

Field Data Sheets – Basic RUAA Survey
(to be completed for each site)

Data Collectors & Contact Information: J. Stroebel, A. Martinez, J. Millican and P. Sudman	
Date & Time: 10Jun11 @ 14:50 CST	County Name: Brown
Stream Name: Mid-Pecan Bayou	
Segment No. or nearest downstream Segment No.: 1431	
Description of Site: MP008	

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 or 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 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.
3.82cfs

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: 36.0°C Water Temp: 30.0°C

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

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

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

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

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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 or 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 (25 ft) of water
☐ Individual is well away from water between 8 and 30 meters (100 ft) ☒ Not applicable

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

Limited access

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? ☐ Yes ☒ No

C. Secondary Contact Water Recreation Evaluation:

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

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

- a. Check the following boxes of secondary contact recreation activities that were observed at the time of the sampling event at the site (Attach photos of activities or lack of activities).

- ☐ Fishing
☐ Boating-commercial, recreational
☐ Non-whitewater-kayaking, rafting, canoeing
☒ No secondary contact recreation activities were observed
☐ Other secondary contact activities: _____

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- 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 (25 ft) of water
☐Body well away from water between 8 and 30 meters (100 ft)
2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
No public access. 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: _____
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).
Private property; steep rocky banks
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 and no public roads, steep rocky banks

D. Noncontact Recreation Evaluation

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

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

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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 x Downstream x Left Bank x Right Bank x

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

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

- 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	134 (270 - 136)	15.5	1.33
Pool 2	27.5 (100 - 127.5)	8.9	0.58 (glide?)
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)
0 meters	0.80
30 meters	0.28
60 meters	0.28
90 meters	0.27
120 meters	0.93
150 meters	0.59
180 meters	0.77
210 meters	1.20
240 meters	0.70
270 meters	0.24
300 meters	0.98
Average	0.64

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- 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	6.5
Width at narrowest point of the stream within 300 meter reach	3.47
Width at the widest point of the stream within 300 meter reach	15.5

- 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:

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	

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- | | |
|---|---|
| <input type="checkbox"/> Drinking or water in mouth | <input type="checkbox"/> Playing on shoreline |
| <input type="checkbox"/> Bathing | <input type="checkbox"/> Picnicking |
| <input type="checkbox"/> Walking | <input type="checkbox"/> Motorcycle/ATV |
| <input type="checkbox"/> Jogging/running | <input type="checkbox"/> Hunting/Trapping |
| <input type="checkbox"/> Bicycling | <input type="checkbox"/> Wildlife watching |
| <input type="checkbox"/> Standing | <input checked="" type="checkbox"/> None |
| <input type="checkbox"/> Sitting | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Lying down/sleeping | |

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☐ Yes ☒ No (If yes, please provide supporting documentation and photos.) Comments: _____3. Check any channel obstructions that apply (Attach photos).

- | | | | | |
|---------------------------------------|---|---|--------------------------------------|--|
| <input type="checkbox"/> Culverts | <input type="checkbox"/> Fences | <input type="checkbox"/> Log jams | <input type="checkbox"/> Rip rap | <input type="checkbox"/> Water control structure |
| <input type="checkbox"/> Barbed Wire | <input type="checkbox"/> Dams | <input type="checkbox"/> Thick vegetation | <input type="checkbox"/> Low bridges | <input type="checkbox"/> None |
| <input type="checkbox"/> Utility pipe | <input checked="" type="checkbox"/> Other (specify): <u>Large rocks</u> | | | |

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

- | | | | |
|--|---|---|---|
| <input type="checkbox"/> Campgrounds | <input type="checkbox"/> Stairs/walkway | <input type="checkbox"/> Roads (paved/unpaved) | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Playgrounds | <input type="checkbox"/> Boating access (ramps) | <input type="checkbox"/> Populated area | <input checked="" type="checkbox"/> None of the above |
| <input type="checkbox"/> Rural area | <input type="checkbox"/> Beach | <input type="checkbox"/> Docks or rafts | |
| <input type="checkbox"/> Residential | <input type="checkbox"/> Bridge crossing | <input type="checkbox"/> Commercial outfitter | |
| <input type="checkbox"/> National forests | <input type="checkbox"/> Commercial boating | <input type="checkbox"/> Nearby school | |
| <input type="checkbox"/> Urban/suburban location | <input type="checkbox"/> Trails/paths (hiking/biking) | <input type="checkbox"/> Power Line Corridor | |
| <input type="checkbox"/> Golf Course | <input type="checkbox"/> Paved parking lot | <input type="checkbox"/> Parks (national/city/county/state) | |
| <input type="checkbox"/> Sports field | <input type="checkbox"/> Unimproved parking lot | <input type="checkbox"/> Public property | |

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

- | | | |
|--|--|--|
| <input checked="" type="checkbox"/> Private Property | <input checked="" type="checkbox"/> Fence | <input type="checkbox"/> No trespass sign |
| <input type="checkbox"/> Barge/ship traffic | <input type="checkbox"/> Wildlife | <input type="checkbox"/> Industrial |
| <input checked="" type="checkbox"/> Steep slopes | <input type="checkbox"/> None of the Above | <input checked="" type="checkbox"/> No public access |
| <input type="checkbox"/> Other: _____ | <input checked="" type="checkbox"/> No roads | |

