Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: MP/NC - BRA	
Date & Time: 10Aug.10 1330	County Name: Robertson
Stream Name: Walnut Creek	
Segment No. or nearest downstream Segment No.: 12420	
Description of Site: 16403 Downstream from SH 6	

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

A. Stream Characteristics:

1. Check the following channel flow status that applies.

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

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

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

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

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

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

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

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. 5.217 cfs

4. Water Quality Data (Field Parameters)

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

Air Temp 37.2 °C 99°F Water Temp 28.1 °C

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

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

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

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

Easy access ~~ff~~ from SH6 ROW, Private property with fence # 865-867

8. Dominant Primary Substrate

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

Stream Name_____ Site: _____
Date: _____ Time: _____

B. Primary Contact Water Recreation Evaluation:

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

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?
☐ Yes ☑ No primary contact recreation activities were observed

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

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

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

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

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
Will Have seen evidence of fishing at this site during routine sampling in the past

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
Access from site # 865 867

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: _____

Date: _____ Time: _____

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

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

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
N/A Easy access up to private property & fence. No hindrances other than 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
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).
Pics # 865-867. Good water depth & flow.

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

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

1. Provide site-specific information and documentation (including photographs) regarding unsafe conditions, recreation activities, and presence or absence of water recreation activities.
Have seen evidence of fishing at this site in the past.

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____

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 811 Downstream 818 Left Bank 819 Right Bank 820
Photos #s (150 meters) Upstream 869 Downstream 870 Left Bank 871 Right Bank 872
Photos #s (300 meters) Upstream 873 Downstream 874 Left Bank 875 Right Bank 876

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	22	10	1.10
Pool 2	41	4	0.95
Pool 3	73	8	1.15
Pool 4	15	5	1.1
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	0.25
60 meters	0.50
90 meters	0.35
120 meters	0.65
150 meters	0.75
180 meters	0.65
210 meters	0.90
240 meters	0.85
270 meters	0.52
300 meters	0.37
Average	0.58

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

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

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	1
Width at narrowest point of the stream within 300 meter reach	0.75
Width at the widest point of the stream within 300 meter reach	11

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

COMMENTS: Good flow & nice pools.

2. Non-wadeable Streams

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

Also, take photos facing upstream, downstream, left bank, and right bank at .

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

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

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

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

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

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

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

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

Comments: Have seen evidence of fishing here in the past.

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

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

Comments: # 978

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: _____

Stream Name_____ Site: _____
Date: _____ Time: _____

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

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

see transects pics

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).

Pools are deep enough to fish

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream:_____ Date:_____

Site:_____ Site

Description:_____

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

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

Observations:_____

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

: Fri Aug 13 2010

16403-10AUG10.WAD
2010/08/10 12:31:44

NC

FlowTracker
P872
3.7
2.30
0.0%

(English Units)
ft
ft/s
ft^2
cfs

Accuracy	1.0%	1.0%
Depth	0.4%	1.1%
Velocity	0.5%	3.6%
Width	0.1%	0.1%
Method	1.9%	-
# Stations	2.3%	-
Overall	**3.2%**	**3.9%**

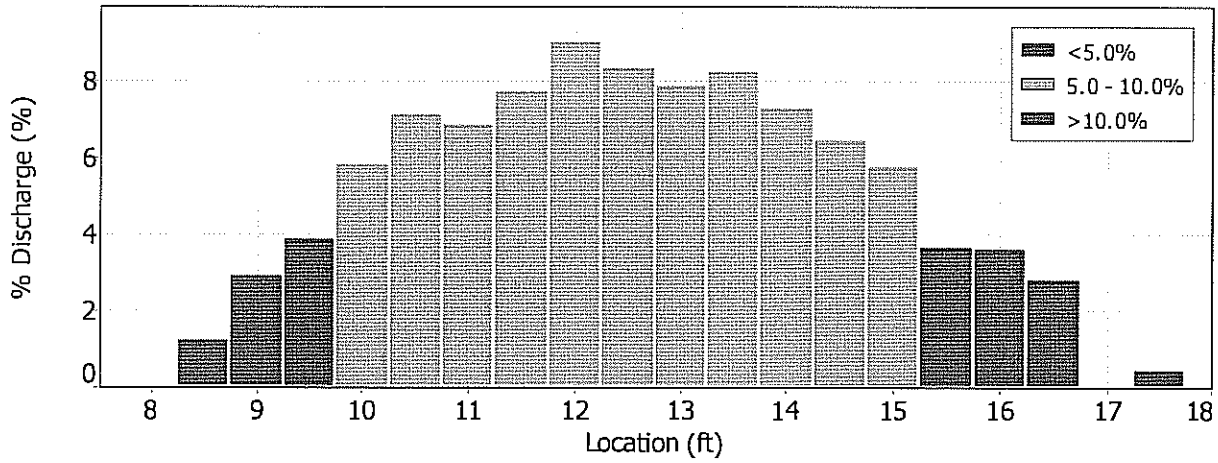
40	22
LEW	10.500
30.7 dB	6.600
82.68 °F	0.629
Mid-Section	0.7905
	5.2175

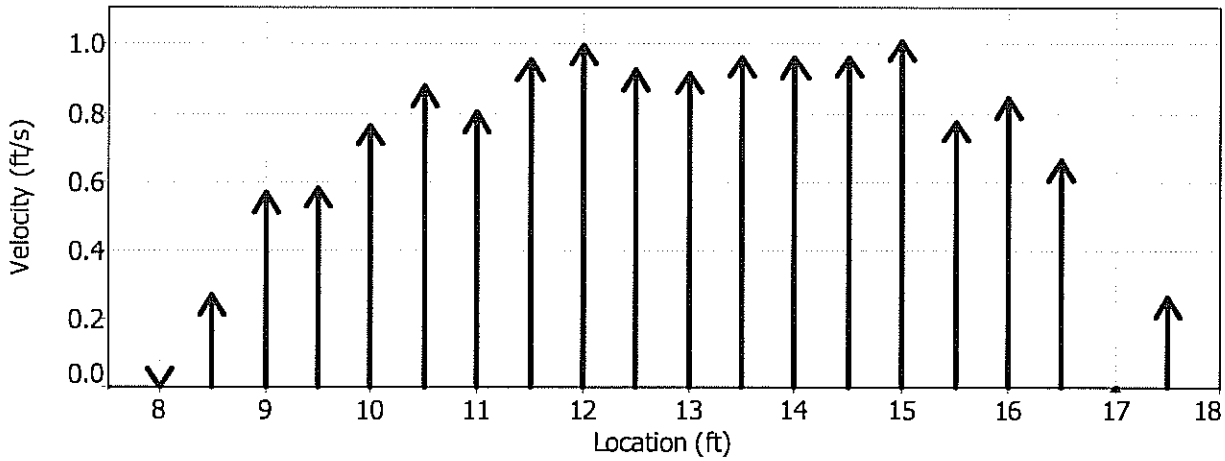
				Depth								
0	12:31	7.50	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
1	*12:34*	*8.00*	*0.6*	*0.350*	*0.6*	*0.140*	*-0.0003*	*1.00*	*-0.0003*	*0.175*	*-0.0001*	*0.0*
2	12:35	8.50	0.6	0.500	0.6	0.200	0.2700	1.00	0.2700	0.250	0.0675	1.3
3	12:36	9.00	0.6	0.550	0.6	0.220	0.5676	1.00	0.5676	0.275	0.1560	3.0
4	12:37	9.50	0.6	0.700	0.6	0.280	0.5827	1.00	0.5827	0.350	0.2040	3.9
5	*12:38*	*10.00*	*0.6*	*0.800*	*0.6*	*0.320*	*0.7657*	*1.00*	*0.7657*	*0.400*	*0.3062*	*5.9*
6	12:40	10.50	0.6	0.850	0.6	0.340	0.8783	1.00	0.8783	0.425	0.3733	7.2
7	12:41	11.00	0.6	0.900	0.6	0.360	0.8015	1.00	0.8015	0.450	0.3607	6.9
8	12:42	11.50	0.6	0.850	0.6	0.340	0.9557	1.00	0.9557	0.425	0.4062	7.8
9	12:43	12.00	0.6	0.950	0.6	0.380	0.9980	1.00	0.9980	0.475	0.4741	9.1
10	*12:43*	*12.50*	*0.6*	*0.950*	*0.6*	*0.380*	*0.9242*	*1.00*	*0.9242*	*0.475*	*0.4391*	*8.4*
11	12:44	13.00	0.6	0.900	0.6	0.360	0.9177	1.00	0.9177	0.450	0.4129	7.9
12	*12:45*	*13.50*	*0.6*	*0.900*	*0.6*	*0.360*	*0.9626*	*1.00*	*0.9626*	*0.450*	*0.4331*	*8.3*
13	12:47	14.00	0.6	0.800	0.6	0.320	0.9603	1.00	0.9603	0.400	0.3841	7.4
14	12:48	14.50	0.6	0.700	0.6	0.280	0.9646	1.00	0.9646	0.350	0.3377	6.5
15	12:49	15.00	0.6	0.600	0.6	0.240	1.0098	1.00	1.0098	0.300	0.3030	5.8
16	12:50	15.50	0.6	0.500	0.6	0.200	0.7756	1.00	0.7756	0.250	0.1939	3.7
17	12:51	16.00	0.6	0.450	0.6	0.180	0.8445	1.00	0.8445	0.225	0.1901	3.6
18	12:52	16.50	0.6	0.450	0.6	0.180	0.6624	1.00	0.6624	0.225	0.1491	2.9
19	12:53	17.00	0.6	0.300	0.6	0.120	0.0010	1.00	0.0010	0.150	0.0001	0.0
20	12:54	17.50	0.6	0.200	0.6	0.080	0.2651	1.00	0.2651	0.100	0.0265	0.5
21	12:54	18.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0

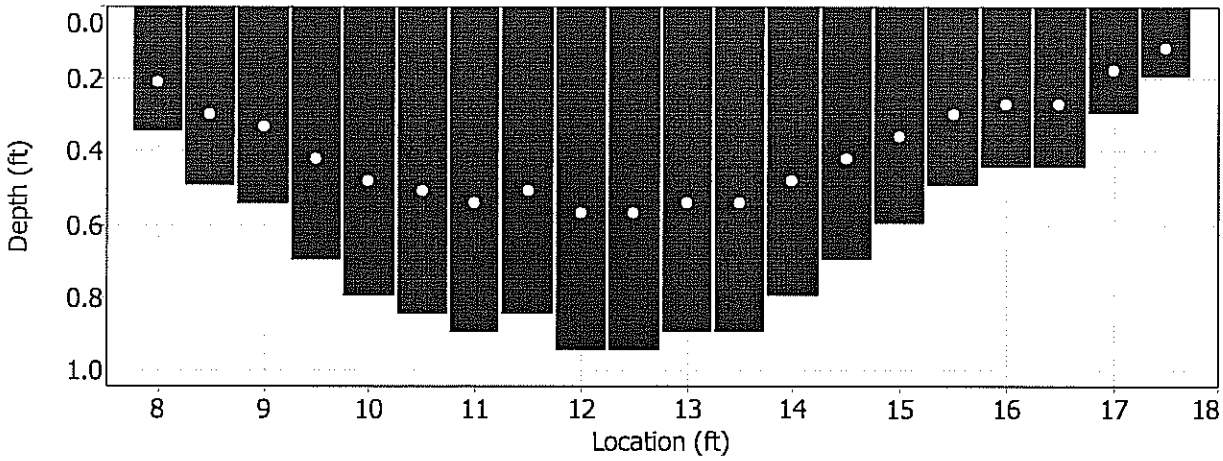
: Fri Aug 13 2010

16403-10AUG10.WAD
2010/08/10 12:31:44

NC







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2010/08/10 12:31:44

NC

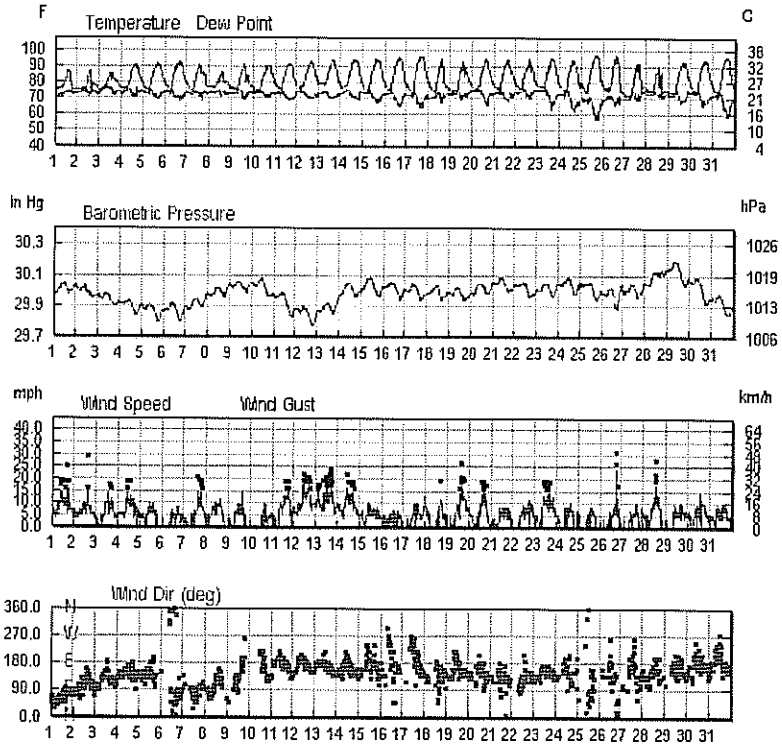
1	8.00	0.6	SNR (56.1) is different from typical SNR (30.7)
		0.6	High SNR variation during measurement: 4.7,5.6
5	10.00	0.6	High SNR variation during measurement: 5.2,5.2
10	12.50	0.6	High SNR variation during measurement: 9.0,9.0
12	13.50	0.6	High SNR variation during measurement: 5.6,5.6

History for Hearne, TX

Month of July, 2010

Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	97 °F	93 °F	85 °F	
Mean Temperature	86 °F	84 °F	80 °F	
Min Temperature	78 °F	75 °F	72 °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	21	19	15	579
Growing Degree Days (base 50)	36	34	30	1047
Dew Point:				
Dew Point	77 °F	72 °F	58 °F	
Precipitation:				
Precipitation	0.46 in	0.02 in	0.00 in	0.65 in
Snowdepth	-	-	-	-
Wind:				
Wind	24 mph	4 mph	0 mph	
Gust Wind	34 mph	18 mph	9 mph	
Sea Level Pressure:				
Sea Level Pressure	30.20 in	29.98 in	29.78 in	



Monthly Calendar Overview

« Previous Month « 2009 **July 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
				Actual: 87 | 75	Actual: 87 | 75	Actual: 85 | 75
				Precip: 0.07	Precip: 0.46	Precip: 0.00

																Average: - | - Precip: -		Average: - | - Precip: -		Average: - | - Precip: -	
4	Actual: 91 | 76 Precip: 0.00 Average: - | - Precip: -	5	Actual: 92 | 74 Precip: 0.00 Average: - | - Precip: -	6	Actual: 93 | 75 Precip: 0.00 Average: - | - Precip: -	7	Actual: 91 | 74 Precip: 0.00 Average: - | - Precip: -	8	Actual: 86 | 76 Precip: 0.00 Average: - | - Precip: -	9	Actual: 91 | 75 Precip: 0.00 Average: - | - Precip: -	10	Actual: 90 | 74 Precip: 0.00 Average: - | - Precip: -
11	Actual: 92 | 75 Precip: 0.00 Average: - | - Precip: -	12	Actual: 93 | 76 Precip: 0.00 Average: - | - Precip: -	13	Actual: 94 | 78 Precip: 0.00 Average: - | - Precip: -	14	Actual: 94 | 76 Precip: 0.00 Average: - | - Precip: -	15	Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	16	Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	17	Actual: 96 | 73 Precip: 0.00 Average: - | - Precip: -
18	Actual: 95 | 74 Precip: 0.00 Average: - | - Precip: -	19	Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	20	Actual: 95 | 76 Precip: 0.00 Average: - | - Precip: -	21	Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	22	Actual: 95 | 76 Precip: 0.00 Average: - | - Precip: -	23	Actual: 95 | 77 Precip: 0.00 Average: - | - Precip: -	24	Actual: 94 | 73 Precip: 0.00 Average: - | - Precip: -
25	Actual: 97 | 74 Precip: 0.00 Average: - | - Precip: -	26	Actual: 97 | 75 Precip: 0.00 Average: - | - Precip: -	27	Actual: 92 | 72 Precip: 0.01 Average: - | - Precip: -	28	Actual: 90 | 74 Precip: 0.11 Average: - | - Precip: -	29	Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	30	Actual: 94 | 74 Precip: 0.00 Average: - | - Precip: -	31	Actual: 96 | 73 Precip: 0.00 Average: - | - Precip: -

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear; Mostly Cloudy Partly Sunny; Partly Cloudy Mostly Sunny; Cloudy; Rain; Snow; Hail Flurries; Thunderstorms; Hazy Fog; Sleet; '?' denotes 'chance of'; Unknown

Actual: 90 | 58 Precip: 0.00 Average: 71 | 53 Precip: 0.03

Data Category; Condition; High Temp.; Lo Temp.; Precip. (in inches); Daily Avg. Temp.; Temps in °F; -60 -30 0 30 60 90 120

Print This Calendar

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
July	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	87	81	75	75	73	71	94	80	64	30.04	30.00	29.97	10	6	4	16	8	25	0.07	Rain
2	87	81	75	76	74	72	94	88	63	30.03	29.99	29.95	10	7	4	16	6	29	0.46	Rain
3	85	80	75	77	75	72	95	85	68	29.98	29.94	29.90	10	5	3	14	4	20	0.00	Rain
4	91	84	76	77	74	71	94	75	51	29.94	29.90	29.84	7	5	3	14	7	18	0.00	Rain
5	92	83	74	76	73	70	95	74	48	29.91	29.87	29.80	7	5	3	10	5	9	0.00	
6	93	84	75	75	72	69	94	69	44	29.92	29.87	29.80	7	5	3	8	2	-	0.00	
7	91	82	74	75	73	69	94	75	53	29.94	29.91	29.87	7	5	4	15	3	25	0.00	
8	86	81	76	75	74	72	90	81	63	30.02	29.98	29.95	10	6	3	12	5	16	0.00	Rain
9	91	83	75	76	73	70	94	79	51	30.06	30.02	29.98	7	5	3	15	2	18	0.00	Rain
10	90	82	74	75	73	71	96	77	53	30.08	30.02	29.96	7	4	3	9	1	-	0.00	
11	92	84	75	75	72	69	94	72	46	29.99	29.94	29.83	7	5	4	15	5	20	0.00	
12	93	84	76	75	73	70	92	70	47	29.90	29.86	29.78	7	5	4	21	9	22	0.00	
13	94	86	78	75	73	71	86	68	46	29.92	29.88	29.85	7	4	3	18	11	24	0.00	
14	94	85	76	76	73	70	91	69	46	30.05	30.00	29.95	7	5	3	16	9	22	0.00	
15	95	85	75	76	72	68	95	69	41	30.09	30.02	29.96	7	5	2	10	5	16	0.00	
16	95	85	75	75	71	66	94	67	38	30.06	30.02	29.94	10	6	3	7	2	-	0.00	Rain
17	96	84	73	74	71	65	94	63	35	30.05	30.00	29.94	10	9	3	10	2	16	0.00	

18	95	84	74	75	72	68	90	73	42	30.03	29.99	29.94	10	10	7	12	5	20	0.00	Thunderstorm
19	93	84	74	76	73	70	96	76	48	30.02	29.98	29.94	10	8	0	18	4	26	0.00	Fog
20	95	86	76	76	73	65	95	73	39	30.05	30.01	29.97	10	9	5	15	6	18	0.00	
21	95	85	75	75	73	69	95	71	42	30.09	30.05	29.99	10	9	5	8	2	16	0.00	Rain
22	95	86	76	76	74	70	94	75	45	30.06	30.01	29.96	10	9	7	12	3	20	0.00	
23	95	86	77	77	73	64	94	70	35	30.05	30.01	29.96	10	9	5	14	4	20	0.00	
24	94	84	73	76	71	63	96	69	37	30.09	30.04	29.98	10	9	4	10	3	-	0.00	
25	97	86	74	72	67	58	88	58	26	30.06	30.02	29.94	10	10	7	8	2	-	0.00	Rain
26	97	86	75	73	70	67	87	67	38	30.02	29.97	29.88	10	7	4	24	2	34	0.00	Rain , Thunderstorm
27	92	82	72	76	72	69	95	79	46	30.05	30.00	29.96	10	6	4	10	2	-	0.01	Rain , Thunderstorm
28	90	82	74	76	74	71	95	83	56	30.14	30.09	30.03	10	9	3	17	6	31	0.11	Rain , Thunderstorm
29	93	84	74	77	72	68	96	74	45	30.20	30.14	30.03	10	9	5	10	3	-	0.00	
30	94	84	74	76	72	66	95	71	41	30.09	30.04	29.91	10	9	2	14	5	18	0.00	
31	96	84	73	74	69	59	94	66	29	29.98	29.93	29.85	10	9	5	10	4	-	0.00	

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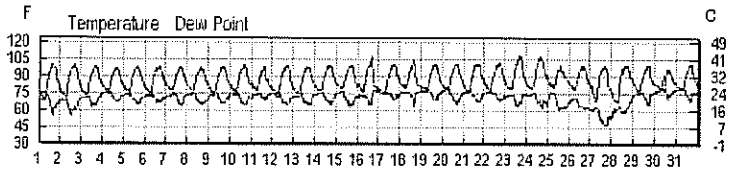
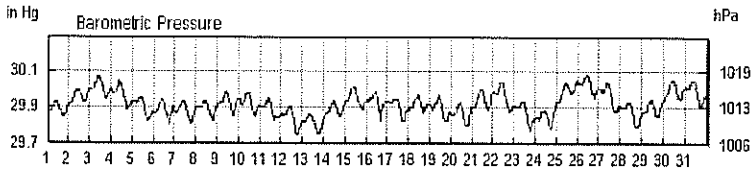
History for Hearne, TX

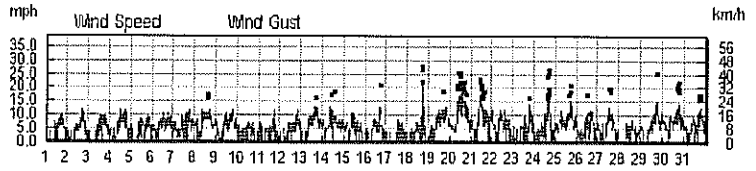
Month of August, 2010

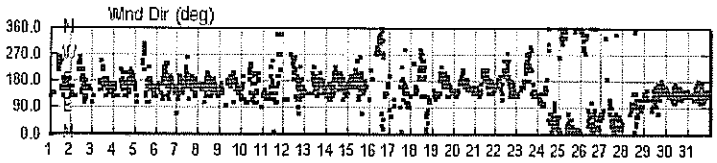
Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	109 °F	101 °F	97 °F	
Mean Temperature	94 °F	88 °F	84 °F	
Min Temperature	81 °F	76 °F	68 °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	29	24	19	730
Growing Degree Days (base 50)	44	38	34	1189
Dew Point:				
Dew Point	81 °F	71 °F	48 °F	
Precipitation:				
Precipitation	0.00 in	0.00 in	0.00 in	0.00 in
Snowdepth	-	-	-	-
Wind:				
Wind	21 mph	4 mph	0 mph	
Gust Wind	29 mph	18 mph	9 mph	
Sea Level Pressure:				
Sea Level Pressure	30.09 in	29.92 in	29.75 in	









Monthly Calendar Overview

« Previous Month « 2009 **August 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
Actual: 100 | 69	Actual: 99 | 71	Actual: 98 | 73	Actual: 97 | 76	Actual: 98 | 75	Actual: 98 | 75	Actual: 98 | 78
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -

8		9		10		11		12		13		14	
Actual:	98 | 77	Actual:	98 | 74	Actual:	100 | 75	Actual:	99 | 78	Actual:	99 | 75	Actual:	99 | 75	Actual:	100 | 77
Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00
Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -
Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-
15		16		17		18		19		20		21	
Actual:	100 | 79	Actual:	109 | 76	Actual:	101 | 76	Actual:	104 | 81	Actual:	101 | 79	Actual:	101 | 80	Actual:	102 | 77
Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00
Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -
Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-
22		23		24		25		26		27		28	
Actual:	103 | 77	Actual:	109 | 79	Actual:	108 | 79	Actual:	100 | 80	Actual:	100 | 79	Actual:	99 | 69	Actual:	101 | 68
Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00
Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -
Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-
29		30		31									
Actual:	100 | 77	Actual:	99 | 81	Actual:	101 | 80								
Precip:	0.00	Precip:	0.00	Precip:	0.00								
Average:	- | -	Average:	- | -	Average:	- | -								
Precip:	-	Precip:	-	Precip:	-								

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear · Mostly Cloudy Partly Sunny · Partly Cloudy Mostly Sunny · Cloudy · Rain · Snow · Hail Flurries · Thunderstorms · Hazy Fog · Sleet · '?' denotes 'chance of' · Unknown

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

Data Category · Condition · High Temp. · Lo Temp. · Precip. (in inches) · Daily Avg. Temp. · Temps in °F

-60 -30 0 30 60 90 120

Print This Calendar

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
August	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	100	84	69	74	67	55	95	60	22	29.93	29.89	29.84	10	9	7	9	2	-	0.00	
2	99	85	71	70	64	55	90	55	25	30.00	29.96	29.91	10	9	4	12	2	16	0.00	
3	98	86	73	73	69	64	94	60	32	30.08	30.01	29.95	10	8	4	9	2	16	0.00	
4	97	86	76	77	73	68	94	66	38	30.05	29.98	29.89	7	6	3	12	4	17	0.00	Rain
5	98	86	75	74	71	65	92	62	34	29.96	29.91	29.83	7	5	3	8	3	-	0.00	
6	98	86	75	74	71	67	92	63	36	29.95	29.89	29.81	10	8	4	10	5	-	0.00	
7	98	88	78	75	71	64	86	60	33	29.94	29.88	29.81	10	10	10	12	5	16	0.00	
8	98	88	77	76	71	65	92	63	34	29.94	29.90	29.83	10	10	10	12	6	20	0.00	
9	98	86	74	76	71	66	95	63	34	29.99	29.93	29.85	10	10	7	12	5	16	0.00	
10	100	88	75	77	72	65	94	64	33	29.98	29.93	29.85	10	10	3	7	2	9	0.00	
11	99	88	78	76	73	68	89	64	36	29.96	29.90	29.83	10	10	10	12	3	24	0.00	Rain , Thunderstorm
12	99	87	75	76	71	65	92	63	33	29.90	29.85	29.75	10	10	7	9	2	-	0.00	
13	99	87	75	75	70	65	91	62	33	29.87	29.82	29.76	10	10	10	13	4	17	0.00	
14	100	88	77	76	72	66	92	62	33	29.94	29.88	29.83	10	10	7	13	6	18	0.00	
15	100	90	79	77	72	63	90	62	30	30.02	29.96	29.89	10	10	10	10	5	-	0.00	
16	109	92	76	79	72	65	90	64	26	29.99	29.93	29.83	10	10	10	13	3	23	0.00	
17	101	88	76	78	75	70	96	69	36	29.95	29.91	29.83	10	9	5	8	1	-	0.00	
18	104	92	81	78	75	65	88	65	28	29.97	29.92	29.87	10	10	10	21	3	29	0.00	Thunderstorm
19	101	90	79	79	75	69	94	67	35	29.97	29.90	29.83	10	10	10	13	4	21	0.00	
20	101	90	80	80	74	66	95	62	33	29.93	29.86	29.80	10	10	7	17	8	25	0.00	
21	102	90	77	79	74	68	96	64	33	30.01	29.94	29.89	10	10	10	17	7	23	0.00	

22	103	90	77	78	74	69	94	62	34	30.04	29.97	29.88	10	10	7	12	6	-	0.00	
23	109	94	79	74	71	65	85	54	26	29.93	29.88	29.77	10	10	10	14	2	22	0.00	
24	108	94	79	77	71	63	88	53	24	29.90	29.85	29.78	10	10	10	17	4	26	0.00	
25	100	90	80	77	69	62	86	54	30	30.04	29.99	29.93	10	10	10	15	7	21	0.00	
26	100	90	79	72	67	62	76	50	29	30.09	30.04	29.96	10	10	10	12	5	18	0.00	
27	99	84	69	64	57	48	83	42	17	30.04	29.98	29.88	10	10	10	13	5	21	0.00	
28	101	84	68	65	61	54	82	49	25	29.94	29.89	29.79	10	10	10	8	1	-	0.00	
29	100	88	77	77	74	66	92	65	33	29.95	29.89	29.85	10	10	10	15	5	29	0.00	
30	99	90	81	81	77	72	93	73	42	30.06	30.00	29.94	10	10	10	14	7	22	0.00	
31	101	90	80	80	76	68	96	70	33	30.05	30.00	29.91	10	10	7	12	5	17	0.00	

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Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: MB/JN - BRA	
Date & Time: 22 Jun 10 1400	County Name: Robertson
Stream Name: Walnut	
Segment No. or nearest downstream Segment No.: 1242 O	
Description of Site: 20021 upstream from County Road 123	

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

A. Stream Characteristics:

1. Check the following channel flow status that applies.

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

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

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

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

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

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

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

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. 5.6 cfs

4. Water Quality Data (Field Parameters)

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

Air Temp 34.4 °C (94° F) Water Temp 27.8 °C

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

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

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

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

thick vegetation fence, private property, parking area along road. # 102', 690

8. Dominant Primary Substrate

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

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

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

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

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

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

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

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

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
None #702

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 4WDT line photo #688
☐ Boating-commercial, recreational
☐ Non-whitewater-kayaking, rafting, canoeing
☒ ~~No~~ secondary contact recreation activities were observed
☐ Other secondary contact activities: _____

Field Data Sheets – Basie RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

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

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

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
lack of suitable habitat for game fish, private property, remote location.

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

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

5. Describe the physical characteristics of the water body that hinders the frequency of secondary contact recreation (depth, etc.) (Attach photos or depth measurements, etc. for documentation).
lack of suitable habitat for game fish, private property remote location, fence

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.

Log Sum # 693

Field Data Sheets – Basic RUAA Survey

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

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

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

Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters.
Photos #s (30 meters) Upstream 689 Downstream 690 Left Bank 691 Right Bank 692
Photos #s (150 meters) Upstream 694 Downstream 695 Left Bank 696 Right Bank 697
Photos #s (300 meters) Upstream 698 Downstream 699 Left Bank 700 Right Bank 701

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	18	7.5	0.9
Pool 2	15	6.5	~~0.95~~ 1.2m
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	7.0	~~0.7~~ 0.22
	60 meters	6.0	0.22
	90 meters	8.0	0.15
	120 meters	7.0	0.44
X	150 meters	8.0	0.19
	180 meters	7.5	0.24
	210 meters	6.5	0.75
	240 meters	5.5	0.5
	270 meters	8.0	0.24
X	300 meters	8.0	0.28
	Average		0.32

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

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

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	8 m
Width at narrowest point of the stream within 300 meter reach	6 m
Width at the widest point of the stream within 300 meter reach	9 m

d) Is there sufficient water within a 300 meter stream reach during base flow conditions to support primary contact recreation? ☑ Yes ☐ No
COMMENTS: This site is down stream from mine and there is always water here water is shallow

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

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

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

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

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

☐ Culverts
☐ Barbed wire
☐ Utility pipe
☐ Fences
☐ Dams
☐ Other (specify): _____
☒ Log jams 693 695
☐ Thick vegetation
☐ Rip rap
☐ Low bridges
☐ Water control structure
~~☐ None~~
SW 22 JUN 16

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: map as evidence photo # 702

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

☒ Private Property
☐ No trespass sign
☐ Wildlife
☐ Steep slopes
☐ No public access
☐ No roads
☒ Fence
☐ Barge/ship traffic
☐ Industrial
☐ None of the Above
~~☐ Other:~~ _____
SW 22 JUN 16
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~~
SW 22 JUN 16
Comments: Trotline photo 688 (old)

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

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

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

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: Tracks

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

11. Garbage Observed

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

Briefly describe the kinds of garbage observed: _____

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

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

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream:_____ Date:_____

Site:_____ Site

Description:_____

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

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

Observations:_____

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

CDT	Max Temperature C	Mean Temperature C	Min Temperature C	Dew Point C	Mean Dew Point C	Min DewpointC	Max Humidity	Mean Humidity	Min Humidity	Max Sea Level Pressurehp	Mean Sea Level Pressurehp	Min Sea Level Pressurehp	Max Visibility Km	Mean Visibility Km	Min Visibility Km	Max Wind Speed Km/h	Mean Wind Speed Km/h	Max Gust Speed Km/h	Precipitation Cm	Cloud Cover	Events
4/1/2010	24	20	15	14	13	11	81	66	51	1015	1012	1008	16	16	16	37	21	48	0	6	
4/2/2010	23	20	17	16	15	14	91	76	58	1011	1009	1007	16	12	5	34	19	40	0	7	
4/3/2010	27	16	6	16	5	-8	94	57	9	1016	1014	1012	16	11	0	13	2		0	2	Fog-Rain
4/4/2010	27	22	16	18	16	13	92	74	52	1016	1014	1013	16	11	2	34	13	47	0	6	
4/5/2010	26	22	19	17	16	15	83	71	52	1018	1016	1014	16	15	11	32	18	45	0	7	
4/6/2010	26	22	18	16	15	13	83	68	50	1015	1011	1007	16	15	11	42	24	53	0	6	
4/7/2010	22	19	16	16	13	0	85	69	24	1011	1010	1007	16	12	6	26	13	40	0.05	8	Rain
4/8/2010	18	11	5	3	-1	-3	71	42	23	1022	1020	1017	16	16	16	29	18	42	0	0	
4/9/2010	21	11	0	3	0	-2	92	56	21	1023	1020	1018	16	16	16	19	5	32	0	0	
4/10/2010	22	16	10	11	9	6	85	66	46	1023	1021	1020	16	16	16	24	10	39	0	2	
4/11/2010	22	17	11	14	11	8	83	70	50	1024	1022	1020	16	14	6	14	6		0	6	
4/12/2010	25	17	10	13	8	2	92	61	23	1022	1021	1018	16	13	3	21	5	29	0	0	
4/13/2010	26	18	11	13	10	8	88	62	35	1021	1019	1017	16	16	11	26	5	35	0.08	1	
4/14/2010	25	20	13	18	15	13	96	80	55	1024	1021	1020	16	14	8	19	5	27	0.03	4	
4/15/2010	25	21	17	19	17	15	94	80	58	1023	1021	1019	16	15	11	19	6	29	0.08	5	Rain
4/16/2010	23	18	15	17	16	13	93	80	60	1022	1020	1016	16	14	6	16	5	26	0	6	
4/17/2010	25	21	18	17	16	15	90	76	55	1017	1015	1012	16	13	6	21	6	32	0	7	
4/18/2010	20	17	15	16	15	13	96	86	70	1016	1014	1013	16	16	11	13	3		0.08	8	Rain-Thunderstorm
4/19/2010	18	15	11	16	12	10	97	82	62	1019	1017	1015	16	9	5	23	11	32	0.2	8	Rain
4/20/2010	22	16	11	14	12	10	94	70	48	1018	1016	1013	16	10	6	13	3		0	3	
4/21/2010	27	18	11	15	13	11	97	71	42	1014	1012	1009	16	12	6	16	5	27	0	1	Rain
4/22/2010	23	20	15	18	16	14	97	83	69	1010	1008	1005	16	12	3	29	13	40	0	6	Rain
4/23/2010	30	25	20	21	19	18	96	78	50	1005	1003	999	16	12	5	26	13	37	0.15	6	Rain-Thunderstorm
4/24/2010	27	21	13	21	10	5	94	56	25	1006	1004	1000	16	16	8	34	14	53	0.03	2	Rain
4/25/2010	27	20	12	11	8	3	88	56	22	1011	1009	1006	16	16	16	29	8	47	0	0	
4/26/2010	31	20	8	17	10	7	95	61	25	1012	1010	1006	16	16	5	24	5	32	0.13	0	Rain-Thunderstorm
4/27/2010	23	16	9	10	6	3	90	52	27	1019	1016	1014	16	16	11	26	13	34	0	3	
4/28/2010	27	17	7	10	7	4	95	57	25	1017	1015	1010	16	16	16	26	6	35	0	0	
4/29/2010	28	22	15	17	16	12	94	69	46	1012	1007	1001	16	15	8	39	19	55	0	4	
4/30/2010	28	25	22	22	20	19	86	75	60	1002	1000	998	16	10	6	34	19	52	0	7	Rain
5/1/2010	27	23	19	22	18	13	96	73	54	1002	1001	998	16	13	4	26	10	34	0	5	
5/2/2010	28	20	12	13	9	3	92	57	20	1008	1006	1004	16	16	16	19	5	26	0	2	Rain
5/3/2010	31	20	9	12	8	5	90	54	20	1017	1013	1010	16	15	8	29	5	40	0	1	Rain

5/4/2010	30	19	8	13	9	5	98	59	22	1018	1015	1011	16	15	1	14	3		0	0	
5/5/2010	33	23	12	13	10	8	87	47	22	1013	1011	1010	16	16	16	24	11	32	0	0	
5/6/2010	32	24	16	17	16	13	94	64	34	1013	1011	1008	16	15	11	26	13	39	0	2	
5/7/2010	33	26	20	21	19	18	89	67	42	1013	1011	1008	16	15	11	24	18	34	0	5	
5/8/2010	23	21	19	14	9	6	60	47	35	1025	1022	1019	16	16	16	24	16	40	0	8	
5/9/2010	21	20	18	13	8	6	61	46	40	1023	1020	1017	16	16	16	24	11	27	0	8	
5/10/2010	31	25	20	20	18	17	88	68	45	1016	1013	1009	16	16	11	37	19	50	0	5	
5/11/2010	33	27	21	21	18	15	90	64	37	1013	1011	1009	16	15	8	37	18	50	0	3	
5/12/2010	31	26	21	21	19	17	89	67	46	1012	1010	1009	16	15	11	39	23	60	0	3	
5/13/2010	31	27	22	21	20	17	82	67	43	1016	1014	1010	16	16	11	32	21	48	0	5	
5/14/2010	28	23	18	21	20	17	96	84	56	1019	1017	1014	16	12	1	29	11	52	4.24	4	Rain-Thunderstorm
5/15/2010	26	21	17	18	17	15	96	81	55	1019	1016	1014	16	10	6	40	13	53	0.97	3	Rain-Thunderstorm
5/16/2010	30	23	16	20	18	16	98	78	46	1017	1015	1012	16	8	2	10	2		0	2	
5/17/2010	31	25	18	22	20	17	100	79	47	1018	1015	1013	16	12	2	47	3	66	1.19	2	Rain-Thunderstorm
5/18/2010	30	23	17	20	18	17	96	75	51	1016	1014	1011	16	12	8	13	5		0	0	
5/19/2010	31	26	21	21	20	18	95	73	47	1012	1009	1006	11	8	6	27	13	35	0	4	
5/20/2010	31	27	23	22	21	21	89	76	55	1011	1009	1008	11	9	6	23	14	34	0	6	Rain
5/21/2010	32	27	22	22	21	19	95	71	48	1015	1013	1011	16	9	6	21	11	29	0	3	
5/22/2010	32	27	22	22	21	20	93	73	49	1014	1012	1010	11	9	6	27	14	42	0	4	
5/23/2010	32	28	24	22	21	20	86	69	51	1014	1012	1011	16	10	6	26	16	39	0	5	Rain
5/24/2010	31	26	22	22	20	16	94	69	42	1015	1013	1011	11	9	5	26	13	35	0	4	
5/25/2010	31	26	21	21	19	16	93	70	39	1015	1013	1011	16	9	5	19	10	29	0	1	
5/26/2010	31	25	18	21	18	12	96	68	31	1017	1015	1013	16	11	6	11	2		0	1	
5/27/2010	32	25	18	21	18	15	94	67	35	1017	1015	1012	16	10	6	11	2		0	0	
5/28/2010	33	26	20	20	18	15	93	62	32	1014	1012	1009	16	9	5	10	2		0	1	
5/29/2010	34	27	20	21	18	15	92	64	32	1010	1009	1006	16	11	6	10	2		0	2	
5/30/2010	33	27	21	22	19	17	91	65	38	1011	1009	1008	16	14	8	19	3		0	1	Thunderstorm
5/31/2010	33	27	21	21	19	16	94	65	36	1015	1013	1012	16	15	6	13	5		0	0	
6/1/2010	32	26	20	21	19	17	94	64	39	1015	1013	1009	16	15	8	16	5	26	0	0	
6/2/2010	33	27	20	22	20	18	95	69	41	1011	1009	1005	16	13	4	37	8	47	1.19	3	Rain-Thunderstorm
6/3/2010	21	21	20	21	20	19	96	94	89	1008	1007	1004	16	11	3	24	8	37	2.03	7	Rain-Thunderstorm
6/4/2010	31	25	19	21	20	17	97	74	44	1010	1008	1007	16	9	1	10	0		0	1	Fog
6/5/2010	32	26	21	22	21	20	95	74	54	1011	1009	1008	16	13	6	16	3		0	0	
6/6/2010	33	28	24	25	23	22	95	76	52	1013	1012	1010	11	7	3	11	6		0	4	
6/7/2010	32	28	24	24	23	22	92	77	57	1016	1014	1012	11	7	5	16	6		0	2	
6/8/2010	28	25	22	24	22	20	94	86	63	1016	1014	1013	16	12	8	21	8	29	0	3	Rain
6/9/2010	25	23	21	23	21	20	96	94	91	1016	1014	1011	16	10	2	21	5	27	7.37	6	Rain-Thunderstorm

6/10/2010	32	27	22	25	23	21	96	80	54	1013	1011	1009	11	7	5	29	13	39	0	3	Rain
6/11/2010	32	28	25	25	23	22	91	76	59	1013	1012	1011	11	7	5	27	16	37	0	4	
6/12/2010	32	28	25	24	23	22	91	75	56	1016	1015	1013	16	9	6	26	16	40	0	4	Rain
6/13/2010	32	28	25	24	23	21	91	73	53	1017	1016	1013	11	7	5	23	14	32	0	5	
6/14/2010	33	29	25	24	22	20	93	72	46	1015	1014	1010	11	8	5	23	13	34	0	4	Rain
6/15/2010	33	28	23	23	22	19	96	72	42	1017	1015	1013	11	8	4	14	6		0	3	
6/16/2010	33	28	23	24	22	20	95	71	44	1019	1017	1015	16	11	4	16	6		0	2	
6/17/2010	33	28	23	24	22	18	95	72	44	1017	1016	1014	16	10	0	23	6	29	0	3	Fog
6/18/2010	33	28	23	24	22	21	93	71	49	1017	1016	1013	16	16	11	23	10	29	0	3	
6/19/2010	33	28	24	23	22	20	93	71	44	1019	1017	1015	16	15	11	16	10		0	2	
6/20/2010	33	28	23	23	22	20	94	69	45	1018	1016	1013	16	16	11	16	6	27	0	2	
6/21/2010	33	28	22	23	21	21	92	69	47	1017	1015	1014	16	16	16	14	6		0	1	
6/22/2010	33	28	23	23	22	19	92	67	42	1018	1016	1015	16	16	16	13	5		0	1	
6/23/2010	33	28	22	23	22	20	94	69	43	1018	1016	1015	16	16	11	13	5		0	1	
6/24/2010	28	26	25	24	23	22	91	85	68	1019	1018	1017	16	16	16	8	3		0	3	Rain

« Previous Month	« 2009	May 2010			2011 »	Next Month »
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1 Actual: 82 | 67 Precip: 0.00 Average: - | - Precip: -
2 Actual: 83 | 55 Precip: 0.00 Average: - | - Precip: -	3 Actual: 88 | 49 Precip: 0.00 Average: - | - Precip: -	4 Actual: 87 | 47 Precip: 0.00 Average: - | - Precip: -	5 Actual: 93 | 54 Precip: 0.00 Average: - | - Precip: -	6 Actual: 91 | 62 Precip: 0.00 Average: - | - Precip: -	7 Actual: 92 | 69 Precip: 0.00 Average: - | - Precip: -	8 Actual: 74 | 67 Precip: 0.00 Average: - | - Precip: -
9 Actual: 71 | 66 Precip: 0.00 Average: - | - Precip: -	10 Actual: 88 | 69 Precip: 0.00 Average: - | - Precip: -	11 Actual: 92 | 71 Precip: 0.00 Average: - | - Precip: -	12 Actual: 89 | 71 Precip: 0.00 Average: - | - Precip: -	13 Actual: 89 | 73 Precip: 0.00 Average: - | - Precip: -	14 Actual: 83 | 65 Precip: 1.67 Average: - | - Precip: -	15 Actual: 79 | 63 Precip: 0.38 Average: - | - Precip: -
16 Actual: 86 | 62 Precip: 0.00 Average: - | - Precip: -	17 Actual: 89 | 66 Precip: 0.47 Average: - | - Precip: -	18 Actual: 86 | 64 Precip: 0.00 Average: - | - Precip: -	19 Actual: 88 | 71 Precip: 0.00 Average: - | - Precip: -	20 Actual: 88 | 74 Precip: 0.00 Average: - | - Precip: -	21 Actual: 90 | 72 Precip: 0.00 Average: - | - Precip: -	22 Actual: 90 | 73 Precip: 0.00 Average: - | - Precip: -
23 Actual: 90 | 76 Precip: 0.00 Average: - | - Precip: -	24 Actual: 88 | 72 Precip: 0.00 Average: - | - Precip: -	25 Actual: 89 | 71 Precip: 0.00 Average: - | - Precip: -	26 Actual: 89 | 65 Precip: 0.00 Average: - | - Precip: -	27 Actual: 91 | 66 Precip: 0.00 Average: - | - Precip: -	28 Actual: 93 | 68 Precip: 0.00 Average: - | - Precip: -	29 Actual: 94 | 68 Precip: 0.00 Average: - | - Precip: -
30 Actual: 93 | 70 Precip: 0.00 Average: - | - Precip: -	31 Actual: 92 | 70 Precip: 0.00 Average: - | - Precip: -					

Calendar Key

Sunny Clear · Mostly Cloudy Partly Sunny · Mostly Sunny Partly Cloudy · Cloudy · Rain · Snow · Hail Flurries · Thunderstorms · Hazy Fog · Sleet · '?' denotes 'chance of' · Unknown

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

Data Category
Condition
High Temp.
Lo Temp.
Precip. (in inches)
Daily Avg. Temp.
Temps in °F
-60 -30 0 30 60 90 120

Powered by Weather Underground, Inc.

