Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information: Sam Sugurek, Beth Almarez	
Date & Time: 9/1/12 0940	County Name: Bee
Stream Name: Aransas Creek	
Segment No. or nearest downstream Segment No.: 2004A	
Description of Site: 12941 ACKOZ E 181	

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: 30.6 °C 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.)

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

beyond fence line is pasture w/over-grazed vegetation

6. Ease of bank access to the water body: ☐ Easy ☑ Moderately easy ☑ Moderately difficult ☐ Difficult
   KBA 9/1/12

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name: Arrunsas Creek Site: ACK02
Date: 9/1/12 Time: 0940

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).
   site dry

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

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

C. Secondary Contact Water Recreation Evaluation:

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

1. Were water recreation activities observed at the site, but the nature of the recreation does not involve a significant risk of ingestion (e.g., secondary contact recreation activities)? ☐ Yes ☑ No secondary contact recreation activities were observed.

   a. Check the following boxes of secondary contact recreation activities that were observed at the time of the sampling event at the site (Attach photos of activities or lack of activities).
   ☐ Fishing
   ☐ Boating-commercial, recreational
   ☐ Non-whitewater-kayaking, rafting, canoeing
   ☑ No secondary contact recreation activities were observed
   ☐ Other secondary contact activities: _____

Field Data Sheets – Basic RUAA Survey

Stream Name: Aransas Creek Site: ACK02
Date: 9/1/12 Time: 0940

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).
site 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 BH 9/1/12
Please describe how often the activities occur? ☒ Unknown ☐ Never ☐ Daily ☐ Monthly ☐ Yearly
none observed

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).
site dry

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).
stream banks overgrown, poison ivy abundant

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: Arrarsas Creek Site: ACK 02
Date: 9/1/12 Time: 0940

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. site dry

	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. site dry

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: Aranisqas Creek Site: ACK02
Date: 9/1/12 Time: 0940

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. measured dry stream bed

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	4.5
Width at narrowest point of the stream within 300 meter reach	4.3
Width at the widest point of the stream within 300 meter reach	5.5

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: Aransas Creek Site: ACK02
Date: 9-1-12 Time: 0940

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
   - BA 9/1/12

   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: overgrown banks, site dry

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: trash

Field Data Sheets – Basic RUAA Survey

Stream Name: Aransas Creek Site: ACL02
Date: 9/1/12 Time: 0940

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: site dry

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
cattle? found on other side of fence under bridge

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, styrofoam

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: Arnsses Creek Date:

Site: C181 ACK02 Site Description: C 181

Time Begin: Time End: Meter Type:

Observers: SS, BA 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: Sam Sugarek, Beth Almaraz	
Date & Time: 8/31/12 1211	County Name: Bee County
Stream Name: Aransas Creek	
Segment No. or nearest downstream Segment No.: 2001A	
Description of Site: midway between US 181 & FM 888 ACK03	

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.

   SS 8/31/12

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 pools

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: 36.5 °C Water Temp: 32.41 °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):
   private property, fence

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

property has been in family for ~100 years, he owns about 200 acres

Field Data Sheets – Basic RUAA Survey

Stream Name: Aranskis Creek Site: ACK 0.3
Date: 8/3/12 Time: 1211

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). 8/31/12
   ☐ 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).
   Shallow pools currently, during times of lots of rain there may be flow, but typically shallow

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

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

C. Secondary Contact Water Recreation Evaluation:

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

1. Were water recreation activities observed at the site, but the nature of the recreation does not involve a significant risk of ingestion (e.g., secondary contact recreation activities)? ☐ Yes ☑ No secondary contact recreation activities were observed.

   a. Check the following boxes of secondary contact recreation activities that were observed at the time of the sampling event at the site (Attach photos of activities or lack of activities).
   ☐ Fishing
   ☐ Boating-commercial, recreational
   ☐ Non-whitewater-kayaking, rafting, canoeing
   ☐ No secondary contact recreation activities were observed
   ☐ Other secondary contact activities: _____

Field Data Sheets – Basic RUAA Survey

Stream Name: Aransas Creek Site: ACL 03
Date: 8/31/12 Time: 1211

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).
Shallow pools, no flow currently

