Low bridges
   - ☐ None
   - ☐ Utility pipe
   - ☐ Other (specify): _____

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

   Comments: _____

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

   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: _____ Site: _____
Date: _____ 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: NA ☐ clear ☐ green ☐ red ☐ brown ☐ black
   - Bottom Deposit: NA ☐ sludge ☐ solids ☐ fine sediments ☐ none ☐ other
   - Water Surface: NA ☐ 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 rabbits ☐ None ☐ slight presence ☑ moderate presence ☐ large presence
   - Domesticated Pets ☒ None ☐ slight presence ☐ moderate presence ☐ large presence
   - Livestock cattle ☐ 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
    hogs, cattle

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: _____ Date: _____

Site: _____ Site Description: _____

Time Begin: _____ Time End: _____ Meter Type: _____

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

Observations: _____

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

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information: C. Goffinet, A. Mariner, M. Brown	
Date & Time: 17 Jul 12 0730	County Name:
Stream Name: Leona River	
Segment No. or nearest downstream Segment No.: AU03_03	FM 278
Description of Site: SJ Ranch	

A. Stream Characteristics:

1. Check the following channel flow status that applies:
   ☐ dry ☐ no flow ☐ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:
   ☑ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.
   ☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.
   ☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.
   ☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.
   ☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow
   Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites.
   0 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: 26.1 °C (79) Water Temp: NA °C

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

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

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

7. Please describe access opportunities or explain why the site is not easily accessible (Attach photos for documentation).
   steep, karst, limestone w/ many holes

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

Stream Name: _____ Site _____
Date _____ Time _____

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 ☐ Diving ☐ 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 ☐ >50

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

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
   no water

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

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: _____

Stream Name: _____ Site: _____
Date: _____ Time: _____

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)

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).
no water's

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).
no water

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).
p.p.

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 _____ Site _____
Date _____ Time _____

E. Stream Channel and Substantial Pools Measurements

Please check the following which best describes the river or stream: ☐ Wadeable ☐ Non-wadeable

1. Wadeable Streams

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

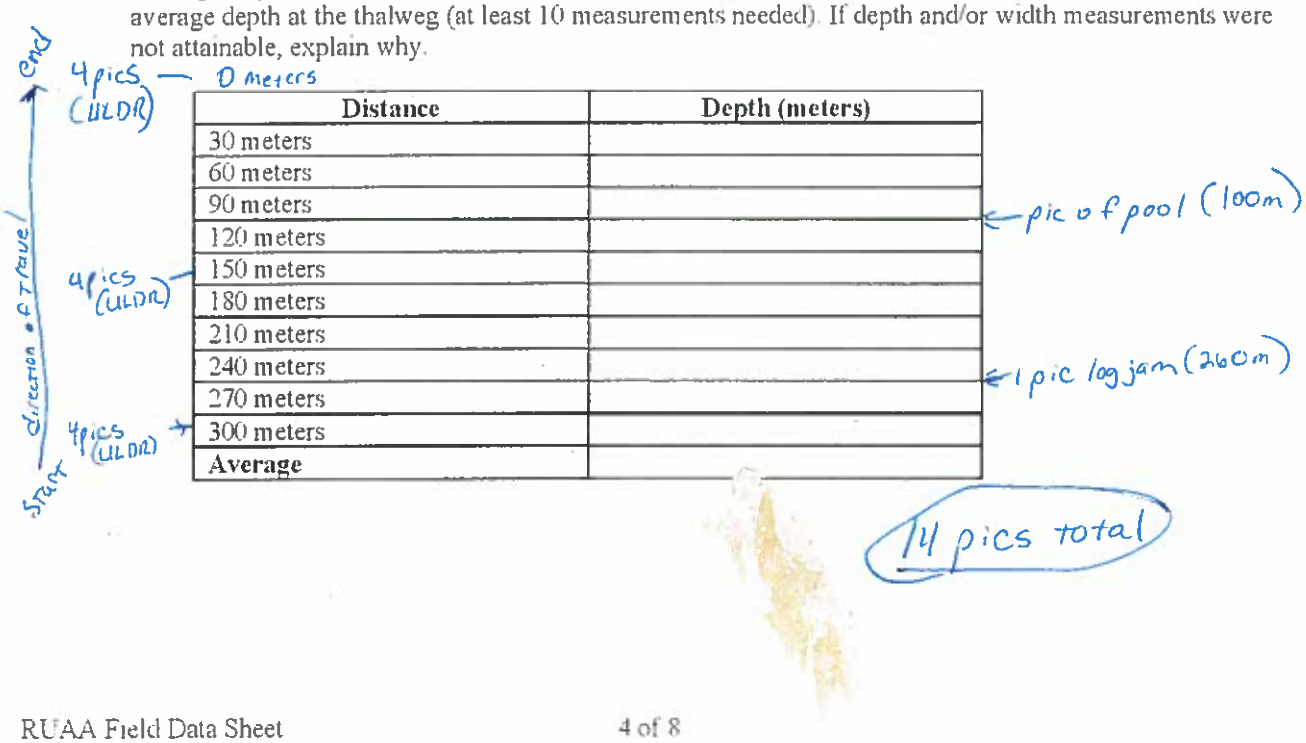
Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters

Photos #s (30 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓
Photos #s (150 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓
Photos #s (300 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓

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

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

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



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

Stream Name _____ Site _____
Date _____ Time _____

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

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	0
Width at narrowest point of the stream within 300 meter reach	0
Width at the widest point of the stream within 300 meter reach	0

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

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

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

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

Stream Name: _____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

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

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

3. Check any channel obstructions that apply (Attach photos).
   - ☐ Culverts
   - ☐ Barbed wire
   - ☐ Utility pipe
   - ☐ Fences
   - ☑ Dams
   - ☐ Other (specify): _____
   - ☐ Log jams
   - ☐ Thick vegetation
   - ☐ Rip rap
   - ☐ Low bridges
   - ☐ Water control structure
   - ☐ None

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

   Comments: _____

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

   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: _____ Site _____
Date _____ 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: NA ☐ 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: _____

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: _____ Date: _____

Site: _____ Site Description: _____

Time Begin: _____ Time End: _____ Meter Type: _____

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

Observations: _____

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

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information: GH JS, JS	
Date & Time: 17 July 12 0911 CST	County Name:
Stream Name:	
Segment No. or nearest downstream Segment No.: 2109	
Description of Site: AV 03-05	

A. Stream Characteristics:

1. Check the following channel flow status that applies:
   ☑ dry ☐ no flow ☐ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:
   ☑ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.
   ☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.
   ☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.
   ☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.
   ☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow
   Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites.
   0 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 32.2 °C 90°F Water Temp _____ °C

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

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

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name _____ Site _____
Date _____ Time _____

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 ☐ Diving ☐ 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 ☐ >50

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

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation)
   no water

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

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: _____

Stream Name _____ Site: _____
Date _____ Time _____

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)

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).
no water

3. If secondary contact recreation activities are observed, how often do water recreational activities occur that do not involve a significant risk of water ingestion? ☐ Frequently ☐ Infrequently
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)
no water

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).
private property

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: _____ Site _____
Date _____ Time _____

E. Stream Channel and Substantial Pools Measurements

Please check the following which best describes the river or stream: ☐ Wadeable ☐ Non-wadeable

1. Wadeable Streams

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

Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters.

Photos #s (30 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓
Photos #s (150 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓
Photos #s (300 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓

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

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

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

0m 0 ULOR 1-4

Distance	Depth (meters)
30 meters	0
60 meters	0
90 meters	0
120 meters	0
150 meters	0
180 meters	0
210 meters	0
240 meters	0
270 meters	0
300 meters	0
Average	0

ULO 5-8

ULOR 9-12

Field Data Sheets – Basic RUAA Survey

Stream Name: _____ Site: _____
Date: _____ Time: _____

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

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	2
Width at narrowest point of the stream within 300 meter reach	2
Width at the widest point of the stream within 300 meter reach	0

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

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name: _____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

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

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

3. Check any channel obstructions that apply (Attach photos).
   - ☐ Culverts
   - ☐ Barbed wire
   - ☐ Utility pipe
   - ☐ Fences
   - ☐ Dams
   - ☐ Other (specify): _____
   - ☒ Log jams
   - ☒ Thick vegetation
   - ☐ Rip rap
   - ☐ Low bridges
   - ☐ Water control structure
   - ☐ None

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

   Comments: _____

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

   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: suspected rope swing

Field Data Sheets – Basic RUAA Survey

Stream Name: _____ Site: _____
Date: _____ 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
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
deer

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:
bottles, containers

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:_____ Date _____

Site:_____ Site Description:_____

Time Begin _____ Time End:_____ Meter Type:_____

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

Observations:_____

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

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information:	C. Coffinet, A. Martinez, M. Brown
Date & Time: 17 Jul 12 1137	County Name: Uvalde
Stream Name: Leona River	
Segment No. or nearest downstream Segment No.: au 03_06	LR21
Description of Site:	