« Previous Month | « 2009 | June 2010 | 2011 » | Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1 Actual: 91 | 69 Precip: 0.00 Average: - | - Precip: -	2 Actual: 92 | 69 Precip: 0.47 Average: - | - Precip: -	3 Actual: 71 | 68 Precip: 0.80 Average: - | - Precip: -	4 Actual: 89 | 67 Precip: 0.00 Average: - | - Precip: -	5 Actual: 90 | 71 Precip: 0.00 Average: - | - Precip: -
6 Actual: 92 | 76 Precip: 0.00 Average: - | - Precip: -	7 Actual: 90 | 76 Precip: 0.00 Average: - | - Precip: -	8 Actual: 83 | 73 Precip: 0.00 Average: - | - Precip: -	9 Actual: 77 | 70 Precip: 2.90 Average: - | - Precip: -	10 Actual: 91 | 73 Precip: 0.00 Average: - | - Precip: -	11 Actual: 90 | 77 Precip: 0.00 Average: - | - Precip: -	12 Actual: 91 | 78 Precip: 0.00 Average: - | - Precip: -
13 Actual: 91 | 78 Precip: 0.00 Average: - | - Precip: -	14 Actual: 93 | 77 Precip: 0.00 Average: - | - Precip: -	15 Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	16 Actual: 93 | 75 Precip: 0.00 Average: - | - Precip: -	17 Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	18 Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	19 Actual: 93 | 76 Precip: 0.00 Average: - | - Precip: -
20 Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	21 Actual: 93 | 73 Precip: 0.00 Average: - | - Precip: -	22 Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	23 Actual: 93 | 73 Precip: 0.00 Average: - | - Precip: -	24 Actual: 84 | 76 Precip: 0.05 Average: - | - Precip: -	25 Actual: 94 | 74 Precip: 0.00 Average: - | - Precip: -	26 Actual: 94 | 74 Precip: 0.00 Average: - | - Precip: -
27 Actual: 94 | 73 Precip: 0.00 Average: - | - Precip: -	28 Actual: 93 | 72 Precip: 0.00 Average: - | - Precip: -	29 Actual: 93 | 77 Precip: 0.00 Average: - | - Precip: -	30 Actual: 85 | 73 Precip: 0.00 Average: - | - Precip: -			

Calendar Key

Sunny Clear · Mostly Cloudy Partly Sunny · Mostly Sunny Partly Cloudy · Cloudy · Rain · Snow · Hail Flurries · Thunderstorms · Hazy Fog · Sleet · '?' denotes 'chance of' · Unknown

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

Data Category
Condition
High Temp.
Lo Temp.
Precip. (in inches)
Daily Avg. Temp.
Temps in °F
-60 -30 0 30 60 90 120

Powered by Weather Underground, Inc.

: Thu Jul 1 2010

20021-22JUN10.WAD
2010/06/22 12:56:11

MB

FlowTracker
P872
3.7
2.30
0.0%

(English Units)
ft
ft/s
ft^2
cfs

Accuracy	1.0%	1.0%
Depth	0.4%	1.7%
Velocity	1.1%	4.6%
Width	0.1%	0.1%
Method	1.9%	-
# Stations	2.2%	-
Overall	**3.3%**	**5.0%**

20	23
LEW	21.500
35.8 dB	9.300
81.96 °F	0.433
Mid-Section	0.5973
	5.5554

				Depth								
0	12:56	0.50	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
1	*12:56*	*1.50*	*0.6*	*0.150*	*0.6*	*0.060*	*0.0000*	*1.00*	*0.0000*	*0.150*	*0.0000*	*0.0*
2	*12:56*	*2.50*	*0.6*	*0.200*	*0.6*	*0.080*	*0.1457*	*1.00*	*0.1457*	*0.200*	*0.0292*	*0.5*
3	*12:57*	*3.50*	*0.6*	*0.350*	*0.6*	*0.140*	*0.0000*	*1.00*	*0.0000*	*0.350*	*0.0000*	*0.0*
4	*12:58*	*4.50*	*0.6*	*0.400*	*0.6*	*0.160*	*0.1946*	*1.00*	*0.1946*	*0.400*	*0.0778*	*1.4*
5	12:59	5.50	0.6	0.400	0.6	0.160	0.9669	1.00	0.9669	0.400	0.3867	7.0
6	13:00	6.50	0.6	0.400	0.6	0.160	1.0912	1.00	1.0912	0.400	0.4364	7.9
7	13:00	7.50	0.6	0.400	0.6	0.160	0.9239	1.00	0.9239	0.400	0.3695	6.7
8	13:01	8.50	0.6	0.450	0.6	0.180	0.9580	1.00	0.9580	0.450	0.4312	7.8
9	13:02	9.50	0.6	0.350	0.6	0.140	1.0571	1.00	1.0571	0.350	0.3700	6.7
10	13:02	10.50	0.6	0.400	0.6	0.160	0.9455	1.00	0.9455	0.400	0.3782	6.8
11	13:03	11.50	0.6	0.350	0.6	0.140	0.5354	1.00	0.5354	0.350	0.1874	3.4
12	13:04	12.50	0.6	0.400	0.6	0.160	0.3583	1.00	0.3583	0.400	0.1433	2.6
13	13:05	13.50	0.6	0.450	0.6	0.180	0.3314	1.00	0.3314	0.450	0.1492	2.7
14	13:06	14.50	0.6	0.500	0.6	0.200	0.4564	1.00	0.4564	0.500	0.2282	4.1
15	13:07	15.50	0.6	0.500	0.6	0.200	0.6637	1.00	0.6637	0.500	0.3319	6.0
16	13:07	16.50	0.6	0.500	0.6	0.200	0.5774	1.00	0.5774	0.500	0.2887	5.2
17	13:08	17.50	0.6	0.550	0.6	0.220	0.5810	1.00	0.5810	0.550	0.3195	5.8
18	13:09	18.50	0.6	0.600	0.6	0.240	0.7208	1.00	0.7208	0.600	0.4325	7.8
19	*13:09*	*19.50*	*0.6*	*0.700*	*0.6*	*0.280*	*0.5633*	*1.00*	*0.5633*	*0.700*	*0.3944*	*7.1*
20	13:10	20.50	0.6	0.700	0.6	0.280	0.6332	1.00	0.6332	0.700	0.4433	8.0
21	13:11	21.50	0.6	0.600	0.6	0.240	0.2874	1.00	0.2874	0.450	0.1293	2.3
22	13:11	22.00	None	0.400	0.0	0.0	0.0000	1.00	0.2874	0.100	0.0287	0.5

: Thu Jul 1 2010

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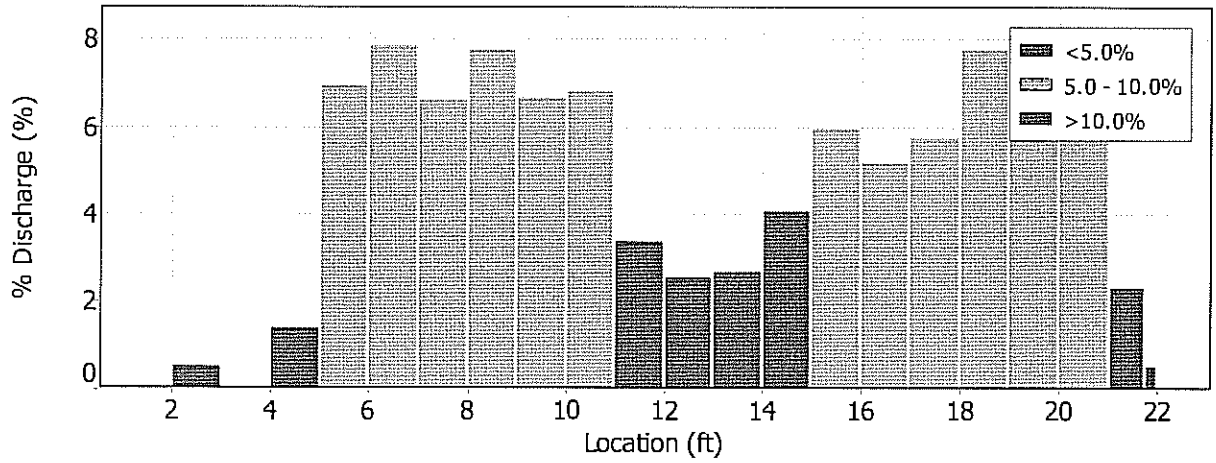
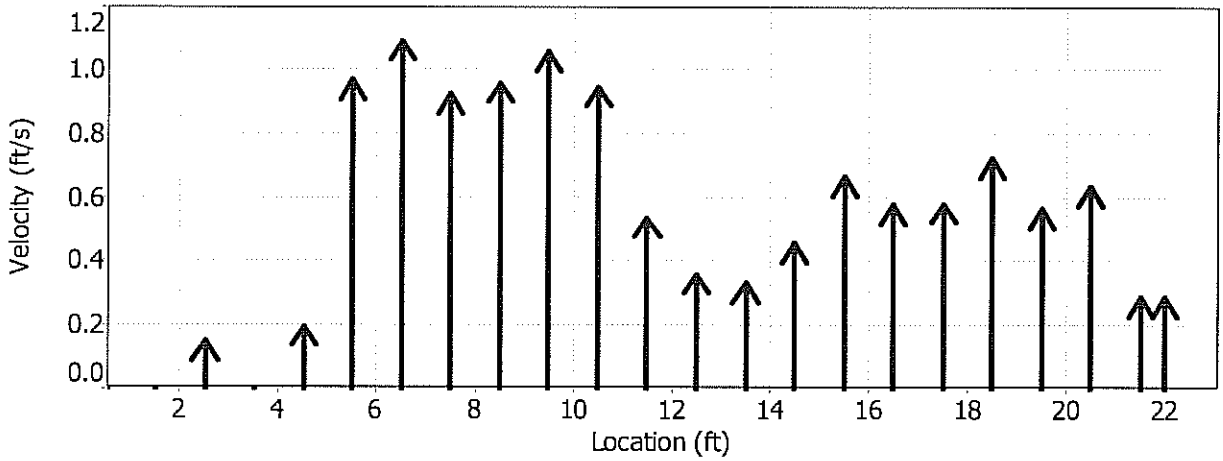
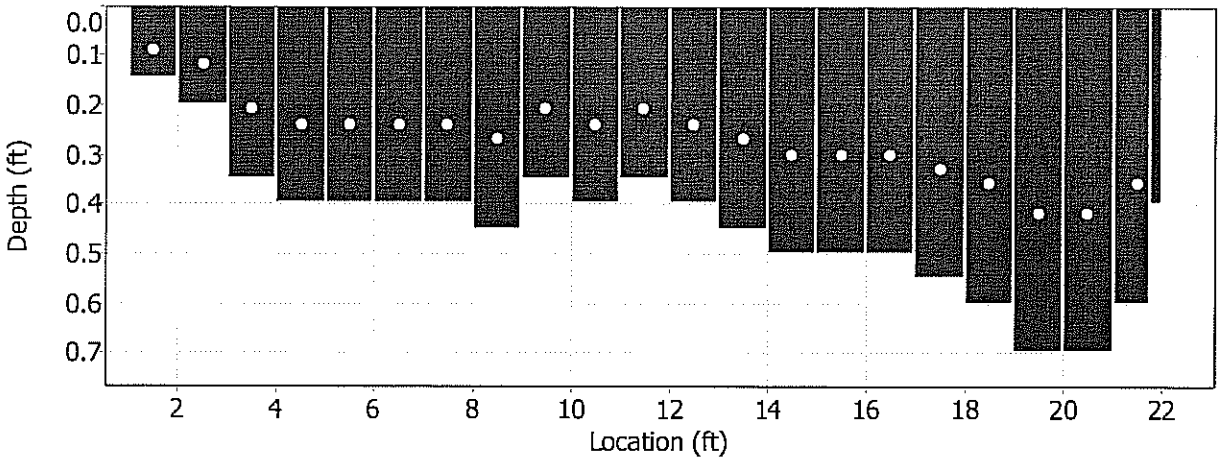
2010/06/22 12:56:11

MB







: Thu Jul 1 2010

20021-22JUN10.WAD
2010/06/22 12:56:11

MB

1	1.50	0.6	SNR (67.7) is different from typical SNR (35.8)
2	2.50	0.6	Boundary QC is Fair; possible boundary interference
3	3.50	0.6	SNR (49.4) is different from typical SNR (35.8)
		0.6	Boundary QC is Fair; possible boundary interference
4	4.50	0.6	High standard error: 0.068
		0.6	Boundary QC is Good; possible boundary interference
19	19.50	0.6	High standard error: 0.031

Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: JNMB BRA	
Date & Time: 22 Jun 10 1235	County Name: Robertson
Stream Name: Walnut Creek	
Segment No. or nearest downstream Segment No.: 12420	
Description of Site: 20565 upstream from Nesbit Road	

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

A. Stream Characteristics:

1. Check the following channel flow status that applies.

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

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

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

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

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

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

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

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. 0.08 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 MD @ 33.3 °C 23 Jun 10 92°F Water Temp 27.2 °C

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

R Forest	____ Urban	____ Rip rap
____ Shrub dominated corridor	L 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):

Mine property down stream of bridge. private property upstream #615

8. Dominant Primary Substrate

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

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

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

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

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

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

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

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
None photo # 686 - 687

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
WD Road 675

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_____ Site: _____
Date: _____ Time: _____

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

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body well away from water between 8 and 30 meters (100 ft) None

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, fences #

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: private property

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).
depth

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 / mine property #680-681

D. Noncontact Recreation Evaluation

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

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

Field Data Sheets – Basic RUAA Survey

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

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

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

Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters.
Photos #s (30 meters) Upstream 674 Downstream 675 Left Bank 676 Right Bank 677
Photos #s (150 meters) Upstream 678 Downstream 679 Left Bank 680 Right Bank 681
Photos #s (300 meters) Upstream 682 Downstream 683 Left Bank 684 Right Bank 685

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 SUBSTANTIAL POOLS

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

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

	Distance		Depth (meters)
*	30 meters	1.9	0.4
	60 meters	2.0	0.22
	90 meters	2.5	0.07
	120 meters	4.0	0.37
*	150 meters	3.7	0.07
	180 meters	2.0	0.1
	210 meters	1.6	0.15
	240 meters	2.3	0.13
	270 meters	2.4	0.07
*	300 meters	4.1	0.08
	Average		0.17

Hog Sign

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

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

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	3 m
Width at narrowest point of the stream within 300 meter reach	1.5 ~~4.5 m~~ MD 22Jun10
Width at the widest point of the stream within 300 meter reach	4.5 m

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

_____

_____

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

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

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

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

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

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

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

☐ Campgrounds ☐ Stairs/walkway ☑ Roads (paved/unpaved) ☐ Other:_____
☐ Playgrounds ☐ Boating access (ramps) ☐ Populated area ☒ None of the Above
☑ Rural area ☐ Beach ☐ Docks or rafts
☐ Residential ☑ Bridge crossing ☐ Commercial outfitter
☐ National forests ☐ Commercial boating ☐ Nearby school
☐ Urban/suburban location ☐ Trails/paths (hiking/biking) ☐ Power Line Corridor
☐ Golf Course ☐ Paved parking lot ☐ Parks (national/city/county/state)
☐ Sports Field ☐ Unimproved parking lot ☐ Public Property
Comments: #675

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

☒ Private Property ☑ Fence
☒ No trespass sign ☐ Barge/ship traffic
☐ Wildlife ☐ Industrial
☐ Steep slopes ☐ None of the Above
☒ No public access ☐ Other:_____
☐ No roads
Comments: 687

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

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

Aquatic Vegetation: ☐ absent ☒ rare ☐common ☐abundant
Algae Cover: ☒absent ☐ rare ☐common ☐abundant
Odor: ☒none ☐ rare ☐common ☐abundant
Color: ☒clear ☐ green ☐red ☒brown ☐ black
Bottom Deposit: ☐ sludge ☐ solids ☒fine sediments ☐none ☐other
Water Surface: ☒clear ☐ scum ☐ foam ☐ debris ☐ oil
Other: #674, 679, 683

8. Vertebrates Observed within 300 meter reach

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

Comments: _____

9. Mammals Observed within 300 meter reach

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

Comments: _____

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

11. Garbage Observed

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

Briefly describe the kinds of garbage observed: _____

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

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

_____

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream:_____ Date:_____

Site:_____ Site

Description:_____

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

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

Observations:_____

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

CDT	Max Temperature C	Mean Temperature C	Min Temperature C	Dew Point C	Mean Dew Point C	Min DewpointC	Max Humidity	Mean Humidity	Min Humidity	Max Sea Level Pressure hPa	Mean Sea Level Pressure hPa	Min Sea Level Pressure hPa	Max Visibility Km	Mean Visibility Km	Min Visibility Km	Max Wind Speed Km/h	Mean Wind Speed Km/h	Max Gust Speed Km/h	Precipitation Cm	Cloud Cover	Events
4/1/2010	24	20	15	14	13	11	81	66	51	1015	1012	1008	16	16	16	37	21	48	0	6	
4/2/2010	23	20	17	16	15	14	91	76	58	1011	1009	1007	16	12	5	34	19	40	0	7	
4/3/2010	27	16	6	16	5	-8	94	57	9	1016	1014	1012	16	11	0	13	2		0	2	Fog-Rain
4/4/2010	27	22	16	18	16	13	92	74	52	1016	1014	1013	16	11	2	34	13	47	0	6	
4/5/2010	26	22	19	17	16	15	83	71	52	1018	1016	1014	16	15	11	32	18	45	0	7	
4/6/2010	26	22	18	16	15	13	83	68	50	1015	1011	1007	16	15	11	42	24	53	0	6	
4/7/2010	22	19	16	16	13	0	85	69	24	1011	1010	1007	16	12	6	26	13	40	0.05	8	Rain
4/8/2010	18	11	5	3	-1	-3	71	42	23	1022	1020	1017	16	16	16	29	18	42	0	0	
4/9/2010	21	11	0	3	0	-2	92	56	21	1023	1020	1018	16	16	16	19	5	32	0	0	
4/10/2010	22	16	10	11	9	6	85	66	46	1023	1021	1020	16	16	16	24	10	39	0	2	
4/11/2010	22	17	11	14	11	8	83	70	50	1024	1022	1020	16	14	6	14	6		0	6	
4/12/2010	25	17	10	13	8	2	92	61	23	1022	1021	1018	16	13	3	21	5	29	0	0	
4/13/2010	26	18	11	13	10	8	88	62	35	1021	1019	1017	16	16	11	26	5	35	0.08	1	
4/14/2010	25	20	13	18	15	13	96	80	55	1024	1021	1020	16	14	8	19	5	27	0.03	4	
4/15/2010	25	21	17	19	17	15	94	80	58	1023	1021	1019	16	15	11	19	6	29	0.08	5	Rain
4/16/2010	23	18	15	17	16	13	93	80	60	1022	1020	1016	16	14	6	16	5	26	0	6	
4/17/2010	25	21	18	17	16	15	90	76	55	1017	1015	1012	16	13	6	21	6	32	0	7	
4/18/2010	20	17	15	16	15	13	96	86	70	1016	1014	1013	16	16	11	13	3		0.08	8	Rain-Thunderstorm
4/19/2010	18	15	11	16	12	10	97	82	62	1019	1017	1015	16	9	5	23	11	32	0.2	8	Rain
4/20/2010	22	16	11	14	12	10	94	70	48	1018	1016	1013	16	10	6	13	3		0	3	
4/21/2010	27	18	11	15	13	11	97	71	42	1014	1012	1009	16	12	6	16	5	27	0	1	Rain
4/22/2010	23	20	15	18	16	14	97	83	69	1010	1008	1005	16	12	3	29	13	40	0	6	Rain
4/23/2010	30	25	20	21	19	18	96	78	50	1005	1003	999	16	12	5	26	13	37	0.15	6	Rain-Thunderstorm
4/24/2010	27	21	13	21	10	5	94	56	25	1006	1004	1000	16	16	8	34	14	53	0.03	2	Rain
4/25/2010	27	20	12	11	8	3	88	56	22	1011	1009	1006	16	16	16	29	8	47	0	0	
4/26/2010	31	20	8	17	10	7	95	61	25	1012	1010	1006	16	16	5	24	5	32	0.13	0	Rain-Thunderstorm
4/27/2010	23	16	9	10	6	3	90	52	27	1019	1016	1014	16	16	11	26	13	34	0	3	
4/28/2010	27	17	7	10	7	4	95	57	25	1017	1015	1010	16	16	16	26	6	35	0	0	
4/29/2010	28	22	15	17	16	12	94	69	46	1012	1007	1001	16	15	8	39	19	55	0	4	
4/30/2010	28	25	22	22	20	19	86	75	60	1002	1000	998	16	10	6	34	19	52	0	7	Rain
5/1/2010	27	23	19	22	18	13	96	73	54	1002	1001	998	16	13	4	26	10	34	0	5	
5/2/2010	28	20	12	13	9	3	92	57	20	1008	1006	1004	16	16	16	19	5	26	0	2	Rain
5/3/2010	31	20	9	12	8	5	90	54	20	1017	1013	1010	16	15	8	29	5	40	0	1	Rain

5/4/2010	30	19	8	13	9	5	98	59	22	1018	1015	1011	16	15	1	14	3		0	0	
5/5/2010	33	23	12	13	10	8	87	47	22	1013	1011	1010	16	16	16	24	11	32	0	0	
5/6/2010	32	24	16	17	16	13	94	64	34	1013	1011	1008	16	15	11	26	13	39	0	2	
5/7/2010	33	26	20	21	19	18	89	67	42	1013	1011	1008	16	15	11	24	18	34	0	5	
5/8/2010	23	21	19	14	9	6	60	47	35	1025	1022	1019	16	16	16	24	16	40	0	8	
5/9/2010	21	20	18	13	8	6	61	46	40	1023	1020	1017	16	16	16	24	11	27	0	8	
5/10/2010	31	25	20	20	18	17	88	68	45	1016	1013	1009	16	16	11	37	19	50	0	5	
5/11/2010	33	27	21	21	18	15	90	64	37	1013	1011	1009	16	15	8	37	18	50	0	3	
5/12/2010	31	26	21	21	19	17	89	67	46	1012	1010	1009	16	15	11	39	23	60	0	3	
5/13/2010	31	27	22	21	20	17	82	67	43	1016	1014	1010	16	16	11	32	21	48	0	5	
5/14/2010	28	23	18	21	20	17	96	84	56	1019	1017	1014	16	12	1	29	11	52	4.24	4	Rain-Thunderstorm
5/15/2010	26	21	17	18	17	15	96	81	55	1019	1016	1014	16	10	6	40	13	53	0.97	3	Rain-Thunderstorm
5/16/2010	30	23	16	20	18	16	98	78	46	1017	1015	1012	16	8	2	10	2		0	2	
5/17/2010	31	25	18	22	20	17	100	79	47	1018	1015	1013	16	12	2	47	3	66	1.19	2	Rain-Thunderstorm
5/18/2010	30	23	17	20	18	17	96	75	51	1016	1014	1011	16	12	8	13	5		0	0	
5/19/2010	31	26	21	21	20	18	95	73	47	1012	1009	1006	11	8	6	27	13	35	0	4	
5/20/2010	31	27	23	22	21	21	89	76	55	1011	1009	1008	11	9	6	23	14	34	0	6	Rain
5/21/2010	32	27	22	22	21	19	95	71	48	1015	1013	1011	16	9	6	21	11	29	0	3	
5/22/2010	32	27	22	22	21	20	93	73	49	1014	1012	1010	11	9	6	27	14	42	0	4	
5/23/2010	32	28	24	22	21	20	86	69	51	1014	1012	1011	16	10	6	26	16	39	0	5	Rain
5/24/2010	31	26	22	22	20	16	94	69	42	1015	1013	1011	11	9	5	26	13	35	0	4	
5/25/2010	31	26	21	21	19	16	93	70	39	1015	1013	1011	16	9	5	19	10	29	0	1	
5/26/2010	31	25	18	21	18	12	96	68	31	1017	1015	1013	16	11	6	11	2		0	1	
5/27/2010	32	25	18	21	18	15	94	67	35	1017	1015	1012	16	10	6	11	2		0	0	
5/28/2010	33	26	20	20	18	15	93	62	32	1014	1012	1009	16	9	5	10	2		0	1	
5/29/2010	34	27	20	21	18	15	92	64	32	1010	1009	1006	16	11	6	10	2		0	2	
5/30/2010	33	27	21	22	19	17	91	65	38	1011	1009	1008	16	14	8	19	3		0	1	Thunderstorm
5/31/2010	33	27	21	21	19	16	94	65	36	1015	1013	1012	16	15	6	13	5		0	0	
6/1/2010	32	26	20	21	19	17	94	64	39	1015	1013	1009	16	15	8	16	5	26	0	0	
6/2/2010	33	27	20	22	20	18	95	69	41	1011	1009	1005	16	13	4	37	8	47	1.19	3	Rain-Thunderstorm
6/3/2010	21	21	20	21	20	19	96	94	89	1008	1007	1004	16	11	3	24	8	37	2.03	7	Rain-Thunderstorm
6/4/2010	31	25	19	21	20	17	97	74	44	1010	1008	1007	16	9	1	10	0		0	1	Fog
6/5/2010	32	26	21	22	21	20	95	74	54	1011	1009	1008	16	13	6	16	3		0	0	
6/6/2010	33	28	24	25	23	22	95	76	52	1013	1012	1010	11	7	3	11	6		0	4	
6/7/2010	32	28	24	24	23	22	92	77	57	1016	1014	1012	11	7	5	16	6		0	2	
6/8/2010	28	25	22	24	22	20	94	86	63	1016	1014	1013	16	12	8	21	8	29	0	3	Rain
6/9/2010	25	23	21	23	21	20	96	94	91	1016	1014	1011	16	10	2	21	5	27	7.37	6	Rain-Thunderstorm

6/10/2010	32	27	22	25	23	21	96	80	54	1013	1011	1009	11	7	5	29	13	39	0	3 Rain
6/11/2010	32	28	25	25	23	22	91	76	59	1013	1012	1011	11	7	5	27	16	37	0	4
6/12/2010	32	28	25	24	23	22	91	75	56	1016	1015	1013	16	9	6	26	16	40	0	4 Rain
6/13/2010	32	28	25	24	23	21	91	73	53	1017	1016	1013	11	7	5	23	14	32	0	5
6/14/2010	33	29	25	24	22	20	93	72	46	1015	1014	1010	11	8	5	23	13	34	0	4 Rain
6/15/2010	33	28	23	23	22	19	96	72	42	1017	1015	1013	11	8	4	14	6		0	3
6/16/2010	33	28	23	24	22	20	95	71	44	1019	1017	1015	16	11	4	16	6		0	2
6/17/2010	33	28	23	24	22	18	95	72	44	1017	1016	1014	16	10	0	23	6	29	0	3 Fog
6/18/2010	33	28	23	24	22	21	93	71	49	1017	1016	1013	16	16	11	23	10	29	0	3
6/19/2010	33	28	24	23	22	20	93	71	44	1019	1017	1015	16	15	11	16	10		0	2
6/20/2010	33	28	23	23	22	20	94	69	45	1018	1016	1013	16	16	11	16	6	27	0	2
6/21/2010	33	28	22	23	21	21	92	69	47	1017	1015	1014	16	16	16	14	6		0	1
6/22/2010	33	28	23	23	22	19	92	67	42	1018	1016	1015	16	16	16	13	5		0	1
6/23/2010	33	28	22	23	22	20	94	69	43	1018	1016	1015	16	16	11	13	5		0	1
6/24/2010	28	26	25	24	23	22	91	85	68	1019	1018	1017	16	16	16	8	3		0	3 Rain

« Previous Month	« 2009	May 2010			2011 »	Next Month »
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1 Actual: 82 | 67 Precip: 0.00 Average: - | - Precip: -
2 Actual: 83 | 55 Precip: 0.00 Average: - | - Precip: -	3 Actual: 88 | 49 Precip: 0.00 Average: - | - Precip: -	4 Actual: 87 | 47 Precip: 0.00 Average: - | - Precip: -	5 Actual: 93 | 54 Precip: 0.00 Average: - | - Precip: -	6 Actual: 91 | 62 Precip: 0.00 Average: - | - Precip: -	7 Actual: 92 | 69 Precip: 0.00 Average: - | - Precip: -	8 Actual: 74 | 67 Precip: 0.00 Average: - | - Precip: -
9 Actual: 71 | 66 Precip: 0.00 Average: - | - Precip: -	10 Actual: 88 | 69 Precip: 0.00 Average: - | - Precip: -	11 Actual: 92 | 71 Precip: 0.00 Average: - | - Precip: -	12 Actual: 89 | 71 Precip: 0.00 Average: - | - Precip: -	13 Actual: 89 | 73 Precip: 0.00 Average: - | - Precip: -	14 Actual: 83 | 65 Precip: 1.67 Average: - | - Precip: -	15 Actual: 70 | 63 Precip: 0.38 Average: - | - Precip: -
16 Actual: 86 | 62 Precip: 0.00 Average: - | - Precip: -	17 Actual: 89 | 66 Precip: 0.47 Average: - | - Precip: -	18 Actual: 86 | 64 Precip: 0.00 Average: - | - Precip: -	19 Actual: 88 | 71 Precip: 0.00 Average: - | - Precip: -	20 Actual: 88 | 74 Precip: 0.00 Average: - | - Precip: -	21 Actual: 90 | 72 Precip: 0.00 Average: - | - Precip: -	22 Actual: 90 | 73 Precip: 0.00 Average: - | - Precip: -
23 Actual: 90 | 76 Precip: 0.00 Average: - | - Precip: -	24 Actual: 88 | 72 Precip: 0.00 Average: - | - Precip: -	25 Actual: 89 | 71 Precip: 0.00 Average: - | - Precip: -	26 Actual: 89 | 65 Precip: 0.00 Average: - | - Precip: -	27 Actual: 91 | 66 Precip: 0.00 Average: - | - Precip: -	28 Actual: 93 | 68 Precip: 0.00 Average: - | - Precip: -	29 Actual: 94 | 68 Precip: 0.00 Average: - | - Precip: -
30 Actual: 93 | 70 Precip: 0.00 Average: - | - Precip: -	31 Actual: 92 | 70 Precip: 0.00 Average: - | - Precip: -					

Calendar Key

Sunny Clear · Mostly Cloudy Partly Sunny · Mostly Sunny Partly Cloudy · Cloudy · Rain · Snow · Hail Flurries · Thunderstorms · Hazy Fog · Sleet · '?' denotes 'chance of' · Unknown

Actual: 90 | 58 — Data Category
Precip: 0.00 — Condition
Average: 71 | 53 — High Temp. / Lo Temp.
Precip: 0.03 — Precip. (in inches) / Daily Avg. Temp.
-60 -30 0 30 60 90 120 — Temps in °F

Powered by Weather Underground, Inc.

« Previous Month	« 2009	June 2010			2011 »	Next Month »
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1 Actual: 91 | 69 Precip: 0.00 Average: - | - Precip: -	2 Actual: 92 | 69 Precip: 0.47 Average: - | - Precip: -	3 Actual: 71 | 60 Precip: 0.80 Average: - | - Precip: -	4 Actual: 89 | 67 Precip: 0.00 Average: - | - Precip: -	5 Actual: 90 | 71 Precip: 0.00 Average: - | - Precip: -
6 Actual: 92 | 76 Precip: 0.00 Average: - | - Precip: -	7 Actual: 90 | 76 Precip: 0.00 Average: - | - Precip: -	8 Actual: 83 | 73 Precip: 0.00 Average: - | - Precip: -	9 Actual: 77 | 70 Precip: 2.90 Average: - | - Precip: -	10 Actual: 91 | 73 Precip: 0.00 Average: - | - Precip: -	11 Actual: 90 | 77 Precip: 0.00 Average: - | - Precip: -	12 Actual: 91 | 78 Precip: 0.00 Average: - | - Precip: -
13 Actual: 91 | 78 Precip: 0.00 Average: - | - Precip: -	14 Actual: 93 | 77 Precip: 0.00 Average: - | - Precip: -	15 Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	16 Actual: 93 | 75 Precip: 0.00 Average: - | - Precip: -	17 Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	18 Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	19 Actual: 93 | 76 Precip: 0.00 Average: - | - Precip: -
20 Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	21 Actual: 93 | 73 Precip: 0.00 Average: - | - Precip: -	22 Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	23 Actual: 93 | 73 Precip: 0.00 Average: - | - Precip: -	24 Actual: 84 | 76 Precip: 0.05 Average: - | - Precip: -	25 Actual: 94 | 74 Precip: 0.00 Average: - | - Precip: -	26 Actual: 94 | 74 Precip: 0.00 Average: - | - Precip: -
27 Actual: 94 | 73 Precip: 0.00 Average: - | - Precip: -	28 Actual: 93 | 72 Precip: 0.00 Average: - | - Precip: -	29 Actual: 93 | 77 Precip: 0.00 Average: - | - Precip: -	30 Actual: 85 | 73 Precip: 0.00 Average: - | - Precip: -			

Calendar Key

Sunny Clear · Mostly Cloudy Partly Sunny · Mostly Sunny Partly Cloudy · Cloudy · Rain · Snow · Hail Flurries · Thunderstorms · Hazy Fog · Sleet · '?' denotes 'chance of' · Unknown

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

Data Category
Condition
High Temp.
Lo Temp.
Precip. (in inches)
Daily Avg. Temp.
Temps in °F
-60 -30 0 30 60 90 120

Powered by Weather Underground, Inc.

: Thu Jul 1 2010

20565-22JUN10.WAD
2010/06/22 11:45:40

MB

FlowTracker
P872
3.7
2.30
0.0%

(English Units)
ft
ft/s
ft^2
cfs

Accuracy	1.0%	1.0%
Depth	1.5%	6.8%
Velocity	3.3%	99.8%
Width	0.5%	0.5%
Method	7.4%	-
# Stations	4.6%	-
Overall	**9.5%**	**100.1%**

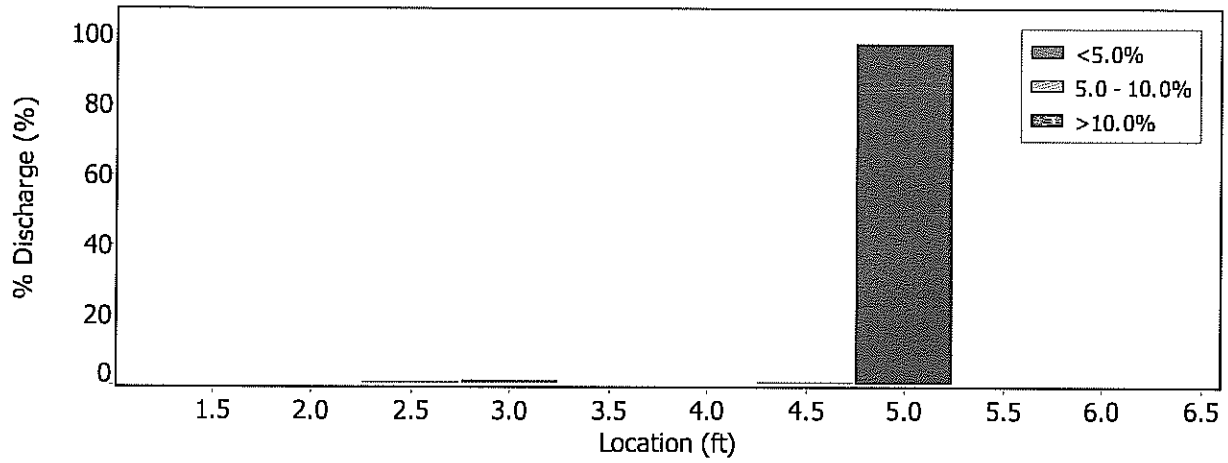
20	11
LEW	5.600
43.6 dB	1.073
81.29 °F	0.192
Mid-Section	0.0761
	0.0817

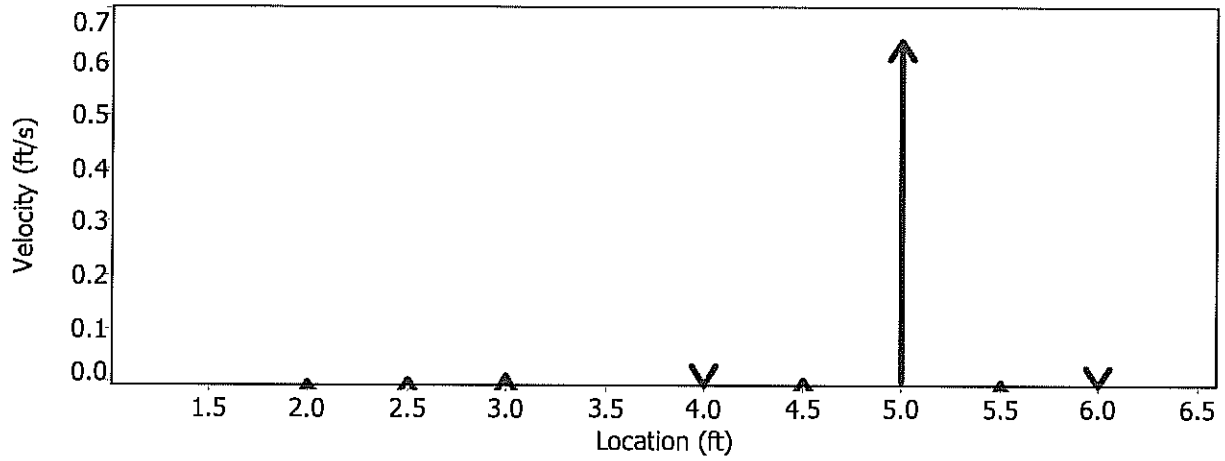
				Depth								
0	11:45	1.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
1	11:45	2.00	0.6	0.150	0.6	0.060	0.0013	1.00	0.0013	0.112	0.0001	0.2
2	*11:46*	*2.50*	*0.6*	*0.200*	*0.6*	*0.080*	*0.0066*	*1.00*	*0.0066*	*0.100*	*0.0007*	*0.8*
3	*11:47*	*3.00*	*0.6*	*0.200*	*0.6*	*0.080*	*0.0125*	*1.00*	*0.0125*	*0.100*	*0.0012*	*1.5*
4	*11:48*	*3.50*	*0.6*	*0.250*	*0.6*	*0.100*	*0.0000*	*1.00*	*0.0000*	*0.125*	*0.0000*	*0.0*
5	11:50	4.00	0.6	0.300	0.6	0.120	-0.0043	1.00	-0.0043	0.150	-0.0006	-0.8
6	*11:51*	*4.50*	*0.6*	*0.300*	*0.6*	*0.120*	*0.0059*	*1.00*	*0.0059*	*0.150*	*0.0009*	*1.1*
7	*11:51*	*5.00*	*0.6*	*0.250*	*0.6*	*0.100*	*0.6411*	*1.00*	*0.6411*	*0.125*	*0.0801*	*98.1*
8	*11:52*	*5.50*	*0.6*	*0.200*	*0.6*	*0.080*	*0.0003*	*1.00*	*0.0003*	*0.100*	*0.0000*	*0.0*
9	*11:54*	*6.00*	*0.6*	*0.200*	*0.6*	*0.080*	*-0.0072*	*1.00*	*-0.0072*	*0.110*	*-0.0008*	*-1.0*
10	11:54	6.60	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0

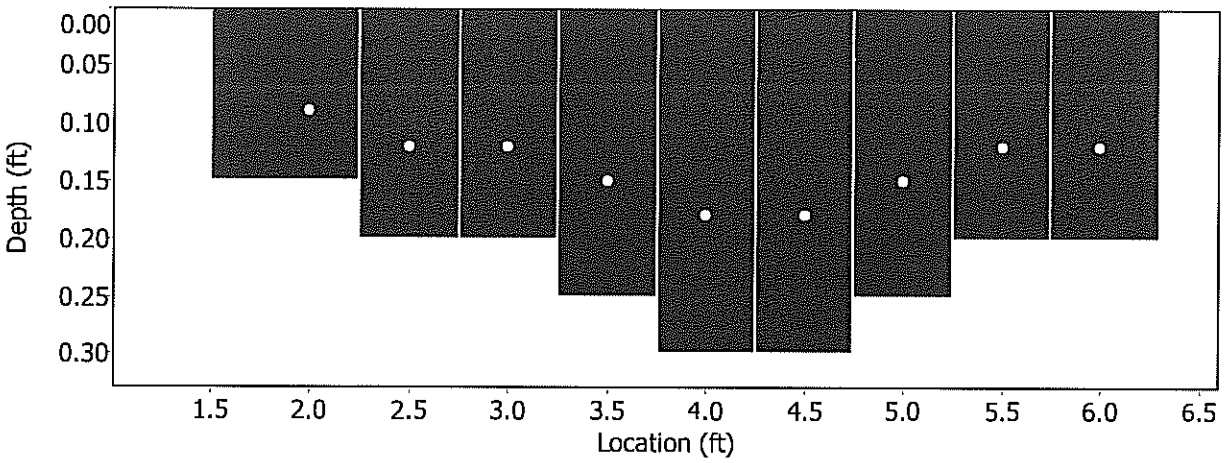
: Thu Jul 1 2010

20565-22JUN10.WAD
2010/06/22 11:45:40

MB







: Thu Jul 1 2010

20565-22JUN10.WAD
2010/06/22 11:45:40

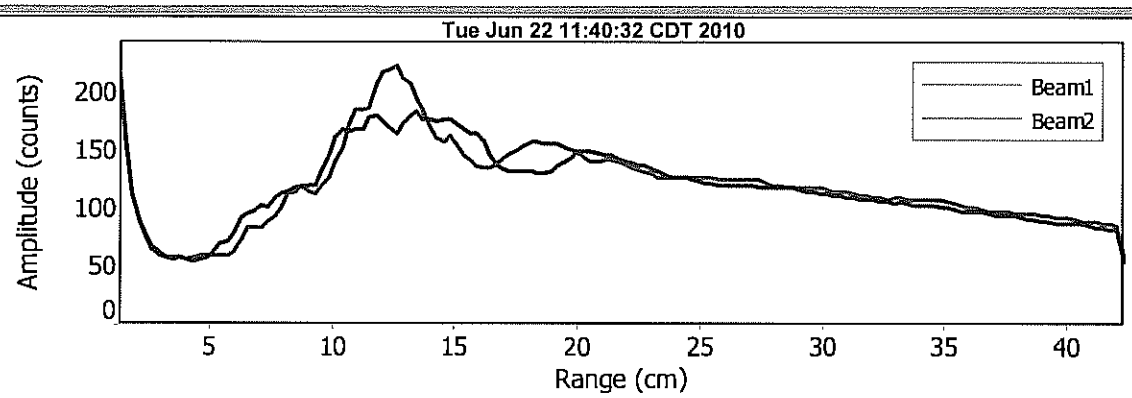
MB

2	2.50	0.6	Boundary QC is Fair; possible boundary interference
3	3.00	0.6	SNR (64.9) is different from typical SNR (43.6)
4	3.50	0.6	SNR (57.4) is different from typical SNR (43.6)
		0.6	Boundary QC is Good; possible boundary interference
6	4.50	0.6	SNR (31.8) is different from typical SNR (43.6)
7	5.00	0.6	SNR (24.9) is different from typical SNR (43.6)
8	5.50	0.6	Boundary QC is Fair; possible boundary interference
9	6.00	0.6	SNR (23.2) is different from typical SNR (43.6)
		0.6	Boundary QC is Fair; possible boundary interference

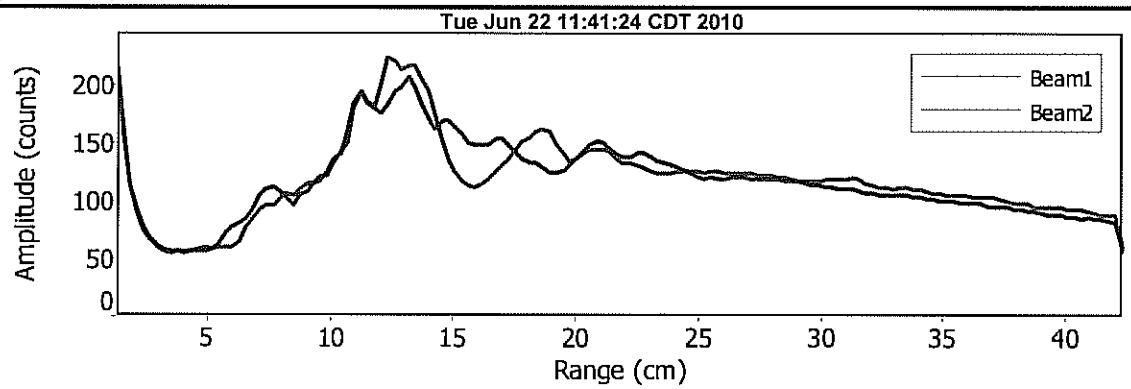
: Thu Jul 1 2010

20565-22JUN10.WAD
2010/06/22 11:45:40

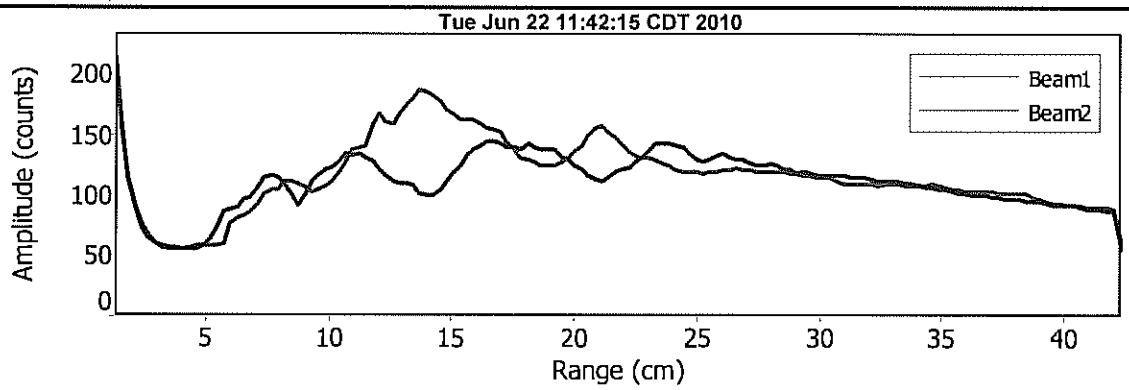
MB



Noise level check - Pass
SNR check - Pass
Peak location check - Fail
Peak shape check - Fail



Noise level check - Pass
SNR check - Pass
Peak location check - Fail
Peak shape check - Fail



Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: MBWC - BRA	
Date & Time: 10 Aug 10 1050	County Name: Robertson
Stream Name: Walnut Creek	
Segment No. or nearest downstream Segment No.: 12420	
Description of Site: 99901 3 miles onto private property from Public Road	

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

A. Stream Characteristics:

1. Check the following channel flow status that applies.

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

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

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

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

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

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

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

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. 4.602 cfs

4. Water Quality Data (Field Parameters)

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

Air Temp 33.3 °C 92°F Water Temp 25.6 °C 78°F

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	AL Pasture	_____ Concrete
_____ Herbaceous marsh	_____ Row crops	Other (specify): _____
_____ Mowed/maintained corridor	_____ Denuded/Eroded bank	

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

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

Easy access to creek, but 3 miles deep into private property. #851-852

8. Dominant Primary Substrate

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

Stream Name_____ Site: _____
Date: _____ Time: _____

B. Primary Contact Water Recreation Evaluation:

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

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?
☐ Yes ☑ No primary contact recreation activities were observed

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

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

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

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

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
Deep moving water, landowner fishes & wades in this part of the creek #851-852

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
On Private property. No county roads in close proximity

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 Evalnation:

- 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: _____

Date: _____ Time: _____

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

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

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
No one present, Land owner fishes & wades here with his family.