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
people may trespass

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).
Shallow pools, no flow currently

6. Describe why there is limited public access (e.g., lack of roads, river or stream banks overgrown, etc.) (Attach photos, maps, etc. for documentation).
fences, 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: Arrowsas Creek Site: ACK03
Date: 8/31/12 Time: 1211

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	17	4.5	0.1
Pool 2	32	4.2	0.4
Pool 3	27	3.9	0.3
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	0.08
60 meters	0.1
90 meters	dry
120 meters	dry
150 meters	0.32
180 meters	0.37
210 meters	0.40
240 meters	dry
270 meters	0.3
300 meters	0.27
Average	0.184

Field Data Sheets – Basic RUAA Survey

Stream Name: Arainsas Creek Site: ACK03
Date: 8/31/12 Time: 1211

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	5.2
Width at narrowest point of the stream within 300 meter reach	1.0
Width at the widest point of the stream within 300 meter reach	14.5

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: Arausas Creek Site: ACK03
Date: 8/31/12 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): earth
   - ☐ 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: owner commented that it probably washed down from upstream. Caught channel cat about ~23 years ago.

Field Data Sheets – Basic RUAA Survey

Stream Name: Arkansas Creek Site: ACK03
Date: 8/31/12 Time: 1211

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: Aransas Creek Date:

Site: ACK03 Site Description: Midway between US181 & FM 888

Time Begin: Time End: Meter Type:

Observers: SS, BA 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: Sam Sugarek, Beth Almaraz	
Date & Time: 3/31/12 1120	County Name: Bee County
Stream Name: Aransas Creek	
Segment No. or nearest downstream Segment No.: 2004A	
Description of Site: ACR04 downstream of FM888	

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.
   BA 8/31/12 ☒ 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 Standing water

4. Water Quality Data (Field Parameters)
   Field parameters should be collected in accordance with the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1.
   Air Temp: 33.4 °C Water Temp: 29.2 °C ~~29~~ BA

5. Riparian Zone (Mark dominant categories with L (Left Bank) and R (Right Bank). Bank orientation is determined by the investigator facing downstream.)
   BA 8/31/12

~~LR~~ Forest	____ Urban	____ Rip rap
~~LR~~ Shrub dominated corridor	____ Pasture	____ Concrete
____ Herbaceous marsh	____ Row crops	Other (specify): ____
LBR 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, fence

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

Field Data Sheets – Basic RUAA Survey

Stream Name: Aransas Creek Site: ACK04
Date: 8/31/12 Time: 1120

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).
   Shallow pool, historically streambed was dug out to capture water

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

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

C. Secondary Contact Water Recreation Evaluation:

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

1. Were water recreation activities observed at the site, but the nature of the recreation does not involve a significant risk of ingestion (e.g., secondary contact recreation activities)? ☐ Yes ☑ No secondary contact recreation activities were observed.

   a. Check the following boxes of secondary contact recreation activities that were observed at the time of the sampling event at the site (Attach photos of activities or lack of activities).
   ☐ Fishing
   ☐ Boating-commercial, recreational
   ☐ Non-whitewater-kayaking, rafting, canoeing
   ☑ No secondary contact recreation activities were observed
   ☐ Other secondary contact activities: _____

Field Data Sheets – Basic RUAA Survey

Stream Name: Arunsas Creek Site: ACK04
Date: 3/31/12 Time: 1120

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 flow, shallow pool

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 flow, shallow pool

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: Aransas Creek Site: ACK 04
Date: 8/31/12 Time: 1120

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	0.254
60 meters	0.22
90 meters	0.05
120 meters	0.25
150 meters	0.34
180 meters	0.28
210 meters	0.26
240 meters	0.25
270 meters	0.41
300 meters	0.47
Average	0.2784

Field Data Sheets – Basic RUAA Survey

Stream Name: Arkansas Creek Site: ACK 04
Date: 8/31/12 Time: 1120

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	7.2
Width at narrowest point of the stream within 300 meter reach	0.4
Width at the widest point of the stream within 300 meter reach	17.4

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: Aransas Creek Site: ACK04
Date: 8/31/12 Time: 1120

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: stream bed was dug out to hold water, pooled w/no flow