Comments: _____

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

- | | | | |
|--|---|--|---|
| <input type="checkbox"/> Roads | <input type="checkbox"/> RV/ATV Tracks | <input type="checkbox"/> NPDES Discharge | <input type="checkbox"/> Organized event |
| <input type="checkbox"/> Rope swings | <input type="checkbox"/> Camping Sites | <input type="checkbox"/> Gates on corridor | <input checked="" type="checkbox"/> No Human Presence |
| <input type="checkbox"/> Dock/platform | <input type="checkbox"/> Fire pit/ring | <input type="checkbox"/> Children's toys | |
| <input type="checkbox"/> Foot paths/prints | <input type="checkbox"/> Fishing Tackle | <input type="checkbox"/> Remnant of Kid's play | |
| <input type="checkbox"/> Other: _____ | | | |

Comments: _____

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

Aquatic Vegetation:	<input type="checkbox"/> absent	<input checked="" type="checkbox"/> rare	<input type="checkbox"/> common	<input type="checkbox"/> abundant	
Algae Cover:	<input type="checkbox"/> absent	<input type="checkbox"/> rare	<input checked="" type="checkbox"/> common	<input type="checkbox"/> abundant	
Odor:	<input type="checkbox"/> none	<input checked="" type="checkbox"/> rare	<input type="checkbox"/> common	<input type="checkbox"/> abundant	
Color:	<input type="checkbox"/> clear	<input checked="" type="checkbox"/> green	<input type="checkbox"/> red	<input checked="" type="checkbox"/> brown	<input type="checkbox"/> black
Bottom Deposit:	<input type="checkbox"/> sludge	<input type="checkbox"/> solids	<input checked="" type="checkbox"/> fine sediment	<input type="checkbox"/> none	<input type="checkbox"/> other
Water Surface:	<input checked="" type="checkbox"/> clear	<input type="checkbox"/> scum	<input type="checkbox"/> foam	<input type="checkbox"/> debris	<input type="checkbox"/> oil
Other:	_____				

8. Vertebrates Observed within 300 meter reach.

Snakes	<input checked="" type="checkbox"/> None	<input type="checkbox"/> slight presence	<input type="checkbox"/> moderate presence	<input type="checkbox"/> large presence
Water Dependent Birds	<input type="checkbox"/> None	<input checked="" type="checkbox"/> slight presence	<input type="checkbox"/> moderate presence	<input type="checkbox"/> large presence
Alligators	<input checked="" type="checkbox"/> None	<input type="checkbox"/> slight presence	<input type="checkbox"/> moderate presence	<input type="checkbox"/> large presence
Comments:	_____			

9. Mammals Observed within 300 meter reach

Wild	<input checked="" type="checkbox"/> None	<input type="checkbox"/> slight presence	<input type="checkbox"/> moderate presence	<input type="checkbox"/> large presence
Domesticated Pets	<input checked="" type="checkbox"/> None	<input type="checkbox"/> slight presence	<input type="checkbox"/> moderate presence	<input type="checkbox"/> large presence
Livestock	<input checked="" type="checkbox"/> None	<input type="checkbox"/> slight presence	<input type="checkbox"/> moderate presence	<input type="checkbox"/> large presence
Feral Hogs	<input checked="" type="checkbox"/> None	<input type="checkbox"/> slight presence	<input type="checkbox"/> moderate presence	<input type="checkbox"/> large presence
Comments:	<u>Based on tracks and fecal dropping, it was assumed a large presence of wild animals and livestock.</u>			

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	<input type="checkbox"/> absent	<input checked="" type="checkbox"/> rare	<input type="checkbox"/> common	<input type="checkbox"/> abundant
Small garbage in the channel	<input type="checkbox"/> absent	<input checked="" type="checkbox"/> rare	<input type="checkbox"/> common	<input type="checkbox"/> abundant
Bank Garbage	<input type="checkbox"/> absent	<input checked="" type="checkbox"/> rare	<input type="checkbox"/> common	<input type="checkbox"/> abundant
Briefly describe the kinds of garbage observed: <u>Plastics</u>				

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 Sheets – Basic RUAA Survey
Stream Flow (Discharge) Measurement

Stream: <u>Mid Pecan Bayou</u>			Date: <u>10Jun11</u>		
Site: <u>MP008</u>		Site Description: <u>MP008</u>			
Time Begin: <u>14:59</u>		Time End: <u>15:13</u>		Meter Type: <u>SonTek Flowtracker</u>	
Observers: <u>A. Martinez</u>		Stream width*: <u>11.0</u>		Section Width (W): <u>0.50</u>	
Observations: <u>Total flow = 3.82 cfs</u>					

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft) (m)	Velocity (V)		Flow (Q) (m ³ /s) (ft ³ /s)
			At Point (ft/s) (m/s)	Average (ft/s) (m/s)	
12.0	0			0	0
12.5	0.20			0	0
13.0	0.20			0.46	0.05
13.5	0.25			1.01	0.13
14.0	0.25			1.08	0.13
14.5	0.25			1.76	0.22
15.0	0.30			2.41	0.36
15.5	0.30			2.23	0.33
16.0	0.25			2.54	0.32
16.5	0.20			1.86	0.19
17.0	0.30			2.66	0.40
17.5	0.20			2.47	0.25
18.0	0.20			1.71	0.17
18.5	0.20			1.62	0.16
19.0	0.20			1.82	0.18
19.5	0.20			1.01	0.10
20.0	0.25			0.68	0.09
20.5	0.30			1.86	0.28
21.0	0.25			1.96	0.24
21.5	0.25			1.75	0.22
22.5	0.10			0.11	0.01