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).
N/A

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).
No public roads in area.

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

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

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 853 Downstream 854 Left Bank 855 Right Bank 856
Photos #s (150 meters) Upstream 857 Downstream 858 Left Bank 859 Right Bank 860
Photos #s (300 meters) Upstream 861 Downstream 862 Left Bank 863 Right Bank 864

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	24	12	>1.2
Pool 2	~~26~~ 69	6	.59
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	0.45
60 meters	0.48
90 meters	0.33
120 meters	0.45
150 meters	0.26
180 meters	0.32
210 meters	0.46
240 meters	0.34
270 meters	0.52
300 meters	0.61
Average	0.42

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

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

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	3
Width at narrowest point of the stream within 300 meter reach	0.4
Width at the widest point of the stream within 300 meter reach	12

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

COMMENTS: Good fishing holes, landowner fishes & wades in stream at this 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_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

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

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

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

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

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

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

☐ Campgrounds ☐ Stairs/walkway ☐ Roads (paved/unpaved) ☐ Other: _____
☐ Playgrounds ☐ Boating access (ramps) ☐ Populated area ☑ None of the Above
☑ Rural area ☐ Beach ☐ Docks or rafts
☐ Residential ☐ Bridge crossing ☐ Commercial outfitter
☐ National forests ☐ Commercial boating ☐ Nearby school
☐ Urban/suburban location ☐ Trails/paths (hiking/biking) ☐ Power Line Corridor
☐ Golf Course ☐ Paved parking lot ☐ Parks (national/city/county/state)
☐ Sports Field ☐ Unimproved parking lot ☐ Public Property
Comments: Private property ≈ 3 miles from public road.

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

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

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

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

Stream Name_____ Site: _____
Date: _____ Time: _____

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

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

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: Hogs in creek

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).
Constant water flow from mine discharge upstream from this property. Water is allways flowing and shaded. Good fishing area.

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

Stream:_____ Date:_____

Site:_____ Site

Description:_____

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

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

Observations:_____

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

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FlowTracker
P872
3.7
2.30
0.0%

(English Units)
ft
ft/s
ft^2
cfs

Accuracy	1.0%	1.0%
Depth	0.4%	2.3%
Velocity	0.9%	11.0%
Width	0.1%	0.1%
Method	2.1%	-
# Stations	2.5%	-
Overall	**3.5%**	**11.3%**

40	20
LEW	11.100
32.1 dB	5.245
78.04 °F	0.473
Mid-Section	0.8774
	4.6021

				Depth								
0	09:57	0.80	None	0.700	0.0	0.0	0.0000	1.00	0.9360	0.350	0.3277	7.1
1	09:57	1.80	0.6	0.650	0.6	0.260	0.9360	1.00	0.9360	0.520	0.4867	10.6
2	09:58	2.40	0.6	0.650	0.6	0.260	1.5262	1.00	1.5262	0.390	0.5952	12.9
3	*09:59*	*3.00*	*0.6*	*0.700*	*0.6*	*0.280*	*0.3960*	*1.00*	*0.3960*	*0.245*	*0.0971*	*2.1*
4	10:22	3.10	0.6	0.550	0.6	0.220	1.5387	1.00	1.5387	0.165	0.2539	5.5
5	10:00	3.60	0.6	0.600	0.6	0.240	1.0600	1.00	1.0600	0.330	0.3499	7.6
6	10:01	4.20	0.6	0.600	0.6	0.240	1.3671	1.00	1.3671	0.360	0.4923	10.7
7	10:02	4.80	0.6	0.600	0.6	0.240	1.1860	1.00	1.1860	0.360	0.4271	9.3
8	*10:04*	*5.40*	*0.6*	*0.500*	*0.6*	*0.200*	*1.0794*	*1.00*	*1.0794*	*0.300*	*0.3239*	*7.0*
9	10:05	6.00	0.6	0.500	0.6	0.200	1.0883	1.00	1.0883	0.300	0.3265	7.1
10	10:06	6.60	0.6	0.450	0.6	0.180	1.1703	1.00	1.1703	0.270	0.3161	6.9
11	*10:09*	*7.20*	*0.6*	*0.450*	*0.6*	*0.180*	*0.2923*	*1.00*	*0.2923*	*0.270*	*0.0790*	*1.7*
12	10:10	7.80	0.6	0.450	0.6	0.180	0.6952	1.00	0.6952	0.270	0.1878	4.1
13	*10:11*	*8.40*	*0.6*	*0.350*	*0.6*	*0.140*	*0.5817*	*1.00*	*0.5817*	*0.210*	*0.1222*	*2.7*
14	10:14	9.00	0.6	0.300	0.6	0.120	0.6129	1.00	0.6129	0.180	0.1103	2.4
15	*10:15*	*9.60*	*0.6*	*0.300*	*0.6*	*0.120*	*0.5597*	*1.00*	*0.5597*	*0.180*	*0.1007*	*2.2*
16	*10:17*	*10.20*	*0.6*	*0.250*	*0.6*	*0.100*	*0.0427*	*1.00*	*0.0427*	*0.150*	*0.0064*	*0.1*
17	*10:18*	*10.80*	*0.6*	*0.250*	*0.6*	*0.100*	*0.0020*	*1.00*	*0.0020*	*0.150*	*0.0003*	*0.0*
18	*10:20*	*11.40*	*0.6*	*0.400*	*0.6*	*0.160*	*-0.0030*	*1.00*	*-0.0030*	*0.220*	*-0.0006*	*0.0*
19	10:20	11.90	None	0.100	0.0	0.0	0.0000	1.00	-0.0030	0.025	-0.0001	0.0

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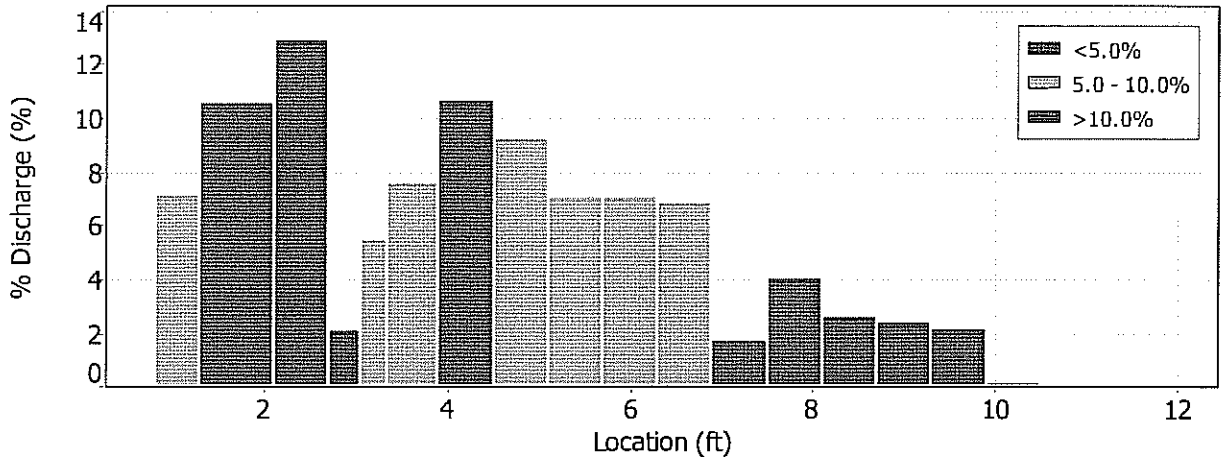

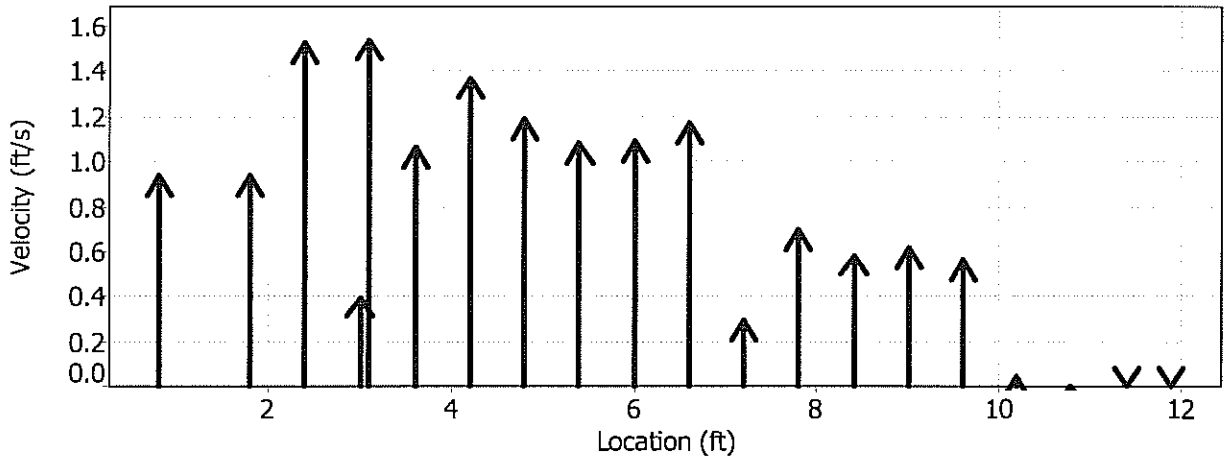

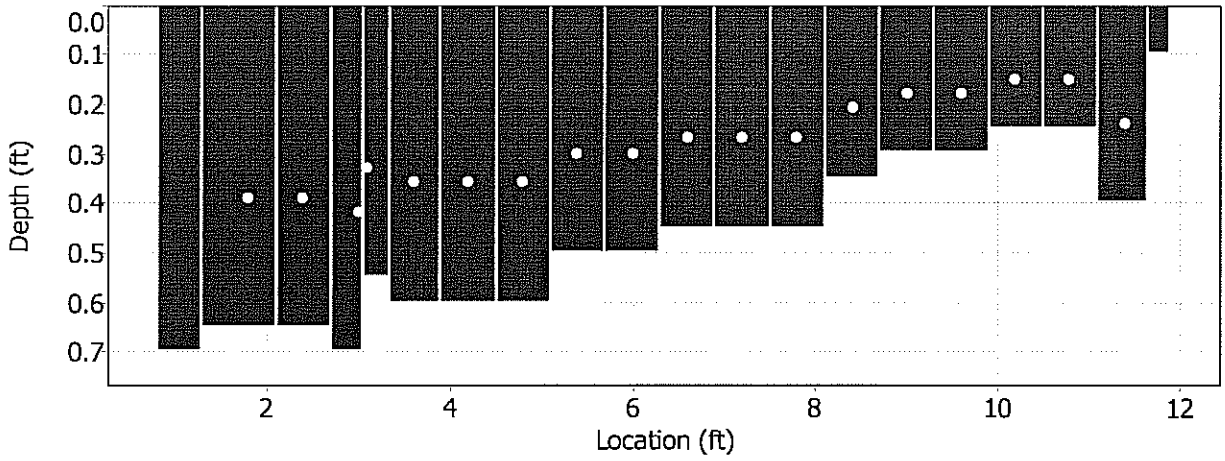

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3	3.00	0.6	High standard error: 0.031
8	5.40	0.6	High standard error: 0.060
11	7.20	0.6	High standard error: 0.032
		0.6	Boundary QC is Fair; possible boundary interference
13	8.40	0.6	High standard error: 0.034
15	9.60	0.6	Boundary QC is Fair; possible boundary interference
16	10.20	0.6	High angle: -67
17	10.80	0.6	Boundary QC is Good; possible boundary interference
18	11.40	0.6	Boundary QC is Fair; possible boundary interference

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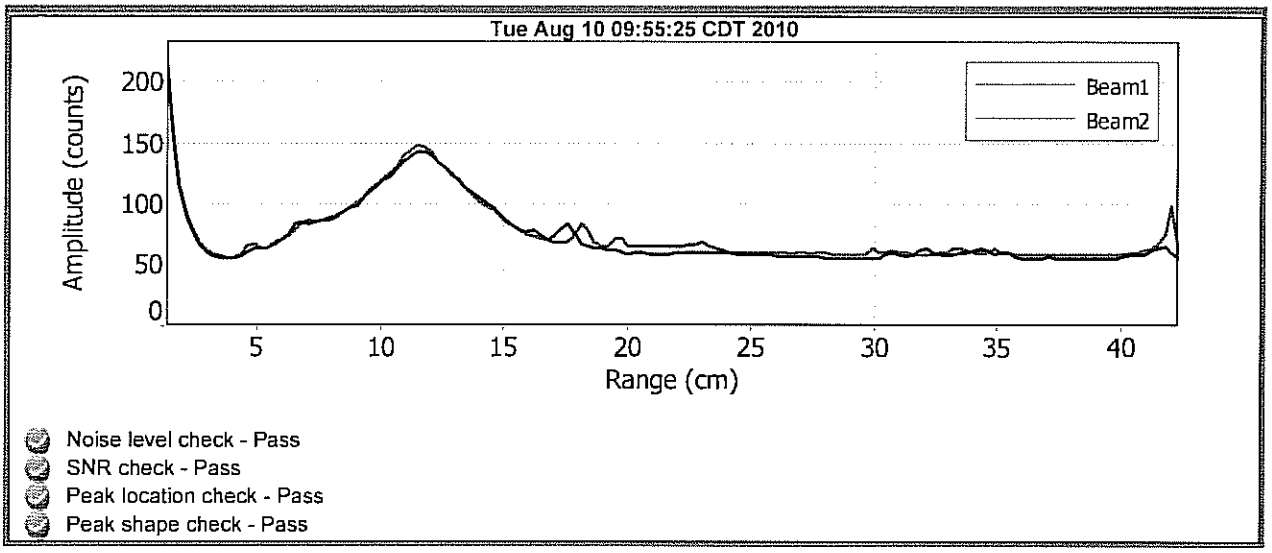


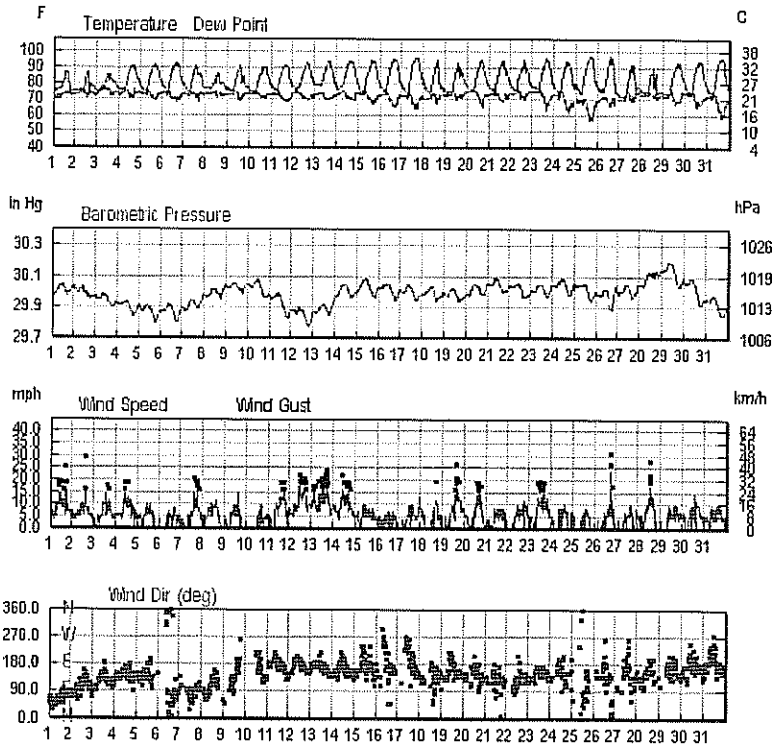
Noise level check - Pass
SNR check - Pass
Peak location check - Pass
Peak shape check - Pass

History for Hearne, TX

Month of July, 2010

Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	97 °F	93 °F	85 °F	
Mean Temperature	86 °F	84 °F	80 °F	
Min Temperature	78 °F	75 °F	72 °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	21	19	15	579
Growing Degree Days (base 50)	36	34	30	1047
Dew Point:				
Dew Point	77 °F	72 °F	58 °F	
Precipitation:				
Precipitation	0.46 in	0.02 in	0.00 in	0.65 in
Snowdepth	-	-	-	-
Wind:				
Wind	24 mph	4 mph	0 mph	
Gust Wind	34 mph	18 mph	9 mph	
Sea Level Pressure:				
Sea Level Pressure	30.20 in	29.98 in	29.78 in	



Monthly Calendar Overview

« Previous Month « 2009 **July 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
				Actual: 87 | 75	Actual: 87 | 75	Actual: 85 | 75
				Precip: 0.07	Precip: 0.46	Precip: 0.00

																Average: - | - Precip: -		Average: - | - Precip: -		Average: - | - Precip: -			
4		5		6		7		8		9		10	
Actual:	91 | 76	Actual:	92 | 74	Actual:	93 | 75	Actual:	91 | 74	Actual:	86 | 76	Actual:	91 | 75	Actual:	90 | 74
Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00
Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -
Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-
11		12		13		14		15		16		17	
Actual:	92 | 75	Actual:	93 | 76	Actual:	94 | 78	Actual:	94 | 76	Actual:	95 | 75	Actual:	95 | 75	Actual:	96 | 73
Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00
Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -
Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-
18		19		20		21		22		23		24	
Actual:	95 | 74	Actual:	93 | 74	Actual:	95 | 76	Actual:	95 | 75	Actual:	95 | 76	Actual:	95 | 77	Actual:	94 | 73
Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00
Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -
Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-
25		26		27		28		29		30		31	
Actual:	97 | 74	Actual:	97 | 75	Actual:	92 | 72	Actual:	90 | 74	Actual:	93 | 74	Actual:	94 | 74	Actual:	96 | 73
Precip:	0.00	Precip:	0.00	Precip:	0.01	Precip:	0.11	Precip:	0.00	Precip:	0.00	Precip:	0.00
Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -
Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear, Mostly Cloudy Partly Sunny, Partly Cloudy Mostly Sunny, Cloudy, Rain, Snow, Hail Flurries, Thunderstorms, Hazy Fog, Sleet, '?' denotes 'chance of', Unknown

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

Data Category, Condition, High Temp., Lo Temp., Precip. (in inches), Daily Avg. Temp., Temps in °F

-60 -30 0 30 60 90 120

Print This Calendar

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
July	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	87	81	75	75	73	71	94	80	64	30.04	30.00	29.97	10	6	4	16	8	25	0.07	Rain
2	87	81	75	76	74	72	94	88	63	30.03	29.99	29.95	10	7	4	16	6	29	0.46	Rain
3	85	80	75	77	75	72	95	85	68	29.98	29.94	29.90	10	5	3	14	4	20	0.00	Rain
4	91	84	76	77	74	71	94	75	51	29.94	29.90	29.84	7	5	3	14	7	18	0.00	Rain
5	92	83	74	76	73	70	95	74	48	29.91	29.87	29.80	7	5	3	10	5	9	0.00	
6	93	84	75	75	72	69	94	69	44	29.92	29.87	29.80	7	5	3	8	2	-	0.00	
7	91	82	74	75	73	69	94	75	53	29.94	29.91	29.87	7	5	4	15	3	25	0.00	
8	86	81	76	75	74	72	90	81	63	30.02	29.98	29.95	10	6	3	12	5	16	0.00	Rain
9	91	83	75	76	73	70	94	79	51	30.06	30.02	29.98	7	5	3	15	2	18	0.00	Rain
10	90	82	74	75	73	71	96	77	53	30.08	30.02	29.96	7	4	3	9	1	-	0.00	
11	92	84	75	75	72	69	94	72	46	29.99	29.94	29.83	7	5	4	15	5	20	0.00	
12	93	84	76	75	73	70	92	70	47	29.90	29.86	29.78	7	5	4	21	9	22	0.00	
13	94	86	78	75	73	71	86	68	46	29.92	29.88	29.85	7	4	3	18	11	24	0.00	
14	94	85	76	76	73	70	91	69	46	30.05	30.00	29.95	7	5	3	16	9	22	0.00	
15	95	85	75	76	72	68	95	69	41	30.09	30.02	29.96	7	5	2	10	5	16	0.00	
16	95	85	75	75	71	66	94	67	38	30.06	30.02	29.94	10	6	3	7	2	-	0.00	Rain
17	96	84	73	74	71	65	94	63	35	30.05	30.00	29.94	10	9	3	10	2	16	0.00	

18	95	84	74	75	72	68	90	73	42	30.03	29.99	29.94	10	10	7	12	5	20	0.00	Thunderstorm
19	93	84	74	76	73	70	96	76	48	30.02	29.98	29.94	10	8	0	18	4	26	0.00	Fog
20	95	86	76	76	73	65	95	73	39	30.05	30.01	29.97	10	9	5	15	6	18	0.00	
21	95	85	75	75	73	69	95	71	42	30.09	30.05	29.99	10	9	5	8	2	16	0.00	Rain
22	95	86	76	76	74	70	94	75	45	30.06	30.01	29.96	10	9	7	12	3	20	0.00	
23	95	86	77	77	73	64	94	70	35	30.05	30.01	29.96	10	9	5	14	4	20	0.00	
24	94	84	73	76	71	63	96	69	37	30.09	30.04	29.98	10	9	4	10	3	-	0.00	
25	97	86	74	72	67	58	88	58	26	30.06	30.02	29.94	10	10	7	8	2	-	0.00	Rain
26	97	86	75	73	70	67	87	67	38	30.02	29.97	29.88	10	7	4	24	2	34	0.00	Rain , Thunderstorm
27	92	82	72	76	72	69	95	79	46	30.05	30.00	29.96	10	6	4	10	2	-	0.01	Rain , Thunderstorm
28	90	82	74	76	74	71	95	83	56	30.14	30.09	30.03	10	9	3	17	6	31	0.11	Rain , Thunderstorm
29	93	84	74	77	72	68	96	74	45	30.20	30.14	30.03	10	9	5	10	3	-	0.00	
30	94	84	74	76	72	66	95	71	41	30.09	30.04	29.91	10	9	2	14	5	18	0.00	
31	96	84	73	74	69	59	94	66	29	29.98	29.93	29.85	10	9	5	10	4	-	0.00	

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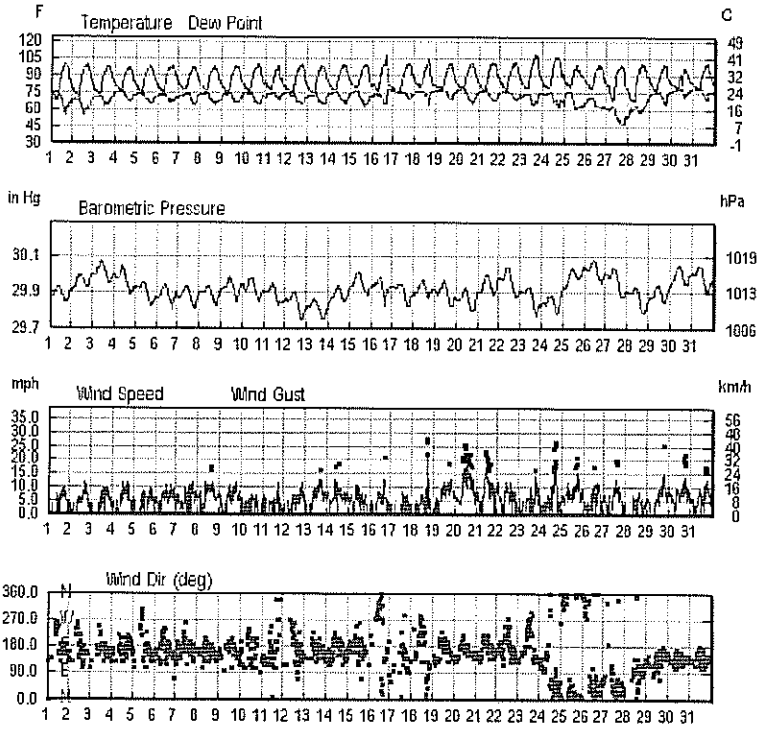
History for Hearne, TX

Month of August, 2010

Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	109 °F	101 °F	97 °F	
Mean Temperature	94 °F	88 °F	84 °F	
Min Temperature	81 °F	76 °F	68 °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	29	24	19	730
Growing Degree Days (base 50)	44	38	34	1189
Dew Point:				
Dew Point	81 °F	71 °F	48 °F	
Precipitation:				
Precipitation	0.00 in	0.00 in	0.00 in	0.00 in
Snowdepth	-	-	-	-
Wind:				
Wind	21 mph	4 mph	0 mph	
Gust Wind	29 mph	18 mph	9 mph	
Sea Level Pressure:				
Sea Level Pressure	30.09 in	29.92 in	29.75 in	



Monthly Calendar Overview

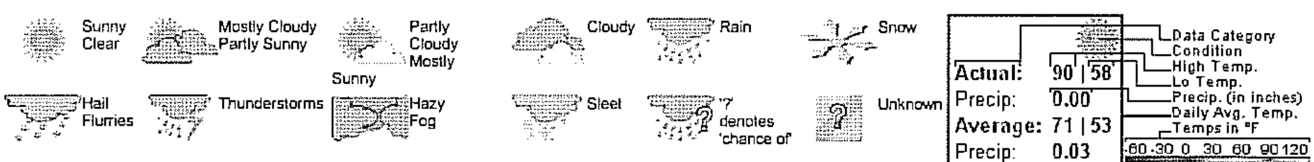
« Previous Month | « 2009 | **August 2010** | 2011 » | Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
Actual: 100 | 69	Actual: 99 | 71	Actual: 98 | 73	Actual: 97 | 76	Actual: 98 | 75	Actual: 98 | 75	Actual: 98 | 78
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -

8	9	10	11	12	13	14
Actual: 98 | 77 Precip: 0.00 Average: - | - Precip: -	Actual: 98 | 74 Precip: 0.00 Average: - | - Precip: -	Actual: 100 | 75 Precip: 0.00 Average: - | - Precip: -	Actual: 99 | 78 Precip: 0.00 Average: - | - Precip: -	Actual: 99 | 75 Precip: 0.00 Average: - | - Precip: -	Actual: 99 | 75 Precip: 0.00 Average: - | - Precip: -	Actual: 100 | 77 Precip: 0.00 Average: - | - Precip: -
15	**16**	**17**	**18**	**19**	**20**	**21**
Actual: 100 | 79 Precip: 0.00 Average: - | - Precip: -	Actual: 109 | 76 Precip: 0.00 Average: - | - Precip: -	Actual: 101 | 76 Precip: 0.00 Average: - | - Precip: -	Actual: 104 | 81 Precip: 0.00 Average: - | - Precip: -	Actual: 101 | 79 Precip: 0.00 Average: - | - Precip: -	Actual: 101 | 80 Precip: 0.00 Average: - | - Precip: -	Actual: 102 | 77 Precip: 0.00 Average: - | - Precip: -
22	**23**	**24**	**25**	**26**	**27**	**28**
Actual: 103 | 77 Precip: 0.00 Average: - | - Precip: -	Actual: 109 | 79 Precip: 0.00 Average: - | - Precip: -	Actual: 108 | 79 Precip: 0.00 Average: - | - Precip: -	Actual: 100 | 80 Precip: 0.00 Average: - | - Precip: -	Actual: 100 | 79 Precip: 0.00 Average: - | - Precip: -	Actual: 99 | 69 Precip: 0.00 Average: - | - Precip: -	Actual: 101 | 68 Precip: 0.00 Average: - | - Precip: -
29	**30**	**31**				
Actual: 100 | 77 Precip: 0.00 Average: - | - Precip: -	Actual: 99 | 81 Precip: 0.00 Average: - | - Precip: -	Actual: 101 | 80 Precip: 0.00 Average: - | - Precip: -				

« Previous Month « 2009 2011 » Next Month »

Calendar Key:



Print This Calendar

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
August	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	100	84	69	74	67	55	95	60	22	29.93	29.89	29.84	10	9	7	9	2	-	0.00	
2	99	85	71	70	64	55	90	55	25	30.00	29.96	29.91	10	9	4	12	2	16	0.00	
3	98	86	73	73	69	64	94	60	32	30.08	30.01	29.95	10	8	4	9	2	16	0.00	
4	97	86	76	77	73	68	94	66	38	30.05	29.98	29.89	7	6	3	12	4	17	0.00	Rain
5	98	86	75	74	71	65	92	62	34	29.96	29.91	29.83	7	5	3	8	3	-	0.00	
6	98	86	75	74	71	67	92	63	36	29.95	29.89	29.81	10	8	4	10	5	-	0.00	
7	98	88	78	75	71	64	86	60	33	29.94	29.88	29.81	10	10	10	12	5	16	0.00	
8	98	88	77	76	71	65	92	63	34	29.94	29.90	29.83	10	10	10	12	6	20	0.00	
9	98	86	74	76	71	66	95	63	34	29.99	29.93	29.85	10	10	7	12	5	16	0.00	
10	100	88	75	77	72	65	94	64	33	29.98	29.93	29.85	10	10	3	7	2	9	0.00	
11	99	88	78	76	73	68	89	64	36	29.96	29.90	29.83	10	10	10	12	3	24	0.00	Rain , Thunderstorm
12	99	87	75	76	71	65	92	63	33	29.90	29.85	29.75	10	10	7	9	2	-	0.00	
13	99	87	75	75	70	65	91	62	33	29.87	29.82	29.76	10	10	10	13	4	17	0.00	
14	100	88	77	76	72	66	92	62	33	29.94	29.88	29.83	10	10	7	13	6	18	0.00	
15	100	90	79	77	72	63	90	62	30	30.02	29.96	29.89	10	10	10	10	5	-	0.00	
16	109	92	76	79	72	65	90	64	26	29.99	29.93	29.83	10	10	10	13	3	23	0.00	
17	101	88	76	78	75	70	96	69	36	29.95	29.91	29.83	10	9	5	8	1	-	0.00	
18	104	92	81	78	75	65	88	65	28	29.97	29.92	29.87	10	10	10	21	3	29	0.00	Thunderstorm
19	101	90	79	79	75	69	94	67	35	29.97	29.90	29.83	10	10	10	13	4	21	0.00	
20	101	90	80	80	74	66	95	62	33	29.93	29.86	29.80	10	10	7	17	8	25	0.00	
21	102	90	77	79	74	68	96	64	33	30.01	29.94	29.89	10	10	10	17	7	23	0.00	

22	103	90	77	78	74	69	94	62	34	30.04	29.97	29.88	10	10	7	12	6	-	0.00	
23	109	94	79	74	71	65	85	54	26	29.93	29.88	29.77	10	10	10	14	2	22	0.00	
24	108	94	79	77	71	63	88	53	24	29.90	29.85	29.78	10	10	10	17	4	26	0.00	
25	100	90	80	77	69	62	86	54	30	30.04	29.99	29.93	10	10	10	15	7	21	0.00	
26	100	90	79	72	67	62	76	50	29	30.09	30.04	29.96	10	10	10	12	5	18	0.00	
27	99	84	69	64	57	48	83	42	17	30.04	29.98	29.88	10	10	10	13	5	21	0.00	
28	101	84	68	65	61	54	82	49	25	29.94	29.89	29.79	10	10	10	8	1	-	0.00	
29	100	88	77	77	74	66	92	65	33	29.95	29.89	29.85	10	10	10	15	5	29	0.00	
30	99	90	81	81	77	72	93	73	42	30.06	30.00	29.94	10	10	10	14	7	22	0.00	
31	101	90	80	80	76	68	96	70	33	30.05	30.00	29.91	10	10	7	12	5	17	0.00	

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Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: JW/JG	
Date & Time: 24JUN10 1000	County Name: ROBERTSON
Stream Name: WALNUT ~~99206~~ 99902	
Segment No. or nearest downstream Segment No.: 12420	
Description of Site: Walnut Creek @ FM46 upstream	

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

A. Stream Characteristics:

1. Check the following channel flow status that applies.

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

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

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

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

0012 ☒ 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 ean 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. 20.01 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 27.6 °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	LR 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):

0002 Fenced out from road under bridge with no gates

8. Dominant Primary Substrate

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

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

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

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

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

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

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

0002 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).
Stagnant pool fenced off on private property

0001 3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
FM 46

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_____ Site: _____
Date: _____ Time: _____

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

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

0002 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).
completely fenced out

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

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

5. Describe the physical characteristics of the water body that hinders the frequency of secondary contact recreation (depth, etc.) (Attach photos or depth measurements, etc. for documentation).
none

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).
0002 Barbed wire 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.
none

Field Data Sheets – Basie RUAA Survey

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

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

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

Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters.
Photos #s (30 meters) Upstream 004 Downstream 005 Left Bank 006 Right Bank 007
Photos #s (150 meters) Upstream 008 Downstream 009 Left Bank 010 Right Bank 011
Photos #s (300 meters) Upstream 014 Downstream 015 Left Bank 016 Right Bank 017

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	20+ *	15	0.85
Pool 2	40	5	0.85
Pool 3	30	6	0.77
Pool 4	10	9	0.93
Pool 5	10	5	0.65
Pool 6			
Pool 7			
Pool 8			
Pool 9			
Pool 10			

extends out of reach

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	0.64
60 meters	0.40
90 meters	0.10
120 meters	0.77
150 meters	0.75
180 meters	0.16
210 meters	0.11
240 meters	0.11
270 meters	0.02
300 meters	0.00
Average	N/A

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

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

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	4
Width at narrowest point of the stream within 300 meter reach	n/a
Width at the widest point of the stream within 300 meter reach	15

d) Is there sufficient water within a 300 meter stream reach during base flow conditions to support primary contact recreation? ☑ Yes ☐ No
COMMENTS:
Large pool near bridge deep enough to swim in

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

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

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

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

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

0003

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

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

0001

☐ 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).

0002

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

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

0001

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

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

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

Aquatic Vegetation: ☐ absent ☒ rare ☐ common ☐ abundant
Algae Cover: ☐ absent ☒ rare ☐ common ☐ abundant
Odor: ☐ none ☐ rare ☒ common ☐ abundant
0021 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

0020 Wild	☐ None	☒ slight presence	☐ moderate presence	☐ large presence
Domesticated Pets	☒ None	☐ slight presence	☐ moderate presence	☐ large presence
0018 Livestock	☐ None	☐ slight presence	☐ moderate presence	☒ large presence
Feral Hogs	☐ None	☐ slight presence	☒ moderate presence	☐ large presence

0017 Comments: _____

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

0020 ☒ Tracks ☒ Fecal droppings ☐ Bird nests

11. Garbage Observed

0013

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

Briefly describe the kinds of garbage observed: oil jug

_____
_____

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

13. Please document any other relevant information regarding recreational activities and the water body in general (for example, area outside of the stream reach evaluated).
No

_____
_____
_____
_____

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream:_____ Date:_____

Site:_____ Site

Description:_____

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

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

Observations:_____

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

: Thu Jul 1 2010

99902-25JUN10.WAD
2010/06/25 08:58:43

JN

FlowTracker
P872
3.7
2.30
0.0%

(English Units)
ft
ft/s
ft^2
cfs

Accuracy	1.0%	1.0%
Depth	3.1%	35.6%
Velocity	35.2%	280.1%
Width	1.0%	1.0%
Method	15.7%	-
# Stations	4.6%	-
Overall	**38.9%**	**282.4%**

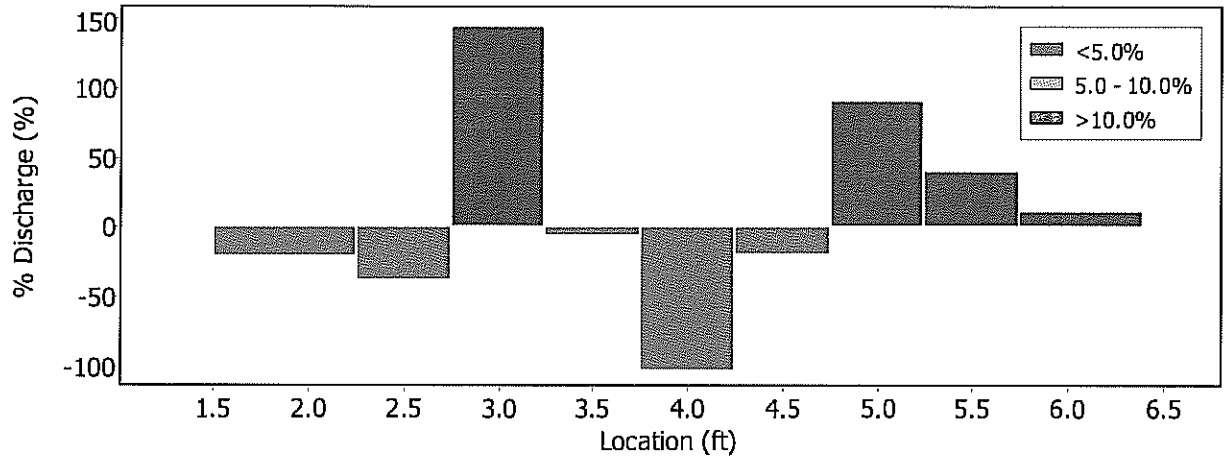
20	11
LEW	5.800
48.0 dB	1.620
80.49 °F	0.279
Mid-Section	-0.0055
	-0.0089

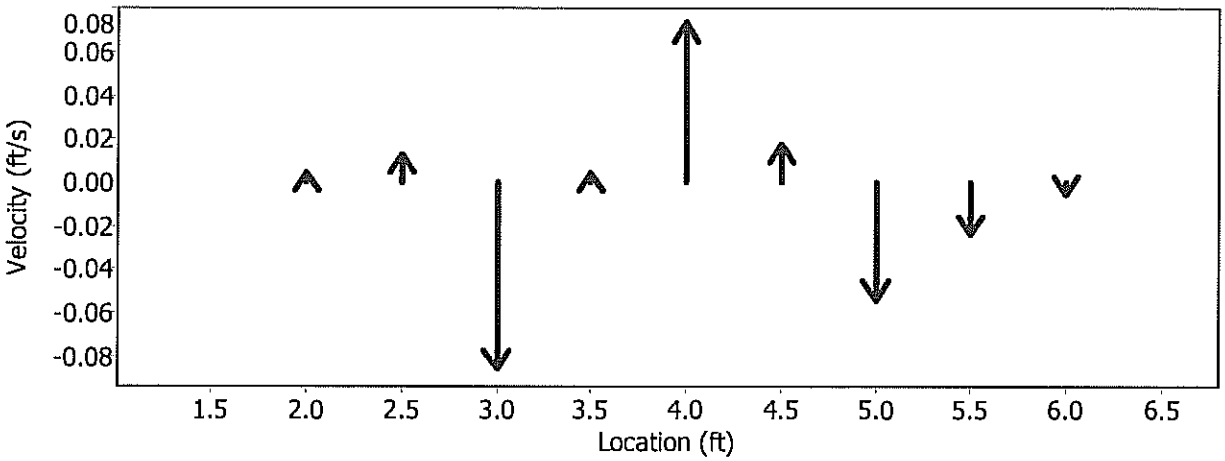
				Depth								
0	08:58	1.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
1	08:59	2.00	0.6	0.500	0.6	0.200	0.0049	1.00	0.0049	0.375	0.0018	-20.7
2	*09:00*	*2.50*	*0.6*	*0.500*	*0.6*	*0.200*	*0.0135*	*1.00*	*0.0135*	*0.250*	*0.0034*	*-37.8*
3	*09:02*	*3.00*	*0.6*	*0.300*	*0.6*	*0.120*	*-0.0860*	*1.00*	*-0.0860*	*0.150*	*-0.0129*	*144.8*
4	09:03	3.50	0.6	0.250	0.6	0.100	0.0049	1.00	0.0049	0.125	0.0006	-6.9
5	*09:04*	*4.00*	*0.6*	*0.250*	*0.6*	*0.100*	*0.0735*	*1.00*	*0.0735*	*0.125*	*0.0092*	*-103.2*
6	*09:05*	*4.50*	*0.6*	*0.200*	*0.6*	*0.080*	*0.0177*	*1.00*	*0.0177*	*0.100*	*0.0018*	*-19.9*
7	*09:06*	*5.00*	*0.6*	*0.300*	*0.6*	*0.120*	*-0.0541*	*1.00*	*-0.0541*	*0.150*	*-0.0081*	*91.2*
8	*09:06*	*5.50*	*0.6*	*0.300*	*0.6*	*0.120*	*-0.0240*	*1.00*	*-0.0240*	*0.150*	*-0.0036*	*40.3*
9	09:07	6.00	0.6	0.300	0.6	0.120	-0.0056	1.00	-0.0056	0.195	-0.0011	12.2
10	09:07	6.80	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0

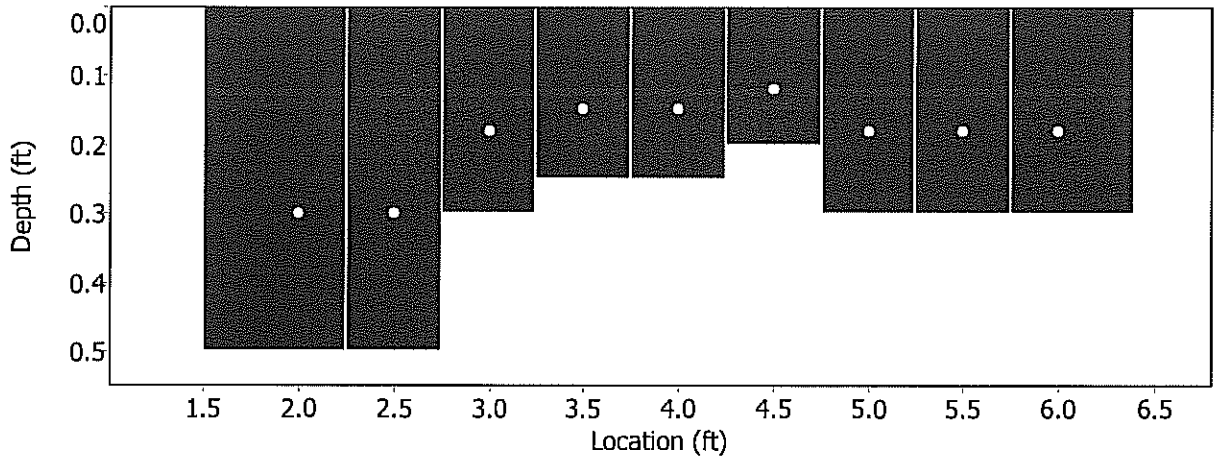
: Thu Jul 1 2010

99902-25JUN10.WAD
2010/06/25 08:58:43

JN







: Thu Jul 1 2010

99902-25JUN10.WAD
2010/06/25 08:58:43

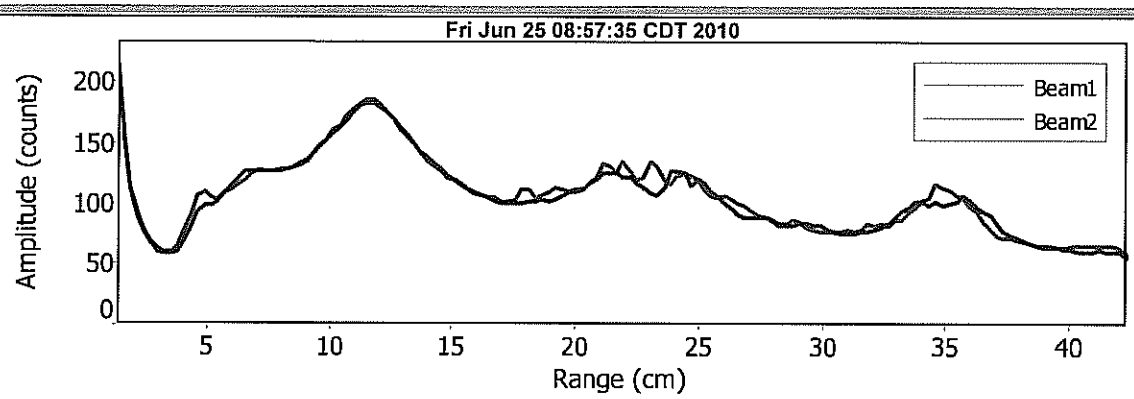
JN

2	2.50	0.6	High SNR variation during measurement: 7.7,7.3
3	3.00	0.6	High angle: 175
5	4.00	0.6	High SNR variation during measurement: 6.5,6.0
6	4.50	0.6	SNR (33.8) is different from typical SNR (48.0)
7	5.00	0.6	High angle: 173
8	5.50	0.6	High angle: -153