3. Check any channel obstructions that apply (Attach photos).
   - ☐ Culverts
   - ☑ Barbed wire
   - ☐ Utility pipe
   - ☐ Fences
   - ☐ Dams
   - ☑ Other (specify): earth - higher elevation due to streambed historically dredged
   - ☐ Log jams
   - ☐ Thick vegetation
   - ☐ Rip rap
   - ☐ Low bridges
   - ☐ Water control structure
   - ☑ None BA

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 - private property
   - ☐ Industrial
   - ☑ No public access

   Comments: owner commented that they don't get in water (unless falling in on accident) would like for there to be fish - small minnows present, turtles eat the fish though

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: boat /light on adjacent property, small foot bridg accross pool

Field Data Sheets – Basic RUAA Survey

Stream Name: Aransas Creek Site: ACK C4
Date: 8/31/12 Time: 1120

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: turtles in water

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:
plastic bag

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: Arenisos Creek Date:

Site: ACK04 Site Description: downstream of FM 888

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)	

No flow, pooled water

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information: Sam Sugarek, Beth Almaraz	
Date & Time: 9/1/12 1035	County Name: Bee County
Stream Name: Aransas Creek	
Segment No. or nearest downstream Segment No.: 2004A	
Description of Site: 20066 ACL05 @ FM 888	

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: 31.4 °C Water Temp: 31.2 °C BA 9/1/12
   N/A

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

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):
   bridge crossing

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

Field Data Sheets – Basic RUAA Survey

Stream Name: Aransas Creek Site: 20066
Date: 9/1/12 Time: 1035

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).
   site dry

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

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

C. Secondary Contact Water Recreation Evaluation:

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

1. Were water recreation activities observed at the site, but the nature of the recreation does not involve a significant risk of ingestion (e.g., secondary contact recreation activities)? ☐ Yes ☑ No secondary contact recreation activities were observed.

   a. Check the following boxes of secondary contact recreation activities that were observed at the time of the sampling event at the site (Attach photos of activities or lack of activities).
   ☐ Fishing
   ☐ Boating-commercial, recreational
   ☐ Non-whitewater-kayaking, rafting, canoeing
   ☑ No secondary contact recreation activities were observed
   ☐ Other secondary contact activities: _____

Field Data Sheets – Basic RUAA Survey

Stream Name: Arrowsas Creek Site: 20066
Date: 9/1/12 Time: 1035

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).
site 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).
site dry

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).
stream banks overgrown

D. Noncontact Recreation Evaluation

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name: Arunsis Creek Site: 20616
Date: 9/1/12 Time: 1035

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. no water - however dry pool dimensions 26×6

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name: Aransas Creek Site: 2000
Date: 9/1/12 Time: 1035

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. TOOK measurements of dry creek bed

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	1.2
Width at narrowest point of the stream within 300 meter reach	0.9
Width at the widest point of the stream within 300 meter reach	1.6.0

BA 9/1/12

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

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: Aransas Creek Site: 20066
Date: 9/11/12 Time: 1035

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 → 6m x 2.5
   - ☐ 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: site goes dry, overgrown vegetation

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: trash, small platform in tree

Field Data Sheets – Basic RUAA Survey

Stream Name: Aransas Creek Site: 20066
Date: 9/1/12 Time: 1035

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

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: frogs

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:
car seats, bottles, candle holders, plastic, tire, diapers, mattress, siding

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: Arroyos Creek Date:

Site: 20066 Site Description: @ FM 888

Time Begin: Time End: Meter Type:

Observers: SS, BA 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)

BA 8/31/12

Data Collectors & Contact Information: Sam Sugarek, Beth Almaraz	
Date & Time: 8/31/12 ~~1344~~ 1351	County Name: Bee County
Stream Name: Aransas Creek	
Segment No. or nearest downstream Segment No.: 2004A	
Description of Site: ACK06 @ FM 1349	

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: 36.3 °C 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.)