A. Stream Characteristics:

1. Check the following channel flow status that applies:
   ☑ dry ☐ no flow ☐ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:
   ☑ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.
   ☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.
   ☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.
   ☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.
   ☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow
   Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites.
   0 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: 35.0 °C (95 °F) Water Temp: NA °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, R ✓ Forest	____ Urban	____ Rip rap	
____ Shrub dominated corridor	____ Pasture	____ Concrete	
____ Herbaceous marsh	____ Row crops	Other (specify): ____	
____ Mowed/maintained corridor	____ Denuded/Eroded bank		

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

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

   _____

   _____

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

Field Data Sheets – Basic RUAA Survey

Stream Name _____ Site _____
Date _____ Time _____

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 ☐ Diving ☐ 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 ☐ >50

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

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation)
   no water

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

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: _____

Stream Name _____ Site _____
Date _____ Time _____

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)

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).
no water

3. If secondary contact recreation activities are observed, how often do water recreational activities occur that do not involve a significant risk of water ingestion? ☐ frequently ☐ infrequently
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).
no water

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).
private prop. w/ locked gate only open to public at certain times

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: _____ Site: _____
Date _____ Time _____

E. Stream Channel and Substantial Pools Measurements

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. 0

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. No Pools

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

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

4 pics (LLDR) 0 meters

Distance	Depth (meters)
30 meters	0
60 meters	0
90 meters	0
120 meters	0
4 pics (LLDR) 150 meters	0
180 meters	0
210 meters	0
240 meters	0
270 meters	0
4 pics (LLDR) 300 meters	0
Average	0

Stream Name: _____ Site: _____
Date: _____ Time _____

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

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	0
Width at narrowest point of the stream within 300 meter reach	0
Width at the widest point of the stream within 300 meter reach	0

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

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name _____ Site: _____
Date _____ Time: _____

F. Additional RUAA Information

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

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☑ Yes ☐ No (If yes, please provide supporting documentation and photos.)
   Comments: dam upstream @ 270 m

3. Check any channel obstructions that apply (Attach photos).
   - ☐ Culverts
   - ☐ Barbed wire
   - ☐ Utility pipe
   - ☐ Fences
   - ☑ Dams
   - ☐ Other (specify): _____
   - ☐ Log jams
   - ☐ Thick vegetation
   - ☐ Rip rap
   - ☐ Low bridges
   - ☐ Water control structure
   - ☐ None

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest).
   - ☑ Campgrounds
   - ☐ Playgrounds
   - ☐ Rural area
   - ☐ Residential
   - ☐ National forests
   - ☐ Urban/suburban location
   - ☐ Golf Course
   - ☐ Sports Field
   - ☐ Stairs/walkway
   - ☐ Boating access (ramps)
   - ☐ Beach
   - ☐ Bridge crossing
   - ☐ Commercial boating
   - ☐ Trails/paths (hiking/biking)
   - ☐ Paved parking lot
   - ☐ Unimproved parking lot
   - ☑ Roads (paved/unpaved)
   - ☐ Populated area
   - ☐ Docks or rafts
   - ☐ Commercial outfitter
   - ☐ Nearby school
   - ☐ Power Line Corridor
   - ☑ Parks (national/city/county/state)
   - ☐ Public Property
   - ☐ Other _____
   - ☐ None of the Above

   Comments: _____

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

   Comments: _____

6. Check any indications of human use (Attach photos).
   - ☑ Roads
   - ☐ Rope swings
   - ☐ Dock/platform
   - ☐ Foot paths/prints
   - ☑ Other: picnic tables
   - ☐ 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: _____ Site: _____
Date: _____ 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
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:
bottles, [illegible] tires, cans

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:_____ Date:_____

Site:_____ Site Description:_____

Time Begin:_____ Time End:_____ Meter Type:_____

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

Observations _____

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

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information:	JS, JJ, GH
Date & Time: 7/5/12	1145 CST County Name:
Stream Name: Loria	
Segment No. or nearest downstream Segment No.:	2107
Description of Site:	AU 03-07

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. Stream flow
   Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites.
   0 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: 34.4 °C (94 °F) Water Temp: 29.9 °C

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

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

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name: _____ Site: _____
Date _____ Time: _____

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 ☐ Diving ☐ 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 ☐ >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).
   none

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

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: _____

Stream Name _____ Site _____
Date _____ Time _____

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)

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).
none

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).
private property, open periodically

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: _____ Site: _____
Date: _____ Time: _____

E. Stream Channel and Substantial Pools Measurements

Please check the following which best describes the river or stream: ☑ Wadeable ☐ Non-wadeable

1. Wadeable Streams

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

Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters.

Photos #s (30 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓
Photos #s (150 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓
Photos #s (300 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓

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

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

widest 14.0 m

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.