: Thu Jul 1 2010

99902-25JUN10.WAD
2010/06/25 08:58:43

JN



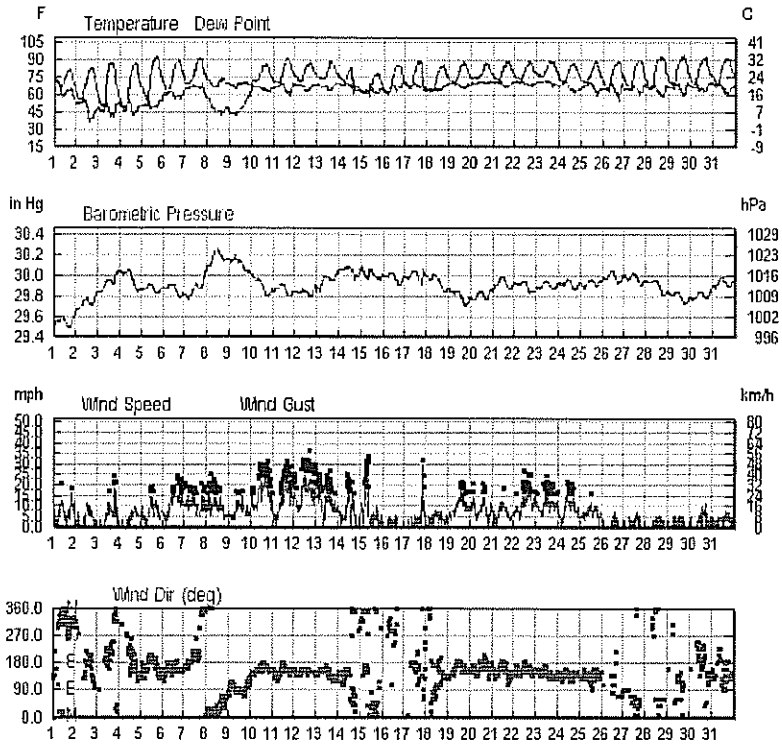
- Noise level check - Pass
- SNR check - Pass
- Peak location check - Pass
- Peak shape check - Pass

History for Hearne, TX

Month of May, 2010

Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	94 °F	88 °F	71 °F	
Mean Temperature	83 °F	77 °F	67 °F	
Min Temperature	76 °F	66 °F	47 °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	18	12	2	374
Growing Degree Days (base 50)	33	27	17	835
Dew Point:				
Dew Point	73 °F	63 °F	38 °F	
Precipitation:				
Precipitation	1.67 in	0.08 in	0.00 in	2.52 in
Snowdepth	-	-	-	-
Wind:				
Wind	29 mph	6 mph	0 mph	
Gust Wind	41 mph	20 mph	10 mph	
Sea Level Pressure:				
Sea Level Pressure	30.26 in	29.91 in	29.48 in	



Monthly Calendar Overview

« Previous Month « 2009 **May 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1

Actual: 82 | 67
Precip: 0.00

Average: - | -
Precip: -

2	Actual:	83 | 55	Precip:	0.00	Average:	- | -	Precip:	-	3	Actual:	88 | 49	Precip:	0.00	Average:	- | -	Precip:	-	4	Actual:	87 | 47	Precip:	0.00	Average:	- | -	Precip:	-	5	Actual:	93 | 54	Precip:	0.00	Average:	- | -	Precip:	-
6	Actual:	91 | 62	Precip:	0.00	Average:	- | -	Precip:	-	7	Actual:	92 | 69	Precip:	0.00	Average:	- | -	Precip:	-	8	Actual:	74 | 67	Precip:	0.00	Average:	- | -	Precip:	-	9	Actual:	71 | 66	Precip:	0.00	Average:	- | -	Precip:	-
10	Actual:	88 | 69	Precip:	0.00	Average:	- | -	Precip:	-	11	Actual:	92 | 71	Precip:	0.00	Average:	- | -	Precip:	-	12	Actual:	89 | 71	Precip:	0.00	Average:	- | -	Precip:	-	13	Actual:	89 | 73	Precip:	0.00	Average:	- | -	Precip:	-
14	Actual:	83 | 65	Precip:	1.67	Average:	- | -	Precip:	-	15	Actual:	79 | 63	Precip:	0.38	Average:	- | -	Precip:	-	16	Actual:	86 | 62	Precip:	0.00	Average:	- | -	Precip:	-	17	Actual:	89 | 66	Precip:	0.47	Average:	- | -	Precip:	-
18	Actual:	86 | 64	Precip:	0.00	Average:	- | -	Precip:	-	19	Actual:	88 | 71	Precip:	0.00	Average:	- | -	Precip:	-	20	Actual:	88 | 74	Precip:	0.00	Average:	- | -	Precip:	-	21	Actual:	90 | 72	Precip:	0.00	Average:	- | -	Precip:	-
22	Actual:	90 | 73	Precip:	0.00	Average:	- | -	Precip:	-	23	Actual:	90 | 76	Precip:	0.00	Average:	- | -	Precip:	-	24	Actual:	88 | 72	Precip:	0.00	Average:	- | -	Precip:	-	25	Actual:	89 | 71	Precip:	0.00	Average:	- | -	Precip:	-
26	Actual:	89 | 65	Precip:	0.00	Average:	- | -	Precip:	-	27	Actual:	91 | 66	Precip:	0.00	Average:	- | -	Precip:	-	28	Actual:	93 | 68	Precip:	0.00	Average:	- | -	Precip:	-	29	Actual:	94 | 68	Precip:	0.00	Average:	- | -	Precip:	-
30	Actual:	93 | 70	Precip:	0.00	Average:	- | -	Precip:	-	31	Actual:	92 | 70	Precip:	0.00	Average:	- | -	Precip:	-																	

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear · Mostly Cloudy Partly Sunny · Partly Cloudy Mostly Sunny · Cloudy · Rain · Snow · Hail Flurries · Thunderstorms · Hazy Fog · Sleet · '?' denotes 'chance of' · Unknown

Print This Calendar

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

Data Category · Condition · High Temp. · Lo Temp. · Precip. (in inches) · Daily Avg. Temp. · Temps in °F (-60 -30 0 30 60 90 120)

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
May	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	82	74	67	72	65	56	96	73	54	29.60	29.55	29.48	10	8	2	16	6	21	0.00	
2	83	69	55	56	49	38	92	57	20	29.78	29.72	29.64	10	10	10	12	3	16	0.00	Rain
3	88	68	49	54	48	42	90	54	20	30.03	29.92	29.84	10	9	5	18	3	25	0.00	Rain
4	87	67	47	57	49	42	98	59	22	30.06	29.98	29.85	10	9	1	9	2	-	0.00	
5	93	74	54	56	51	48	87	47	22	29.92	29.87	29.83	10	10	10	15	7	20	0.00	
6	91	76	62	64	61	57	94	64	34	29.91	29.86	29.78	10	10	7	16	8	24	0.00	
7	92	80	69	70	67	65	89	67	42	29.92	29.85	29.77	10	9	7	15	11	21	0.00	
8	74	70	67	58	49	43	60	47	35	30.26	30.17	30.09	10	10	10	15	10	25	0.00	
9	71	68	66	57	47	43	61	46	40	30.20	30.13	30.05	10	10	10	15	7	17	0.00	
10	88	78	69	68	66	64	88	68	45	30.01	29.91	29.79	10	10	7	23	12	31	0.00	
11	92	82	71	70	66	59	90	64	37	29.92	29.86	29.79	10	9	5	23	11	31	0.00	
12	89	80	71	70	67	64	89	67	46	29.90	29.84	29.79	10	9	7	24	14	37	0.00	

13	89	81	73	70	68	64	82	67	43	30.02	29.94	29.84	10	10	7	20	13	30	0.00	
14	83	74	65	70	68	63	96	84	56	30.10	30.05	29.96	10	7	1	18	7	32	1.67	Rain , Thunderstorm
15	79	71	63	66	64	59	96	81	55	30.09	30.01	29.96	10	6	4	25	8	33	0.38	Rain , Thunderstorm
16	86	74	62	68	65	61	98	78	46	30.03	29.98	29.90	10	5	2	6	1	-	0.00	
17	89	78	66	73	68	63	100	79	47	30.06	29.99	29.91	10	7	1	29	2	41	0.47	Rain , Thunderstorm
18	86	75	64	69	65	63	96	75	51	30.02	29.96	29.85	10	7	5	8	3	-	0.00	
19	88	80	71	71	69	66	95	73	47	29.88	29.81	29.71	7	5	4	17	8	22	0.00	
20	88	81	74	72	71	70	89	76	55	29.85	29.80	29.76	7	6	4	14	9	21	0.00	Rain
21	90	81	72	72	70	67	95	71	48	29.98	29.92	29.85	10	6	4	13	7	18	0.00	
22	90	82	73	72	70	68	93	73	49	29.95	29.90	29.83	7	6	4	17	9	26	0.00	
23	90	83	76	73	71	68	86	69	51	29.95	29.90	29.87	10	6	4	16	10	24	0.00	Rain
24	88	80	72	72	68	61	94	69	42	29.97	29.92	29.86	7	5	3	16	8	22	0.00	
25	89	80	71	71	67	61	93	70	39	29.97	29.93	29.87	10	6	3	12	6	18	0.00	
26	89	77	65	71	65	55	96	68	31	30.05	29.98	29.92	10	7	4	7	1	-	0.00	
27	91	78	66	70	66	60	94	67	35	30.03	29.97	29.90	10	6	4	7	1	-	0.00	
28	93	80	68	69	65	59	93	62	32	29.96	29.90	29.81	10	6	3	6	1	-	0.00	
29	94	81	68	70	66	60	92	64	32	29.84	29.80	29.72	10	7	4	6	1	-	0.00	
30	93	82	70	72	67	63	91	65	38	29.85	29.81	29.77	10	9	5	12	2	-	0.00	Thunderstorm
31	92	81	70	71	67	62	94	65	36	29.98	29.92	29.88	10	9	4	8	3	-	0.00	

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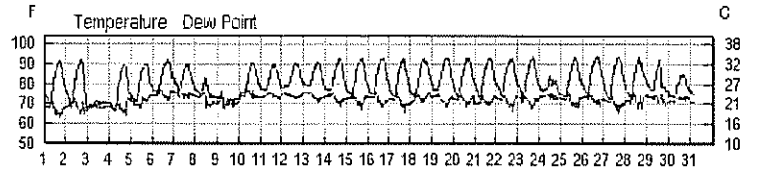
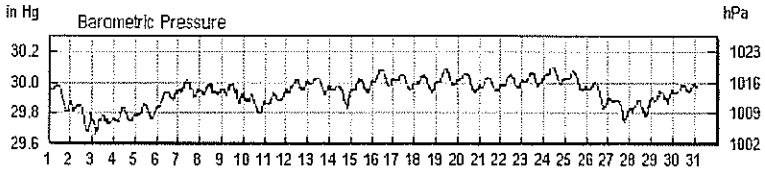
History for Hearne, TX

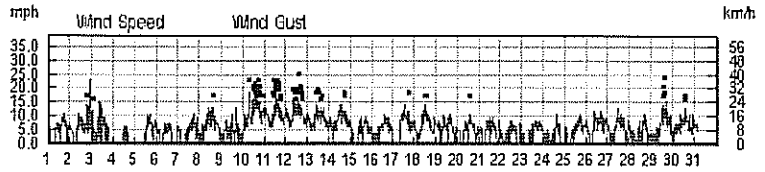
Month of June, 2010

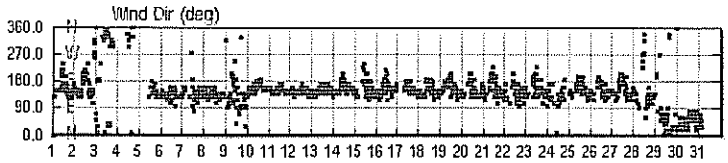
Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	94 °F	90 °F	71 °F	
Mean Temperature	85 °F	82 °F	70 °F	
Min Temperature	78 °F	74 °F	67 °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	20	17	4	505
Growing Degree Days (base 50)	35	32	20	959
Dew Point:				
Dew Point	77 °F	72 °F	63 °F	
Precipitation:				
Precipitation	2.90 in	0.14 in	0.00 in	4.22 in
Snowdepth	-	-	-	-
Wind:				
Wind	23 mph	5 mph	0 mph	
Gust Wind	29 mph	18 mph	12 mph	
Sea Level Pressure:				
Sea Level Pressure	30.10 in	29.93 in	29.66 in	









Monthly Calendar Overview

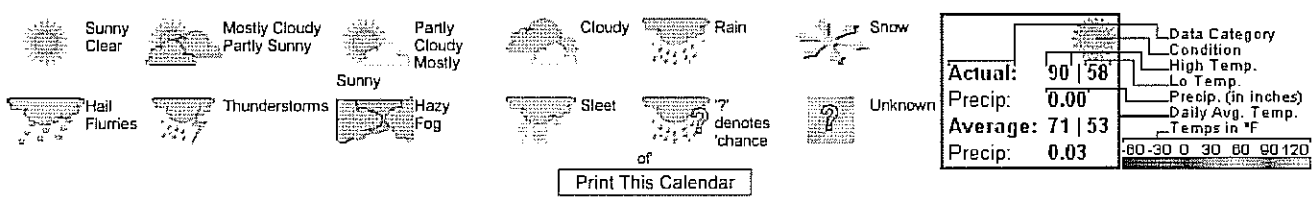
« Previous Month « 2009 **June 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4	5
		Actual: 91 | 69	Actual: 92 | 69	Actual: 71 | 68	Actual: 89 | 67	Actual: 90 | 71
		Precip: 0.00	Precip: 0.47	Precip: 0.80	Precip: 0.00	Precip: 0.00
		Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -

			Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
6	7	8	9	10	11	12
Actual: 92 | 76	Actual: 90 | 76	Actual: 83 | 73	Actual: 77 | 70	Actual: 91 | 73	Actual: 90 | 77	Actual: 91 | 78
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 2.90	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
13	14	15	16	17	18	19
Actual: 91 | 78	Actual: 93 | 77	Actual: 93 | 74	Actual: 93 | 75	Actual: 93 | 74	Actual: 93 | 74	Actual: 93 | 76
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
20	21	22	23	24	25	26
Actual: 93 | 74	Actual: 93 | 73	Actual: 93 | 74	Actual: 93 | 73	Actual: 84 | 76	Actual: 94 | 74	Actual: 94 | 74
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.05	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
27	28	29	30			
Actual: 94 | 73	Actual: 93 | 72	Actual: 93 | 77	Actual: 85 | 73			
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00			
Average: - | -	Average: - | -	Average: - | -	Average: - | -			
Precip: -	Precip: -	Precip: -	Precip: -			

« Previous Month « 2009 2011 » Next Month »

Calendar Key:



Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
June	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	91	80	69	71	67	63	94	64	39	29.99	29.92	29.81	10	10	5	10	3	16	0.00	
2	92	81	69	73	69	65	95	69	41	29.87	29.79	29.68	10	8	2	23	5	29	0.47	Rain , Thunderstorm
3	71	70	68	70	69	67	96	94	89	29.78	29.74	29.66	10	7	2	15	5	23	0.80	Rain , Thunderstorm
4	89	78	67	71	68	64	97	74	44	29.84	29.78	29.74	10	6	0	6	0	-	0.00	Fog
5	90	80	71	73	71	68	95	74	54	29.86	29.80	29.76	10	8	4	10	2	-	0.00	
6	92	84	76	77	75	72	95	76	52	29.93	29.89	29.83	7	4	2	7	4	-	0.00	
7	90	83	76	76	75	72	92	77	57	30.02	29.96	29.90	7	4	3	10	4	-	0.00	
8	83	78	73	76	73	68	94	86	63	30.00	29.95	29.92	10	7	5	13	5	18	0.00	Rain
9	77	74	70	74	70	68	96	94	91	30.00	29.94	29.86	10	6	1	13	3	17	2.90	Rain , Thunderstorm
10	91	82	73	77	75	71	96	80	54	29.92	29.87	29.80	7	4	3	18	8	24	0.00	Rain
11	90	84	77	77	74	72	91	76	59	29.93	29.89	29.85	7	5	3	17	10	23	0.00	
12	91	84	78	76	75	73	91	75	56	30.02	29.97	29.93	10	5	4	16	10	25	0.00	Rain
13	91	84	78	76	75	71	91	73	53	30.03	30.00	29.92	7	5	3	14	9	20	0.00	
14	93	85	77	76	73	68	93	72	46	29.98	29.94	29.83	7	5	3	14	8	21	0.00	Rain
15	93	84	74	75	72	67	96	72	42	30.03	29.98	29.93	7	5	2	9	4	-	0.00	
16	93	84	75	76	73	68	95	71	44	30.09	30.03	29.98	10	7	2	10	4	-	0.00	
17	93	84	74	76	72	66	95	72	44	30.05	30.02	29.96	10	6	0	14	4	18	0.00	Fog

18	93	84	74	76	73	70	93	71	49	30.05	30.00	29.93	10	10	7	14	6	18	0.00	
19	93	84	76	75	73	69	93	71	44	30.09	30.03	29.99	10	9	7	10	6	-	0.00	
20	93	84	74	75	72	69	94	69	45	30.06	30.01	29.93	10	10	7	10	4	17	0.00	
21	93	83	73	74	71	70	92	69	47	30.04	29.99	29.94	10	10	10	9	4	-	0.00	
22	93	84	74	75	72	67	92	67	42	30.06	30.00	29.97	10	10	10	8	3	-	0.00	
23	93	83	73	74	72	68	94	69	43	30.07	30.02	29.98	10	10	7	8	3	-	0.00	
24	84	80	76	76	74	72	91	83	68	30.10	30.05	29.99	10	10	5	10	3	-	0.05	Rain
25	94	84	74	76	72	68	95	71	44	30.08	30.01	29.94	10	10	5	10	3	16	0.00	
26	94	84	74	75	73	69	95	69	46	30.01	29.94	29.83	10	10	5	12	6	17	0.00	
27	94	84	73	74	71	66	94	67	39	29.90	29.84	29.74	10	10	7	13	5	-	0.00	
28	93	82	72	76	72	68	94	70	43	29.88	29.83	29.78	10	8	5	10	4	17	0.00	
29	93	85	77	75	73	70	91	78	49	29.94	29.90	29.86	10	7	4	15	4	24	0.00	Rain , Thunderstorm
30	85	79	73	74	73	71	92	81	66	29.99	29.95	29.92	7	6	4	13	5	17	0.00	Rain

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Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: MD JN – BRA	
Date & Time: 22Jun10 1030	County Name: Robertson
Stream Name: Walnut Creek	
Segment No. or nearest downstream Segment No.: 1242B	
Description of Site: 99403 Downstream from FM 2293	

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

A. Stream Characteristics:

1. Check the following channel flow status that applies.

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

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

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

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

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

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

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

3. Streamflow

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

4. Water Quality Data (Field Parameters)

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

Air Temp 29.44 °C 85 °F Water Temp N/A °C

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

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

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

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

Low fence, bridge access, private property #1662

8. Dominant Primary Substrate

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

Field Data Sheets – Basic RUAA Survey

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

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

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

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

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

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

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
depth and Lack of water #662

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
~~No~~ Public Access #662 ; Access only from Co. road 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_____ Site: _____
Date: _____ Time: _____

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

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

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
Lack of water, private property #662

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).
depth #662

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.
private property, lack of water #662

Field Data Sheets – Basic RUAA Survey

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

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

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

Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters.
Photos #s (30 meters) Upstream ~~545~~ 662 Downstream 663 Left Bank 664 Right Bank 665
Photos #s (150 meters) Upstream 666 Downstream 667 Left Bank 668 Right Bank 669
Photos #s (300 meters) Upstream 670 Downstream 671 Left Bank 672 Right Bank 673

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	~~30~~ 120	2.0	~~0.3~~ 0.5
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	Width	Depth (meters)
*	30 meters	0	0.0
	60 meters	2.0	0.3
	90 meters	1.9	0.22
	120 meters	2.0	0.5
*	150 meters	2.8	0.4
	180 meters	0	0.0
	210 meters	0	0.0
	240 meters	0	0.0
	270 meters	2.2	0.35
*	300 meters	1.8	0.27
	Average	1.2	~~.29~~ 0.204

MT 23Jun10

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

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

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

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

_____

_____

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

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

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

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

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

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

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

☐ Campgrounds ☐ Stairs/walkway ☒ Roads (paved/unpaved) ☐ Other:_____
☐ Playgrounds ☐ Boating access (ramps) ☐ Populated area ~~☒ None of the Above~~ 22 JUN'10
☒ Rural area ☐ Beach ☐ Docks or rafts
☐ Residential ☒ Bridge crossing ☐ Commercial outfitter
☐ National forests ☐ Commercial boating ☐ Nearby school
☐ Urban/suburban location ☐ Trails/paths (hiking/biking) ☒ Power Line Corridor 133m from stream
☐ Golf Course ☐ Paved parking lot ☐ Parks (national/city/county/state)
☐ Sports Field ☐ Unimproved parking lot ☐ Public Property
Comments:_____

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

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

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

Aquatic Vegetation: ☐ absent ☒ rare ☐ common ☐ abundant
Algae Cover: ☐ absent ☒ rare ☐ common ☐ abundant
Odor: ☒ none ☐ rare ☐ common ☐ abundant
Color: ☐ clear ☐ green ☐ red ☒ brown ☐ black
Bottom Deposit: ☐ sludge ☐ solids ☒ fine sediments ☐ none ☐ other #663
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 Raccoon

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).

N/A

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream:_____ Date:_____

Site:_____ Site

Description:_____

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

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

Observations:_____

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

CDT	Max Temperature C	Mean Temperature C	Min Temperature C	Dew Point C	Mean Dew Point C	Min DewpointC	Max Humidity	Mean Humidity	Min Humidity	Max Sea Level Pressure hPa	Mean Sea Level Pressure hPa	Min Sea Level Pressure hPa	Max Visibility Km	Mean Visibility Km	Min Visibility Km	Max Wind Speed Km/h	Mean Wind Speed Km/h	Max Gust Speed Km/h	Precipitation Cm	Cloud Cover	Events
4/1/2010	24	20	15	14	13	11	81	66	51	1015	1012	1008	16	16	16	37	21	48	0	6	
4/2/2010	23	20	17	16	15	14	91	76	58	1011	1009	1007	16	12	5	34	19	40	0	7	
4/3/2010	27	16	6	16	5	-8	94	57	9	1016	1014	1012	16	11	0	13	2		0	2	Fog-Rain
4/4/2010	27	22	16	18	16	13	92	74	52	1016	1014	1013	16	11	2	34	13	47	0	6	
4/5/2010	26	22	19	17	16	15	83	71	52	1018	1016	1014	16	15	11	32	18	45	0	7	
4/6/2010	26	22	18	16	15	13	83	68	50	1015	1011	1007	16	15	11	42	24	53	0	6	
4/7/2010	22	19	16	16	13	0	85	69	24	1011	1010	1007	16	12	6	26	13	40	0.05	8	Rain
4/8/2010	18	11	5	3	-1	-3	71	42	23	1022	1020	1017	16	16	16	29	18	42	0	0	
4/9/2010	21	11	0	3	0	-2	92	56	21	1023	1020	1018	16	16	16	19	5	32	0	0	
4/10/2010	22	16	10	11	9	6	85	66	46	1023	1021	1020	16	16	16	24	10	39	0	2	
4/11/2010	22	17	11	14	11	8	83	70	50	1024	1022	1020	16	14	6	14	6		0	6	
4/12/2010	25	17	10	13	8	2	92	61	23	1022	1021	1018	16	13	3	21	5	29	0	0	
4/13/2010	26	18	11	13	10	8	88	62	35	1021	1019	1017	16	16	11	26	5	35	0.08	1	
4/14/2010	25	20	13	18	15	13	96	80	55	1024	1021	1020	16	14	8	19	5	27	0.03	4	
4/15/2010	25	21	17	19	17	15	94	80	58	1023	1021	1019	16	15	11	19	6	29	0.08	5	Rain
4/16/2010	23	18	15	17	16	13	93	80	60	1022	1020	1016	16	14	6	16	5	26	0	6	
4/17/2010	25	21	18	17	16	15	90	76	55	1017	1015	1012	16	13	6	21	6	32	0	7	
4/18/2010	20	17	15	16	15	13	96	86	70	1016	1014	1013	16	16	11	13	3		0.08	8	Rain-Thunderstorm
4/19/2010	18	15	11	16	12	10	97	82	62	1019	1017	1015	16	9	5	23	11	32	0.2	8	Rain
4/20/2010	22	16	11	14	12	10	94	70	48	1018	1016	1013	16	10	6	13	3		0	3	
4/21/2010	27	18	11	15	13	11	97	71	42	1014	1012	1009	16	12	6	16	5	27	0	1	Rain
4/22/2010	23	20	15	18	16	14	97	83	69	1010	1008	1005	16	12	3	29	13	40	0	6	Rain
4/23/2010	30	25	20	21	19	18	96	78	50	1005	1003	999	16	12	5	26	13	37	0.15	6	Rain-Thunderstorm
4/24/2010	27	21	13	21	10	5	94	56	25	1006	1004	1000	16	16	8	34	14	53	0.03	2	Rain
4/25/2010	27	20	12	11	8	3	88	56	22	1011	1009	1006	16	16	16	29	8	47	0	0	
4/26/2010	31	20	8	17	10	7	95	61	25	1012	1010	1006	16	16	5	24	5	32	0.13	0	Rain-Thunderstorm
4/27/2010	23	16	9	10	6	3	90	52	27	1019	1016	1014	16	16	11	26	13	34	0	3	
4/28/2010	27	17	7	10	7	4	95	57	25	1017	1015	1010	16	16	16	26	6	35	0	0	
4/29/2010	28	22	15	17	16	12	94	69	46	1012	1007	1001	16	15	8	39	19	55	0	4	
4/30/2010	28	25	22	22	20	19	86	75	60	1002	1000	998	16	10	6	34	19	52	0	7	Rain
5/1/2010	27	23	19	22	18	13	96	73	54	1002	1001	998	16	13	4	26	10	34	0	5	
5/2/2010	28	20	12	13	9	3	92	57	20	1008	1006	1004	16	16	16	19	5	26	0	2	Rain
5/3/2010	31	20	9	12	8	5	90	54	20	1017	1013	1010	16	15	8	29	5	40	0	1	Rain

5/4/2010	30	19	8	13	9	5	98	59	22	1018	1015	1011	16	15	1	14	3		0	0	
5/5/2010	33	23	12	13	10	8	87	47	22	1013	1011	1010	16	16	16	24	11	32	0	0	
5/6/2010	32	24	16	17	16	13	94	64	34	1013	1011	1008	16	15	11	26	13	39	0	2	
5/7/2010	33	26	20	21	19	18	89	67	42	1013	1011	1008	16	15	11	24	18	34	0	5	
5/8/2010	23	21	19	14	9	6	60	47	35	1025	1022	1019	16	16	16	24	16	40	0	8	
5/9/2010	21	20	18	13	8	6	61	46	40	1023	1020	1017	16	16	16	24	11	27	0	8	
5/10/2010	31	25	20	20	18	17	88	68	45	1016	1013	1009	16	16	11	37	19	50	0	5	
5/11/2010	33	27	21	21	18	15	90	64	37	1013	1011	1009	16	15	8	37	18	50	0	3	
5/12/2010	31	26	21	21	19	17	89	67	46	1012	1010	1009	16	15	11	39	23	60	0	3	
5/13/2010	31	27	22	21	20	17	82	67	43	1016	1014	1010	16	16	11	32	21	48	0	5	
5/14/2010	28	23	18	21	20	17	96	84	56	1019	1017	1014	16	12	1	29	11	52	4.24	4	Rain-Thunderstorm
5/15/2010	26	21	17	18	17	15	96	81	55	1019	1016	1014	16	10	6	40	13	53	0.97	3	Rain-Thunderstorm
5/16/2010	30	23	16	20	18	16	98	78	46	1017	1015	1012	16	8	2	10	2		0	2	
5/17/2010	31	25	18	22	20	17	100	79	47	1018	1015	1013	16	12	2	47	3	66	1.19	2	Rain-Thunderstorm
5/18/2010	30	23	17	20	18	17	96	75	51	1016	1014	1011	16	12	8	13	5		0	0	
5/19/2010	31	26	21	21	20	18	95	73	47	1012	1009	1006	11	8	6	27	13	35	0	4	
5/20/2010	31	27	23	22	21	21	89	76	55	1011	1009	1008	11	9	6	23	14	34	0	6	Rain
5/21/2010	32	27	22	22	21	19	95	71	48	1015	1013	1011	16	9	6	21	11	29	0	3	
5/22/2010	32	27	22	22	21	20	93	73	49	1014	1012	1010	11	9	6	27	14	42	0	4	
5/23/2010	32	28	24	22	21	20	86	69	51	1014	1012	1011	16	10	6	26	16	39	0	5	Rain
5/24/2010	31	26	22	22	20	16	94	69	42	1015	1013	1011	11	9	5	26	13	35	0	4	
5/25/2010	31	26	21	21	19	16	93	70	39	1015	1013	1011	16	9	5	19	10	29	0	1	
5/26/2010	31	25	18	21	18	12	96	68	31	1017	1015	1013	16	11	6	11	2		0	1	
5/27/2010	32	25	18	21	18	15	94	67	35	1017	1015	1012	16	10	6	11	2		0	0	
5/28/2010	33	26	20	20	18	15	93	62	32	1014	1012	1009	16	9	5	10	2		0	1	
5/29/2010	34	27	20	21	18	15	92	64	32	1010	1009	1006	16	11	6	10	2		0	2	
5/30/2010	33	27	21	22	19	17	91	65	38	1011	1009	1008	16	14	8	19	3		0	1	Thunderstorm
5/31/2010	33	27	21	21	19	16	94	65	36	1015	1013	1012	16	15	6	13	5		0	0	
6/1/2010	32	26	20	21	19	17	94	64	39	1015	1013	1009	16	15	8	16	5	26	0	0	
6/2/2010	33	27	20	22	20	18	95	69	41	1011	1009	1005	16	13	4	37	8	47	1.19	3	Rain-Thunderstorm
6/3/2010	21	21	20	21	20	19	96	94	89	1008	1007	1004	16	11	3	24	8	37	2.03	7	Rain-Thunderstorm
6/4/2010	31	25	19	21	20	17	97	74	44	1010	1008	1007	16	9	1	10	0		0	1	Fog
6/5/2010	32	26	21	22	21	20	95	74	54	1011	1009	1008	16	13	6	16	3		0	0	
6/6/2010	33	28	24	25	23	22	95	76	52	1013	1012	1010	11	7	3	11	6		0	4	
6/7/2010	32	28	24	24	23	22	92	77	57	1016	1014	1012	11	7	5	16	6		0	2	
6/8/2010	28	25	22	24	22	20	94	86	63	1016	1014	1013	16	12	8	21	8	29	0	3	Rain
6/9/2010	25	23	21	23	21	20	96	94	91	1016	1014	1011	16	10	2	21	5	27	7.37	6	Rain-Thunderstorm

6/10/2010	32	27	22	25	23	21	96	80	54	1013	1011	1009	11	7	5	29	13	39	0	3 Rain
6/11/2010	32	28	25	25	23	22	91	76	59	1013	1012	1011	11	7	5	27	16	37	0	4
6/12/2010	32	28	25	24	23	22	91	75	56	1016	1015	1013	16	9	6	26	16	40	0	4 Rain
6/13/2010	32	28	25	24	23	21	91	73	53	1017	1016	1013	11	7	5	23	14	32	0	5
6/14/2010	33	29	25	24	22	20	93	72	46	1015	1014	1010	11	8	5	23	13	34	0	4 Rain
6/15/2010	33	28	23	23	22	19	96	72	42	1017	1015	1013	11	8	4	14	6		0	3
6/16/2010	33	28	23	24	22	20	95	71	44	1019	1017	1015	16	11	4	16	6		0	2
6/17/2010	33	28	23	24	22	18	95	72	44	1017	1016	1014	16	10	0	23	6	29	0	3 Fog
6/18/2010	33	28	23	24	22	21	93	71	49	1017	1016	1013	16	16	11	23	10	29	0	3
6/19/2010	33	28	24	23	22	20	93	71	44	1019	1017	1015	16	15	11	16	10		0	2
6/20/2010	33	28	23	23	22	20	94	69	45	1018	1016	1013	16	16	11	16	6	27	0	2
6/21/2010	33	28	22	23	21	21	92	69	47	1017	1015	1014	16	16	16	14	6		0	1
6/22/2010	33	28	23	23	22	19	92	67	42	1018	1016	1015	16	16	16	13	5		0	1
6/23/2010	33	28	22	23	22	20	94	69	43	1018	1016	1015	16	16	11	13	5		0	1
6/24/2010	28	26	25	24	23	22	91	85	68	1019	1018	1017	16	16	16	8	3		0	3 Rain

Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: MB/JW- BRA	
Date & Time: 22 Jun 10	County Name: ROBERTSON
Stream Name: Walnut Creek	
Segment No. or nearest downstream Segment No.: 12420	
Description of Site: 99904	

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

A. Stream Characteristics:

1. Check the following channel flow status that applies.

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

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

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

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

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

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

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

3. Streamflow

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

4. Water Quality Data (Field Parameters)

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

Air Temp _____ ° C Water Temp _____ ° C

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

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

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

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

This site is on private property. No public road. We could not locate land owner to gain access. No transects performed.

8. Dominant Primary Substrate

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

Stream Name_____ Site: _____
Date: _____ Time: _____

B. Primary Contact Water Recreation Evaluation:

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

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?
☐ Yes ☐ No primary contact recreation activities were observed

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

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

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

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

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

_____
_____

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

_____
_____

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

C. Secondary Contact Water Recreation Evaluation:

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

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

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

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

Date: _____ Time: _____

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

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

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

_____
_____

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

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

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

_____
_____
_____

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

_____
_____
_____

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

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

_____
_____
_____
_____
_____
_____

E. Stream Channel and Substantial Pools Measurements

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

1. Wadeable Streams

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

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

Photos #s (30 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

Photos #s (150 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

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

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

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

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

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

_____

_____

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

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

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

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

F. Additional RUAA Information

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

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

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

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

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

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

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

Comments: _____

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

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

Comments: _____

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

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

Comments: _____

Stream Name_____ Site: _____
Date: _____ Time: _____

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

_____
_____

8. Vertebrates Observed within 300 meter reach

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

Comments: _____

9. Mammals Observed within 300 meter reach

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

Comments: _____

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

11. Garbage Observed

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

Briefly describe the kinds of garbage observed: _____
_____
_____

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

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

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream:_____ Date:_____

Site:_____ Site

Description:_____

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

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

Observations:_____

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

Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information:	AB JN - BRA
Date & Time: 22Jun10 0900	County Name: Robertson
Stream Name: Walnut Creek	
Segment No. or nearest downstream Segment No.: 1242.0	
Description of Site: 99905 Downstream from Nash Road	

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

A. Stream Characteristics:

1. Check the following channel flow status that applies.

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

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

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

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

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

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

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

3. Streamflow

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

4. Water Quality Data (Field Parameters)

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

Air Temp 26.7°C 80 °F Water Temp N/A °C

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

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

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

7. Please describe access opportunities or explain why the site is not easily accessible (Attach photos for documentation): No fence - Thick trees and shrubs #2647 Fence is overgrown with brush and vines

8. Dominant Primary Substrate

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

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

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

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

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

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

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

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

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation). County road crosses stream, see pic # 2647

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, upper most stream 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_____ Site: _____
Date: _____ Time: _____

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

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

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
No flow, only muddy pools. Pic # 2648

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

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

5. Describe the physical characteristics of the water body that hinders the frequency of secondary contact recreation (depth, etc.) (Attach photos or depth measurements, etc. for documentation).
No water at bridge Pic # 2648

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).
Pic # 2647, 2648

D. Noncontact Recreation Evaluation

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

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

Field Data Sheets – Basic RUAA Survey

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

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

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

Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters.
Photos #s (30 meters) Upstream 649 Downstream 654 Left Bank 652 Right Bank 653
Photos #s (150 meters) Upstream 654 Downstream 655 Left Bank 656 Right Bank 657
Photos #s (300 meters) Upstream 658 Downstream 659 Left Bank 660 Right Bank 661

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	62 m	6 m	.90
Pool 2	17	3.5	.5
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 width	Depth (meters)
30 meters 4 m	.45 m
60 meters 3.5	.20 m
90 meters 0.0	—
120 meters 0.0	—
150 meters 0.0	—
180 meters 0.0	—
210 meters 0.0	—
240 meters 0.0	—
270 meters 0.0	—
300 meters 0.0	—
Average 3.75	~~.325~~ 0.065

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Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

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

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	Mostly Dry
Width at narrowest point of the stream within 300 meter reach	Mostly Dry
Width at the widest point of the stream within 300 meter reach	6m at large pool

d) Is there sufficient water within a 300 meter stream reach during base flow conditions to support primary contact recreation? ☐ Yes ☑ No
COMMENTS: Dry with the exception of 2 pools

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

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

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

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

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

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

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

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

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

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

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

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

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: Cow in creek

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

11. Garbage Observed

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

Briefly describe the kinds of garbage observed: Refrigerator, Glass bottles, Lawn chairs #2653

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).
N/A

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream:_____ Date:_____

Site:_____ Site

Description:_____

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

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

Observations:_____

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

CDT	Max Temperature C	Mean Temperature C	Min Temperature C	Dew Point C	Mean Dew Point C	Min DewpointC	Max Humidity	Mean Humidity	Min Humidity	Max Sea Level Pressure hP	Mean Sea Level Pressure hP	Min Sea Level Pressure hP	Max Visibility Km	Mean Visibility Km	Min Visibility Km	Max Wind Speed Km/h	Mean Wind Speed Km/h	Max Gust Speed Km/h	Precipitation Cm	Cloud Cover	Events
4/1/2010	24	20	15	14	13	11	81	66	51	1015	1012	1008	16	16	16	37	21	48	0	6	
4/2/2010	23	20	17	16	15	14	91	76	58	1011	1009	1007	16	12	5	34	19	40	0	7	
4/3/2010	27	16	6	16	5	-8	94	57	9	1016	1014	1012	16	11	0	13	2		0	2	Fog-Rain
4/4/2010	27	22	16	18	16	13	92	74	52	1016	1014	1013	16	11	2	34	13	47	0	6	
4/5/2010	26	22	19	17	16	15	83	71	52	1018	1016	1014	16	15	11	32	18	45	0	7	
4/6/2010	26	22	18	16	15	13	83	68	50	1015	1011	1007	16	15	11	42	24	53	0	6	
4/7/2010	22	19	16	16	13	0	85	69	24	1011	1010	1007	16	12	6	26	13	40	0.05	8	Rain
4/8/2010	18	11	5	3	-1	-3	71	42	23	1022	1020	1017	16	16	16	29	18	42	0	0	
4/9/2010	21	11	0	3	0	-2	92	56	21	1023	1020	1018	16	16	16	19	5	32	0	0	
4/10/2010	22	16	10	11	9	6	85	66	46	1023	1021	1020	16	16	16	24	10	39	0	2	
4/11/2010	22	17	11	14	11	8	83	70	50	1024	1022	1020	16	14	6	14	6		0	6	
4/12/2010	25	17	10	13	8	2	92	61	23	1022	1021	1018	16	13	3	21	5	29	0	0	
4/13/2010	26	18	11	13	10	8	88	62	35	1021	1019	1017	16	16	11	26	5	35	0.08	1	
4/14/2010	25	20	13	18	15	13	96	80	55	1024	1021	1020	16	14	8	19	5	27	0.03	4	
4/15/2010	25	21	17	19	17	15	94	80	58	1023	1021	1019	16	15	11	19	6	29	0.08	5	Rain
4/16/2010	23	18	15	17	16	13	93	80	60	1022	1020	1016	16	14	6	16	5	26	0	6	
4/17/2010	25	21	18	17	16	15	90	76	55	1017	1015	1012	16	13	6	21	6	32	0	7	
4/18/2010	20	17	15	16	15	13	96	86	70	1016	1014	1013	16	16	11	13	3		0.08	8	Rain-Thunderstorm
4/19/2010	18	15	11	16	12	10	97	82	62	1019	1017	1015	16	9	5	23	11	32	0.2	8	Rain
4/20/2010	22	16	11	14	12	10	94	70	48	1018	1016	1013	16	10	6	13	3		0	3	
4/21/2010	27	18	11	15	13	11	97	71	42	1014	1012	1009	16	12	6	16	5	27	0	1	Rain
4/22/2010	23	20	15	18	16	14	97	83	69	1010	1008	1005	16	12	3	29	13	40	0	6	Rain
4/23/2010	30	25	20	21	19	18	96	78	50	1005	1003	999	16	12	5	26	13	37	0.15	6	Rain-Thunderstorm
4/24/2010	27	21	13	21	10	5	94	56	25	1006	1004	1000	16	16	8	34	14	53	0.03	2	Rain
4/25/2010	27	20	12	11	8	3	88	56	22	1011	1009	1006	16	16	16	29	8	47	0	0	
4/26/2010	31	20	8	17	10	7	95	61	25	1012	1010	1006	16	16	5	24	5	32	0.13	0	Rain-Thunderstorm
4/27/2010	23	16	9	10	6	3	90	52	27	1019	1016	1014	16	16	11	26	13	34	0	3	
4/28/2010	27	17	7	10	7	4	95	57	25	1017	1015	1010	16	16	16	26	6	35	0	0	
4/29/2010	28	22	15	17	16	12	94	69	46	1012	1007	1001	16	15	8	39	19	55	0	4	
4/30/2010	28	25	22	22	20	19	86	75	60	1002	1000	998	16	10	6	34	19	52	0	7	Rain
5/1/2010	27	23	19	22	18	13	96	73	54	1002	1001	998	16	13	4	26	10	34	0	5	
5/2/2010	28	20	12	13	9	3	92	57	20	1008	1006	1004	16	16	16	19	5	26	0	2	Rain
5/3/2010	31	20	9	12	8	5	90	54	20	1017	1013	1010	16	15	8	29	5	40	0	1	Rain

5/4/2010	30	19	8	13	9	5	98	59	22	1018	1015	1011	16	15	1	14	3		0	0	
5/5/2010	33	23	12	13	10	8	87	47	22	1013	1011	1010	16	16	16	24	11	32	0	0	
5/6/2010	32	24	16	17	16	13	94	64	34	1013	1011	1008	16	15	11	26	13	39	0	2	
5/7/2010	33	26	20	21	19	18	89	67	42	1013	1011	1008	16	15	11	24	18	34	0	5	
5/8/2010	23	21	19	14	9	6	60	47	35	1025	1022	1019	16	16	16	24	16	40	0	8	
5/9/2010	21	20	18	13	8	6	61	46	40	1023	1020	1017	16	16	16	24	11	27	0	8	
5/10/2010	31	25	20	20	18	17	88	68	45	1016	1013	1009	16	16	11	37	19	50	0	5	
5/11/2010	33	27	21	21	18	15	90	64	37	1013	1011	1009	16	15	8	37	18	50	0	3	
5/12/2010	31	26	21	21	19	17	89	67	46	1012	1010	1009	16	15	11	39	23	60	0	3	
5/13/2010	31	27	22	21	20	17	82	67	43	1016	1014	1010	16	16	11	32	21	48	0	5	
5/14/2010	28	23	18	21	20	17	96	84	56	1019	1017	1014	16	12	1	29	11	52	4.24	4	Rain-Thunderstorm
5/15/2010	26	21	17	18	17	15	96	81	55	1019	1016	1014	16	10	6	40	13	53	0.97	3	Rain-Thunderstorm
5/16/2010	30	23	16	20	18	16	98	78	46	1017	1015	1012	16	8	2	10	2		0	2	
5/17/2010	31	25	18	22	20	17	100	79	47	1018	1015	1013	16	12	2	47	3	66	1.19	2	Rain-Thunderstorm
5/18/2010	30	23	17	20	18	17	96	75	51	1016	1014	1011	16	12	8	13	5		0	0	
5/19/2010	31	26	21	21	20	18	95	73	47	1012	1009	1006	11	8	6	27	13	35	0	4	
5/20/2010	31	27	23	22	21	21	89	76	55	1011	1009	1008	11	9	6	23	14	34	0	6	Rain
5/21/2010	32	27	22	22	21	19	95	71	48	1015	1013	1011	16	9	6	21	11	29	0	3	
5/22/2010	32	27	22	22	21	20	93	73	49	1014	1012	1010	11	9	6	27	14	42	0	4	
5/23/2010	32	28	24	22	21	20	86	69	51	1014	1012	1011	16	10	6	26	16	39	0	5	Rain
5/24/2010	31	26	22	22	20	16	94	69	42	1015	1013	1011	11	9	5	26	13	35	0	4	
5/25/2010	31	26	21	21	19	16	93	70	39	1015	1013	1011	16	9	5	19	10	29	0	1	
5/26/2010	31	25	18	21	18	12	96	68	31	1017	1015	1013	16	11	6	11	2		0	1	
5/27/2010	32	25	18	21	18	15	94	67	35	1017	1015	1012	16	10	6	11	2		0	0	
5/28/2010	33	26	20	20	18	15	93	62	32	1014	1012	1009	16	9	5	10	2		0	1	
5/29/2010	34	27	20	21	18	15	92	64	32	1010	1009	1006	16	11	6	10	2		0	2	
5/30/2010	33	27	21	22	19	17	91	65	38	1011	1009	1008	16	14	8	19	3		0	1	Thunderstorm
5/31/2010	33	27	21	21	19	16	94	65	36	1015	1013	1012	16	15	6	13	5		0	0	
6/1/2010	32	26	20	21	19	17	94	64	39	1015	1013	1009	16	15	8	16	5	26	0	0	
6/2/2010	33	27	20	22	20	18	95	69	41	1011	1009	1005	16	13	4	37	8	47	1.19	3	Rain-Thunderstorm
6/3/2010	21	21	20	21	20	19	96	94	89	1008	1007	1004	16	11	3	24	8	37	2.03	7	Rain-Thunderstorm
6/4/2010	31	25	19	21	20	17	97	74	44	1010	1008	1007	16	9	1	10	0		0	1	Fog
6/5/2010	32	26	21	22	21	20	95	74	54	1011	1009	1008	16	13	6	16	3		0	0	
6/6/2010	33	28	24	25	23	22	95	76	52	1013	1012	1010	11	7	3	11	6		0	4	
6/7/2010	32	28	24	24	23	22	92	77	57	1016	1014	1012	11	7	5	16	6		0	2	
6/8/2010	28	25	22	24	22	20	94	86	63	1016	1014	1013	16	12	8	21	8	29	0	3	Rain
6/9/2010	25	23	21	23	21	20	96	94	91	1016	1014	1011	16	10	2	21	5	27	7.37	6	Rain-Thunderstorm

6/10/2010	32	27	22	25	23	21	96	80	54	1013	1011	1009	11	7	5	29	13	39	0	3	Rain
6/11/2010	32	28	25	25	23	22	91	76	59	1013	1012	1011	11	7	5	27	16	37	0	4	
6/12/2010	32	28	25	24	23	22	91	75	56	1016	1015	1013	16	9	6	26	16	40	0	4	Rain
6/13/2010	32	28	25	24	23	21	91	73	53	1017	1016	1013	11	7	5	23	14	32	0	5	
6/14/2010	33	29	25	24	22	20	93	72	46	1015	1014	1010	11	8	5	23	13	34	0	4	Rain
6/15/2010	33	28	23	23	22	19	96	72	42	1017	1015	1013	11	8	4	14	6		0	3	
6/16/2010	33	28	23	24	22	20	95	71	44	1019	1017	1015	16	11	4	16	6		0	2	
6/17/2010	33	28	23	24	22	18	95	72	44	1017	1016	1014	16	10	0	23	6	29	0	3	Fog
6/18/2010	33	28	23	24	22	21	93	71	49	1017	1016	1013	16	16	11	23	10	29	0	3	
6/19/2010	33	28	24	23	22	20	93	71	44	1019	1017	1015	16	15	11	16	10		0	2	
6/20/2010	33	28	23	23	22	20	94	69	45	1018	1016	1013	16	16	11	16	6	27	0	2	
6/21/2010	33	28	22	23	21	21	92	69	47	1017	1015	1014	16	16	16	14	6		0	1	
6/22/2010	33	28	23	23	22	19	92	67	42	1018	1016	1015	16	16	16	13	5		0	1	
6/23/2010	33	28	22	23	22	20	94	69	43	1018	1016	1015	16	16	11	13	5		0	1	
6/24/2010	28	26	25	24	23	22	91	85	68	1019	1018	1017	16	16	16	8	3		0	3	Rain

Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: MDJG - BRH	
Date & Time: 16 Aug 10 1130	County Name: Robertson
Stream Name: Walnut Creek	
Segment No. or nearest downstream Segment No.: 12420	
Description of Site: 16403 Downstream from SH6	

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

A. Stream Characteristics:

1. Check the following channel flow status that applies.

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

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

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

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

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

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

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

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. 5.465 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 90°F 32.2°C Water Temp 27.95 °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	RL 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):

SH6 crosses creek. Wide ROW at bridge. Fence at private property along ROW 1032, 1033 Gentle slope to creek

8. Dominant Primary Substrate

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

Stream Name_____ Site: _____
Date: _____ Time: _____

B. Primary Contact Water Recreation Evaluation:

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

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?