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):
   barbed wire fence, private property

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

Field Data Sheets – Basic RUAA Survey

Stream Name: Aransas Creek Site: ACK06
Date: 8/31/12 Time: 1351

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

   BH 9/1/12 none 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).
   dry

3. Describe if there is public access (e.g., parks, roads, etc.) (Attach photos, maps, etc. for documentation).
   bridge crossing - but barbed wire fence, 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: _____

Field Data Sheets – Basic RUAA Survey

Stream Name: Aransas Creek Site: ACK06
Date: A 8/31/12 Time: 1351

BA 8/28/12

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).
dry, private property

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: dry

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).
dry

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).
barbed wire fence, 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: Aransas Creek Site: ACK6
Date: 8/31/12 Time: 1351

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 dry

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. dry

	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. dry

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: Aransas Creek Site: ACK06
Date: 8/31/12 Time: 1351

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. dry

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: Arkansas Creek Site: ACK06
Date: 8/31/12 Time: 1351

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

   BA 8/31/12

   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: Arawsas Creek Site: ACK06
Date: 8/31/12 Time: 1351

7. Check all water characteristics that apply (Attach photos). N/A dry

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

DK 8/31/12

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

DK 8/31/12

Briefly describe the kinds of garbage observed:
cans & glass

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: Aransas Creek Date:

Site: ACK 06 Site Description: CFM349

Time Begin: Time End: Meter Type:

Observers: SS, BA Stream Width*: Section Width (W):

Observations: site dry

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)

28°20.621
-97°49.995

Data Collectors & Contact Information: Sam Sugarek, Beth Amaral	
Date & Time: 8/31/12 1500	County Name: Bee County
Stream Name: Aransas Creek	
Segment No. or nearest downstream Segment No.: 2004A	
Description of Site: ACK07 CU559	

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.

BA 8/31/12

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 site dry with exception of pool of water in creek bed from leaky trough

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: 36.6 °C 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.)

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):
   private property, fence

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

Field Data Sheets – Basic RUAA Survey

Stream Name: Aransas Creek Site: ACK07
Date: 8/31/12 Time: 1500

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). BA 8/31/12
   ☐ 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).
   site dry except water has pooled from leaking cattle trough

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

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

C. Secondary Contact Water Recreation Evaluation:

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

1. Were water recreation activities observed at the site, but the nature of the recreation does not involve a significant risk of ingestion (e.g., secondary contact recreation activities)? ☐ Yes ☑ No secondary contact recreation activities were observed.

   a. Check the following boxes of secondary contact recreation activities that were observed at the time of the sampling event at the site (Attach photos of activities or lack of activities).
   ☐ Fishing
   ☐ Boating-commercial, recreational
   ☐ Non-whitewater-kayaking, rafting, canoeing
   ☑ No secondary contact recreation activities were observed
   ☐ Other secondary contact activities: _____

Field Data Sheets – Basic RUAA Survey

Stream Name: Aransas Creek Site: ACK07
Date: 8/31/12 Time: 1500

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).
private property, cattle growling!

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 SPS 8/31/12
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: site dry,

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).
site dry

6. Describe why there is limited public access (e.g., lack of roads, river or stream banks overgrown, etc.) (Attach photos, maps, etc. for documentation).
fences, 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: Arunsas Creek
Site: ACK07
Date: 8/31/12
Time: 1500

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	0.22
60 meters	dry
90 meters	↓
120 meters	↓
150 meters	↓
180 meters	↓
210 meters	↓
240 meters	↓
270 meters	↓
300 meters	↓
Average	

site has leaking cattle trough w/water flowing out into creek bed & has made a small pool

Field Data Sheets – Basic RUAA Survey

Stream Name: Arawsas Creek Site: ACK07
Date: 8/31/12 Time: 1500

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. 32m length measured pool from cattle trough leak

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	0.5 R
Width at narrowest point of the stream within 300 meter reach	2.5 R
Width at the widest point of the stream within 300 meter reach	5.5

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: Aransas Creek
Site: ACK07
Date: 8/31/12
Time: 1500

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

   BA 8/31/12

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: Aransas Creek Site: ACK07
Date: 8/31/12 Time: 1500

7. Check all water characteristics that apply (Attach photos). from cattle trough leak

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: frogs in pool from leaky trough

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

Date:

Stream: Arkansas Creek

Site: ACK07 Site Description: @ US 59

Time Begin: Time End: Meter Type:

Observers: SS, BA 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: Sam Sugarek, Beth Almanza	
Date & Time: 8/31/12 10:30	County Name: Bee County
Stream Name: Aransas Creek	
Segment No. or nearest downstream Segment No.: 2004A	
Description of Site: ACRUSA @ Gill Ranch Rd	

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: 32.4 °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	L&L Pasture	____ Concrete
____ Herbaceous marsh	____ Row crops	Other (specify): ____
L&R Mowed/maintained corridor	____ Denuded/Eroded bank	

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name: Arunsees Creek Site: ACK08
Date: 8/31/12 Time: 1030

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).
   dry, private property, fence

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

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

C. Secondary Contact Water Recreation Evaluation:

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

1. Were water recreation activities observed at the site, but the nature of the recreation does not involve a significant risk of ingestion (e.g., secondary contact recreation activities)? ☐ Yes ☑ No secondary contact recreation activities were observed.

   a. Check the following boxes of secondary contact recreation activities that were observed at the time of the sampling event at the site (Attach photos of activities or lack of activities).
   ☐ Fishing
   ☐ Boating-commercial, recreational
   ☐ Non-whitewater-kayaking, rafting, canoeing
   ☑ No secondary contact recreation activities were observed
   ☐ Other secondary contact activities: _____

Field Data Sheets – Basic RUAA Survey

Stream Name: Aransas Creek Site: ACK08
Date: 8/31/12 Time: 1030

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).
dry, private property, fence

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 none observed
Please describe how often the activities occur? ☐ Unknown ☑ Never ☐ Daily ☐ Monthly ☐ Yearly
BA 8/31/12

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

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).
dry most of the time unless there has been significant rainfall for many days & then the water does not stay in area for a long amount of time

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, 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: Arnsons Creek Site: ACC08
Date: 8/31/12 Time: 1030

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. N/A dry

	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. N/A dry

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: Aransas Creek Site: ACK68
Date: 8/31/12 Time: 1030

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.

N/A dry

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: dry

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: Aransas Creek Site: ACK 08
Date: 8/31/12 Time: 1030

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 BA 8/31/12

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: dry

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: Aransas Creek Site: ACK08
Date: 8/31/12 Time: 1030

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: Site dry

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).

dry

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream: Arrunsas Creek Date:

Site: ACK05 Site Description @ Gill Ranch Rd

Time Begin: Time End: Meter Type:

Observers: SS, BA Stream Width*: Section Width (W):

Observations: site dry

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)	

GPS - 28°22.911 -97°51.707 additional site on property from site #8

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information:	Sam Sugarek, Beth Almaraz
Date & Time: 8/31/2012 9:53	County Name: Bee County
Stream Name: Aransas Creek	
Segment No. or nearest downstream Segment No.: 2004 A	
Description of Site: ~~E La Parra Rd AC-09~~ AC-8b	

BA 8/31/12

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.
   0.0 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: 31.4 °C Water Temp: N/A °C dry

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):
   private property

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

Field Data Sheets – Basic RUAA Survey

Stream Name: Aransas Creek Site: ACK09
Date: 8/31/12 Time: 0953

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).
   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: _____

Field Data Sheets – Basic RUAA Survey

Stream Name: Aransas Creek Site: ACK09
Date: 8/31/12 Time: 0953

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).
dry, private property

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: dry unless recent high rain event (water here when hurricane blew through ~03)

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).
dry most of the time

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: Aransas Creek Site: ACK04
Date: 8/31/12 Time: 0953

E. Stream Channel and Substantial Pools Measurements

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

1. Wadeable Streams dry site

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. N/A no water

	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. N/A no water

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: Arroyos Creek
Date: 8/21/12

Site: ACK09
Time: 0953

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: dry site

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: Arkansas Creek Site: ACK 07
Date: 8/31/12 Time: 0953

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

   BA 8/31/12

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: site dry

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: Aransas Creek Site: ACK07
Date: 8/31/12 Time: 0953

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: N/A dry

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 dry

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream: Arkansas Creek Date:

Site: ACK C9 Site Description: @ La Para Rd.

Time Begin: Time End: Meter Type:

Observers: SS, BA Stream Width*: Section Width (W):

Observations: site dry

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)	