0.50 VLOR 2-5

Distance	Depth (meters)
30 meters	0.49
60 meters	0.45
90 meters	0.45
120 meters	0.58
150 meters	0.68
180 meters	0.73
210 meters	0.80
240 meters	0.65
270 meters	0.90
300 meters	0
Average	

VLOR 7-10

VLOR 14-17

Avg. width 11.5 meters

Narrowest 0

#1-bobber
#6-liver
#11-obstruction 210m
#12-algae scum
#13-obstruction 240m

Stream Name _____ Site _____
Date _____ Time _____

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

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	11.5 m
Width at narrowest point of the stream within 300 meter reach	9.0
Width at the widest point of the stream within 300 meter reach	14.0

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

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name: _____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

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

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

3. Check any channel obstructions that apply (Attach photos)
   - ☐ Culverts
   - ☐ Barbed wire
   - ☐ Utility pipe
   - ☐ Fences
   - ☐ Dams
   - ☐ Other (specify): _____
   - ☒ Log jams
   - ☐ Thick vegetation
   - ☐ Rip rap
   - ☐ Low bridges
   - ☐ Water control structure
   - ☐ None

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest).
   - ☐ Campgrounds
   - ☐ Playgrounds
   - ☐ Rural area
   - ☐ Residential
   - ☐ National forests
   - ☐ Urban/suburban location
   - ☐ Golf Course
   - ☐ Sports Field
   - ☐ Stairs/walkway
   - ☐ Boating access (ramps)
   - ☐ Beach
   - ☐ Bridge crossing
   - ☐ Commercial boating
   - ☐ Trails/paths (hiking/biking)
   - ☐ Paved parking lot
   - ☐ Unimproved parking lot
   - ☐ Roads (paved/unpaved)
   - ☐ Populated area
   - ☐ Docks or rafts
   - ☐ Commercial outfitter
   - ☐ Nearby school
   - ☐ Power Line Corridor
   - ☐ Parks (national/city/county/state)
   - ☐ Public Property
   - ☒ Other: picnic tables
   - ☐ None of the Above

   Comments: _____

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

   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: bobbers lures

Field Data Sheets – Basic RUAA Survey

Stream Name: _____ Site: _____
Date _____ 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
Water Surface:	☐ clear	☐ scum	☐ foam ☐ debris	☐ oil

Other: mostly clear, some scum

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:
tires bottles,

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:_____ Date:_____

Site:_____ Site Description:_____

Time Begin:_____ Time End:_____ Meter Type:_____

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

Observations:_____

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

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information:	G. Gaffney, A. Martinez, M. Brown
Date & Time: 17 Jul 12 1100	County Name:
Stream Name: Leona River	
Segment No. or nearest downstream Segment No.: Au 03_09	LR19
Description of Site:	

A. Stream Characteristics:

1. Check the following channel flow status that applies
   ☑ dry ☐ no flow ☐ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:
   ☑ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.
   ☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.
   ☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.
   ☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.
   ☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow
   Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites.
   0 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: 32.2 °C (90°F) Water Temp: NA °C

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

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

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

7. Please describe access opportunities or explain why the site is not easily accessible (Attach photos for documentation)
   steep slope, heavy vegetation

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

Field Data Sheets – Basic RUAA Survey

Stream Name _____ Site _____
Date _____ Time _____

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 ☐ Diving ☐ 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 ☐ >50

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

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation)
   no water

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

Stream Name: _____ Site: _____
Date: _____ Time: _____

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)

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).
no water

3. If secondary contact recreation activities are observed, how often do water recreational activities occur that do not involve a significant risk of water ingestion? ☐ frequently ☐ infrequently
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: no water

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).
no water

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).
access from bridge only, dirt.

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: _____ Site: _____
Date: _____ Time: _____

E. Stream Channel and Substantial Pools Measurements

Please check the following which best describes the river or stream: ☐ Wadeable ☐ Non-wadeable

1. Wadeable Streams

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

Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters.

Photos #s (30 meters) Upstream ___ Downstream ___ Left Bank ___ Right Bank ___
Photos #s (150 meters) Upstream ___ Downstream ___ Left Bank ___ Right Bank ___
Photos #s (300 meters) Upstream ___ Downstream ___ Left Bank ___ Right Bank ___

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

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

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

start Bridge

4 pics (ULDR) 0 meters

4 pics (ULDR)

4 pics (ULDR)

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

Stream Name: _____ Site: _____
Date: _____ Time: _____

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

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

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

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name: _____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

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

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

3. Check any channel obstructions that apply (Attach photos)
   - ☐ Culverts
   - ☐ Barbed wire
   - ☐ Utility pipe
   - ☐ Fences
   - ☑ Dams
   - ☐ Other (specify): _____
   - ☐ Log jams
   - ☑ Thick vegetation
   - ☑ Rip rap
   - ☐ Low bridges
   - ☐ Water control structure
   - ☐ None