☐ Yes ☑ No primary contact recreation activities were observed

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

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

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

c. Check the following that apply regarding the individuals proximity to the water body.

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

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

Nice pool, below bridge, Steady flow of water from mine discharge, Have seen evidence of fishing during routine monitoring. #1034,1035

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

SH 6 crosses creek 1032, 1033

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: _____

Date: _____ Time: _____

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

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

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

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).
Some nice pools in 300 m reach. 1 pool below bridge, others on private property, #1035, 1034

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 on each side of creek #1034

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.
Saw no evidence of contact recreation. 1034, 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 1036 Downstream 1037 Left Bank 1038 Right Bank 1039

Photos #s (150 meters) Upstream 1040 Downstream 1041 Left Bank 1042 Right Bank 1043

Photos #s (300 meters) Upstream — Downstream — Left Bank — Right Bank — No pics

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	22	~~1.10~~ 10	1.10
Pool 2	41	4	0.95
Pool 3	74	8	1.02
Pool 4	13	5	1.05
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	0.26
60 meters	0.55
90 meters	0.35
120 meters	0.65
150 meters	0.75
180 meters	0.60
210 meters	0.90
240 meters	0.85
270 meters	0.55
300 meters	0.35
Average	0.58

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

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

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	1.5 m
Width at narrowest point of the stream within 300 meter reach	0.75
Width at the widest point of the stream within 300 meter reach	11

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

COMMENTS:
Saw where someone had a fire on the bank and an empty worm box nearby.

2. Non-wadeable Streams

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

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

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

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

Comments: Discharge from mine creates habitat for game fish and increases flows

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

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

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

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

Comments: #1032 – 1038

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

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

Comments: #1037

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: old fire + empty worm box on edge of creek.

Stream Name_____ Site: _____
Date: _____ Time: _____

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

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

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).
Steady flow of water and some nice pools in reach.

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream:_____ Date:_____

Site:_____ Site

Description:_____

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

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

Observations:_____

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

: Wed Sep 29 2010

16403-16AUG10.WAD
2010/08/16 10:28:55

JG

FlowTracker
P872
3.7
2.30
0.0%

(English Units)
ft
ft/s
ft^2
cfs

Accuracy	1.0%	1.0%
Depth	0.3%	1.8%
Velocity	0.6%	1.8%
Width	0.1%	0.1%
Method	2.0%	-
# Stations	3.0%	-
Overall	**3.8%**	**2.7%**

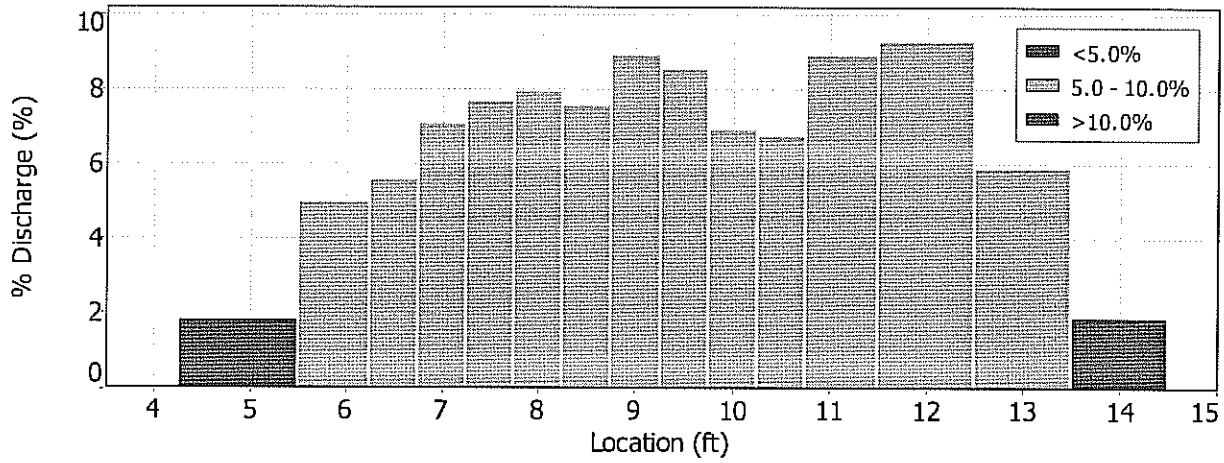
40	17
LEW	11.500
29.0 dB	7.263
81.77 °F	0.632
Mid-Section	0.7524
	5.4646

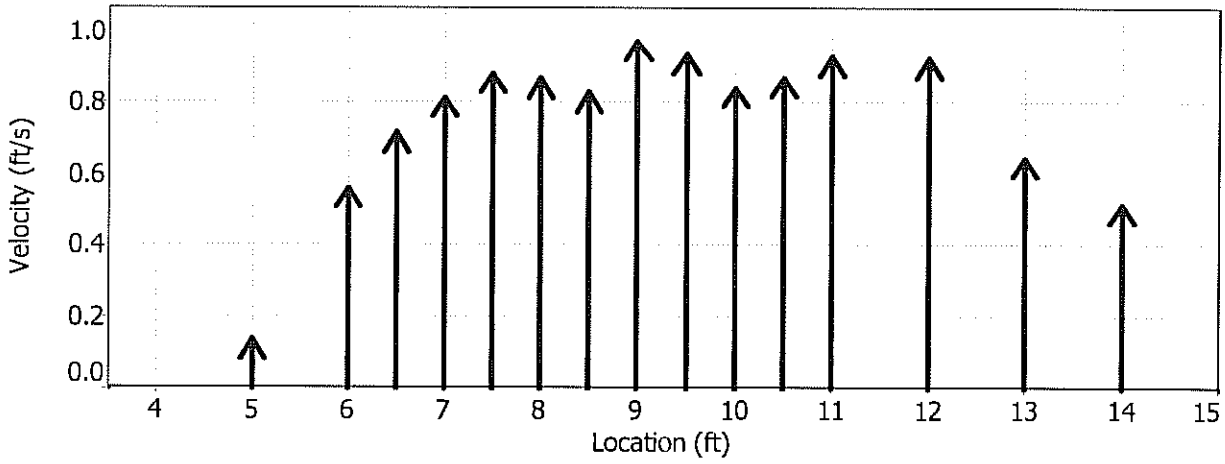
				Depth								
0	10:28	3.50	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
1	*10:28*	*5.00*	*0.6*	*0.600*	*0.6*	*0.240*	*0.1355*	*1.00*	*0.1355*	*0.750*	*0.1016*	*1.9*
2	10:29	6.00	0.6	0.650	0.6	0.260	0.5614	1.00	0.5614	0.487	0.2736	5.0
3	10:43	6.50	0.6	0.850	0.6	0.340	0.7162	1.00	0.7162	0.425	0.3044	5.6
4	10:30	7.00	0.6	0.950	0.6	0.380	0.8166	1.00	0.8166	0.475	0.3879	7.1
5	10:39	7.50	0.6	0.950	0.6	0.380	0.8825	1.00	0.8825	0.475	0.4193	7.7
6	10:31	8.00	0.6	1.000	0.6	0.400	0.8688	1.00	0.8688	0.500	0.4344	7.9
7	10:40	8.50	0.6	1.000	0.6	0.400	0.8287	1.00	0.8287	0.500	0.4144	7.6
8	10:32	9.00	0.6	1.000	0.6	0.400	0.9731	1.00	0.9731	0.500	0.4865	8.9
9	*10:41*	*9.50*	*0.6*	*1.000*	*0.6*	*0.400*	*0.9360*	*1.00*	*0.9360*	*0.500*	*0.4680*	*8.6*
10	10:33	10.00	0.6	0.900	0.6	0.360	0.8432	1.00	0.8432	0.450	0.3794	6.9
11	10:42	10.50	0.6	0.850	0.6	0.340	0.8727	1.00	0.8727	0.425	0.3709	6.8
12	10:34	11.00	0.6	0.700	0.6	0.280	0.9311	1.00	0.9311	0.525	0.4889	8.9
13	10:36	12.00	0.6	0.550	0.6	0.220	0.9252	1.00	0.9252	0.550	0.5087	9.3
14	10:37	13.00	0.6	0.500	0.6	0.200	0.6463	1.00	0.6463	0.500	0.3232	5.9
15	*10:38*	*14.00*	*0.6*	*0.200*	*0.6*	*0.080*	*0.5161*	*1.00*	*0.5161*	*0.200*	*0.1033*	*1.9*
16	10:38	15.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0

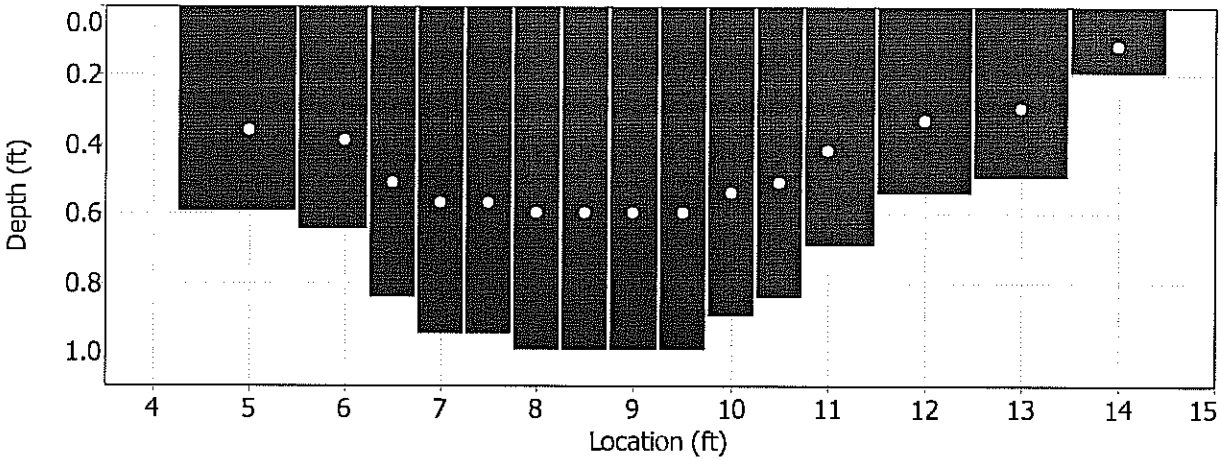
: Wed Sep 29 2010

16403-16AUG10.WAD
2010/08/16 10:28:55

JG







: Wed Sep 29 2010

16403-16AUG10.WAD
2010/08/16 10:28:55

JG

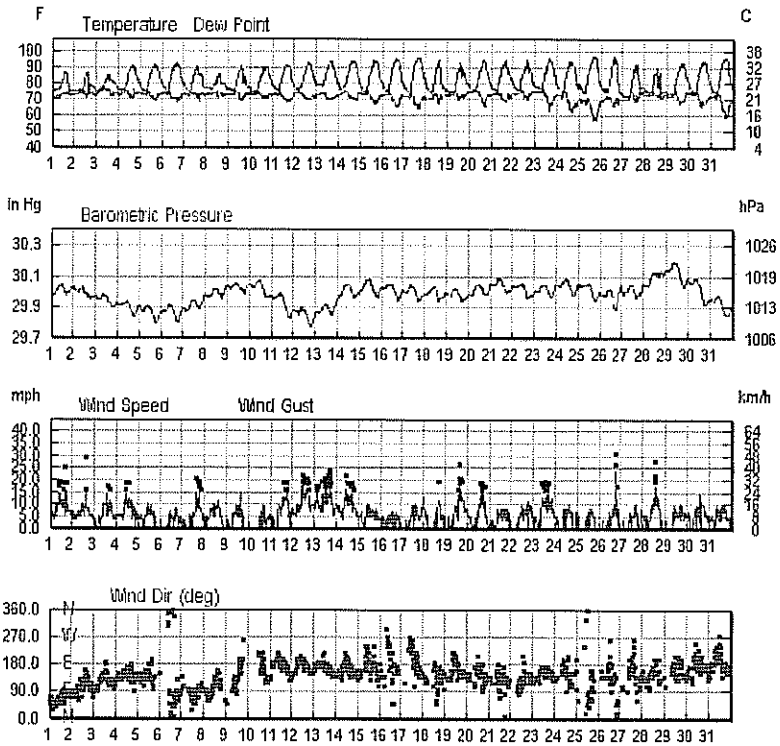
1	5.00	0.6	Boundary QC is Fair; possible boundary interference
9	9.50	0.6	SNR (41.3) is different from typical SNR (29.0)
15	14.00	0.6	SNR (42.3) is different from typical SNR (29.0)
		0.6	High SNR variation during measurement: 3.0,7.7

History for Hearne, TX

Month of July, 2010

Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	97 °F	93 °F	85 °F	
Mean Temperature	86 °F	84 °F	80 °F	
Min Temperature	78 °F	75 °F	72 °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	21	19	15	579
Growing Degree Days (base 50)	36	34	30	1047
Dew Point:				
Dew Point	77 °F	72 °F	58 °F	
Precipitation:				
Precipitation	0.46 in	0.02 in	0.00 in	0.65 in
Snowdepth	-	-	-	-
Wind:				
Wind	24 mph	4 mph	0 mph	
Gust Wind	34 mph	18 mph	9 mph	
Sea Level Pressure:				
Sea Level Pressure	30.20 in	29.98 in	29.78 in	



Monthly Calendar Overview

« Previous Month « 2009 July 2010 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
				Actual: 87 | 75	Actual: 87 | 75	Actual: 85 | 75
				Precip: 0.07	Precip: 0.46	Precip: 0.00

																		Average: - | - Precip: -		Average: - | - Precip: -		Average: - | - Precip: -	
4	Actual: 91 | 76 Precip: 0.00 Average: - | - Precip: -	5	Actual: 92 | 74 Precip: 0.00 Average: - | - Precip: -	6	Actual: 93 | 75 Precip: 0.00 Average: - | - Precip: -	7	Actual: 91 | 74 Precip: 0.00 Average: - | - Precip: -	8	Actual: 86 | 76 Precip: 0.00 Average: - | - Precip: -	9	Actual: 91 | 75 Precip: 0.00 Average: - | - Precip: -	10	Actual: 90 | 74 Precip: 0.00 Average: - | - Precip: -
11	Actual: 92 | 75 Precip: 0.00 Average: - | - Precip: -	12	Actual: 93 | 76 Precip: 0.00 Average: - | - Precip: -	13	Actual: 94 | 78 Precip: 0.00 Average: - | - Precip: -	14	Actual: 94 | 76 Precip: 0.00 Average: - | - Precip: -	15	Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	16	Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	17	Actual: 96 | 73 Precip: 0.00 Average: - | - Precip: -
18	Actual: 95 | 74 Precip: 0.00 Average: - | - Precip: -	19	Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	20	Actual: 95 | 76 Precip: 0.00 Average: - | - Precip: -	21	Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	22	Actual: 95 | 76 Precip: 0.00 Average: - | - Precip: -	23	Actual: 95 | 77 Precip: 0.00 Average: - | - Precip: -	24	Actual: 94 | 73 Precip: 0.00 Average: - | - Precip: -
25	Actual: 97 | 74 Precip: 0.00 Average: - | - Precip: -	26	Actual: 97 | 75 Precip: 0.00 Average: - | - Precip: -	27	Actual: 92 | 72 Precip: 0.01 Average: - | - Precip: -	28	Actual: 90 | 74 Precip: 0.11 Average: - | - Precip: -	29	Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	30	Actual: 94 | 74 Precip: 0.00 Average: - | - Precip: -	31	Actual: 96 | 73 Precip: 0.00 Average: - | - Precip: -

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear · Mostly Cloudy Partly Sunny · Partly Cloudy Mostly Sunny · Cloudy · Rain · Snow · Hail Flurries · Thunderstorms · Hazy Fog · Sleet · '?' denotes 'chance of' · Unknown

Data Category: Condition; High Temp.; Lo Temp.; Precip. (in inches); Daily Avg. Temp.; Temps in °F

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

-60 -30 0 30 60 90 120

Print This Calendar

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
July	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	87	81	75	75	73	71	94	80	64	30.04	30.00	29.97	10	6	4	16	8	25	0.07	Rain
2	87	81	75	76	74	72	94	88	63	30.03	29.99	29.95	10	7	4	16	6	29	0.46	Rain
3	85	80	75	77	75	72	95	85	68	29.98	29.94	29.90	10	5	3	14	4	20	0.00	Rain
4	91	84	76	77	74	71	94	75	51	29.94	29.90	29.84	7	5	3	14	7	18	0.00	Rain
5	92	83	74	76	73	70	95	74	48	29.91	29.87	29.80	7	5	3	10	5	9	0.00	
6	93	84	75	75	72	69	94	69	44	29.92	29.87	29.80	7	5	3	8	2	-	0.00	
7	91	82	74	75	73	69	94	75	53	29.94	29.91	29.87	7	5	4	15	3	25	0.00	
8	86	81	76	75	74	72	90	81	63	30.02	29.98	29.95	10	6	3	12	5	16	0.00	Rain
9	91	83	75	76	73	70	94	79	51	30.06	30.02	29.98	7	5	3	15	2	18	0.00	Rain
10	90	82	74	75	73	71	96	77	53	30.08	30.02	29.96	7	4	3	9	1	-	0.00	
11	92	84	75	75	72	69	94	72	46	29.99	29.94	29.83	7	5	4	15	5	20	0.00	
12	93	84	76	75	73	70	92	70	47	29.90	29.86	29.78	7	5	4	21	9	22	0.00	
13	94	86	78	75	73	71	86	68	46	29.92	29.88	29.85	7	4	3	18	11	24	0.00	
14	94	85	76	76	73	70	91	69	46	30.05	30.00	29.95	7	5	3	16	9	22	0.00	
15	95	85	75	76	72	68	95	69	41	30.09	30.02	29.96	7	5	2	10	5	16	0.00	
16	95	85	75	75	71	66	94	67	38	30.06	30.02	29.94	10	6	3	7	2	-	0.00	Rain
17	96	84	73	74	71	65	94	63	35	30.05	30.00	29.94	10	9	3	10	2	16	0.00	

18	95	84	74	75	72	68	90	73	42	30.03	29.99	29.94	10	10	7	12	5	20	0.00	Thunderstorm
19	93	84	74	76	73	70	96	76	48	30.02	29.98	29.94	10	8	0	18	4	26	0.00	Fog
20	95	86	76	76	73	65	95	73	39	30.05	30.01	29.97	10	9	5	15	6	18	0.00	
21	95	85	75	75	73	69	95	71	42	30.09	30.05	29.99	10	9	5	8	2	16	0.00	Rain
22	95	86	76	76	74	70	94	75	45	30.06	30.01	29.96	10	9	7	12	3	20	0.00	
23	95	86	77	77	73	64	94	70	35	30.05	30.01	29.96	10	9	5	14	4	20	0.00	
24	94	84	73	76	71	63	96	69	37	30.09	30.04	29.98	10	9	4	10	3	-	0.00	
25	97	86	74	72	67	58	88	58	26	30.06	30.02	29.94	10	10	7	8	2	-	0.00	Rain
26	97	86	75	73	70	67	87	67	38	30.02	29.97	29.88	10	7	4	24	2	34	0.00	Rain , Thunderstorm
27	92	82	72	76	72	69	95	79	46	30.05	30.00	29.96	10	6	4	10	2	-	0.01	Rain , Thunderstorm
28	90	82	74	76	74	71	95	83	56	30.14	30.09	30.03	10	9	3	17	6	31	0.11	Rain , Thunderstorm
29	93	84	74	77	72	68	96	74	45	30.20	30.14	30.03	10	9	5	10	3	-	0.00	
30	94	84	74	76	72	66	95	71	41	30.09	30.04	29.91	10	9	2	14	5	18	0.00	
31	96	84	73	74	69	59	94	66	29	29.98	29.93	29.85	10	9	5	10	4	-	0.00	

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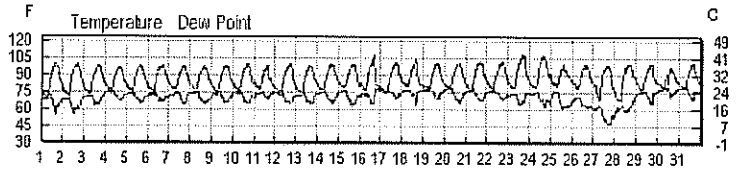
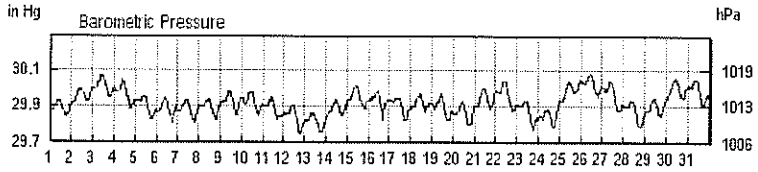
History for Hearne, TX

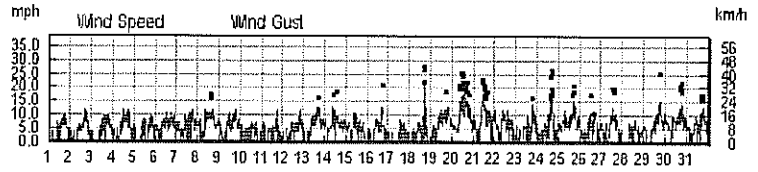
Month of August, 2010

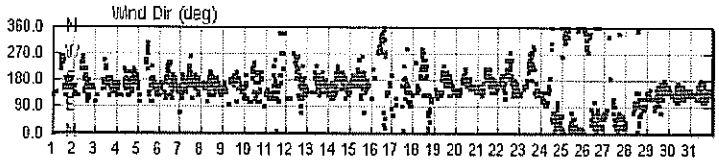
Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	109 °F	101 °F	97 °F	
Mean Temperature	94 °F	88 °F	84 °F	
Min Temperature	81 °F	76 °F	68 °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	29	24	19	730
Growing Degree Days (base 50)	44	38	34	1189
Dew Point:				
Dew Point	81 °F	71 °F	48 °F	
Precipitation:				
Precipitation	0.00 in	0.00 in	0.00 in	0.00 in
Snowdepth	-	-	-	-
Wind:				
Wind	21 mph	4 mph	0 mph	
Gust Wind	29 mph	18 mph	9 mph	
Sea Level Pressure:				
Sea Level Pressure	30.09 in	29.92 in	29.75 in	









Monthly Calendar Overview

« Previous Month « 2009 **August 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
Actual: 100 | 69	**Actual:** 99 | 71	**Actual:** 98 | 73	**Actual:** 97 | 76	**Actual:** 98 | 75	**Actual:** 96 | 75	**Actual:** 98 | 78
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -

8		9		10		11		12		13		14	
Actual:	98 | 77	Actual:	98 | 74	Actual:	100 | 75	Actual:	99 | 78	Actual:	99 | 75	Actual:	99 | 75	Actual:	100 | 77
Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00
Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -
Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-

15		16		17		18		19		20		21	
Actual:	100 | 79	Actual:	109 | 76	Actual:	101 | 76	Actual:	104 | 81	Actual:	101 | 79	Actual:	101 | 80	Actual:	102 | 77
Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00
Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -
Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-

22		23		24		25		26		27		28	
Actual:	103 | 77	Actual:	109 | 79	Actual:	108 | 79	Actual:	100 | 80	Actual:	100 | 79	Actual:	99 | 69	Actual:	101 | 68
Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00
Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -
Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-

29		30		31			
Actual:	100 | 77	Actual:	99 | 81	Actual:	101 | 80		
Precip:	0.00	Precip:	0.00	Precip:	0.00		
Average:	- | -	Average:	- | -	Average:	- | -		
Precip:	-	Precip:	-	Precip:	-		

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear, Mostly Cloudy Partly Sunny, Partly Cloudy Mostly Sunny, Cloudy, Rain, Snow, Hail Flurries, Thunderstorms, Hazy Fog, Sleet, '?' denotes 'chance of', Unknown

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

Data Category, Condition, High Temp., Lo Temp., Precip. (in inches), Daily Avg. Temp., Temps in °F

-60 -30 0 30 60 90 120

Print This Calendar

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
August	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	100	84	69	74	67	55	95	60	22	29.93	29.89	29.84	10	9	7	9	2	-	0.00	
2	99	85	71	70	64	55	90	55	25	30.00	29.96	29.91	10	9	4	12	2	16	0.00	
3	98	86	73	73	69	64	94	60	32	30.08	30.01	29.95	10	8	4	9	2	16	0.00	
4	97	86	76	77	73	68	94	66	38	30.05	29.98	29.89	7	6	3	12	4	17	0.00	Rain
5	98	86	75	74	71	65	92	62	34	29.96	29.91	29.83	7	5	3	8	3	-	0.00	
6	98	86	75	74	71	67	92	63	36	29.95	29.89	29.81	10	8	4	10	5	-	0.00	
7	98	88	78	75	71	64	86	60	33	29.94	29.88	29.81	10	10	10	12	5	16	0.00	
8	98	88	77	76	71	65	92	63	34	29.94	29.90	29.83	10	10	10	12	6	20	0.00	
9	98	86	74	76	71	66	95	63	34	29.99	29.93	29.85	10	10	7	12	5	16	0.00	
10	100	88	75	77	72	65	94	64	33	29.98	29.93	29.85	10	10	3	7	2	9	0.00	
11	99	88	78	76	73	68	89	64	36	29.96	29.90	29.83	10	10	10	12	3	24	0.00	Rain , Thunderstorm
12	99	87	75	76	71	65	92	63	33	29.90	29.85	29.75	10	10	7	9	2	-	0.00	
13	99	87	75	75	70	65	91	62	33	29.87	29.82	29.76	10	10	10	13	4	17	0.00	
14	100	88	77	76	72	66	92	62	33	29.94	29.88	29.83	10	10	7	13	6	18	0.00	
15	100	90	79	77	72	63	90	62	30	30.02	29.96	29.89	10	10	10	10	5	-	0.00	
16	109	92	76	79	72	65	90	64	26	29.99	29.93	29.83	10	10	10	13	3	23	0.00	
17	101	88	76	78	75	70	96	69	36	29.95	29.91	29.83	10	9	5	8	1	-	0.00	
18	104	92	81	78	75	65	88	65	28	29.97	29.92	29.87	10	10	10	21	3	29	0.00	Thunderstorm
19	101	90	79	79	75	69	94	67	35	29.97	29.90	29.83	10	10	10	13	4	21	0.00	
20	101	90	80	80	74	66	95	62	33	29.93	29.86	29.80	10	10	7	17	8	25	0.00	
21	102	90	77	79	74	68	96	64	33	30.01	29.94	29.89	10	10	10	17	7	23	0.00	

22	103	90	77	78	74	69	94	62	34	30.04	29.97	29.88	10	10	7	12	6	-	0.00
23	109	94	79	74	71	65	85	54	26	29.93	29.86	29.77	10	10	10	14	2	22	0.00
24	108	94	79	77	71	63	88	53	24	29.90	29.85	29.78	10	10	10	17	4	26	0.00
25	100	90	80	77	69	62	86	54	30	30.04	29.99	29.93	10	10	10	15	7	21	0.00
26	100	90	79	72	67	62	76	50	29	30.09	30.04	29.96	10	10	10	12	5	18	0.00
27	99	84	69	64	57	48	83	42	17	30.04	29.98	29.88	10	10	10	13	5	21	0.00
28	101	84	68	65	61	54	82	49	25	29.94	29.89	29.79	10	10	10	8	1	-	0.00
29	100	88	77	77	74	66	92	65	33	29.95	29.89	29.85	10	10	10	15	5	29	0.00
30	99	90	81	81	77	72	93	73	42	30.06	30.00	29.94	10	10	10	14	7	22	0.00
31	101	90	80	80	76	68	96	70	33	30.05	30.00	29.91	10	10	7	12	5	17	0.00

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Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: MJ/JG - BRA	
Date & Time: 16 Aug 10 1015	County Name: Robertson
Stream Name: Walnut Creek	
Segment No. or nearest downstream Segment No.: 12420	
Description of Site: 20021 upstream from County Road 123	

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

A. Stream Characteristics:

1. Check the following channel flow status that applies.

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

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

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

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

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

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

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

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. 56.30 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 85F° C 29.4°C Water Temp 27.46° C

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

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

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

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

County Road crosses stream. Fence overgrown with trees & vines # 1015, 1016, 1017, 1018

8. Dominant Primary Substrate

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

Stream Name_____ Site: _____
Date: _____ Time: _____

B. Primary Contact Water Recreation Evaluation:

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

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?
☐ Yes ☑ No primary contact recreation activities were observed

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

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

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

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

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
Good flow, some significant pools, Found evidence of fishing on last transect, Wide shallow stream flow

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
County road crosses creek. Fence with heavy brush and vines on each side of Reach # ~~1019~~ 1017, 1018
MTG Aug 10

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: fishing ~~[illegible]~~ evidence

Date: _____ Time: _____

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

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

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
N/A all pics of creek 1015-1030
16Aug10

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).
N/A

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

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

1. Provide site-specific information and documentation (including photographs) regarding unsafe conditions, recreation activities, and presence or absence of water recreation activities.
Transect taken on Weekday morning, No body around.
1015-1030. Parking area along road near bridge.

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

E. Stream Channel and Substantial Pools Measurements

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

1. Wadeable Streams

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

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

Photos #s (30 meters) Upstream 1019 Downstream 1020 Left Bank 1021 Right Bank 1022
Photos #s (150 meters) Upstream 1023 Downstream 1024 Left Bank 1025 Right Bank 1026
Photos #s (300 meters) Upstream 1027 Downstream 1028 Left Bank 1029 Right Bank 1030

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	14	7	0.75
Pool 2	42	8	1.05
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	0.23
60 meters	0.30
90 meters	0.18
120 meters	0.72
150 meters	0.28
180 meters	0.22
210 meters	0.68
240 meters	0.45
270 meters	0.22
300 meters	0.27
Average	0.35 m

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

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

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	8
Width at narrowest point of the stream within 300 meter reach	5
Width at the widest point of the stream within 300 meter reach	9

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

COMMENTS: 2 significant pools within reach. Always water in creek from mine discharge.

2. Non-wadeable Streams

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

Also, take photos facing upstream, downstream, left bank, and right bank at .

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

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

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

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

Comments: ~~Mine~~ Mine discharges water into creek.

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

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

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

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

Comments: # 1016 - 1018

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

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

Comments: # 1016 - 1018

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: Found evidence of fishing on previous transect

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

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

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

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: Hog, deer, and cow tracks in stream. Saw deer near bridge

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

11. Garbage Observed

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

Briefly describe the kinds of garbage observed: bottles, cans, tires

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).
constant flow of water from mine discharge. Parking area near bridge along road.

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream:_____ Date:_____

Site:_____ Site

Description:_____

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

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

Observations:_____

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

: Wed Sep 29 2010

20021-16AUG10.WAD
2010/08/16 09:40:44

JG

FlowTracker
P872
3.7
2.30
0.0%

(English Units)
ft
ft/s
ft^2
cfs

Accuracy	1.0%	1.0%
Depth	0.4%	1.4%
Velocity	0.6%	4.5%
Width	0.1%	0.1%
Method	2.0%	-
# Stations	2.6%	-
Overall	**3.5%**	**4.8%**

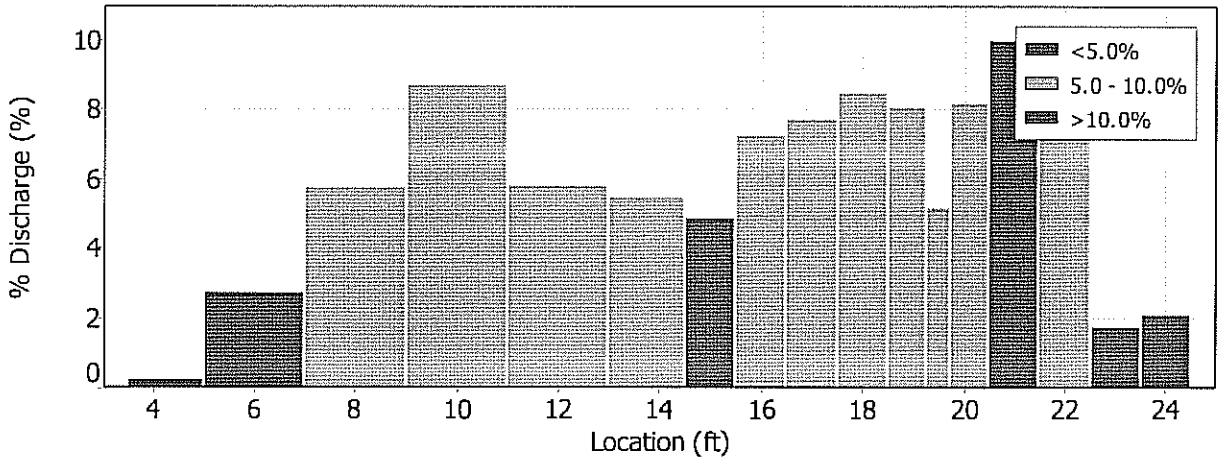
40	19
REW	22.000
35.6 dB	7.900
80.72 °F	0.359
Mid-Section	0.7127
	5.6299

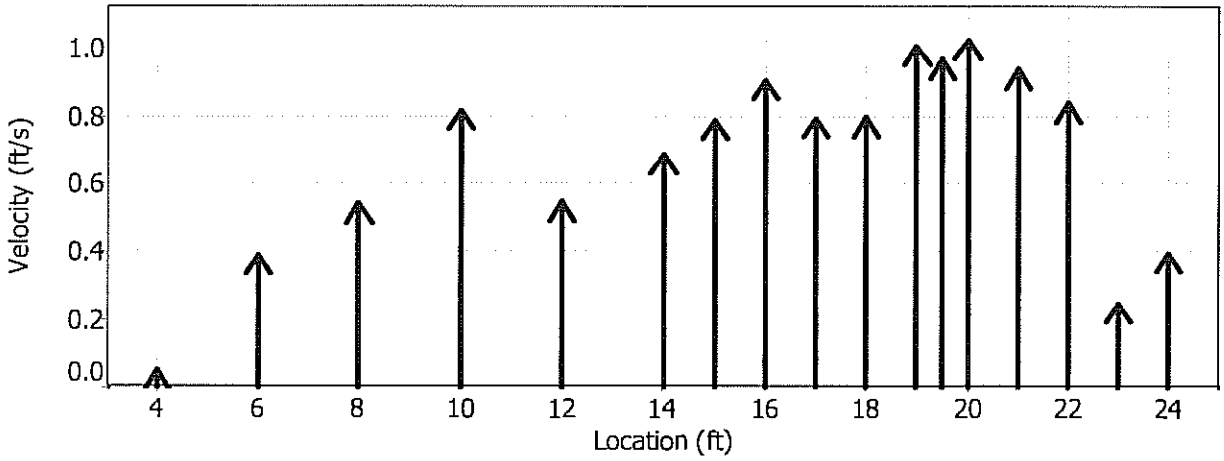
				Depth								
0	09:40	3.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
1	*09:40*	*4.00*	*0.6*	*0.200*	*0.6*	*0.080*	*0.0492*	*1.00*	*0.0492*	*0.300*	*0.0148*	*0.3*
2	09:41	6.00	0.6	0.200	0.6	0.080	0.3891	1.00	0.3891	0.400	0.1557	2.8
3	09:42	8.00	0.6	0.300	0.6	0.120	0.5423	1.00	0.5423	0.600	0.3253	5.8
4	09:43	10.00	0.6	0.300	0.6	0.120	0.8169	1.00	0.8169	0.600	0.4899	8.7
5	09:44	12.00	0.6	0.300	0.6	0.120	0.5479	1.00	0.5479	0.600	0.3286	5.8
6	09:45	14.00	0.6	0.300	0.6	0.120	0.6883	1.00	0.6883	0.450	0.3096	5.5
7	09:58	15.00	0.6	0.350	0.6	0.140	0.7871	1.00	0.7871	0.350	0.2755	4.9
8	09:46	16.00	0.6	0.450	0.6	0.180	0.9081	1.00	0.9081	0.450	0.4088	7.3
9	09:51	17.00	0.6	0.550	0.6	0.220	0.7940	1.00	0.7940	0.550	0.4366	7.8
10	09:47	18.00	0.6	0.600	0.6	0.240	0.7972	1.00	0.7972	0.600	0.4784	8.5
11	09:52	19.00	0.6	0.600	0.6	0.240	1.0079	1.00	1.0079	0.450	0.4536	8.1
12	09:57	19.50	0.6	0.600	0.6	0.240	0.9685	1.00	0.9685	0.300	0.2906	5.2
13	09:48	20.00	0.6	0.600	0.6	0.240	1.0259	1.00	1.0259	0.450	0.4617	8.2
14	09:53	21.00	0.6	0.600	0.6	0.240	0.9393	1.00	0.9393	0.600	0.5636	10.0
15	09:49	22.00	0.6	0.500	0.6	0.200	0.8392	1.00	0.8392	0.500	0.4196	7.5
16	09:54	23.00	0.6	0.400	0.6	0.160	0.2470	1.00	0.2470	0.400	0.0988	1.8
17	09:49	24.00	0.6	0.300	0.6	0.120	0.3960	1.00	0.3960	0.300	0.1187	2.1
18	09:49	25.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0

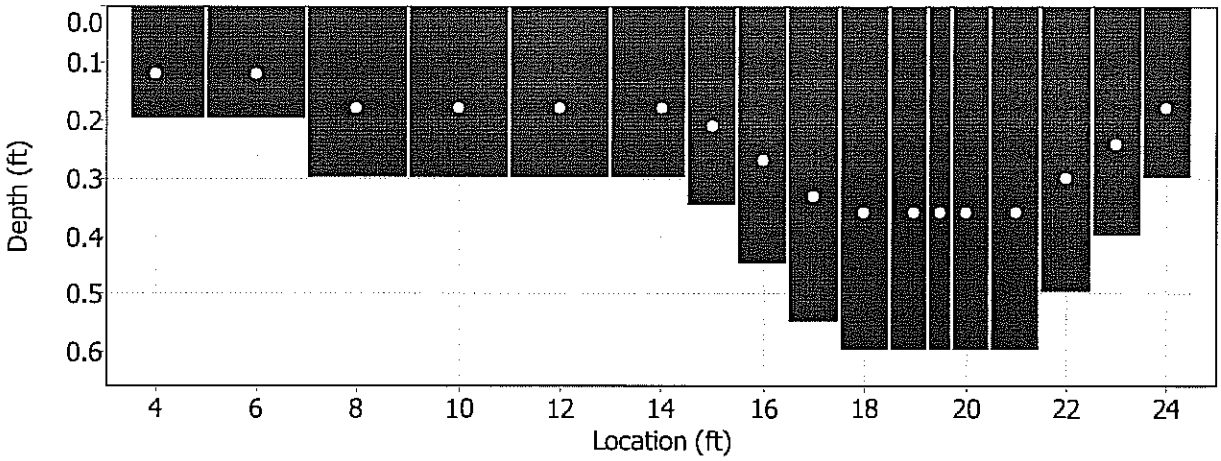
: Wed Sep 29 2010

20021-16AUG10.WAD
2010/08/16 09:40:44

JG







: Wed Sep 29 2010

20021-16AUG10.WAD 2010/08/16 09:40:44	JG

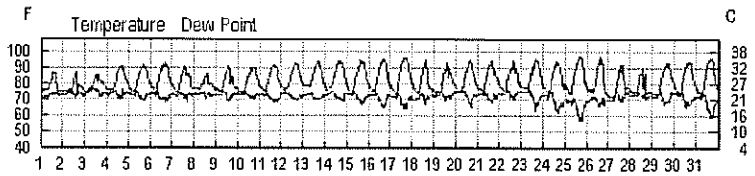
1	4.00	0.6	SNR (50.1) is different from typical SNR (35.6)

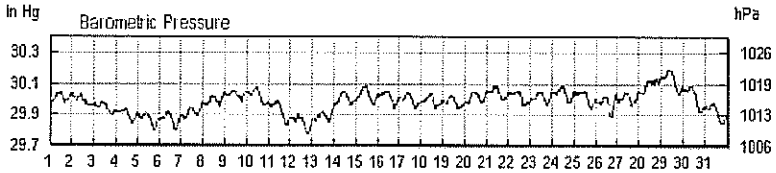
History for Hearne, TX

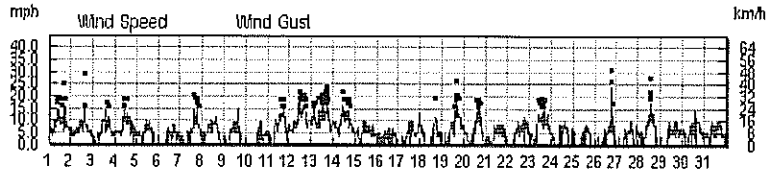
Month of July, 2010

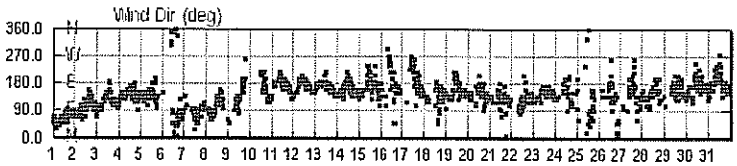
Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	97 °F	93 °F	85 °F	
Mean Temperature	86 °F	84 °F	80 °F	
Min Temperature	78 °F	75 °F	72 °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	21	19	15	579
Growing Degree Days (base 50)	36	34	30	1047
Dew Point:				
Dew Point	77 °F	72 °F	58 °F	
Precipitation:				
Precipitation	0.46 in	0.02 in	0.00 in	0.65 in
Snowdepth	-	-	-	-
Wind:				
Wind	24 mph	4 mph	0 mph	
Gust Wind	34 mph	18 mph	9 mph	
Sea Level Pressure:				
Sea Level Pressure	30.20 in	29.98 in	29.78 in	









Monthly Calendar Overview

« Previous Month « 2009 **July 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
				Actual: 87 | 75	Actual: 87 | 75	Actual: 85 | 75
				Precip: 0.07	Precip: 0.46	Precip: 0.00

				Average: - | - Precip: -	Average: - | - Precip: -	Average: - | - Precip: -
4 Actual: 91 | 76 Precip: 0.00 Average: - | - Precip: -	5 Actual: 92 | 74 Precip: 0.00 Average: - | - Precip: -	6 Actual: 93 | 75 Precip: 0.00 Average: - | - Precip: -	7 Actual: 91 | 74 Precip: 0.00 Average: - | - Precip: -	8 Actual: 86 | 76 Precip: 0.00 Average: - | - Precip: -	9 Actual: 91 | 75 Precip: 0.00 Average: - | - Precip: -	10 Actual: 90 | 74 Precip: 0.00 Average: - | - Precip: -
11 Actual: 92 | 75 Precip: 0.00 Average: - | - Precip: -	12 Actual: 93 | 76 Precip: 0.00 Average: - | - Precip: -	13 Actual: 94 | 78 Precip: 0.00 Average: - | - Precip: -	14 Actual: 94 | 76 Precip: 0.00 Average: - | - Precip: -	15 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	16 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	17 Actual: 96 | 73 Precip: 0.00 Average: - | - Precip: -
18 Actual: 95 | 74 Precip: 0.00 Average: - | - Precip: -	19 Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	20 Actual: 95 | 76 Precip: 0.00 Average: - | - Precip: -	21 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	22 Actual: 95 | 76 Precip: 0.00 Average: - | - Precip: -	23 Actual: 95 | 77 Precip: 0.00 Average: - | - Precip: -	24 Actual: 94 | 73 Precip: 0.00 Average: - | - Precip: -
25 Actual: 97 | 74 Precip: 0.00 Average: - | - Precip: -	26 Actual: 97 | 75 Precip: 0.00 Average: - | - Precip: -	27 Actual: 92 | 72 Precip: 0.01 Average: - | - Precip: -	28 Actual: 90 | 74 Precip: 0.11 Average: - | - Precip: -	29 Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	30 Actual: 94 | 74 Precip: 0.00 Average: - | - Precip: -	31 Actual: 96 | 73 Precip: 0.00 Average: - | - Precip: -

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear, Mostly Cloudy Partly Sunny, Partly Cloudy Mostly Sunny, Cloudy, Rain, Snow, Hail Flurries, Thunderstorms, Hazy Fog, Sleet, '?' denotes 'chance of', Unknown

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

Data Category, Condition, High Temp., Lo Temp., Precip. (in inches), Daily Avg. Temp., Temps in °F
-60 -30 0 30 60 90 120

Print This Calendar

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
July	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	87	81	75	75	73	71	94	80	64	30.04	30.00	29.97	10	6	4	16	8	25	0.07	Rain
2	87	81	75	76	74	72	94	88	63	30.03	29.99	29.95	10	7	4	16	6	29	0.46	Rain
3	85	80	75	77	75	72	95	85	68	29.98	29.94	29.90	10	5	3	14	4	20	0.00	Rain
4	91	84	76	77	74	71	94	75	51	29.94	29.90	29.84	7	5	3	14	7	18	0.00	Rain
5	92	83	74	76	73	70	95	74	48	29.91	29.87	29.80	7	5	3	10	5	9	0.00	
6	93	84	75	75	72	69	94	69	44	29.92	29.87	29.80	7	5	3	8	2	-	0.00	
7	91	82	74	75	73	69	94	75	53	29.94	29.91	29.87	7	5	4	15	3	25	0.00	
8	86	81	76	75	74	72	90	81	63	30.02	29.98	29.95	10	6	3	12	5	16	0.00	Rain
9	91	83	75	76	73	70	94	79	51	30.06	30.02	29.98	7	5	3	15	2	18	0.00	Rain
10	90	82	74	75	73	71	96	77	53	30.08	30.02	29.96	7	4	3	9	1	-	0.00	
11	92	84	75	75	72	69	94	72	46	29.99	29.94	29.83	7	5	4	15	5	20	0.00	
12	93	84	78	75	73	70	92	70	47	29.90	29.86	29.78	7	5	4	21	9	22	0.00	
13	94	86	78	75	73	71	86	68	46	29.92	29.88	29.85	7	4	3	18	11	24	0.00	
14	94	85	76	76	73	70	91	69	46	30.05	30.00	29.95	7	5	3	16	9	22	0.00	
15	95	85	75	76	72	68	95	69	41	30.09	30.02	29.96	7	5	2	10	5	16	0.00	
16	95	85	75	75	71	66	94	67	38	30.06	30.02	29.94	10	6	3	7	2	-	0.00	Rain
17	96	84	73	74	71	65	94	63	35	30.05	30.00	29.94	10	9	3	10	2	16	0.00	

18	95	84	74	75	72	68	90	73	42	30.03	29.99	29.94	10	10	7	12	5	20	0.00	Thunderstorm
19	93	84	74	76	73	70	96	76	46	30.02	29.98	29.94	10	8	0	18	4	26	0.00	Fog
20	95	86	76	76	73	65	95	73	39	30.05	30.01	29.97	10	9	5	15	6	18	0.00	
21	95	85	75	75	73	69	95	71	42	30.09	30.05	29.99	10	9	5	8	2	16	0.00	Rain
22	95	86	76	76	74	70	94	75	45	30.06	30.01	29.96	10	9	7	12	3	20	0.00	
23	95	86	77	77	73	64	94	70	35	30.05	30.01	29.96	10	9	5	14	4	20	0.00	
24	94	84	73	76	71	63	96	69	37	30.09	30.04	29.98	10	9	4	10	3	-	0.00	
25	97	86	74	72	67	58	88	58	26	30.06	30.02	29.94	10	10	7	8	2	-	0.00	Rain
26	97	86	75	73	70	67	87	67	36	30.02	29.97	29.88	10	7	4	24	2	34	0.00	Rain , Thunderstorm
27	92	82	72	76	72	69	95	79	46	30.05	30.00	29.96	10	6	4	10	2	-	0.01	Rain , Thunderstorm
28	90	82	74	76	74	71	95	83	56	30.14	30.09	30.03	10	9	3	17	6	31	0.11	Rain , Thunderstorm
29	93	84	74	77	72	68	96	74	45	30.20	30.14	30.03	10	9	5	10	3	-	0.00	
30	94	84	74	76	72	66	95	71	41	30.09	30.04	29.91	10	9	2	14	5	18	0.00	
31	96	84	73	74	69	59	94	66	29	29.98	29.93	29.85	10	9	5	10	4	-	0.00	

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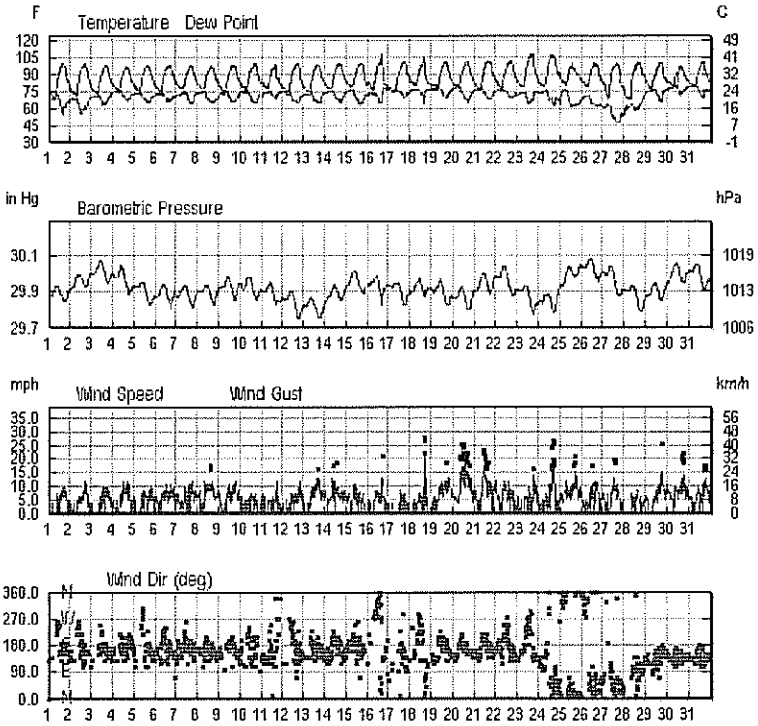
History for Hearne, TX

Month of August, 2010

Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	109 °F	101 °F	97 °F	
Mean Temperature	94 °F	88 °F	84 °F	
Min Temperature	81 °F	76 °F	68 °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	29	24	19	730
Growing Degree Days (base 50)	44	38	34	1189
Dew Point:				
Dew Point	81 °F	71 °F	48 °F	
Precipitation:				
Precipitation	0.00 in	0.00 in	0.00 in	0.00 in
Snowdepth	-	-	-	-
Wind:				
Wind	21 mph	4 mph	0 mph	
Gust Wind	29 mph	18 mph	9 mph	
Sea Level Pressure:				
Sea Level Pressure	30.09 in	29.92 in	29.75 in	



Monthly Calendar Overview

« Previous Month « 2009 **August 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
Actual: 100 | 69	**Actual:** 99 | 71	**Actual:** 98 | 73	**Actual:** 97 | 76	**Actual:** 98 | 75	**Actual:** 98 | 75	**Actual:** 98 | 78
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -

8		9		10		11		12		13		14	
Actual:	98 | 77	Actual:	98 | 74	Actual:	100 | 75	Actual:	99 | 78	Actual:	99 | 75	Actual:	99 | 75	Actual:	100 | 77
Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00
Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -
Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-
15		16		17		18		19		20		21	
Actual:	100 | 79	Actual:	109 | 76	Actual:	101 | 76	Actual:	104 | 81	Actual:	101 | 79	Actual:	101 | 80	Actual:	102 | 77
Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00
Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -
Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-
22		23		24		25		26		27		28	
Actual:	103 | 77	Actual:	109 | 79	Actual:	108 | 79	Actual:	100 | 80	Actual:	100 | 79	Actual:	99 | 69	Actual:	101 | 68
Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00
Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -
Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-
29		30		31									
Actual:	100 | 77	Actual:	99 | 81	Actual:	101 | 80								
Precip:	0.00	Precip:	0.00	Precip:	0.00								
Average:	- | -	Average:	- | -	Average:	- | -								
Precip:	-	Precip:	-	Precip:	-								

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear · Mostly Cloudy Partly Sunny · Partly Cloudy Mostly Sunny · Cloudy · Rain · Snow · Hail Flurries · Thunderstorms · Hazy Fog · Sleet · '?' denotes 'chance of' · Unknown

Actual: 90 | 58 — Data Category, Condition, High Temp., Lo Temp.
Precip: 0.00 — Precip. (in inches)
Average: 71 | 53 — Daily Avg. Temp.
Precip: 0.03 — Temps in °F
-60 -30 0 30 60 90 120

Print This Calendar

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
August	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	100	84	69	74	67	55	95	60	22	29.93	29.89	29.84	10	9	7	9	2	-	0.00	
2	99	85	71	70	64	55	90	55	25	30.00	29.96	29.91	10	9	4	12	2	16	0.00	
3	98	86	73	73	69	64	94	60	32	30.08	30.01	29.95	10	8	4	9	2	16	0.00	
4	97	86	76	77	73	68	94	66	38	30.05	29.98	29.89	7	6	3	12	4	17	0.00	Rain
5	98	86	75	74	71	65	92	62	34	29.96	29.91	29.83	7	5	3	8	3	-	0.00	
6	98	86	75	74	71	67	92	63	36	29.95	29.89	29.81	10	8	4	10	5	-	0.00	
7	98	88	78	75	71	64	86	60	33	29.94	29.88	29.81	10	10	10	12	5	16	0.00	
8	98	88	77	76	71	65	92	63	34	29.94	29.90	29.83	10	10	10	12	6	20	0.00	
9	98	86	74	76	71	66	95	63	34	29.99	29.93	29.85	10	10	7	12	5	16	0.00	
10	100	88	75	77	72	65	94	64	33	29.98	29.93	29.85	10	10	3	7	2	9	0.00	
11	99	88	78	76	73	68	89	64	36	29.96	29.90	29.83	10	10	10	12	3	24	0.00	Rain , Thunderstorm
12	99	87	75	76	71	65	92	63	33	29.90	29.85	29.75	10	10	7	9	2	-	0.00	
13	99	87	75	75	70	65	91	62	33	29.87	29.82	29.76	10	10	10	13	4	17	0.00	
14	100	88	77	76	72	66	92	62	33	29.94	29.88	29.83	10	10	7	13	6	18	0.00	
15	100	90	79	77	72	63	90	62	30	30.02	29.96	29.89	10	10	10	10	5	-	0.00	
16	109	92	76	79	72	65	90	64	26	29.99	29.93	29.83	10	10	10	13	3	23	0.00	
17	101	88	76	78	75	70	96	69	36	29.95	29.91	29.83	10	9	5	8	1	-	0.00	
18	104	92	81	78	75	65	88	65	28	29.97	29.92	29.87	10	10	10	21	3	29	0.00	Thunderstorm
19	101	90	79	79	75	69	94	67	35	29.97	29.90	29.83	10	10	10	13	4	21	0.00	
20	101	90	80	80	74	66	95	62	33	29.93	29.86	29.80	10	10	7	17	8	25	0.00	
21	102	90	77	79	74	68	96	64	33	30.01	29.94	29.89	10	10	10	17	7	23	0.00	

22	103	90	77	78	74	69	94	62	34	30.04	29.97	29.88	10	10	7	12	6	-	0.00	
23	109	94	79	74	71	65	85	54	26	29.93	29.88	29.77	10	10	10	14	2	22	0.00	
24	108	94	79	77	71	63	88	53	24	29.90	29.85	29.78	10	10	10	17	4	26	0.00	
25	100	90	80	77	69	62	86	54	30	30.04	29.99	29.93	10	10	10	15	7	21	0.00	
26	100	90	79	72	67	62	76	50	29	30.09	30.04	29.96	10	10	10	12	5	18	0.00	
27	99	84	69	64	57	48	83	42	17	30.04	29.98	29.88	10	10	10	13	5	21	0.00	
28	101	84	68	65	61	54	82	49	25	29.94	29.89	29.79	10	10	10	8	1	-	0.00	
29	100	88	77	77	74	66	92	65	33	29.95	29.89	29.85	10	10	10	15	5	29	0.00	
30	99	90	81	81	77	72	93	73	42	30.06	30.00	29.94	10	10	10	14	7	22	0.00	
31	101	90	80	80	76	68	96	70	33	30.05	30.00	29.91	10	10	7	12	5	17	0.00	

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Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: MD/JG – BRH	
Date & Time: 16 Aug 10 0910	County Name: Robertson
Stream Name: Walnut Creek	
Segment No. or nearest downstream Segment No.: 12420	
Description of Site: 20565 Upstream from Nesbit Road.	

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

A. Stream Characteristics:

1. Check the following channel flow status that applies.

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

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

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

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

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

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

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

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. <0.05 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 8.3 °C Water Temp ~~62.34~~ °C 16 Aug 10 26.34 °C

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

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

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

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

County road crosses creek. No Fence across creek in either direction. Mine property on downstream side #1000-1002

8. Dominant Primary Substrate

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

Stream Name_____ Site: _____
Date: _____ Time: _____

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

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

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

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

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

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
Low flow, no significant pools #1000-1002

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
County Road with private property on upstream side, mine property on down stream side. #1000-1002

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: _____

Date: _____ Time: _____

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

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

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
Low flow, no pools Pic # 1000-1002

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).
Low flow 0.05 depth, Pic # 1000-1002

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

D. Noncontact Recreation Evaluation

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

1. Provide site-specific information and documentation (including photographs) regarding unsafe conditions, recreation activities, and presence or absence of water recreation activities.
Low flow, 0.05 depth, no pools Pic #1000-1002

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 1003 Downstream 1004 Left Bank 1005 Right Bank 1006
Photos #s (150 meters) Upstream 1007 Downstream 1008 Left Bank 1009 Right Bank 1010
Photos #s (300 meters) Upstream 1011 Downstream 1012 Left Bank 1013 Right Bank 1014

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	No significant Pools		
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	0.05
60 meters	0.04
90 meters	0.07
120 meters	0.20
150 meters	0.05
180 meters	0.07
210 meters	0.06
240 meters	0.05
270 meters	0.02
300 meters	0.07
Average	0.06 m

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

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

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	0.9
Width at narrowest point of the stream within 300 meter reach	0.3
Width at the widest point of the stream within 300 meter reach	3.5

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

COMMENTS: Low flow, no significant pools

2. Non-wadeable Streams

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

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

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

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

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

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

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

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

Comments: Bridge #1003

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

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

Comments: Mine property downstream from road, Private property upstream of road.

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:_____

Stream Name_____ Site: _____
Date: _____ Time: _____

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

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

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: lots of hog & deer tracks

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).
Not enough flow or depth

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream:_____ Date:_____

Site:_____ Site

Description:_____

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

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

Observations:_____

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

: Wed Sep 29 2010

20565-16AUG10.WAD
2010/08/16 08:07:15

JG

FlowTracker
P872
3.7
2.30
0.0%

(English Units)
ft
ft/s
ft^2
cfs

Accuracy	1.0%	1.0%
Depth	1.5%	0.0%
Velocity	16.5%	0.0%
Width	0.5%	0.5%
Method	7.6%	-
# Stations	12.2%	-
Overall	**21.9%**	**1.0%**

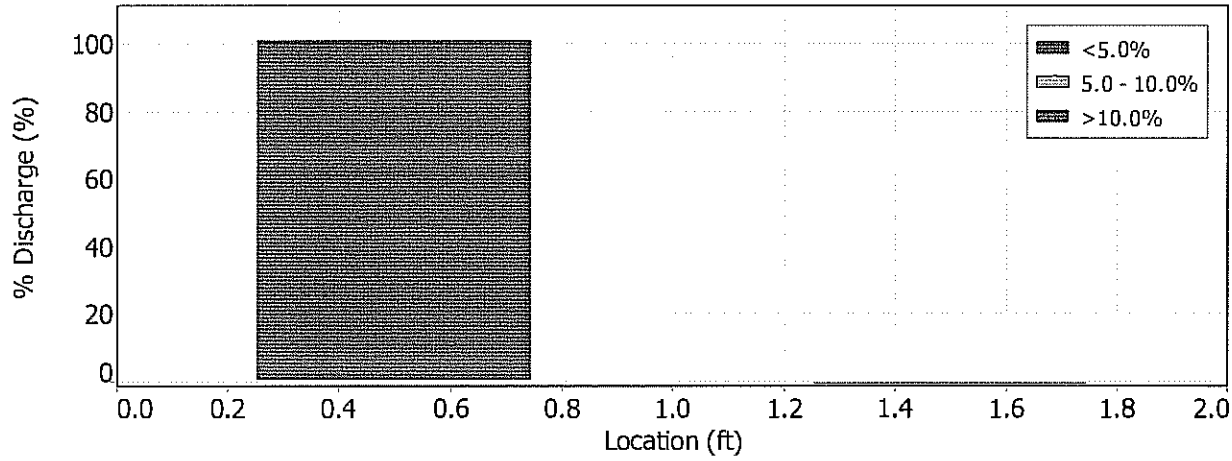
40	5
LEW	2.000
45.8 dB	0.250
78.82 °F	0.125
Mid-Section	0.0066
	0.0016

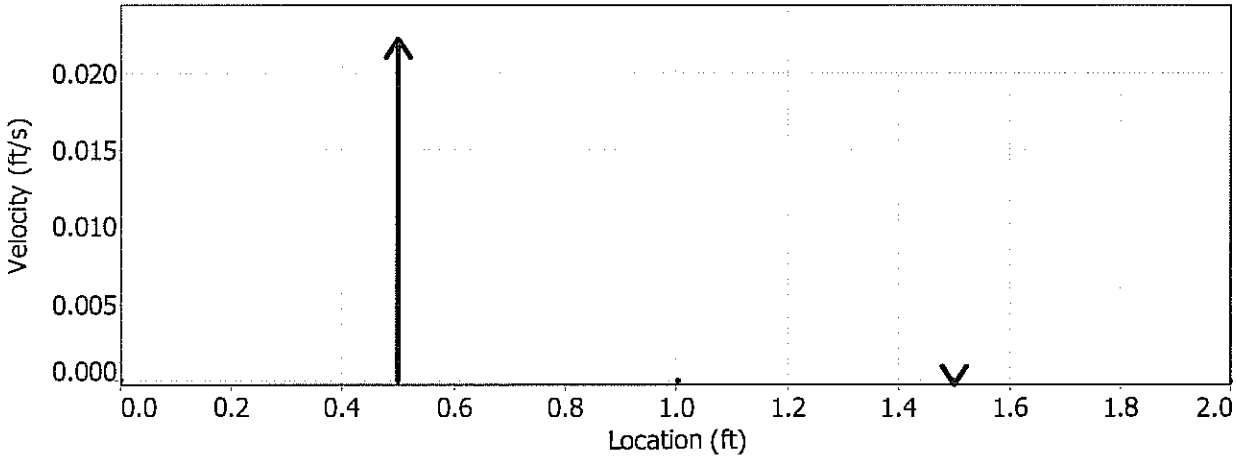
				Depth								
0	08:07	0.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
1	*08:07*	*0.50*	*0.6*	*0.150*	*0.6*	*0.060*	*0.0223*	*1.00*	*0.0223*	*0.075*	*0.0017*	*101.5*
2	*08:09*	*1.00*	*0.6*	*0.200*	*0.6*	*0.080*	*0.0000*	*1.00*	*0.0000*	*0.100*	*0.0000*	*0.0*
3	*08:09*	*1.50*	*0.6*	*0.150*	*0.6*	*0.060*	*-0.0003*	*1.00*	*-0.0003*	*0.075*	*0.0000*	*-1.5*
4	08:09	2.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0

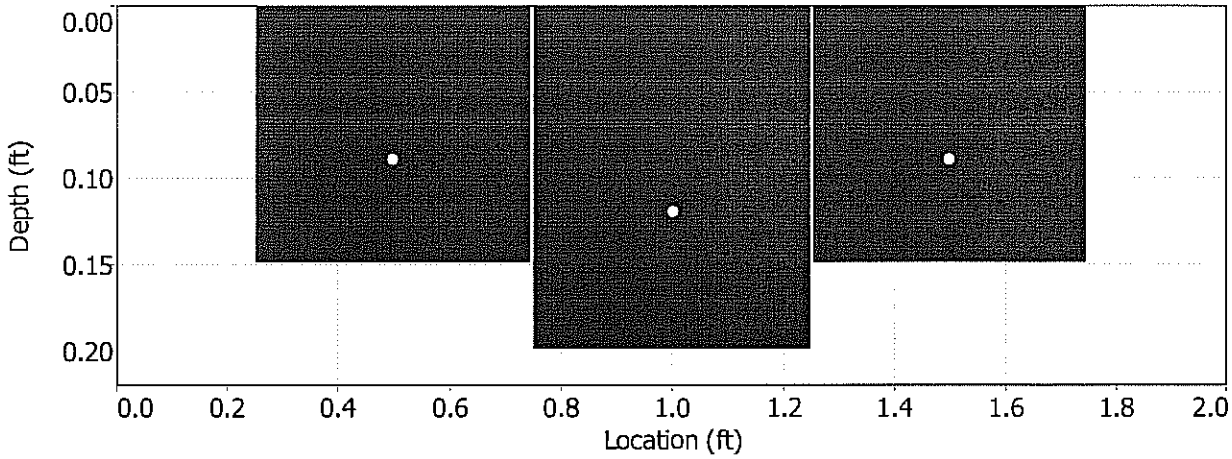
: Wed Sep 29 2010

20565-16AUG10.WAD
2010/08/16 08:07:15

JG







: Wed Sep 29 2010

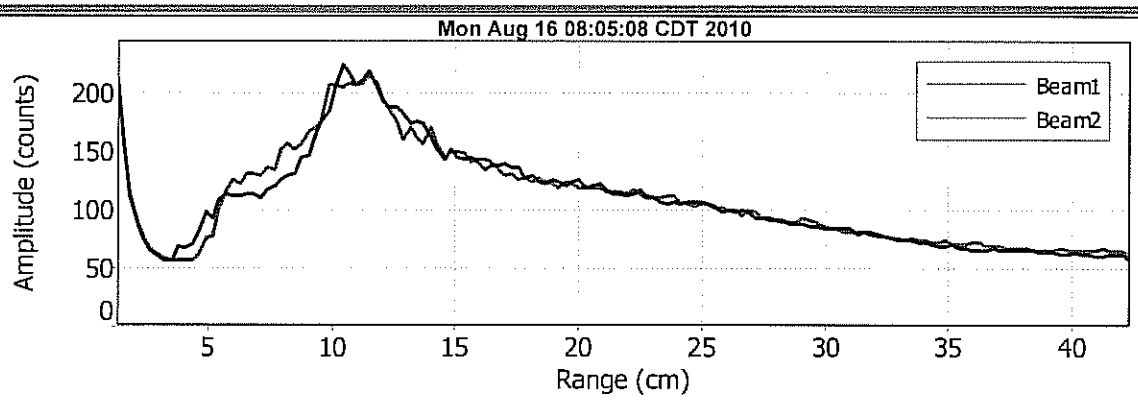
20565-16AUG10.WAD 2010/08/16 08:07:15	JG

1	0.50	0.6	SNR (24.5) is different from typical SNR (45.8)
		0.6	Boundary QC is Poor; possible boundary interference
2	1.00	0.6	SNR (57.0) is different from typical SNR (45.8)
		0.6	High SNR variation during measurement: 5.6,4.3
3	1.50	0.6	SNR (56.1) is different from typical SNR (45.8)
		0.6	High SNR variation during measurement: 6.5,4.3
		0.6	Boundary QC is Fair; possible boundary interference

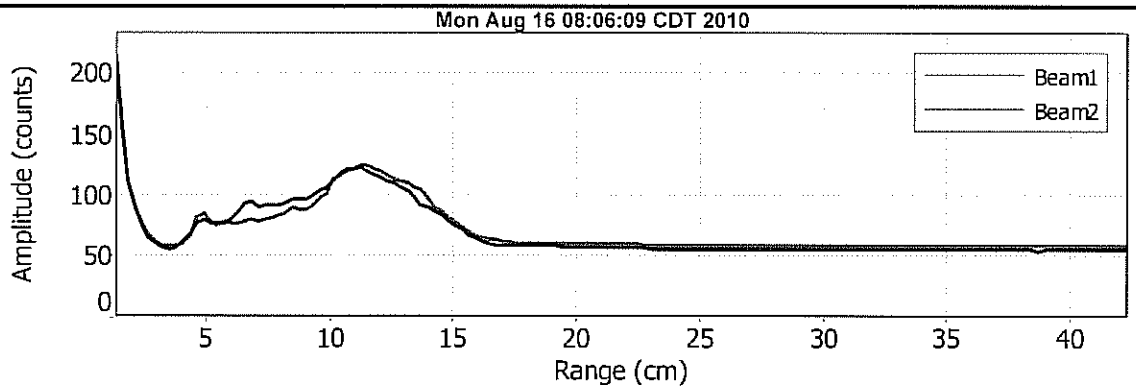
: Wed Sep 29 2010

20565-16AUG10.WAD
2010/08/16 08:07:15

JG



- Noise level check - Pass
- SNR check - Pass
- Peak location check - Pass
- Peak shape check - Fail



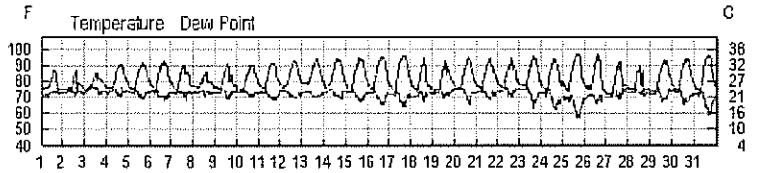
- Noise level check - Pass
- SNR check - Pass
- Peak location check - Pass
- Peak shape check - Pass

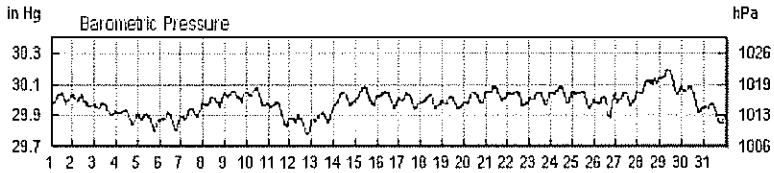
History for Hearne, TX

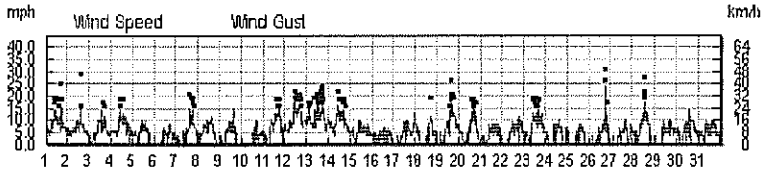
Month of July, 2010

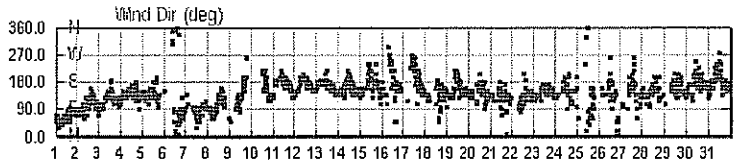
Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	97 °F	93 °F	85 °F	
Mean Temperature	86 °F	84 °F	80 °F	
Min Temperature	78 °F	75 °F	72 °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	21	19	15	579
Growing Degree Days (base 50)	36	34	30	1047
Dew Point:				
Dew Point	77 °F	72 °F	58 °F	
Precipitation:				
Precipitation	0.46 in	0.02 in	0.00 in	0.65 in
Snowdepth	-	-	-	-
Wind:				
Wind	24 mph	4 mph	0 mph	
Gust Wind	34 mph	18 mph	9 mph	
Sea Level Pressure:				
Sea Level Pressure	30.20 in	29.98 in	29.78 in	









Monthly Calendar Overview

« Previous Month « 2009 **July 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
				Actual: 87 | 75	Actual: 87 | 75	Actual: 85 | 75
				Precip: 0.07	Precip: 0.46	Precip: 0.00

				Average: - | - Precip: -	Average: - | - Precip: -	Average: - | - Precip: -
4 Actual: 91 | 76 Precip: 0.00 Average: - | - Precip: -	5 Actual: 92 | 74 Precip: 0.00 Average: - | - Precip: -	6 Actual: 93 | 75 Precip: 0.00 Average: - | - Precip: -	7 Actual: 91 | 74 Precip: 0.00 Average: - | - Precip: -	8 Actual: 86 | 76 Precip: 0.00 Average: - | - Precip: -	9 Actual: 91 | 75 Precip: 0.00 Average: - | - Precip: -	10 Actual: 90 | 74 Precip: 0.00 Average: - | - Precip: -
11 Actual: 92 | 75 Precip: 0.00 Average: - | - Precip: -	12 Actual: 93 | 76 Precip: 0.00 Average: - | - Precip: -	13 Actual: 94 | 78 Precip: 0.00 Average: - | - Precip: -	14 Actual: 94 | 76 Precip: 0.00 Average: - | - Precip: -	15 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	16 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	17 Actual: 96 | 73 Precip: 0.00 Average: - | - Precip: -
18 Actual: 95 | 74 Precip: 0.00 Average: - | - Precip: -	19 Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	20 Actual: 95 | 76 Precip: 0.00 Average: - | - Precip: -	21 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	22 Actual: 95 | 76 Precip: 0.00 Average: - | - Precip: -	23 Actual: 95 | 77 Precip: 0.00 Average: - | - Precip: -	24 Actual: 94 | 73 Precip: 0.00 Average: - | - Precip: -
25 Actual: 97 | 74 Precip: 0.00 Average: - | - Precip: -	26 Actual: 97 | 75 Precip: 0.00 Average: - | - Precip: -	27 Actual: 92 | 72 Precip: 0.01 Average: - | - Precip: -	28 Actual: 90 | 74 Precip: 0.11 Average: - | - Precip: -	29 Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	30 Actual: 94 | 74 Precip: 0.00 Average: - | - Precip: -	31 Actual: 96 | 73 Precip: 0.00 Average: - | - Precip: -

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear · Mostly Cloudy Partly Sunny · Partly Cloudy Mostly Sunny · Cloudy · Rain · Snow · Hail Flurries · Thunderstorms · Hazy Fog · Sleet · '?' denotes chance of · Unknown

Actual: 90 | 58 · Precip: 0.00 · Average: 71 | 53 · Precip: 0.03

Data Category · Condition · High Temp. · Lo Temp. · Precip. (in inches) · Daily Avg. Temp. · Temps in °F

-60 -30 0 30 60 90 120

Print This Calendar

Daily Observations

	2010 Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
July	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	87	81	75	75	73	71	94	80	64	30.04	30.00	29.97	10	6	4	16	8	25	0.07	Rain
2	87	81	75	76	74	72	94	88	63	30.03	29.99	29.95	10	7	4	16	6	29	0.46	Rain
3	85	80	75	77	75	72	95	85	68	29.98	29.94	29.90	10	5	3	14	4	20	0.00	Rain
4	91	84	76	77	74	71	94	75	51	29.94	29.90	29.84	7	5	3	14	7	18	0.00	Rain
5	92	83	74	76	73	70	95	74	48	29.91	29.87	29.80	7	5	3	10	5	9	0.00	
6	93	84	75	75	72	69	94	69	44	29.92	29.87	29.80	7	5	3	8	2	-	0.00	
7	91	82	74	75	73	69	94	75	53	29.94	29.91	29.87	7	5	4	15	3	25	0.00	
8	86	81	76	75	74	72	90	81	63	30.02	29.98	29.95	10	6	3	12	5	16	0.00	Rain
9	91	83	75	76	73	70	94	79	51	30.06	30.02	29.98	7	5	3	15	2	18	0.00	Rain
10	90	82	74	75	73	71	96	77	53	30.08	30.02	29.96	7	4	3	9	1	-	0.00	
11	92	84	75	75	72	69	94	72	46	29.99	29.94	29.83	7	5	4	15	5	20	0.00	
12	93	84	76	75	73	70	92	70	47	29.90	29.86	29.78	7	5	4	21	9	22	0.00	
13	94	86	78	75	73	71	86	68	46	29.92	29.88	29.85	7	4	3	18	11	24	0.00	
14	94	85	76	76	73	70	91	69	46	30.05	30.00	29.95	7	5	3	16	9	22	0.00	
15	95	85	75	76	72	68	95	69	41	30.09	30.02	29.96	7	5	2	10	5	16	0.00	
16	95	85	75	75	71	66	94	67	38	30.06	30.02	29.94	10	6	3	7	2	-	0.00	Rain
17	96	84	73	74	71	65	94	63	35	30.05	30.00	29.94	10	9	3	10	2	16	0.00	

18	95	84	74	75	72	68	90	73	42	30.03	29.99	29.94	10	10	7	12	5	20	0.00	Thunderstorm
19	93	84	74	76	73	70	96	76	48	30.02	29.98	29.94	10	8	0	18	4	26	0.00	Fog
20	95	86	76	76	73	65	95	73	39	30.05	30.01	29.97	10	9	5	15	6	18	0.00	
21	95	85	75	75	73	69	95	71	42	30.09	30.05	29.99	10	9	5	8	2	16	0.00	Rain
22	95	86	76	76	74	70	94	75	45	30.06	30.01	29.96	10	9	7	12	3	20	0.00	
23	95	86	77	77	73	64	94	70	35	30.05	30.01	29.96	10	9	5	14	4	20	0.00	
24	94	84	73	76	71	63	96	69	37	30.09	30.04	29.98	10	9	4	10	3	-	0.00	
25	97	86	74	72	67	58	88	58	26	30.06	30.02	29.94	10	10	7	8	2	-	0.00	Rain
26	97	86	75	73	70	67	87	67	38	30.02	29.97	29.88	10	7	4	24	2	34	0.00	Rain , Thunderstorm
27	92	82	72	76	72	69	95	79	46	30.05	30.00	29.96	10	6	4	10	2	-	0.01	Rain , Thunderstorm
28	90	82	74	76	74	71	95	83	56	30.14	30.09	30.03	10	9	3	17	6	31	0.11	Rain , Thunderstorm
29	93	84	74	77	72	68	96	74	45	30.20	30.14	30.03	10	9	5	10	3	-	0.00	
30	94	84	74	76	72	66	95	71	41	30.09	30.04	29.91	10	9	2	14	5	18	0.00	
31	96	84	73	74	69	59	94	66	29	29.98	29.93	29.85	10	9	5	10	4	-	0.00	

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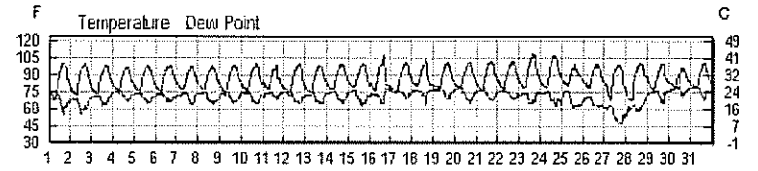
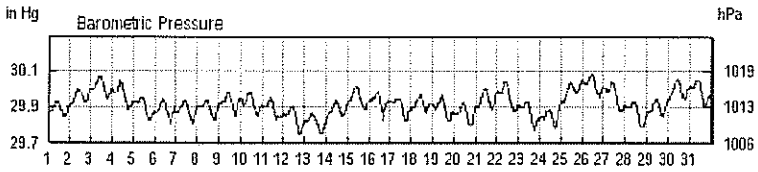
History for Hearne, TX

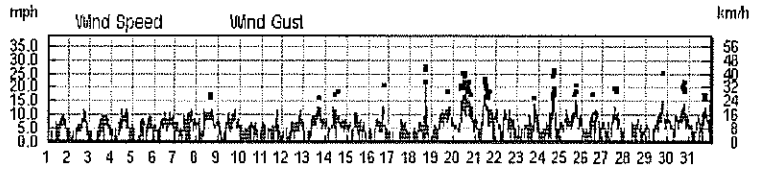
Month of August, 2010

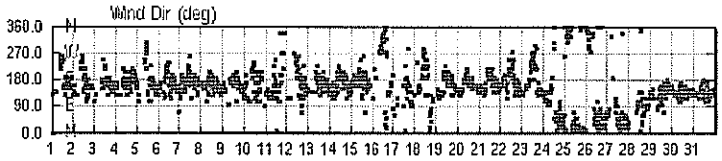
Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	109 °F	101 °F	97 °F	
Mean Temperature	94 °F	88 °F	84 °F	
Min Temperature	81 °F	76 °F	68 °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	29	24	19	730
Growing Degree Days (base 50)	44	38	34	1189
Dew Point:				
Dew Point	81 °F	71 °F	48 °F	
Precipitation:				
Precipitation	0.00 in	0.00 in	0.00 in	0.00 in
Snowdepth	-	-	-	-
Wind:				
Wind	21 mph	4 mph	0 mph	
Gust Wind	29 mph	18 mph	9 mph	
Sea Level Pressure:				
Sea Level Pressure	30.09 in	29.92 in	29.75 in	









Monthly Calendar Overview

« Previous Month « 2009 **August 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
Actual: 100 | 69	**Actual:** 99 | 71	**Actual:** 98 | 73	**Actual:** 97 | 76	**Actual:** 98 | 75	**Actual:** 98 | 75	**Actual:** 98 | 78
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -

8		9		10		11		12		13		14	
Actual:	98 | 77	Actual:	98 | 74	Actual:	100 | 75	Actual:	99 | 78	Actual:	99 | 75	Actual:	99 | 75	Actual:	100 | 77
Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00
Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -
Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-
15		16		17		18		19		20		21	
Actual:	100 | 79	Actual:	109 | 76	Actual:	101 | 76	Actual:	104 | 81	Actual:	101 | 79	Actual:	101 | 80	Actual:	102 | 77
Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00
Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -
Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-
22		23		24		25		26		27		28	
Actual:	103 | 77	Actual:	109 | 79	Actual:	108 | 79	Actual:	100 | 80	Actual:	100 | 79	Actual:	99 | 69	Actual:	101 | 68
Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00
Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -
Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-
29		30		31									
Actual:	100 | 77	Actual:	99 | 81	Actual:	101 | 80								
Precip:	0.00	Precip:	0.00	Precip:	0.00								
Average:	- | -	Average:	- | -	Average:	- | -								
Precip:	-	Precip:	-	Precip:	-								

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear · Mostly Cloudy Partly Sunny · Partly Cloudy Mostly Sunny · Cloudy · Rain · Snow · Hail Flurries · Thunderstorms · Hazy Fog · Sleet · '?' denotes 'chance of' · Unknown

Data Category
Condition
High Temp.
Lo Temp.
Precip. (in inches)
Daily Avg. Temp.
Temps in °F

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

-60 -30 0 30 60 90 120

Print This Calendar

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
August	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	100	84	69	74	67	55	95	60	22	29.93	29.89	29.84	10	9	7	9	2	-	0.00	
2	99	85	71	70	64	55	90	55	25	30.00	29.96	29.91	10	9	4	12	2	16	0.00	
3	98	86	73	73	69	64	94	60	32	30.08	30.01	29.95	10	8	4	9	2	16	0.00	
4	97	86	76	77	73	68	94	66	38	30.05	29.98	29.89	7	6	3	12	4	17	0.00	Rain
5	98	86	75	74	71	65	92	62	34	29.96	29.91	29.83	7	5	3	8	3	-	0.00	
6	98	86	75	74	71	67	92	63	36	29.95	29.89	29.81	10	8	4	10	5	-	0.00	
7	98	88	78	75	71	64	86	60	33	29.94	29.88	29.81	10	10	10	12	5	16	0.00	
8	98	88	77	76	71	65	92	63	34	29.94	29.90	29.83	10	10	10	12	6	20	0.00	
9	98	86	74	76	71	66	95	63	34	29.99	29.93	29.85	10	10	7	12	5	16	0.00	
10	100	88	75	77	72	65	94	64	33	29.98	29.93	29.85	10	10	3	7	2	9	0.00	
11	99	88	78	76	73	68	89	64	36	29.96	29.90	29.83	10	10	10	12	3	24	0.00	Rain , Thunderstorm
12	99	87	75	76	71	65	92	63	33	29.90	29.85	29.75	10	10	7	9	2	-	0.00	
13	99	87	75	75	70	65	91	62	33	29.87	29.82	29.76	10	10	10	13	4	17	0.00	
14	100	88	77	76	72	66	92	62	33	29.94	29.88	29.83	10	10	7	13	6	18	0.00	
15	100	90	79	77	72	63	90	62	30	30.02	29.96	29.89	10	10	10	10	5	-	0.00	
16	109	92	76	79	72	65	90	64	26	29.99	29.93	29.83	10	10	10	13	3	23	0.00	
17	101	88	76	78	75	70	96	69	36	29.95	29.91	29.83	10	9	5	8	1	-	0.00	
18	104	92	81	78	75	65	88	65	28	29.97	29.92	29.87	10	10	10	21	3	29	0.00	Thunderstorm
19	101	90	79	79	75	69	94	67	35	29.97	29.90	29.83	10	10	10	13	4	21	0.00	
20	101	90	80	80	74	66	95	62	33	29.93	29.86	29.80	10	10	7	17	8	25	0.00	
21	102	90	77	79	74	68	96	64	33	30.01	29.94	29.89	10	10	10	17	7	23	0.00	

22	103	90	77	78	74	69	94	62	34	30.04	29.97	29.88	10	10	7	12	6	-	0.00
23	109	94	79	74	71	65	85	54	26	29.93	29.88	29.77	10	10	10	14	2	22	0.00
24	108	94	79	77	71	63	88	53	24	29.90	29.85	29.78	10	10	10	17	4	26	0.00
25	100	90	80	77	69	62	86	54	30	30.04	29.99	29.93	10	10	10	15	7	21	0.00
26	100	90	79	72	67	62	76	50	29	30.09	30.04	29.96	10	10	10	12	5	18	0.00
27	99	84	69	64	57	48	83	42	17	30.04	29.98	29.88	10	10	10	13	5	21	0.00
28	101	84	68	65	61	54	82	49	25	29.94	29.89	29.79	10	10	10	8	1	-	0.00
29	100	88	77	77	74	66	92	65	33	29.95	29.89	29.85	10	10	10	15	5	29	0.00
30	99	90	81	81	77	72	93	73	42	30.06	30.00	29.94	10	10	10	14	7	22	0.00
31	101	90	80	80	76	68	96	70	33	30.05	30.00	29.91	10	10	7	12	5	17	0.00

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Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: MD/JN - BRA	
Date & Time: 23Aug10 0850	County Name: Robertson
Stream Name: Walnut Creek	
Segment No. or nearest downstream Segment No.: 12420	
Description of Site: 99901 ~~Upstream from~~ 3 miles from Public Road on Private property.	

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

A. Stream Characteristics:

1. Check the following channel flow status that applies.

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

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

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

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

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

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

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

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. 4.90 cfs

4. Water Quality Data (Field Parameters)

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

Air Temp 29.4 °C 85°F Water Temp 25.2 °C 77.3 °F

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	RL 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):

3 miles from County road on private property. Easy access to stream from pasture. #1173

8. Dominant Primary Substrate

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

Stream Name_____ Site: _____
Date: _____ Time: _____

B. Primary Contact Water Recreation Evaluation:

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

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?
☐ Yes ☑ No primary contact recreation activities were observed

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

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

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

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

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
Nice pools, Good flow. Landowner actively fish and wade in this creek

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
No public access. Deep into private property. No public roads nearby. #1191

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: _____

Date: _____ Time: _____

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

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

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
Deep into private property. No public access. Good flow & nice pools. # 1174-1194

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).
N/A

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).
3 miles into private property. No access to public

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.
Landowner actually fish & wade this stream once per year. He said that no one else has access to this site.

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____

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 1176 Downstream 1177 Left Bank 1178 Right Bank 1179
Photos #s (150 meters) Upstream 1180 Downstream 1181 Left Bank 1182 Right Bank 1183
Photos #s (300 meters) Upstream 1187 Downstream 1188 Left Bank 1189 Right Bank 1190

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	21	10	0.95
Pool 2	69	6	~~0.57~~ 0.59
Pool 3			RD 23 Ac 10
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	0.42
60 meters	0.48
90 meters	0.23
120 meters	0.55
150 meters	0.23
180 meters	0.25
210 meters	0.49
240 meters	0.44
270 meters	0.53
300 meters	0.58
Average	0.42

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

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

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	3
Width at narrowest point of the stream within 300 meter reach	0.6
Width at the widest point of the stream within 300 meter reach	12

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

COMMENTS: Good daily flow, Nice pools/Glides

2. Non-wadeable Streams

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

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

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

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

Comments: Mine discharges into this stream ≈ 500 m upstream from this site.