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

   Comments: stairs on pp

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

   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: _____ Site: _____
Date: _____ 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: NA ☐ 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: bottles, cans

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:_____ Date:_____

Site:_____ Site Description:_____

Time Begin:_____ Time End:_____ Meter Type:_____

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

Observations:_____

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

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information:	JS, JJ MB
Date & Time: 19 Jul 12 @ 0835	County Name:
Stream Name: Long	
Segment No. or nearest downstream Segment No.: 2109	
Description of Site: AU03_09 City Park Upstr	

A. Stream Characteristics:

1. Check the following channel flow status that applies.
   ☐ dry ☒ no flow ☐ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:
   ☐ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.
   ☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.
   ☒ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.
   ☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.
   ☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow
   Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites.
   0 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 28.3 °C (83 °F) Water Temp: 21.80 °C

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

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

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

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

8. Dominant Primary Substrate
   ☐ Cobble ☐ Sand ☐ Silt ☒ Mud/Clay ☐ Gravel ☐ Bedrock ☐ Rip rap ☐ Concrete, line

Field Data Sheets – Basic RUAA Survey

Stream Name: _____ Site: _____
Date: _____ Time: _____

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 ☐ Diving ☐ 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 ☐ >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).
   City ordinance, looks dirty

3. Describe if there is public access (e.g., parks, roads, etc.) (Attach photos, maps, etc. for documentation).
   City Park w/ roads + parking

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: _____

Stream Name: _____ Site: _____
Date: _____ Time: _____

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)

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).
See previous

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).
See previous
Sign saying irrigated w/ recycled water Do not drink

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).
N.A

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 _____ Site _____
Date _____ Time _____

E. Stream Channel and Substantial Pools Measurements

Please check the following which best describes the river or stream: ☐ Wadeable ☒ Non-wadeable per City ordinance

1. Wadeable Streams

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

Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters.

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

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

	Length (meters)	Width (meters)	Depth (meters)
Pool 1	>300	23.5	1.15
Pool 2			
Pool 3			
Pool 4			
Pool 5			
Pool 6			
Pool 7			
Pool 8			
Pool 9			
Pool 10			

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name _____ Site: _____
Date _____ Time: _____

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

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

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

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 (0 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓
Photos #s (150 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓
Photos #s (300 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓

# Measurements	Width (meters)
1 30	22
2 60	10
3 90	21
4 120	16
150	17.5
6 180	16.0
7 210	22.5
8 240	23.5
9 270	2.7
10 300	2.7

0 14.5m

— Max depth 1.15

Wat. Temp 21.77°C

Field Data Sheets – Basic RUAA Survey

Stream Name: _____ Site: _____
Date: _____ Time: _____

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: Cleanup mess from storm in Park
☐ 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: _____
city treatment pumps

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	☒ Roads (paved/unpaved)	☐ Other: _____
☒ Playgrounds	☐ Boating access (ramps)	☒ Populated area	☐ None of the Above
☐ Rural area	☐ Beach	☐ Docks or rafts	
☒ Residential	☒ Bridge crossing	☐ Commercial outfitter	
☐ National forests	☐ Commercial boating	☐ Nearby school	
☒ 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	☐ 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: Public park

Field Data Sheets – Basic RUAA Survey

Stream Name: _____ Site: _____
Date: _____ 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
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
ducks bird egg

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:
Plastics, caps, cans, bottles, normal stuff

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 _____ Date _____

Site _____ Site Description: _____

Time Begin _____ Time End: _____ Meter Type _____

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

Observations _____

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

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information:	C. Coffinet, A. Martinez, M. Brown
Date & Time: 17 Jul 12 0105	County Name: Uvalde
Stream Name: Leona River	
Segment No. or nearest downstream Segment No.:	Au_03_10
Description of Site:	

A. Stream Characteristics:

1. Check the following channel flow status that applies:
   ☑ dry ☐ no flow ☐ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:
   ☑ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.
   ☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.
   ☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.
   ☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.
   ☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow
   Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites.
   0 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: 35.0 (95°) °C Water Temp: NA °C

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

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

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name _____ Site _____
Date _____ Time _____

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 ☐ Diving ☐ 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 ☐ >50

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

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
   no water
   _____

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

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: _____

Stream Name _____ Site: _____
Date _____ Time _____

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)

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).
no water

3. If secondary contact recreation activities are observed, how often do water recreational activities occur that do not involve a significant risk of water ingestion? ☐ frequently ☐ infrequently
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).
no water

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: _____ Site: _____
Date: _____ Time: _____

E. Stream Channel and Substantial Pools Measurements

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

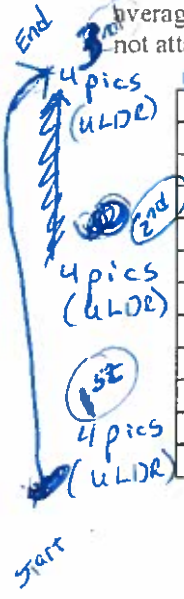
Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters.