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

☑ Culverts ☐ Fences ☐ Log jams ☐ Rip rap ☐ Water control structure
☐ Barbed wire ☐ Dams ☐ Thick vegetation ☐ Low bridges ☐ None
☐ Utility pipe ☐ Other (specify): pic # 1174, 1175, 1176

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: Landowner & family fish & wade in this stream.

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

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

Comments: #1191

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:_____

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

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

Aquatic Vegetation: ☐ absent ☑ rare ☐ common ☐ abundant
Algae Cover: ☐ absent ☐ rare ☑ common ☐ abundant
Odor: ☑ none ☐ rare ☐ common ☐ abundant
Color: ☑ clear ☐ green ☐ red ☐ brown ☐ black
Bottom Deposit: ☐ sludge ☐ solids ☑ fine sediments ☐ none ☑ other clay
Water Surface: ☑ clear ☐ scum ☐ foam ☐ debris ☐ oil
Other: # 1174, 1175, 1173, transect pics

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: Cotton Mouths pic # 1184-1186

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: Cows in creek ≈ 30, hog wallows # 1171-1172

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).
Mine property upstream from this site. They do not allow people access to their property. This site is private property & this land owner & his family fish and hunt here once per year.

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream:_____ Date:_____

Site:_____ Site

Description:_____

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

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

Observations:_____

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

: Wed Sep 29 2010

99901-23AUG10.WAD
2010/08/23 08:02:09

JN

FlowTracker
P872
3.7
2.30
0.0%

(English Units)
ft
ft/s
ft^2
cfs

Accuracy	1.0%	1.0%
Depth	0.2%	1.1%
Velocity	0.9%	4.5%
Width	0.1%	0.1%
Method	2.1%	-
# Stations	3.0%	-
Overall	**3.9%**	**4.7%**

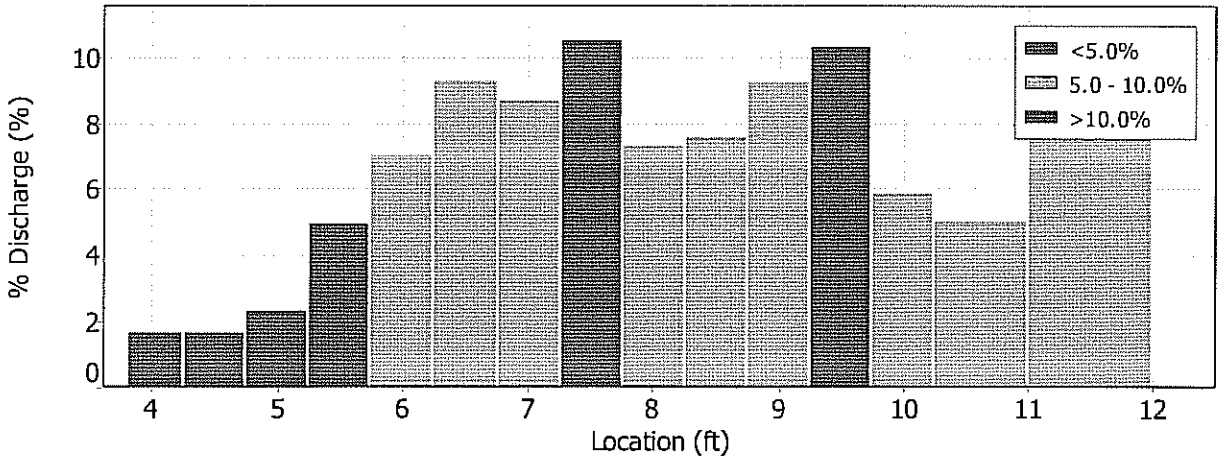
40	17
LEW	8.900
42.8 dB	9.510
77.27 °F	1.06B
Mid-Section	0.5210
	4.9548

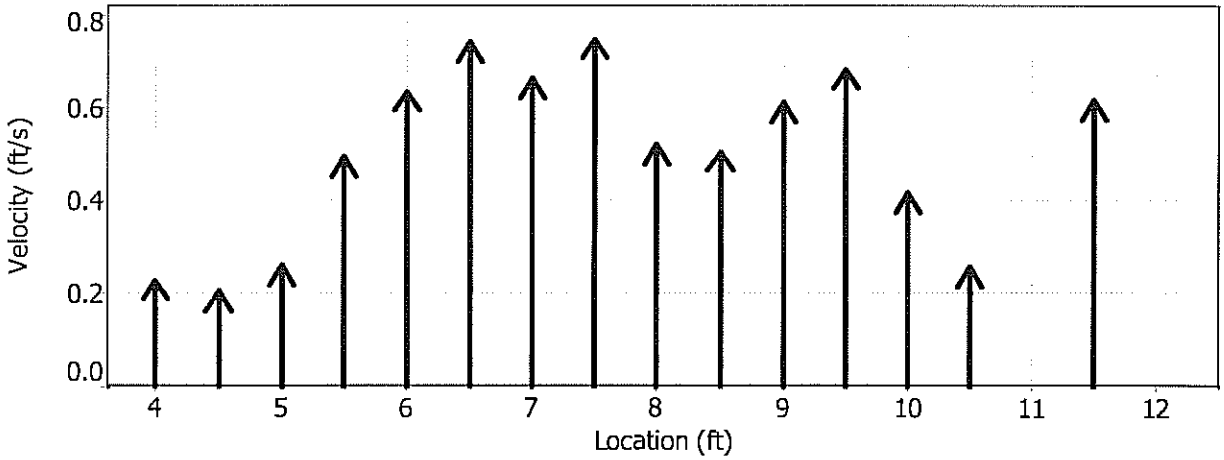
				Depth								
0	08:02	3.60	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
1	08:02	4.00	0.6	0.800	0.6	0.320	0.2287	1.00	0.2287	0.360	0.0823	1.7
2	08:03	4.50	0.6	0.800	0.6	0.320	0.2051	1.00	0.2051	0.400	0.0820	1.7
3	08:04	5.00	0.6	0.900	0.6	0.360	0.2605	1.00	0.2605	0.450	0.1172	2.4
4	08:06	5.50	0.6	1.000	0.6	0.400	0.4944	1.00	0.4944	0.500	0.2472	5.0
5	08:07	6.00	0.6	1.100	0.6	0.440	0.6345	1.00	0.6345	0.550	0.3490	7.0
6	08:08	6.50	0.6	1.250	0.6	0.500	0.7415	1.00	0.7415	0.625	0.4634	9.4
7	08:09	7.00	0.6	1.300	0.6	0.520	0.6640	1.00	0.6640	0.650	0.4316	8.7
8	08:10	7.50	0.6	1.400	0.6	0.560	0.7480	1.00	0.7480	0.700	0.5236	10.6
9	08:12	8.00	0.6	1.400	0.6	0.560	0.5217	1.00	0.5217	0.700	0.3651	7.4
10	08:13	8.50	0.6	1.500	0.6	0.600	0.5046	1.00	0.5046	0.750	0.3784	7.6
11	08:13	9.00	0.6	1.500	0.6	0.600	0.6115	1.00	0.6115	0.750	0.4587	9.3
12	08:14	9.50	0.6	1.500	0.6	0.600	0.6841	1.00	0.6841	0.750	0.5130	10.4
13	08:15	10.00	0.6	1.400	0.6	0.560	0.4167	1.00	0.4167	0.700	0.2917	5.9
14	08:16	10.50	0.6	1.300	0.6	0.520	0.2575	1.00	0.2575	0.975	0.2511	5.1
15	08:18	11.50	0.6	0.650	0.6	0.260	0.6161	1.00	0.6161	0.650	0.4005	8.1
16	08:18	12.50	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0

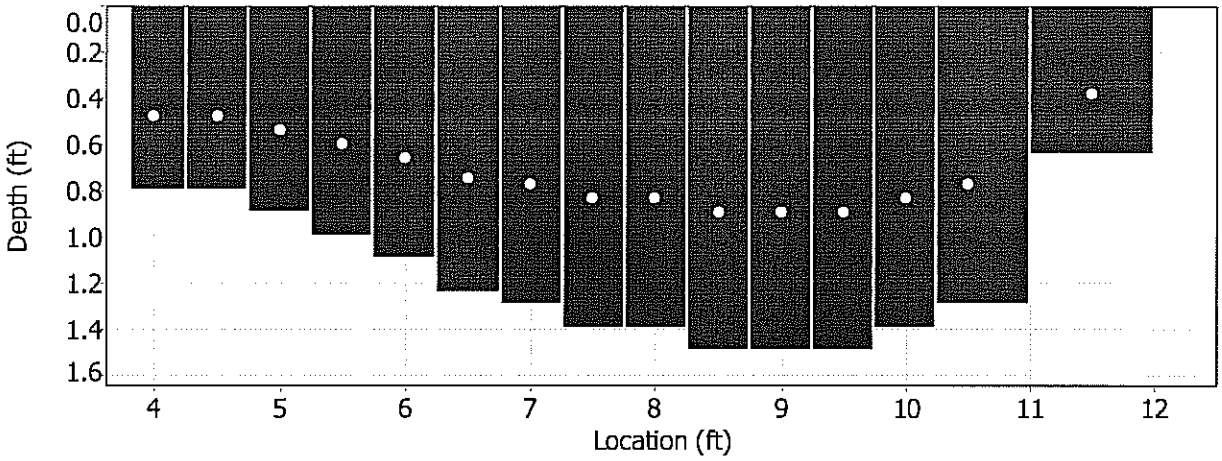
: Wed Sep 29 2010

99901-23AUG10.WAD
2010/08/23 08:02:09

JN







: Wed Sep 29 2010

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2010/08/23 08:02:09

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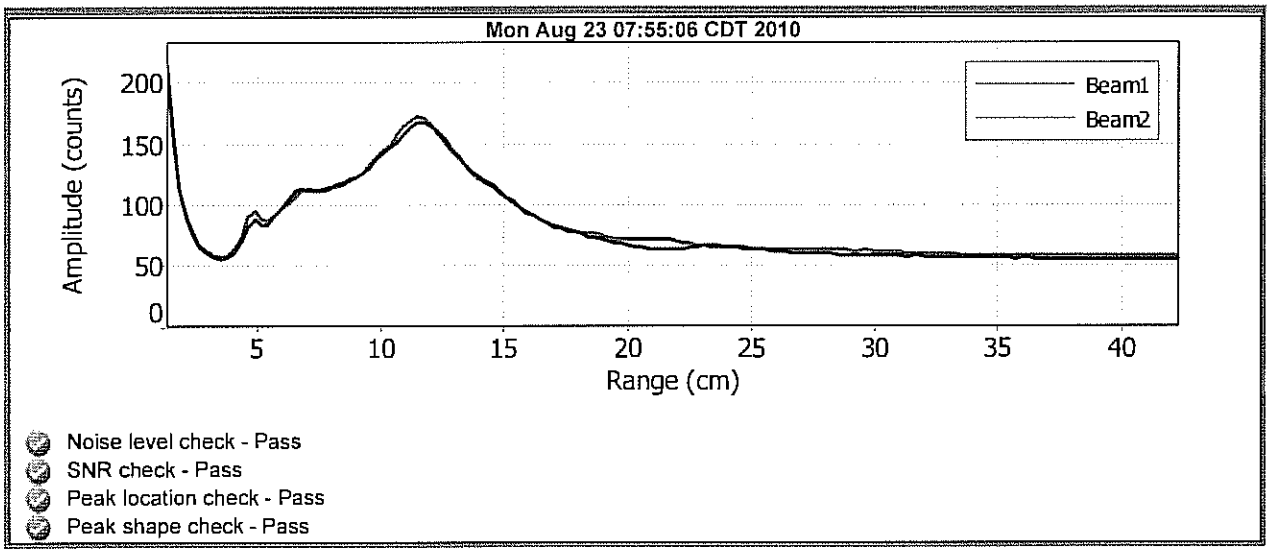


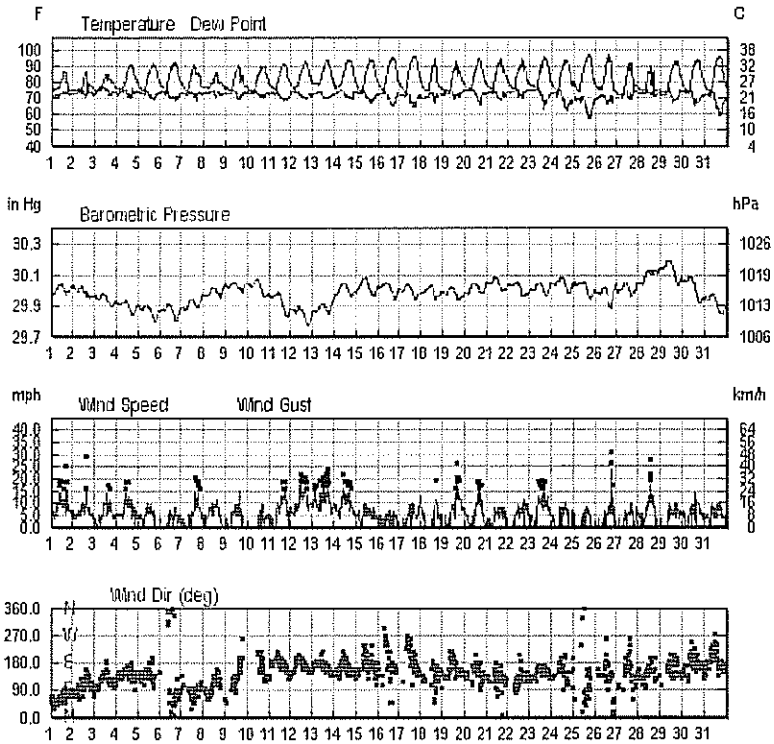
- Noise level check - Pass
- SNR check - Pass
- Peak location check - Pass
- Peak shape check - Pass

History for Hearne, TX

Month of July, 2010

Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	97 °F	93 °F	85 °F	
Mean Temperature	86 °F	84 °F	80 °F	
Min Temperature	78 °F	75 °F	72 °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	21	19	15	579
Growing Degree Days (base 50)	36	34	30	1047
Dew Point:				
Dew Point	77 °F	72 °F	58 °F	
Precipitation:				
Precipitation	0.46 in	0.02 in	0.00 in	0.65 in
Snowdepth	-	-	-	-
Wind:				
Wind	24 mph	4 mph	0 mph	
Gust Wind	34 mph	18 mph	9 mph	
Sea Level Pressure:				
Sea Level Pressure	30.20 in	29.98 in	29.78 in	



Monthly Calendar Overview

« Previous Month « 2009 July 2010 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
				Actual: 87 | 75	Actual: 87 | 75	Actual: 85 | 75
				Precip: 0.07	Precip: 0.46	Precip: 0.00

				Average: - | - Precip: -	Average: - | - Precip: -	Average: - | - Precip: -
4 Actual: 91 | 76 Precip: 0.00 Average: - | - Precip: -	5 Actual: 92 | 74 Precip: 0.00 Average: - | - Precip: -	6 Actual: 93 | 75 Precip: 0.00 Average: - | - Precip: -	7 Actual: 91 | 74 Precip: 0.00 Average: - | - Precip: -	8 Actual: 86 | 76 Precip: 0.00 Average: - | - Precip: -	9 Actual: 91 | 75 Precip: 0.00 Average: - | - Precip: -	10 Actual: 90 | 74 Precip: 0.00 Average: - | - Precip: -
11 Actual: 92 | 75 Precip: 0.00 Average: - | - Precip: -	12 Actual: 93 | 76 Precip: 0.00 Average: - | - Precip: -	13 Actual: 94 | 78 Precip: 0.00 Average: - | - Precip: -	14 Actual: 94 | 76 Precip: 0.00 Average: - | - Precip: -	15 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	16 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	17 Actual: 96 | 73 Precip: 0.00 Average: - | - Precip: -
18 Actual: 95 | 74 Precip: 0.00 Average: - | - Precip: -	19 Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	20 Actual: 95 | 76 Precip: 0.00 Average: - | - Precip: -	21 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	22 Actual: 95 | 76 Precip: 0.00 Average: - | - Precip: -	23 Actual: 95 | 77 Precip: 0.00 Average: - | - Precip: -	24 Actual: 94 | 73 Precip: 0.00 Average: - | - Precip: -
25 Actual: 97 | 74 Precip: 0.00 Average: - | - Precip: -	26 Actual: 97 | 75 Precip: 0.00 Average: - | - Precip: -	27 Actual: 92 | 72 Precip: 0.01 Average: - | - Precip: -	28 Actual: 90 | 74 Precip: 0.11 Average: - | - Precip: -	29 Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	30 Actual: 94 | 74 Precip: 0.00 Average: - | - Precip: -	31 Actual: 96 | 73 Precip: 0.00 Average: - | - Precip: -

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear; Mostly Cloudy Partly Sunny; Partly Cloudy Mostly Sunny; Cloudy; Rain; Snow; Hail Flurries; Thunderstorms; Hazy Fog; Sleet; '?' denotes 'chance of'; Unknown

Data Category: Condition; High Temp.; Lo Temp.; Precip. (in inches); Daily Avg. Temp.; Temps in °F

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

-60 -30 0 30 60 90 120

Print This Calendar

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
July	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	87	81	75	75	73	71	94	80	64	30.04	30.00	29.97	10	6	4	16	8	25	0.07	Rain
2	87	81	75	76	74	72	94	88	63	30.03	29.99	29.95	10	7	4	16	6	29	0.46	Rain
3	85	80	75	77	75	72	95	85	68	29.98	29.94	29.90	10	5	3	14	4	20	0.00	Rain
4	91	84	76	77	74	71	94	75	51	29.94	29.90	29.84	7	5	3	14	7	18	0.00	Rain
5	92	83	74	76	73	70	95	74	48	29.91	29.87	29.80	7	5	3	10	5	9	0.00	
6	93	84	75	75	72	69	94	69	44	29.92	29.87	29.80	7	5	3	8	2	-	0.00	
7	91	82	74	75	73	69	94	75	53	29.94	29.91	29.87	7	5	4	15	3	25	0.00	
8	86	81	76	75	74	72	90	81	63	30.02	29.98	29.95	10	6	3	12	5	16	0.00	Rain
9	91	83	75	76	73	70	94	79	51	30.06	30.02	29.98	7	5	3	15	2	18	0.00	Rain
10	90	82	74	75	73	71	96	77	53	30.08	30.02	29.96	7	4	3	9	1	-	0.00	
11	92	84	75	75	72	69	94	72	46	29.99	29.94	29.83	7	5	4	15	5	20	0.00	
12	93	84	76	75	73	70	92	70	47	29.90	29.86	29.78	7	5	4	21	9	22	0.00	
13	94	86	78	75	73	71	86	68	46	29.92	29.88	29.85	7	4	3	18	11	24	0.00	
14	94	85	76	76	73	70	91	69	46	30.05	30.00	29.95	7	5	3	16	9	22	0.00	
15	95	85	75	76	72	68	95	69	41	30.09	30.02	29.96	7	5	2	10	5	16	0.00	
16	95	85	75	75	71	66	94	67	38	30.06	30.02	29.94	10	6	3	7	2	-	0.00	Rain
17	96	84	73	74	71	65	94	63	35	30.05	30.00	29.94	10	9	3	10	2	16	0.00	

18	95	84	74	75	72	68	90	73	42	30.03	29.99	29.94	10	10	7	12	5	20	0.00	Thunderstorm
19	93	84	74	76	73	70	96	76	48	30.02	29.98	29.94	10	8	0	18	4	26	0.00	Fog
20	95	86	76	76	73	65	95	73	39	30.05	30.01	29.97	10	9	5	15	6	18	0.00	
21	95	85	75	75	73	69	95	71	42	30.09	30.05	29.99	10	9	5	8	2	16	0.00	Rain
22	95	86	76	76	74	70	94	75	45	30.06	30.01	29.96	10	9	7	12	3	20	0.00	
23	95	86	77	77	73	64	94	70	35	30.05	30.01	29.96	10	9	5	14	4	20	0.00	
24	94	84	73	76	71	63	96	69	37	30.09	30.04	29.98	10	9	4	10	3	-	0.00	
25	97	86	74	72	67	58	88	58	26	30.06	30.02	29.94	10	10	7	8	2	-	0.00	Rain
26	97	86	75	73	70	67	87	67	38	30.02	29.97	29.88	10	7	4	24	2	34	0.00	Rain , Thunderstorm
27	92	82	72	76	72	69	95	79	46	30.05	30.00	29.96	10	6	4	10	2	-	0.01	Rain , Thunderstorm
28	90	82	74	76	74	71	95	83	56	30.14	30.09	30.03	10	9	3	17	6	31	0.11	Rain , Thunderstorm
29	93	84	74	77	72	68	96	74	45	30.20	30.14	30.03	10	9	5	10	3	-	0.00	
30	94	84	74	76	72	66	95	71	41	30.09	30.04	29.91	10	9	2	14	5	18	0.00	
31	96	84	73	74	69	59	94	66	29	29.98	29.93	29.85	10	9	5	10	4	-	0.00	

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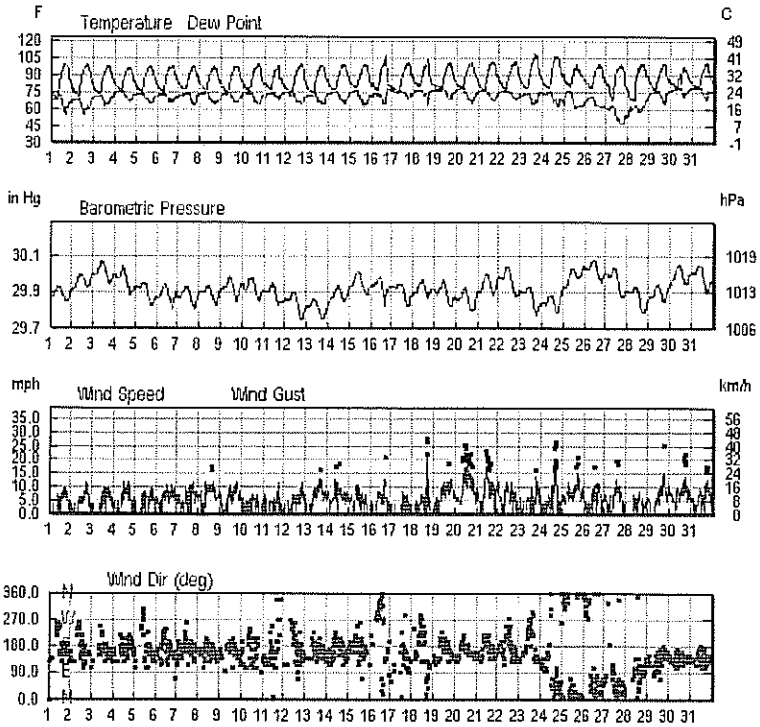
History for Hearne, TX

Month of August, 2010

Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	109 °F	101 °F	97 °F	
Mean Temperature	94 °F	88 °F	84 °F	
Min Temperature	81 °F	76 °F	68 °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	29	24	19	730
Growing Degree Days (base 50)	44	38	34	1189
Dew Point:				
Dew Point	81 °F	71 °F	48 °F	
Precipitation:				
Precipitation	0.00 in	0.00 in	0.00 in	0.00 in
Snowdepth	-	-	-	-
Wind:				
Wind	21 mph	4 mph	0 mph	
Gust Wind	29 mph	18 mph	9 mph	
Sea Level Pressure:				
Sea Level Pressure	30.09 in	29.92 in	29.75 in	



Monthly Calendar Overview

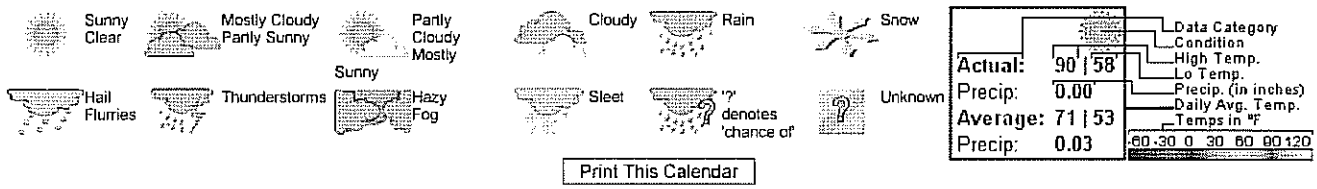
« Previous Month « 2009 **August 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
Actual: 100 | 69	**Actual:** 99 | 71	**Actual:** 98 | 73	**Actual:** 97 | 76	**Actual:** 98 | 75	**Actual:** 98 | 75	**Actual:** 98 | 78
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -

8		9		10		11		12		13		14	
Actual:	98 | 77	Actual:	98 | 74	Actual:	100 | 75	Actual:	99 | 78	Actual:	99 | 75	Actual:	99 | 75	Actual:	100 | 77
Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00
Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -
Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-
15		16		17		18		19		20		21	
Actual:	100 | 79	Actual:	109 | 76	Actual:	101 | 76	Actual:	104 | 81	Actual:	101 | 79	Actual:	101 | 80	Actual:	102 | 77
Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00
Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -
Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-
22		23		24		25		26		27		28	
Actual:	103 | 77	Actual:	109 | 79	Actual:	108 | 79	Actual:	100 | 80	Actual:	100 | 79	Actual:	99 | 69	Actual:	101 | 68
Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00
Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -
Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-
29		30		31									
Actual:	100 | 77	Actual:	99 | 81	Actual:	101 | 80								
Precip:	0.00	Precip:	0.00	Precip:	0.00								
Average:	- | -	Average:	- | -	Average:	- | -								
Precip:	-	Precip:	-	Precip:	-								

« Previous Month « 2009 2011 » Next Month »

Calendar Key:



Print This Calendar

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
August	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	100	84	69	74	67	55	95	60	22	29.93	29.89	29.84	10	9	7	9	2	-	0.00	
2	99	85	71	70	64	55	90	55	25	30.00	29.96	29.91	10	9	4	12	2	16	0.00	
3	98	86	73	73	69	64	94	60	32	30.08	30.01	29.95	10	8	4	9	2	16	0.00	
4	97	86	76	77	73	68	94	66	38	30.05	29.98	29.89	7	6	3	12	4	17	0.00	Rain
5	98	86	75	74	71	65	92	62	34	29.96	29.91	29.83	7	5	3	8	3	-	0.00	
6	98	86	75	74	71	67	92	63	36	29.95	29.89	29.81	10	8	4	10	5	-	0.00	
7	98	88	78	75	71	64	86	60	33	29.94	29.88	29.81	10	10	10	12	5	16	0.00	
8	98	88	77	76	71	65	92	63	34	29.94	29.90	29.83	10	10	10	12	6	20	0.00	
9	98	86	74	76	71	66	95	63	34	29.99	29.93	29.85	10	10	7	12	5	16	0.00	
10	100	88	75	77	72	65	94	64	33	29.98	29.93	29.85	10	10	3	7	2	9	0.00	
11	99	88	78	76	73	68	89	64	36	29.96	29.90	29.83	10	10	10	12	3	24	0.00	Rain , Thunderstorm
12	99	87	75	76	71	65	92	63	33	29.90	29.85	29.75	10	10	7	9	2	-	0.00	
13	99	87	75	75	70	65	91	62	33	29.87	29.82	29.76	10	10	10	13	4	17	0.00	
14	100	88	77	76	72	66	92	62	33	29.94	29.88	29.83	10	10	7	13	6	18	0.00	
15	100	90	79	77	72	63	90	62	30	30.02	29.96	29.89	10	10	10	10	5	-	0.00	
16	109	92	76	79	72	65	90	64	26	29.99	29.93	29.83	10	10	10	13	3	23	0.00	
17	101	88	76	78	75	70	96	69	36	29.95	29.91	29.83	10	9	5	8	1	-	0.00	
18	104	92	81	78	75	65	88	65	28	29.97	29.92	29.87	10	10	10	21	3	29	0.00	Thunderstorm
19	101	90	79	79	75	69	94	67	35	29.97	29.90	29.83	10	10	10	13	4	21	0.00	
20	101	90	80	80	74	66	95	62	33	29.93	29.86	29.80	10	10	7	17	8	25	0.00	
21	102	90	77	79	74	68	96	64	33	30.01	29.94	29.89	10	10	10	17	7	23	0.00	

22	103	90	77	78	74	69	94	62	34	30.04	29.97	29.88	10	10	7	12	6	-	0.00	
23	109	94	79	74	71	65	85	54	26	29.93	29.88	29.77	10	10	10	14	2	22	0.00	
24	108	94	79	77	71	63	88	53	24	29.90	29.85	29.78	10	10	10	17	4	26	0.00	
25	100	90	80	77	69	62	86	54	30	30.04	29.99	29.93	10	10	10	15	7	21	0.00	
26	100	90	79	72	67	62	76	50	29	30.09	30.04	29.96	10	10	10	12	5	18	0.00	
27	99	84	69	64	57	48	83	42	17	30.04	29.98	29.88	10	10	10	13	5	21	0.00	
28	101	84	68	65	61	54	82	49	25	29.94	29.89	29.79	10	10	10	8	1	-	0.00	
29	100	88	77	77	74	66	92	65	33	29.95	29.89	29.85	10	10	10	15	5	29	0.00	
30	99	90	81	81	77	72	93	73	42	30.06	30.00	29.94	10	10	10	14	7	22	0.00	
31	101	90	80	80	76	68	96	70	33	30.05	30.00	29.91	10	10	7	12	5	17	0.00	

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Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: MD JG – BRA	
Date & Time: 13 Aug 10 1100	County Name: Robertson
Stream Name: Walnut Creek	
Segment No. or nearest downstream Segment No.: 12420	
Description of Site: 99902 upstream from FM46	

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

A. Stream Characteristics:

1. Check the following channel flow status that applies.

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

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

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

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

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

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

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

3. Streamflow

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

4. Water Quality Data (Field Parameters)

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

Air Temp 33.3 / 92 °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.)

____ Forest	____ Urban	____ Rip rap
RL 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):

FM46 crosses creek. Fences on both sides with moderate slopes 980-983 # 999

8. Dominant Primary Substrate

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

Stream Name_____ Site: _____
Date: _____ Time: _____

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

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

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

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

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

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
No flow, large pool at bridge, stagnant water depth = >1.2m #998
997

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
fig # 980-983 FM 46 crosses creek
999

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: _____

Date: _____ Time: _____

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

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

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
Stagnant water. # 984, 985

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).
#984, 985. No flow, nasty looking water, muddy bottom.

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

D. Noncontact Recreation Evaluation

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

1. Provide site-specific information and documentation (including photographs) regarding unsafe conditions, recreation activities, and presence or absence of water recreation activities.
984, 985 No flow nasty looking water, muddy bottom
Fence across creek # 986

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 986 Downstream 987 Left Bank 988 Right Bank 989
Photos #s (150 meters) Upstream 990 Downstream 991 Left Bank 992 Right Bank 993
Photos #s (300 meters) Upstream 994 Downstream 995 Left Bank 996 Right Bank 997

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	60	6	1.2
Pool 2	12	6	0.65
Pool 3	11	3	0.7
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	0.25
60 meters	0.34
90 meters	0.12
120 meters	0.48
150 meters	0.18
180 meters	0.17
210 meters	0.0 Dry
240 meters	0.27
270 meters	0.0
300 meters	0.0
Average	N/A

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

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

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	N/A
Width at narrowest point of the stream within 300 meter reach	N/A
Width at the widest point of the stream within 300 meter reach	6'

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

COMMENTS: No flow few stagnant pools

2. Non-wadeable Streams

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

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

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

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

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

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

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

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

Comments: # 980-983

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

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

Comments: # 980-983, 987

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: _____

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

7. Check all water characteristics that apply (Attach photos).
Aquatic Vegetation: ☐ absent ☑ rare ☐ common ☐ abundant
Algae Cover: ☐ absent ☑ rare ☐ common ☐ abundant
Odor: ☐ none ☐ rare ☑ common ☐ abundant
Color: ☐ clear ☐ green ☐ red ☑ brown ☐ black
Bottom Deposit: ☑ sludge ☐ solids ☐ fine sediments ☐ none ☐ other
Water Surface: ☐ clear ☑ scum ☐ foam ☐ debris ☐ oil
Other: #998 + transect pics

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).
No flow, few pools, stagnant water

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

Stream:_____ Date:_____
Site:_____ Site
Description:_____
Time Begin:_____ Time End:_____ Meter Type:_____
Observers:_____ Stream Width*:_____ Section Width (W):_____
Observations:_____

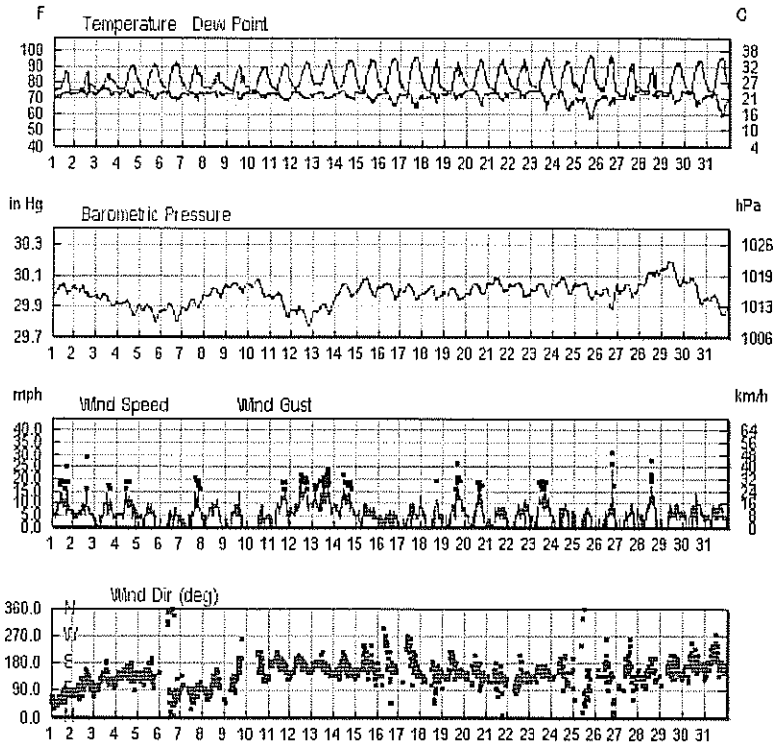
Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V)		Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
			At Point (ft/s)(m/s)	Average (ft/s)(m/s)	

History for Hearne, TX

Month of July, 2010

Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	97 °F	93 °F	85 °F	
Mean Temperature	86 °F	84 °F	80 °F	
Min Temperature	78 °F	75 °F	72 °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	21	19	15	579
Growing Degree Days (base 50)	36	34	30	1047
Dew Point:				
Dew Point	77 °F	72 °F	58 °F	
Precipitation:				
Precipitation	0.46 in	0.02 in	0.00 in	0.65 in
Snowdepth	-	-	-	-
Wind:				
Wind	24 mph	4 mph	0 mph	
Gust Wind	34 mph	18 mph	9 mph	
Sea Level Pressure:				
Sea Level Pressure	30.20 in	29.98 in	29.78 in	



Monthly Calendar Overview

« Previous Month « 2009 **July 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
				Actual: 87 | 75	Actual: 87 | 75	Actual: 85 | 75
				Precip: 0.07	Precip: 0.46	Precip: 0.00

				Average: - | - Precip: -	Average: - | - Precip: -	Average: - | - Precip: -
4 Actual: 91 | 76 Precip: 0.00 Average: - | - Precip: -	5 Actual: 92 | 74 Precip: 0.00 Average: - | - Precip: -	6 Actual: 93 | 75 Precip: 0.00 Average: - | - Precip: -	7 Actual: 91 | 74 Precip: 0.00 Average: - | - Precip: -	8 Actual: 86 | 76 Precip: 0.00 Average: - | - Precip: -	9 Actual: 91 | 75 Precip: 0.00 Average: - | - Precip: -	10 Actual: 90 | 74 Precip: 0.00 Average: - | - Precip: -
11 Actual: 92 | 75 Precip: 0.00 Average: - | - Precip: -	12 Actual: 93 | 76 Precip: 0.00 Average: - | - Precip: -	13 Actual: 94 | 78 Precip: 0.00 Average: - | - Precip: -	14 Actual: 94 | 76 Precip: 0.00 Average: - | - Precip: -	15 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	16 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	17 Actual: 96 | 73 Precip: 0.00 Average: - | - Precip: -
18 Actual: 95 | 74 Precip: 0.00 Average: - | - Precip: -	19 Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	20 Actual: 95 | 76 Precip: 0.00 Average: - | - Precip: -	21 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	22 Actual: 95 | 76 Precip: 0.00 Average: - | - Precip: -	23 Actual: 95 | 77 Precip: 0.00 Average: - | - Precip: -	24 Actual: 94 | 73 Precip: 0.00 Average: - | - Precip: -
25 Actual: 97 | 74 Precip: 0.00 Average: - | - Precip: -	26 Actual: 97 | 75 Precip: 0.00 Average: - | - Precip: -	27 Actual: 92 | 72 Precip: 0.01 Average: - | - Precip: -	28 Actual: 90 | 74 Precip: 0.11 Average: - | - Precip: -	29 Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	30 Actual: 94 | 74 Precip: 0.00 Average: - | - Precip: -	31 Actual: 96 | 73 Precip: 0.00 Average: - | - Precip: -

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear, Mostly Cloudy Partly Sunny, Partly Cloudy Mostly Sunny, Cloudy, Rain, Snow, Hail Flurries, Thunderstorms, Hazy Fog, Sleet, '?' denotes 'chance of', Unknown

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

Data Category, Condition, High Temp., Lo Temp., Precip. (in inches), Daily Avg. Temp., Temps in °F
-60 -30 0 30 60 90 120

Print This Calendar

Daily Observations

	2010 Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
July	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	87	81	75	75	73	71	94	80	64	30.04	30.00	29.97	10	6	4	16	8	25	0.07	Rain
2	87	81	75	76	74	72	94	88	63	30.03	29.99	29.95	10	7	4	16	6	29	0.46	Rain
3	85	80	75	77	75	72	95	85	68	29.98	29.94	29.90	10	5	3	14	4	20	0.00	Rain
4	91	84	76	77	74	71	94	75	51	29.94	29.90	29.84	7	5	3	14	7	18	0.00	Rain
5	92	83	74	76	73	70	95	74	48	29.91	29.87	29.80	7	5	3	10	5	9	0.00	
6	93	84	75	75	72	69	94	69	44	29.92	29.87	29.80	7	5	3	8	2	-	0.00	
7	91	82	74	75	73	69	94	75	53	29.94	29.91	29.87	7	5	4	15	3	25	0.00	
8	86	81	76	75	74	72	90	81	63	30.02	29.98	29.95	10	6	3	12	5	16	0.00	Rain
9	91	83	75	76	73	70	94	79	51	30.06	30.02	29.98	7	5	3	15	2	18	0.00	Rain
10	90	82	74	75	73	71	96	77	53	30.08	30.02	29.96	7	4	3	9	1	-	0.00	
11	92	84	75	75	72	69	94	72	46	29.99	29.94	29.83	7	5	4	15	5	20	0.00	
12	93	84	76	75	73	70	92	70	47	29.90	29.86	29.78	7	5	4	21	9	22	0.00	
13	94	86	78	75	73	71	86	68	46	29.92	29.88	29.85	7	4	3	18	11	24	0.00	
14	94	85	76	76	73	70	91	69	46	30.05	30.00	29.95	7	5	3	16	9	22	0.00	
15	95	85	75	76	72	68	95	69	41	30.09	30.02	29.96	7	5	2	10	5	16	0.00	
16	95	85	75	75	71	66	94	67	38	30.06	30.02	29.94	10	6	3	7	2	-	0.00	Rain
17	96	84	73	74	71	65	94	63	35	30.05	30.00	29.94	10	9	3	10	2	16	0.00	

18	95	84	74	75	72	68	90	73	42	30.03	29.99	29.94	10	10	7	12	5	20	0.00	Thunderstorm
19	93	84	74	76	73	70	96	76	48	30.02	29.98	29.94	10	8	0	18	4	26	0.00	Fog
20	95	86	76	76	73	65	95	73	39	30.05	30.01	29.97	10	9	5	15	6	18	0.00	
21	95	85	75	75	73	69	95	71	42	30.09	30.05	29.99	10	9	5	8	2	16	0.00	Rain
22	95	86	76	76	74	70	94	75	45	30.06	30.01	29.96	10	9	7	12	3	20	0.00	
23	95	86	77	77	73	64	94	70	35	30.05	30.01	29.96	10	9	5	14	4	20	0.00	
24	94	84	73	76	71	63	96	69	37	30.09	30.04	29.98	10	9	4	10	3	-	0.00	
25	97	86	74	72	67	58	88	58	26	30.06	30.02	29.94	10	10	7	8	2	-	0.00	Rain
26	97	86	75	73	70	67	87	67	38	30.02	29.97	29.88	10	7	4	24	2	34	0.00	Rain , Thunderstorm
27	92	82	72	76	72	69	95	79	46	30.05	30.00	29.96	10	6	4	10	2	-	0.01	Rain , Thunderstorm
28	90	82	74	76	74	71	95	83	56	30.14	30.09	30.03	10	9	3	17	6	31	0.11	Rain , Thunderstorm
29	93	84	74	77	72	68	96	74	45	30.20	30.14	30.03	10	9	5	10	3	-	0.00	
30	94	84	74	76	72	66	95	71	41	30.09	30.04	29.91	10	9	2	14	5	18	0.00	
31	96	84	73	74	69	59	94	66	29	29.98	29.93	29.85	10	9	5	10	4	-	0.00	

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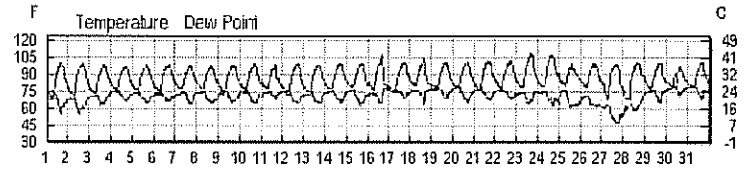
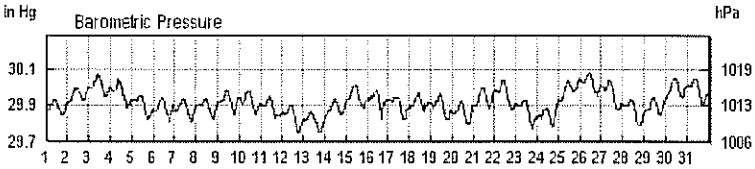
History for Hearne, TX

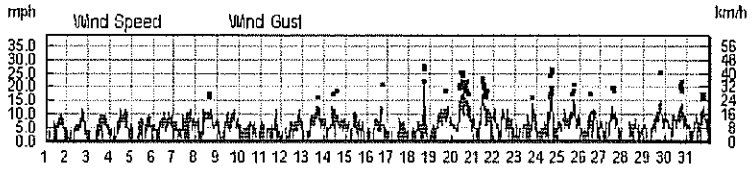
Month of August, 2010

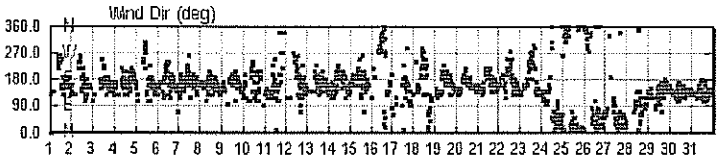
Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	109 °F	101 °F	97 °F	
Mean Temperature	94 °F	88 °F	84 °F	
Min Temperature	81 °F	76 °F	68 °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	29	24	19	730
Growing Degree Days (base 50)	44	38	34	1189
Dew Point:				
Dew Point	81 °F	71 °F	48 °F	
Precipitation:				
Precipitation	0.00 in	0.00 in	0.00 in	0.00 in
Snowdepth	-	-	-	-
Wind:				
Wind	21 mph	4 mph	0 mph	
Gust Wind	29 mph	18 mph	9 mph	
Sea Level Pressure:				
Sea Level Pressure	30.09 in	29.92 in	29.75 in	









Monthly Calendar Overview

« Previous Month « 2009 **August 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
Actual: 100 | 69	**Actual:** 99 | 71	**Actual:** 98 | 73	**Actual:** 97 | 76	**Actual:** 98 | 75	**Actual:** 98 | 75	**Actual:** 98 | 78
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -

8	9	10	11	12	13	14
Actual: 98 | 77	Actual: 98 | 74	Actual: 100 | 75	Actual: 99 | 78	Actual: 99 | 75	Actual: 99 | 75	Actual: 100 | 77
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
15	16	17	18	19	20	21
Actual: 100 | 79	Actual: 109 | 76	Actual: 101 | 76	Actual: 104 | 81	Actual: 101 | 79	Actual: 101 | 80	Actual: 102 | 77
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
22	23	24	25	26	27	28
Actual: 103 | 77	Actual: 109 | 79	Actual: 108 | 79	Actual: 100 | 80	Actual: 100 | 79	Actual: 99 | 69	Actual: 101 | 68
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
29	30	31				
Actual: 100 | 77	Actual: 99 | 81	Actual: 101 | 80				
Precip: 0.00	Precip: 0.00	Precip: 0.00				
Average: - | -	Average: - | -	Average: - | -				
Precip: -	Precip: -	Precip: -				

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear · Mostly Cloudy Partly Sunny · Partly Cloudy Mostly Sunny · Cloudy · Rain · Snow · Hail Flurries · Thunderstorms · Hazy Fog · Sleet · '?' denotes 'chance of' · Unknown

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

Data Category · Condition · High Temp. · Lo Temp. · Precip. (in inches) · Daily Avg. Temp. · Temps in °F · -60 -30 0 30 60 90 120

Print This Calendar

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
August	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	100	84	69	74	67	55	95	60	22	29.93	29.89	29.84	10	9	7	9	2	-	0.00	
2	99	85	71	70	64	55	90	55	25	30.00	29.96	29.91	10	9	4	12	2	16	0.00	
3	98	86	73	73	69	64	94	60	32	30.08	30.01	29.95	10	8	4	9	2	16	0.00	
4	97	86	76	77	73	68	94	66	38	30.05	29.98	29.89	7	6	3	12	4	17	0.00	Rain
5	98	86	75	74	71	65	92	62	34	29.96	29.91	29.83	7	5	3	8	3	-	0.00	
6	98	86	75	74	71	67	92	63	36	29.95	29.89	29.81	10	8	4	10	5	-	0.00	
7	98	88	78	75	71	64	86	60	33	29.94	29.88	29.81	10	10	10	12	5	16	0.00	
8	98	88	77	76	71	65	92	63	34	29.94	29.90	29.83	10	10	10	12	6	20	0.00	
9	98	86	74	76	71	66	95	63	34	29.99	29.93	29.85	10	10	7	12	5	16	0.00	
10	100	88	75	77	72	65	94	64	33	29.98	29.93	29.85	10	10	3	7	2	9	0.00	
11	99	88	78	76	73	68	89	64	36	29.96	29.90	29.83	10	10	10	12	3	24	0.00	Rain , Thunderstorm
12	99	87	75	76	71	65	92	63	33	29.90	29.85	29.75	10	10	7	9	2	-	0.00	
13	99	87	75	75	70	65	91	62	33	29.87	29.82	29.76	10	10	10	13	4	17	0.00	
14	100	88	77	76	72	66	92	62	33	29.94	29.88	29.83	10	10	7	13	6	18	0.00	
15	100	90	79	77	72	63	90	62	30	30.02	29.96	29.89	10	10	10	10	5	-	0.00	
16	109	92	76	79	72	65	90	64	26	29.99	29.93	29.83	10	10	10	13	3	23	0.00	
17	101	88	76	78	75	70	96	69	36	29.95	29.91	29.83	10	9	5	8	1	-	0.00	
18	104	92	81	78	75	65	88	65	28	29.97	29.92	29.87	10	10	10	21	3	29	0.00	Thunderstorm
19	101	90	79	79	75	69	94	67	35	29.97	29.90	29.83	10	10	10	13	4	21	0.00	
20	101	90	80	80	74	66	95	62	33	29.93	29.86	29.80	10	10	7	17	8	25	0.00	
21	102	90	77	79	74	68	96	64	33	30.01	29.94	29.89	10	10	10	17	7	23	0.00	

22	103	90	77	78	74	69	94	62	34	30.04	29.97	29.88	10	10	7	12	6	-	0.00	
23	109	94	79	74	71	65	85	54	26	29.93	29.88	29.77	10	10	10	14	2	22	0.00	
24	108	94	79	77	71	63	88	53	24	29.90	29.85	29.78	10	10	10	17	4	26	0.00	
25	100	90	80	77	69	62	86	54	30	30.04	29.99	29.93	10	10	10	15	7	21	0.00	
26	100	90	79	72	67	62	76	50	29	30.09	30.04	29.96	10	10	10	12	5	18	0.00	
27	99	84	69	64	57	48	83	42	17	30.04	29.98	29.88	10	10	10	13	5	21	0.00	
28	101	84	68	65	61	54	82	49	25	29.94	29.89	29.79	10	10	10	8	1	-	0.00	
29	100	88	77	77	74	66	92	65	33	29.95	29.89	29.85	10	10	10	15	5	29	0.00	
30	99	90	81	81	77	72	93	73	42	30.06	30.00	29.94	10	10	10	14	7	22	0.00	
31	101	90	80	80	76	68	96	70	33	30.05	30.00	29.91	10	10	7	12	5	17	0.00	

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Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: MD/JG - BRA	
Date & Time: 13 Aug 10 1020	County Name: Robertson
Stream Name: Walnut Creek	
Segment No. or nearest downstream Segment No.: 12420	
Description of Site: 99903 Downstream Low FM 2293	

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

A. Stream Characteristics:

1. Check the following channel flow status that applies.

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

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

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

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

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

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

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

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. N/A 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 31.7 °C (89°F) Water Temp N/A °C

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

____ Forest	____ Urban	____ Rip rap
____ Shrub dominated corridor	RL 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):

FM 2293 crosses creek, Fences on each side, Gentle slope to creek #961-963

8. Dominant Primary Substrate

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

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

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

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

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

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

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

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
Sandy dry creek #964, 965 little/no significant pools
Depth of deepest puddle = 0.35m, steep banks along creek #974 #977

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
FM 2293 pic # 961 - 963

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_____ Site: _____
Date: _____ Time: _____

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

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

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
No water #964, 965 (at bridge)

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

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

5. Describe the physical characteristics of the water body that hinders the frequency of secondary contact recreation (depth, etc.) (Attach photos or depth measurements, etc. for documentation).
No water #964, 965 (at bridge) deepest pool = 0.35m
in this transect, water is stagnant.