Photos #s (30 meters) Upstream 1 Downstream 2 Left Bank 3 Right Bank 4
Photos #s (150 meters) Upstream 5 Downstream 6 Left Bank 7 Right Bank 8
Photos #s (300 meters) Upstream 9 Downstream 10 Left Bank 11 Right Bank 12

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

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

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



Distance	Depth (meters)
30 meters	0
60 meters	0
90 meters	0
120 meters	0
150 meters	0
180 meters	0
210 meters	0
240 meters	0
270 meters	0
300 meters	0
Average	0

Stream Name: _____ Site: _____
Date: _____ Time: _____

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

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	0
Width at narrowest point of the stream within 300 meter reach	0
Width at the widest point of the stream within 300 meter reach	0

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

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

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

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

Stream Name: _____ Site _____
Date: _____ Time _____

F. Additional RUAA Information

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

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

3. Check any channel obstructions that apply (Attach photos).
   - ☐ Culverts
   - ☐ Barbed wire
   - ☐ Utility pipe
   - ☐ Fences
   - ☐ Dams
   - ☐ Other (specify): _____
   - ☐ Log jams
   - ☐ Thick vegetation
   - ☐ Rip rap
   - ☐ Low bridges
   - ☐ Water control structure
   - ☑ None

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

   Comments: _____

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

   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: _____ Site: _____
Date: _____ 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
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:
cans

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 _____ Date: _____

Site: _____ Site Description: _____

Time Begin: _____ Time End: _____ Meter Type: _____

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

Observations _____

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

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information:	C. Coffinet, A. Martinez, M. Brown
Date & Time: 17 Jul 12 0129	County Name: Uvalde
Stream Name: Leona River	
Segment No. or nearest downstream Segment No.:	Au-03-11
Description of Site: vegetation	

A. Stream Characteristics:

1. Check the following channel flow status that applies.
   ☑ dry ☐ no flow ☐ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:
   - ☑ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.
   - ☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.
   - ☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.
   - ☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.
   - ☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

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

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

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

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

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

   _____

   _____

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

Field Data Sheets – Basic RUAA Survey

Stream Name _____ Site _____
Date _____ Time _____

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 ☐ Diving ☐ 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 ☐ >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).
   insufficient water - one 8" deep pool

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

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: _____

Stream Name _____ Site: _____
Date: _____ Time: _____

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)

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).
no water

3. If secondary contact recreation activities are observed, how often do water recreational activities occur that do not involve a significant risk of water ingestion? ☐ frequently ☐ infrequently
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: no water

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).
no water

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 _____ Site _____
Date _____ Time: _____

E. Stream Channel and Substantial Pools Measurements

Please check the following which best describes the river or stream ☐ Wadeable ☐ Non-wadeable

1. Wadeable Streams

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

Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters

Photos #s (30 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓
Photos #s (150 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓
Photos #s (300 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓

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

	Length (meters)	Width (meters)	Depth (meters)
Pool 1	greater than 57	13.0	0.36
Pool 2			
Pool 3			
Pool 4			
Pool 5			
Pool 6			
Pool 7			
Pool 8			
Pool 9			
Pool 10			

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

4 pics 0 meters

Distance	Depth (meters)
30 meters	0
60 meters	0
90 meters	0
120 meters	0
4 pics 150 meters	0
180 meters	0
210 meters	0
240 meters	0.2
270 meters	0.35
4 pics 300 meters	0.36
Average	

0

← pool began at 243

12 pictures

Stream Name: _____ Site: _____
Date: _____ Time: _____

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

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	0
Width at narrowest point of the stream within 300 meter reach	0
Width at the widest point of the stream within 300 meter reach	13.0

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

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name: _____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

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

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

3. Check any channel obstructions that apply (Attach photos).
   - ☐ Culverts
   - ☐ Barbed wire
   - ☐ Utility pipe
   - ☐ Fences
   - ☐ Dams
   - ☐ Other (specify): _____
   - ☐ Log jams
   - ☐ Thick vegetation
   - ☐ Rip rap
   - ☐ Low bridges
   - ☐ Water control structure
   - ☑ None

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

   Comments: _____

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

   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 _____ Site _____
Date _____ 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
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:

_____

_____

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:_____ Date:_____

Site:_____ Site Description:_____

Time Begin:_____ Time End:_____ Meter Type:_____

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

Observations _____

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

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information: JS, JJ, GH	
Date & Time: 17 July 12 1245	County Name:
Stream Name:	
Segment No. or nearest downstream Segment No.:	
Description of Site: AU 03-12	

A. Stream Characteristics:

1. Check the following channel flow status that applies.
   ☑ dry ☐ no flow ☐ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:
   ☑ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.
   ☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.
   ☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.
   ☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.
   ☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow
   Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites.
   0 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: 35.0 °C (95 °F) Water Temp: NA °C

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

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

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name: _____ Site: _____
Date: _____ Time: _____

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 ☐ Diving ☐ 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 ☐ >50

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

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation)
   no water, shrubs, grassy, mosquites

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

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: _____

Stream Name _____ Site: _____
Date _____ Time _____

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)

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)
no water

3. If secondary contact recreation activities are observed, how often do water recreational activities occur that do not involve a significant risk of water ingestion? ☐ frequently ☐ infrequently
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)
no water

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)
private property

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: _____ Site: _____
Date: _____ Time: _____

E. Stream Channel and Substantial Pools Measurements

Please check the following which best describes the river or stream: ☒ Wadeable ☐ Non-wadeable

1. Wadeable Streams

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

Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters

Photos #s (30 meters) Upstream ___ Downstream ___ Left Bank ___ Right Bank ___
Photos #s (150 meters) Upstream ___ Downstream ___ Left Bank ___ Right Bank ___
Photos #s (300 meters) Upstream ___ Downstream ___ Left Bank ___ Right Bank ___

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

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

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

0 m 0 ULOR 1-4

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

ULOR 6-9

ULOR 10-13

125M

#5 · gravel road

Stream Name: _____ Site: _____
Date _____ Time: _____

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

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	2
Width at narrowest point of the stream within 300 meter reach	2
Width at the widest point of the stream within 300 meter reach	6

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

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name: _____ Site: _____
Date _____ Time _____

F. Additional RUAA Information

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

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

3. Check any channel obstructions that apply (Attach photos).
   - ☐ Culverts
   - ☐ Barbed wire
   - ☐ Utility pipe
   - ☐ Fences
   - ☐ Dams
   - ☐ Other (specify): _____
   - ☐ Log jams
   - ☐ Thick vegetation
   - ☐ Rip rap
   - ☐ Low bridges
   - ☐ Water control structure
   - ☒ None

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

   Comments: _____

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

   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: _____ Site: _____
Date: _____ 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: NA	☐ clear	☐ green	☐red	☐ brown	☐ black
Bottom Deposit: NA	☐ sludge	☐ solids	☐ fine sediments	☐none	☐other
Water Surface: NA	☐ 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 deer

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: tires

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).
Recent dirt dozing, pasture road in stream

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream: _____ Date _____

Site: _____ Site Description _____

Time Begin _____ Time End: _____ Meter Type: _____

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

Observations: _____

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

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information: C. Goffinet, A. Martinez, M. Brown	
Date & Time: 17 Jul 12	County Name: Ulvalde
Stream Name: Leona River	
Segment No. or nearest downstream Segment No.: AU03_13 ~~(I think)~~ AUS 25 May 2013	
Description of Site:	

A. Stream Characteristics:

1. Check the following channel flow status that applies.
   ☐ dry ☑ no flow ☐ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:
   ☑ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.
   ☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.
   ☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.
   ☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.
   ☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow
   Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites.
   0 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: 37.2 °C 99 °C Water Temp: 34.1 °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,R ✓ Forest	____ Urban	____ Rip rap
____ Shrub dominated corridor	____ Pasture	____ Concrete
____ Herbaceous marsh	____ Row crops	Other (specify): ____
____ Mowed/maintained corridor	____ Denuded/Eroded bank	

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name _____ Site _____
Date _____ Time _____

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 ☐ Diving ☐ 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 ☐ >50

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

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation)
   no water

3. Describe if there is public access (e.g., parks, roads, etc.) (Attach photos, maps, etc. for documentation).
   p.p., must cross fence onto p.p., road & bridge available

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: _____

Stream Name: _____ Site: _____
Date: _____ Time: _____

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)

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).
lack of water

3. If secondary contact recreation activities are observed, how often do water recreational activities occur that do not involve a significant risk of water ingestion? ☐ frequently ☐ infrequently
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).
lack of water

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).
p.p. fence

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 _____ Site _____
Date _____ Time _____

E. Stream Channel and Substantial Pools Measurements

Please check the following which best describes the river or stream: ☑ Wadeable ☐ Non-wadeable

1. Wadeable Streams

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

Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters.

Photos #s (30 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓
Photos #s (150 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓
Photos #s (300 meters) Upstream ✓ Downstream ✓ Left Bank ✓ Right Bank ✓

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

	Length (meters)	Width (meters)	Depth (meters)
Pool 1	40	~~50~~ 3.5	.2
Pool 2	Get off 1ST RUAA	44.5	>1.6
Pool 3	45		
Pool 4			
Pool 5			
Pool 6			
Pool 7			
Pool 8			
Pool 9			
Pool 10			

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

0 meters Pool at end - use last RUAA measurements

Distance	Depth (meters)
30 meters	0
60 meters	0
90 meters	0
120 meters	0
150 meters	.08
180 meters	.2
210 meters	0
240 meters	0
270 meters	0
300 meters	0
Average	0.03

Stream Name: _____ Site: _____
Date: _____ Time: _____

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

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

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

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

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

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

Stream Name _____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

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

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

3. Check any channel obstructions that apply (Attach photos).
   - ☐ Culverts
   - ☐ Barbed wire
   - ☐ Utility pipe
   - ☐ Fences
   - ☐ Dams
   - ☐ Other (specify): _____
   - ☐ Log jams
   - ☐ Thick vegetation
   - ☐ Rip rap
   - ☐ Low bridges
   - ☐ Water control structure
   - ☑ None

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

   Comments: _____

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

   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 _____ Site _____
Date _____ 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
   - 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:

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:_____ Date:_____

Site:_____ Site Description:_____

Time Begin:_____ Time End:_____ Meter Type:_____

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

Observations:_____

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

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information:	JS, JJ, GH
Date & Time: 17 Jul 12 1310 CST	County Name:
Stream Name:	Leona
Segment No. or nearest downstream Segment No.:	
Description of Site:	AU 03-14

A. Stream Characteristics:

1. Check the following channel flow status that applies:
   ☑ dry ☐ no flow ☐ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:
   ☑ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.
   ☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.
   ☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.
   ☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.
   ☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow
   Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites.
   0 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: 36.1 °C 97°F Water Temp: N/A °C

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

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

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

7. Please describe access opportunities or explain why the site is not easily accessible (Attach photos for documentation):
   pp. w/ fence & dense veg.

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

Field Data Sheets – Basic RUAA Survey

Stream Name _____ Site _____
Date _____ Time: _____

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 ☐ Diving ☐ 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 ☐ >50

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

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc., for documentation).
   no water, dense shrubs & vegetation

3. Describe if there is public access (e.g., parks, roads, etc.) (Attach photos, maps, etc. for documentation).
   none, pipes

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: _____

Stream Name: _____ Site: _____
Date: _____ Time: _____

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)

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).
no water

3. If secondary contact recreation activities are observed, how often do water recreational activities occur that do not involve a significant risk of water ingestion? ☐ frequently ☐ infrequently
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).
no water, dense shrubs & veg.

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).
P.P.

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: _____ Site: _____
Date: _____ Time: _____

E. Stream Channel and Substantial Pools Measurements

Please check the following which best describes the river or stream: ☑ Wadeable ☐ Non-wadeable

1. Wadeable Streams

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

Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters.

Photos #s (30 meters) Upstream ___ Downstream ___ Left Bank ___ Right Bank ___
Photos #s (150 meters) Upstream ___ Downstream ___ Left Bank ___ Right Bank ___
Photos #s (300 meters) Upstream ___ Downstream ___ Left Bank ___ Right Bank ___

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

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

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

Distance	Depth (meters)
30 meters	0
60 meters	0
90 meters	0
120 meters	0
150 meters	0
180 meters	0
210 meters	0
240 meters	0
270 meters	0
300 meters	0
Average	0

UDOR-9-12

UDOR-5-8

UDOR 1-4

Stream Name: _____ Site: _____
Date: _____ Time: _____

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

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	2
Width at narrowest point of the stream within 300 meter reach	2
Width at the widest point of the stream within 300 meter reach	8

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

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name: _____ Site: _____
Date: _____ Time: _____

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	☐ Roads (paved/unpaved)	☐ Other: _____
☐ Playgrounds	☐ Boating access (ramps)	☐ Populated area	☐ None of the Above
☐ Rural area	☐ Beach	☐ Docks or rafts	
☐ Residential	☐ Bridge crossing	☐ Commercial outfitter	
☐ National forests	☐ Commercial boating	☐ Nearby school	
☐ 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	☑ 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: _____

Field Data Sheets – Basic RUAA Survey

Stream Name: _____ Site: _____
Date: _____ 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
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:
tires, cans & bottles

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).
brushed

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream _____ Date _____

Site _____ Site Description _____

Time Begin _____ Time End _____ Meter Type _____

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

Observations _____

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