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).
NA

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.
No Water #964, 965 at bridge. Stagnant shallow pools in reach.

Field Data Sheets – Basic RUAA Survey

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

E. Stream Channel and Substantial Pool:
Please check the following which best describes the river or stream: ☑ 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 967 Downstream 968 Left Bank 969 Right Bank 970
Photos #s (150 meters) Upstream 972 Downstream 973 Left Bank 974 Right Bank 975
Photos #s (300 meters) Upstream 976 Downstream 977 Left Bank 978 Right Bank 979

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	No Significant Pools		
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	— Dry
60 meters	— Dry
90 meters	0.20
120 meters	0.35
150 meters	0.28
180 meters	Dry
210 meters	Dry
240 meters	Dry
270 meters	0.07
300 meters	0.25
Average	N/A

966

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

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

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

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

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

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

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

Field Data Sheets – Basic RUAA Survey

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

F. Additional RUAA Information

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

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

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

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

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

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

☐ Campgrounds ☐ Stairs/walkway ☑ Roads (paved/unpaved) ☐ Other: _____
☐ Playgrounds ☐ Boating access (ramps) ☐ Populated area ☐ None of the Above
☑ Rural area ☐ Beach ☐ Docks or rafts
☐ Residential ☑ Bridge crossing ☐ Commercial outfitter
☐ National forests ☐ Commercial boating ☐ Nearby school
☐ Urban/suburban location ☐ Trails/paths (hiking/biking) ☐ Power Line Corridor
☐ Golf Course ☐ Paved parking lot ☐ Parks (national/city/county/state)
☐ Sports Field ☐ Unimproved parking lot ☐ Public Property
Comments: #961-963

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

☑ Private Property ☑ Fence
☐ No trespass sign ☐ Barge/ship traffic
☐ Wildlife ☐ Industrial
☐ Steep slopes ☐ None of the Above
☐ No public access ☐ Other: _____
☐ No roads
Comments: #961-963

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

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

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

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: #966, 971, Cow manure under bridge #963, 964

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).

Pasture on both sides of creek

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream:_____ Date:_____

Site:_____ Site

Description:_____

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

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

Observations:_____

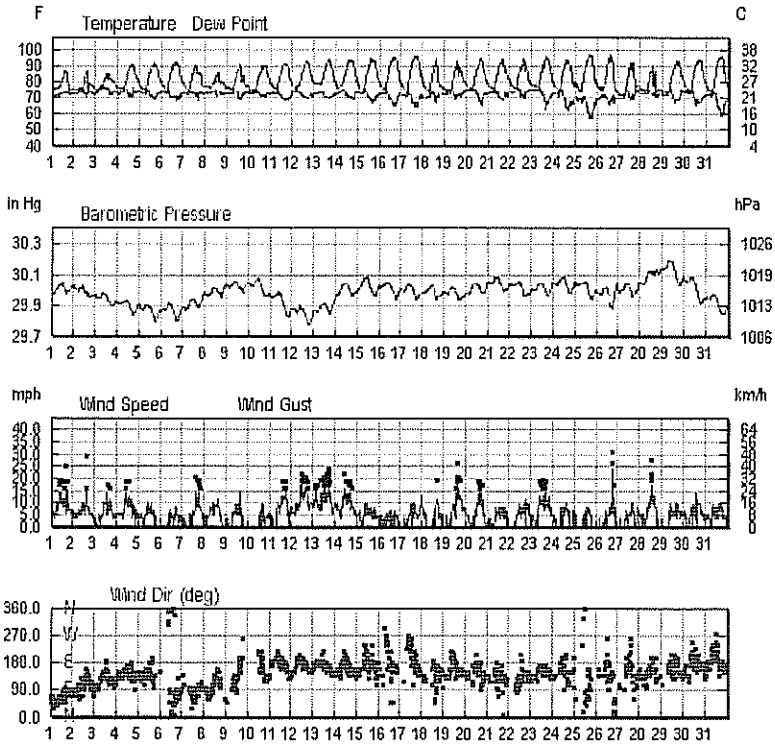
Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V)		Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
			At Point (ft/s)(m/s)	Average (ft/s)(m/s)	

History for Hearne, TX

Month of July, 2010

Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	97 °F	93 °F	85 °F	
Mean Temperature	86 °F	84 °F	80 °F	
Min Temperature	78 °F	75 °F	72 °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	21	19	15	579
Growing Degree Days (base 50)	36	34	30	1047
Dew Point:				
Dew Point	77 °F	72 °F	58 °F	
Precipitation:				
Precipitation	0.46 in	0.02 in	0.00 in	0.65 in
Snowdepth	-	-	-	-
Wind:				
Wind	24 mph	4 mph	0 mph	
Gust Wind	34 mph	18 mph	9 mph	
Sea Level Pressure:				
Sea Level Pressure	30.20 in	29.98 in	29.78 in	



Monthly Calendar Overview

« Previous Month « 2009 July 2010 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
				Actual: 87 | 75	Actual: 87 | 75	Actual: 85 | 75
				Precip: 0.07	Precip: 0.46	Precip: 0.00

																			Average: - | - Precip: -		Average: - | - Precip: -		Average: - | - Precip: -	
4	Actual: 91 | 76 Precip: 0.00 Average: - | - Precip: -	5	Actual: 92 | 74 Precip: 0.00 Average: - | - Precip: -	6	Actual: 93 | 75 Precip: 0.00 Average: - | - Precip: -	7	Actual: 91 | 74 Precip: 0.00 Average: - | - Precip: -	8	Actual: 86 | 76 Precip: 0.00 Average: - | - Precip: -	9	Actual: 91 | 75 Precip: 0.00 Average: - | - Precip: -	10	Actual: 90 | 74 Precip: 0.00 Average: - | - Precip: -
11	Actual: 92 | 75 Precip: 0.00 Average: - | - Precip: -	12	Actual: 93 | 76 Precip: 0.00 Average: - | - Precip: -	13	Actual: 94 | 78 Precip: 0.00 Average: - | - Precip: -	14	Actual: 94 | 76 Precip: 0.00 Average: - | - Precip: -	15	Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	16	Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	17	Actual: 96 | 73 Precip: 0.00 Average: - | - Precip: -
18	Actual: 95 | 74 Precip: 0.00 Average: - | - Precip: -	19	Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	20	Actual: 95 | 76 Precip: 0.00 Average: - | - Precip: -	21	Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	22	Actual: 95 | 76 Precip: 0.00 Average: - | - Precip: -	23	Actual: 95 | 77 Precip: 0.00 Average: - | - Precip: -	24	Actual: 94 | 73 Precip: 0.00 Average: - | - Precip: -
25	Actual: 97 | 74 Precip: 0.00 Average: - | - Precip: -	26	Actual: 97 | 75 Precip: 0.00 Average: - | - Precip: -	27	Actual: 92 | 72 Precip: 0.01 Average: - | - Precip: -	28	Actual: 90 | 74 Precip: 0.11 Average: - | - Precip: -	29	Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	30	Actual: 94 | 74 Precip: 0.00 Average: - | - Precip: -	31	Actual: 96 | 73 Precip: 0.00 Average: - | - Precip: -

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear · Mostly Cloudy Partly Sunny · Partly Cloudy Mostly Sunny · Cloudy · Rain · Snow · Hail Flurries · Thunderstorms · Hazy Fog · Sleet · '?' denotes 'chance of' · Unknown

Data Category · Condition · High Temp. · Lo Temp. · Precip. (in inches) · Daily Avg. Temp. · Temps in °F

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

-60 -30 0 30 60 90 120

Print This Calendar

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
July	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	87	81	75	75	73	71	94	80	64	30.04	30.00	29.97	10	6	4	16	8	25	0.07	Rain
2	87	81	75	76	74	72	94	88	63	30.03	29.99	29.95	10	7	4	16	6	29	0.46	Rain
3	85	80	75	77	75	72	95	85	68	29.98	29.94	29.90	10	5	3	14	4	20	0.00	Rain
4	91	84	76	77	74	71	94	75	51	29.94	29.90	29.84	7	5	3	14	7	18	0.00	Rain
5	92	83	74	76	73	70	95	74	48	29.91	29.87	29.80	7	5	3	10	5	9	0.00	
6	93	84	75	75	72	69	94	69	44	29.92	29.87	29.80	7	5	3	8	2	-	0.00	
7	91	82	74	75	73	69	94	75	53	29.94	29.91	29.87	7	5	4	15	3	25	0.00	
8	86	81	76	75	74	72	90	81	63	30.02	29.98	29.95	10	6	3	12	5	16	0.00	Rain
9	91	83	75	76	73	70	94	79	51	30.06	30.02	29.98	7	5	3	15	2	18	0.00	Rain
10	90	82	74	75	73	71	96	77	53	30.08	30.02	29.96	7	4	3	9	1	-	0.00	
11	92	84	75	75	72	69	94	72	46	29.99	29.94	29.83	7	5	4	15	5	20	0.00	
12	93	84	76	75	73	70	92	70	47	29.90	29.86	29.78	7	5	4	21	9	22	0.00	
13	94	86	78	75	73	71	86	68	46	29.92	29.88	29.85	7	4	3	18	11	24	0.00	
14	94	85	76	76	73	70	91	69	46	30.05	30.00	29.95	7	5	3	16	9	22	0.00	
15	95	85	75	76	72	68	95	69	41	30.09	30.02	29.96	7	5	2	10	5	16	0.00	
16	95	85	75	75	71	66	94	67	38	30.06	30.02	29.94	10	6	3	7	2	-	0.00	Rain
17	96	84	73	74	71	65	94	63	35	30.05	30.00	29.94	10	9	3	10	2	16	0.00	

18	95	84	74	75	72	68	90	73	42	30.03	29.99	29.94	10	10	7	12	5	20	0.00	Thunderstorm
19	93	84	74	76	73	70	96	76	48	30.02	29.98	29.94	10	8	0	18	4	26	0.00	Fog
20	95	86	76	76	73	65	95	73	39	30.05	30.01	29.97	10	9	5	15	6	18	0.00	
21	95	85	75	75	73	69	95	71	42	30.09	30.05	29.99	10	9	5	8	2	16	0.00	Rain
22	95	86	76	76	74	70	94	75	45	30.06	30.01	29.96	10	9	7	12	3	20	0.00	
23	95	86	77	77	73	64	94	70	35	30.05	30.01	29.96	10	9	5	14	4	20	0.00	
24	94	84	73	76	71	63	96	69	37	30.09	30.04	29.98	10	9	4	10	3	-	0.00	
25	97	86	74	72	67	58	88	58	26	30.06	30.02	29.94	10	10	7	8	2	-	0.00	Rain
26	97	86	75	73	70	67	87	67	38	30.02	29.97	29.88	10	7	4	24	2	34	0.00	Rain , Thunderstorm
27	92	82	72	76	72	69	95	79	46	30.05	30.00	29.96	10	6	4	10	2	-	0.01	Rain , Thunderstorm
28	90	82	74	76	74	71	95	83	56	30.14	30.09	30.03	10	9	3	17	6	31	0.11	Rain , Thunderstorm
29	93	84	74	77	72	68	96	74	45	30.20	30.14	30.03	10	9	5	10	3	-	0.00	
30	94	84	74	76	72	66	95	71	41	30.09	30.04	29.91	10	9	2	14	5	18	0.00	
31	96	84	73	74	69	59	94	66	29	29.98	29.93	29.85	10	9	5	10	4	-	0.00	

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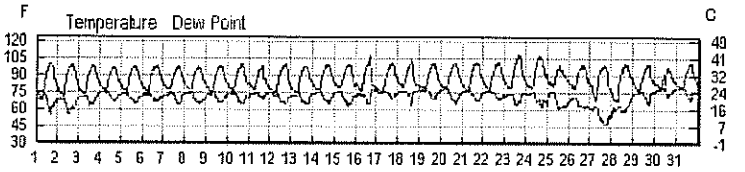
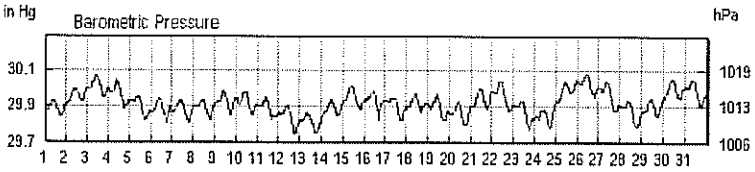
History for Hearne, TX

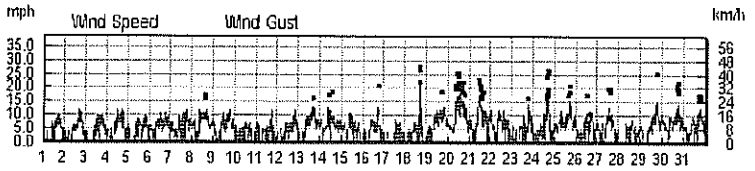
Month of August, 2010

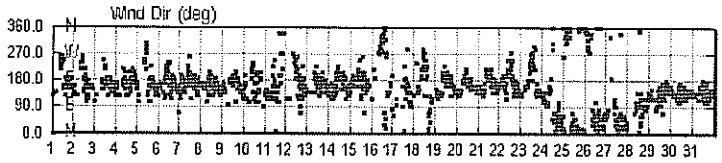
Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	109 °F	101 °F	97 °F	
Mean Temperature	94 °F	88 °F	84 °F	
Min Temperature	81 °F	76 °F	68 °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	29	24	19	730
Growing Degree Days (base 50)	44	38	34	1189
Dew Point:				
Dew Point	81 °F	71 °F	48 °F	
Precipitation:				
Precipitation	0.00 in	0.00 in	0.00 in	0.00 in
Snowdepth	-	-	-	-
Wind:				
Wind	21 mph	4 mph	0 mph	
Gust Wind	29 mph	18 mph	9 mph	
Sea Level Pressure:				
Sea Level Pressure	30.09 in	29.92 in	29.75 in	









Monthly Calendar Overview

« Previous Month | « 2009 | **August 2010** | 2011 » | Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
Actual: 100 | 69	**Actual:** 99 | 71	**Actual:** 98 | 73	**Actual:** 97 | 76	**Actual:** 98 | 75	**Actual:** 96 | 75	**Actual:** 98 | 78
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -

8	9	10	11	12	13	14
Actual: 98 | 77	Actual: 98 | 74	Actual: 100 | 75	Actual: 99 | 76	Actual: 99 | 75	Actual: 99 | 75	Actual: 100 | 77
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
15	16	17	18	19	20	21
Actual: 100 | 79	Actual: 109 | 76	Actual: 101 | 76	Actual: 104 | 81	Actual: 101 | 79	Actual: 101 | 80	Actual: 102 | 77
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
22	23	24	25	26	27	28
Actual: 103 | 77	Actual: 109 | 79	Actual: 108 | 79	Actual: 100 | 80	Actual: 100 | 79	Actual: 99 | 69	Actual: 101 | 68
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
29	30	31				
Actual: 100 | 77	Actual: 99 | 81	Actual: 101 | 80				
Precip: 0.00	Precip: 0.00	Precip: 0.00				
Average: - | -	Average: - | -	Average: - | -				
Precip: -	Precip: -	Precip: -				

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear, Mostly Cloudy Partly Sunny, Partly Cloudy Mostly Sunny, Cloudy, Rain, Snow, Hail Flurries, Thunderstorms, Hazy Fog, Sleet, ? denotes 'chance of', Unknown

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

Data Category, Condition, High Temp., Lo Temp., Precip. (in inches), Daily Avg. Temp., Temps in °F
-60 -30 0 30 60 90 120

Print This Calendar

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
August	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	100	84	69	74	67	55	95	60	22	29.93	29.89	29.84	10	9	7	9	2	-	0.00	
2	99	85	71	70	64	55	90	55	25	30.00	29.96	29.91	10	9	4	12	2	16	0.00	
3	98	86	73	73	69	64	94	60	32	30.08	30.01	29.95	10	8	4	9	2	16	0.00	
4	97	86	76	77	73	68	94	66	38	30.05	29.98	29.89	7	6	3	12	4	17	0.00	Rain
5	98	86	75	74	71	65	92	62	34	29.96	29.91	29.83	7	5	3	8	3	-	0.00	
6	98	86	75	74	71	67	92	63	36	29.95	29.89	29.81	10	8	4	10	5	-	0.00	
7	98	88	78	75	71	64	86	60	33	29.94	29.88	29.81	10	10	10	12	5	16	0.00	
8	98	88	77	76	71	65	92	63	34	29.94	29.90	29.83	10	10	10	12	6	20	0.00	
9	98	86	74	76	71	66	95	63	34	29.99	29.93	29.85	10	10	7	12	5	16	0.00	
10	100	88	75	77	72	65	94	64	33	29.98	29.93	29.85	10	10	3	7	2	9	0.00	
11	99	88	78	76	73	68	89	64	36	29.96	29.90	29.83	10	10	10	12	3	24	0.00	Rain , Thunderstorm
12	99	87	75	76	71	65	92	63	33	29.90	29.85	29.75	10	10	7	9	2	-	0.00	
13	99	87	75	75	70	65	91	62	33	29.87	29.82	29.76	10	10	10	13	4	17	0.00	
14	100	88	77	76	72	66	92	62	33	29.94	29.88	29.83	10	10	7	13	6	18	0.00	
15	100	90	79	77	72	63	90	62	30	30.02	29.96	29.89	10	10	10	10	5	-	0.00	
16	109	92	76	79	72	65	90	64	26	29.99	29.93	29.83	10	10	10	13	3	23	0.00	
17	101	88	76	78	75	70	96	69	36	29.95	29.91	29.83	10	9	5	8	1	-	0.00	
18	104	92	81	78	75	65	88	65	28	29.97	29.92	29.87	10	10	10	21	3	29	0.00	Thunderstorm
19	101	90	79	79	75	69	94	67	35	29.97	29.90	29.83	10	10	10	13	4	21	0.00	
20	101	90	80	80	74	66	95	62	33	29.93	29.86	29.80	10	10	7	17	8	25	0.00	
21	102	90	77	79	74	68	96	64	33	30.01	29.94	29.89	10	10	10	17	7	23	0.00	

22	103	90	77	78	74	69	94	62	34	30.04	29.97	29.88	10	10	7	12	6	-	0.00	
23	109	94	79	74	71	65	85	54	26	29.93	29.88	29.77	10	10	10	14	2	22	0.00	
24	108	94	79	77	71	63	88	53	24	29.90	29.85	29.78	10	10	10	17	4	26	0.00	
25	100	90	80	77	69	62	86	54	30	30.04	29.99	29.93	10	10	10	15	7	21	0.00	
26	100	90	79	72	67	62	76	50	29	30.09	30.04	29.96	10	10	10	12	5	18	0.00	
27	99	84	69	64	57	48	83	42	17	30.04	29.98	29.88	10	10	10	13	5	21	0.00	
28	101	84	68	65	61	54	82	49	25	29.94	29.89	29.79	10	10	10	8	1	-	0.00	
29	100	88	77	77	74	66	92	65	33	29.95	29.89	29.85	10	10	10	15	5	29	0.00	
30	99	90	81	81	77	72	93	73	42	30.06	30.00	29.94	10	10	10	14	7	22	0.00	
31	101	90	80	80	76	68	96	70	33	30.05	30.00	29.91	10	10	7	12	5	17	0.00	

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Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: AD/JG - BRA	
Date & Time: 13 Aug 10	County Name: Robertson
Stream Name: Walnut Creek	
Segment No. or nearest downstream Segment No.: 1242O	
Description of Site: 99904	

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

A. Stream Characteristics:

1. Check the following channel flow status that applies.

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

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

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

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

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

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

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

3. Streamflow

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

4. Water Quality Data (Field Parameters)

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

Air Temp _____ ° C Water Temp _____ ° C

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

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

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

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

This site on private property, No public road to this site, We could not locate owner for access, No Transects

8. Dominant Primary Substrate

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

Stream Name_____ Site: _____
Date: _____ Time: _____

B. Primary Contact Water Recreation Evaluation:

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

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?

☐ Yes ☐ No primary contact recreation activities were observed

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

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

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

c. Check the following that apply regarding the individuals proximity to the water body.

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

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

_____
_____

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

_____
_____

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

C. Secondary Contact Water Recreation Evaluation:

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

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

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

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

Date: _____ Time: _____

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

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

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

_____
_____

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

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

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

_____
_____
_____

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

_____
_____
_____

D. Noncontact Recreation Evaluation

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

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

_____
_____
_____
_____
_____
_____

E. Stream Channel and Substantial Pools Measurements

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

1. Wadeable Streams

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

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

Photos #s (30 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

Photos #s (150 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

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

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

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

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

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

_____

_____

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

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

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

Stream Name_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

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

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

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

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

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

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

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

Comments:_____

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

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

Comments:_____

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

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

Comments:_____

Stream Name_____ Site: _____
Date: _____ Time: _____

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

_____
_____

8. Vertebrates Observed within 300 meter reach

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

Comments: _____

9. Mammals Observed within 300 meter reach

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

Comments: _____

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

11. Garbage Observed

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

Briefly describe the kinds of garbage observed: _____
_____
_____

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

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

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream:_____ Date:_____

Site:_____ Site

Description:_____

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

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

Observations:_____

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

Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: AJG - BRA	
Date & Time: 13 Aug 10 0900	County Name: Robertson
Stream Name: Walnut Creek	
Segment No. or nearest downstream Segment No.: 1242	
Description of Site: 99905 Downstream from Wasill Road.	

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

A. Stream Characteristics:

1. Check the following channel flow status that applies.

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

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

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

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

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

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

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

3. Streamflow

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

4. Water Quality Data (Field Parameters)

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

Air Temp 29.4 °C (85 °F) Water Temp N/A °C

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

____ Forest	____ Urban	____ Rip rap
RL 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):

County Road crosses creek. Very Thick brush/vines. #942-944

8. Dominant Primary Substrate

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

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

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

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

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

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

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

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
No water #945 and 949-960

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
County Road crosses creek #942 Fence #946

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_____ Site: _____
Date: _____ Time: _____

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

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

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

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

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

5. Describe the physical characteristics of the water body that hinders the frequency of secondary contact recreation (depth, etc.) (Attach photos or depth measurements, etc. for documentation).
No water # 945 949-960

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).
Fence around private property # 946, Thick brush

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.
No water # 945

Field Data Sheets – Basic RUAA Survey

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

E. Stream Channel and Substantial Pool:
Please check the following which best describes the river or stream: ☐ 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 949 Downstream 950 Left Bank 951 Right Bank 952
Photos #s (150 meters) Upstream 953 Downstream 954 Left Bank 955 Right Bank 956
Photos #s (300 meters) Upstream 957 Downstream 958 Left Bank 959 Right Bank 960

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			

NO POOLS

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	— Dry
60 meters	— Dry
90 meters	— Dry
120 meters	— Dry
150 meters	— Dry
180 meters	— Dry
210 meters	— Dry
240 meters	— Dry
270 meters	— Dry
300 meters	— Dry
Average	

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

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

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

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

COMMENTS:
Completely Dry no pools

2. Non-wadeable Streams

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

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

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

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

3. Check any channel obstructions that apply (Attach photos). # 947, 948

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

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

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

Comments: Pic # 942

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

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

Comments: # 946

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

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

Comments:_____

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

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

Aquatic Vegetation: ☑ absent ☐ rare ☐ common ☐ abundant
Algae Cover: ☑ absent ☐ rare ☑ common ☐ abundant
Odor: ☑ none ☐ rare ☐ common ☐ abundant
Color: N/A ☐ clear ☐ green ☐ red ☐ brown ☐ black
Bottom Deposit: ☐ sludge ☐ solids ☑ fine sediments ☐ none ☐ other
Water Surface: N/A ☐ clear ☐ scum ☐ foam ☐ debris ☐ oil
Other:
Dry creek 949-960

8. Vertebrates Observed within 300 meter reach

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

Comments: _____

9. Mammals Observed within 300 meter reach

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

Comments: _____

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

11. Garbage Observed

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

Briefly describe the kinds of garbage observed: Beer bottles, cans, appliances, chairs

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).

Pasture on each side with thick low brush & vines

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream:_____ Date:_____

Site:_____ Site

Description:_____

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

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

Observations:_____

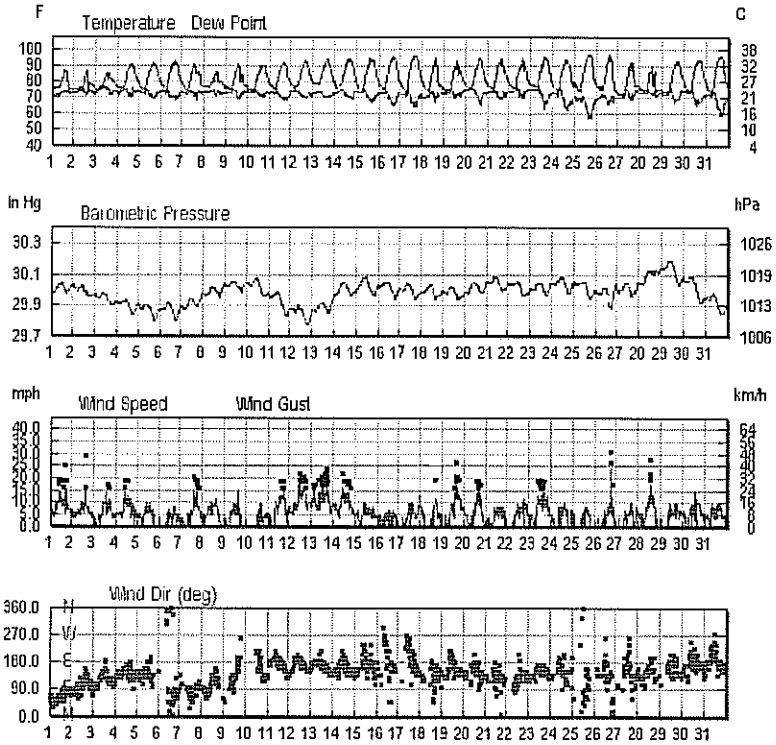
Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V)		Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
			At Point (ft/s)(m/s)	Average (ft/s)(m/s)	

History for Hearne, TX

Month of July, 2010

Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	97 °F	93 °F	85 °F	
Mean Temperature	86 °F	84 °F	80 °F	
Min Temperature	78 °F	75 °F	72 °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	21	19	15	579
Growing Degree Days (base 50)	36	34	30	1047
Dew Point:				
Dew Point	77 °F	72 °F	58 °F	
Precipitation:				
Precipitation	0.46 in	0.02 in	0.00 in	0.65 in
Snowdepth	-	-	-	-
Wind:				
Wind	24 mph	4 mph	0 mph	
Gust Wind	34 mph	18 mph	9 mph	
Sea Level Pressure:				
Sea Level Pressure	30.20 in	29.98 in	29.78 in	



Monthly Calendar Overview

« Previous Month « 2009 July 2010 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
				Actual: 87 | 75	Actual: 87 | 75	Actual: 85 | 75
				Precip: 0.07	Precip: 0.46	Precip: 0.00

																		Average: - | - Precip: -		Average: - | - Precip: -		Average: - | - Precip: -	
4	Actual: 91 | 76 Precip: 0.00 Average: - | - Precip: -	5	Actual: 92 | 74 Precip: 0.00 Average: - | - Precip: -	6	Actual: 93 | 75 Precip: 0.00 Average: - | - Precip: -	7	Actual: 91 | 74 Precip: 0.00 Average: - | - Precip: -	8	Actual: 86 | 76 Precip: 0.00 Average: - | - Precip: -	9	Actual: 91 | 75 Precip: 0.00 Average: - | - Precip: -	10	Actual: 90 | 74 Precip: 0.00 Average: - | - Precip: -
11	Actual: 92 | 75 Precip: 0.00 Average: - | - Precip: -	12	Actual: 93 | 76 Precip: 0.00 Average: - | - Precip: -	13	Actual: 94 | 78 Precip: 0.00 Average: - | - Precip: -	14	Actual: 94 | 76 Precip: 0.00 Average: - | - Precip: -	15	Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	16	Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	17	Actual: 96 | 73 Precip: 0.00 Average: - | - Precip: -
18	Actual: 95 | 74 Precip: 0.00 Average: - | - Precip: -	19	Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	20	Actual: 95 | 76 Precip: 0.00 Average: - | - Precip: -	21	Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	22	Actual: 95 | 76 Precip: 0.00 Average: - | - Precip: -	23	Actual: 95 | 77 Precip: 0.00 Average: - | - Precip: -	24	Actual: 94 | 73 Precip: 0.00 Average: - | - Precip: -
25	Actual: 97 | 74 Precip: 0.00 Average: - | - Precip: -	26	Actual: 97 | 75 Precip: 0.00 Average: - | - Precip: -	27	Actual: 92 | 72 Precip: 0.01 Average: - | - Precip: -	28	Actual: 90 | 74 Precip: 0.11 Average: - | - Precip: -	29	Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	30	Actual: 94 | 74 Precip: 0.00 Average: - | - Precip: -	31	Actual: 96 | 73 Precip: 0.00 Average: - | - Precip: -

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear · Mostly Cloudy Partly Sunny · Partly Cloudy Mostly Sunny · Cloudy · Rain · Snow · Hail Flurries · Thunderstorms · Hazy Fog · Sleet · '?' denotes 'chance of' · Unknown

Print This Calendar

Data Category · Condition · High Temp. · Lo Temp. · Precip. (in inches) · Daily Avg. Temp. · Temps in °F

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

-60 -30 0 30 60 90 120

Daily Observations

2010 Temp. (°F)				Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
July	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	87	81	75	75	73	71	94	80	64	30.04	30.00	29.97	10	6	4	16	8	25	0.07	Rain
2	87	81	75	76	74	72	94	88	63	30.03	29.99	29.95	10	7	4	16	6	29	0.46	Rain
3	85	80	75	77	75	72	95	85	68	29.98	29.94	29.90	10	5	3	14	4	20	0.00	Rain
4	91	84	76	77	74	71	94	75	51	29.94	29.90	29.84	7	5	3	14	7	18	0.00	Rain
5	92	83	74	76	73	70	95	74	48	29.91	29.87	29.80	7	5	3	10	5	9	0.00	
6	93	84	75	75	72	69	94	69	44	29.92	29.87	29.80	7	5	3	8	2	-	0.00	
7	91	82	74	75	73	69	94	75	53	29.94	29.91	29.87	7	5	4	15	3	25	0.00	
8	86	81	76	75	74	72	90	81	63	30.02	29.98	29.95	10	6	3	12	5	16	0.00	Rain
9	91	83	75	76	73	70	94	79	51	30.06	30.02	29.98	7	5	3	15	2	18	0.00	Rain
10	90	82	74	75	73	71	96	77	53	30.08	30.02	29.96	7	4	3	9	1	-	0.00	
11	92	84	75	75	72	69	94	72	46	29.99	29.94	29.83	7	5	4	15	5	20	0.00	
12	93	84	76	75	73	70	92	70	47	29.90	29.86	29.78	7	5	4	21	9	22	0.00	
13	94	86	78	75	73	71	86	68	46	29.92	29.88	29.85	7	4	3	18	11	24	0.00	
14	94	85	76	76	73	70	91	69	46	30.05	30.00	29.95	7	5	3	16	9	22	0.00	
15	95	85	75	76	72	68	95	69	41	30.09	30.02	29.96	7	5	2	10	5	16	0.00	
16	95	85	75	75	71	66	94	67	38	30.06	30.02	29.94	10	6	3	7	2	-	0.00	Rain
17	96	84	73	74	71	65	94	63	35	30.05	30.00	29.94	10	9	3	10	2	16	0.00	

18	95	84	74	75	72	68	90	73	42	30.03	29.99	29.94	10	10	7	12	5	20	0.00	Thunderstorm
19	93	84	74	76	73	70	96	76	48	30.02	29.98	29.94	10	8	0	18	4	26	0.00	Fog
20	95	86	76	76	73	65	95	73	39	30.05	30.01	29.97	10	9	5	15	6	18	0.00	
21	95	85	75	75	73	69	95	71	42	30.09	30.05	29.99	10	9	5	8	2	16	0.00	Rain
22	95	86	76	76	74	70	94	75	45	30.06	30.01	29.96	10	9	7	12	3	20	0.00	
23	95	86	77	77	73	64	94	70	35	30.05	30.01	29.96	10	9	5	14	4	20	0.00	
24	94	84	73	76	71	63	96	69	37	30.09	30.04	29.98	10	9	4	10	3	-	0.00	
25	97	86	74	72	67	58	88	58	26	30.06	30.02	29.94	10	10	7	8	2	-	0.00	Rain
26	97	86	75	73	70	67	87	67	38	30.02	29.97	29.88	10	7	4	24	2	34	0.00	Rain , Thunderstorm
27	92	82	72	76	72	69	95	79	46	30.05	30.00	29.96	10	6	4	10	2	-	0.01	Rain , Thunderstorm
28	90	82	74	76	74	71	95	83	56	30.14	30.09	30.03	10	9	3	17	6	31	0.11	Rain , Thunderstorm
29	93	84	74	77	72	68	96	74	45	30.20	30.14	30.03	10	9	5	10	3	-	0.00	
30	94	84	74	76	72	66	95	71	41	30.09	30.04	29.91	10	9	2	14	5	18	0.00	
31	96	84	73	74	69	59	94	66	29	29.98	29.93	29.85	10	9	5	10	4	-	0.00	

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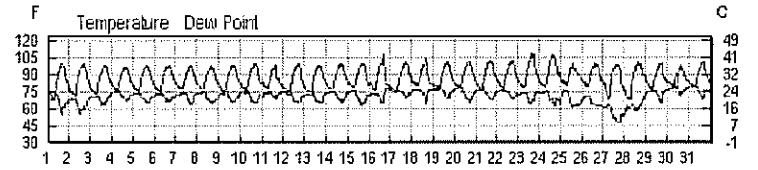
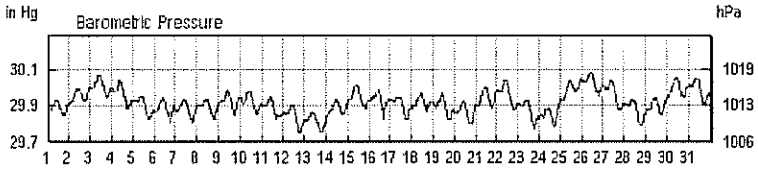
History for Hearne, TX

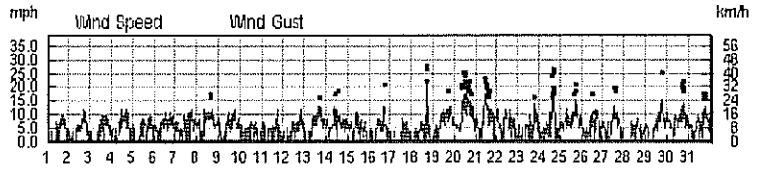
Month of August, 2010

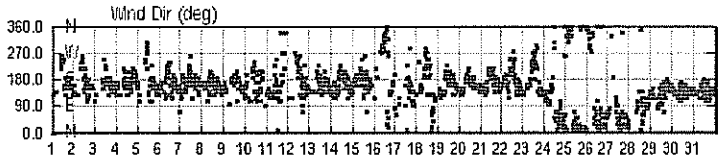
Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	109 °F	101 °F	97 °F	
Mean Temperature	94 °F	88 °F	84 °F	
Min Temperature	81 °F	76 °F	68 °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	29	24	19	730
Growing Degree Days (base 50)	44	38	34	1189
Dew Point:				
Dew Point	81 °F	71 °F	48 °F	
Precipitation:				
Precipitation	0.00 in	0.00 in	0.00 in	0.00 in
Snowdepth	-	-	-	-
Wind:				
Wind	21 mph	4 mph	0 mph	
Gust Wind	29 mph	18 mph	9 mph	
Sea Level Pressure:				
Sea Level Pressure	30.09 in	29.92 in	29.75 in	









Monthly Calendar Overview

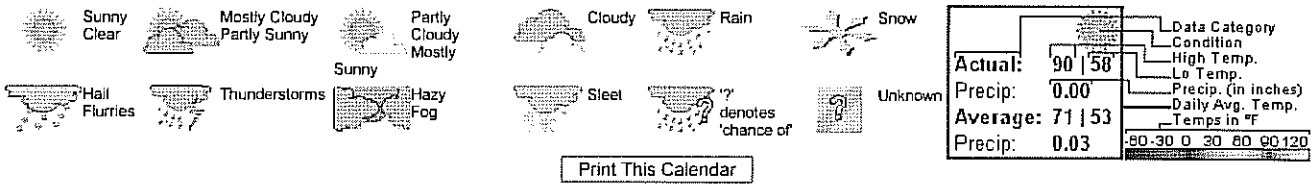
« Previous Month « 2009 **August 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
Actual: 100 | 69	Actual: 99 | 71	Actual: 98 | 73	Actual: 97 | 76	Actual: 98 | 75	Actual: 98 | 75	Actual: 98 | 78
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -

8		9		10		11		12		13		14	
Actual:	98 | 77	Actual:	98 | 74	Actual:	100 | 75	Actual:	99 | 78	Actual:	99 | 75	Actual:	99 | 75	Actual:	100 | 77
Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00
Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -
Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-
15		16		17		18		19		20		21	
Actual:	100 | 79	Actual:	109 | 76	Actual:	101 | 76	Actual:	104 | 81	Actual:	101 | 79	Actual:	101 | 80	Actual:	102 | 77
Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00
Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -
Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-
22		23		24		25		26		27		28	
Actual:	103 | 77	Actual:	109 | 79	Actual:	108 | 79	Actual:	100 | 80	Actual:	100 | 79	Actual:	99 | 69	Actual:	101 | 68
Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00
Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -
Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-
29		30		31									
Actual:	100 | 77	Actual:	99 | 81	Actual:	101 | 80								
Precip:	0.00	Precip:	0.00	Precip:	0.00								
Average:	- | -	Average:	- | -	Average:	- | -								
Precip:	-	Precip:	-	Precip:	-								

« Previous Month « 2009 2011 » Next Month »

Calendar Key:



Print This Calendar

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
August	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	100	84	69	74	67	55	95	60	22	29.93	29.89	29.84	10	9	7	9	2	-	0.00	
2	99	85	71	70	64	55	90	55	25	30.00	29.96	29.91	10	9	4	12	2	16	0.00	
3	98	86	73	73	69	64	94	60	32	30.08	30.01	29.95	10	8	4	9	2	16	0.00	
4	97	86	76	77	73	68	94	66	38	30.05	29.98	29.89	7	6	3	12	4	17	0.00	Rain
5	98	86	75	74	71	65	92	62	34	29.96	29.91	29.83	7	5	3	8	3	-	0.00	
6	98	86	75	74	71	67	92	63	36	29.95	29.89	29.81	10	8	4	10	5	-	0.00	
7	98	88	78	75	71	64	86	60	33	29.94	29.88	29.81	10	10	10	12	5	16	0.00	
8	98	88	77	76	71	65	92	63	34	29.94	29.90	29.83	10	10	10	12	6	20	0.00	
9	98	86	74	76	71	66	95	63	34	29.99	29.93	29.85	10	10	7	12	5	16	0.00	
10	100	88	75	77	72	65	94	64	33	29.98	29.93	29.85	10	10	3	7	2	9	0.00	
11	99	88	78	76	73	68	89	64	36	29.96	29.90	29.83	10	10	10	12	3	24	0.00	Rain , Thunderstorm
12	99	87	75	76	71	65	92	63	33	29.99	29.85	29.75	10	10	7	9	2	-	0.00	
13	99	87	75	75	70	65	91	62	33	29.87	29.82	29.76	10	10	10	13	4	17	0.00	
14	100	88	77	76	72	66	92	62	33	29.94	29.88	29.83	10	10	7	13	6	18	0.00	
15	100	90	79	77	72	63	90	62	30	30.02	29.96	29.89	10	10	10	10	5	-	0.00	
16	109	92	76	79	72	65	90	64	26	29.99	29.93	29.83	10	10	10	13	3	23	0.00	
17	101	88	76	78	75	70	96	69	36	29.95	29.91	29.83	10	9	5	8	1	-	0.00	
18	104	92	81	78	75	65	88	65	28	29.97	29.92	29.87	10	10	10	21	3	29	0.00	Thunderstorm
19	101	90	79	79	75	69	94	67	35	29.97	29.90	29.83	10	10	10	13	4	21	0.00	
20	101	90	80	80	74	66	95	62	33	29.93	29.86	29.80	10	10	7	17	8	25	0.00	
21	102	90	77	79	74	68	96	64	33	30.01	29.94	29.89	10	10	10	17	7	23	0.00	

22	103	90	77	76	74	69	94	62	34	30.04	29.97	29.86	10	10	7	12	6	-	0.00
23	109	94	79	74	71	65	85	54	26	29.93	29.86	29.77	10	10	10	14	2	22	0.00
24	108	94	79	77	71	63	86	53	24	29.90	29.85	29.76	10	10	10	17	4	26	0.00
25	100	90	80	77	69	62	86	54	30	30.04	29.99	29.93	10	10	10	15	7	21	0.00
26	100	90	79	72	67	62	76	50	29	30.09	30.04	29.96	10	10	10	12	5	16	0.00
27	99	84	69	64	57	48	83	42	17	30.04	29.98	29.88	10	10	10	13	5	21	0.00
28	101	84	68	65	61	54	82	49	25	29.94	29.89	29.79	10	10	10	8	1	-	0.00
29	100	88	77	77	74	66	92	65	33	29.95	29.89	29.85	10	10	10	15	5	29	0.00
30	99	90	81	81	77	72	93	73	42	30.06	30.00	29.94	10	10	10	14	7	22	0.00
31	101	90	80	80	76	68	96	70	33	30.05	30.00	29.91	10	10	7	12	5	17	0.00

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Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: Nick Carmean ; Justin Grimm	
Date & Time: 30JUN10 1000	County Name: Robertson
Stream Name: Spring 16394	
Segment No. or nearest downstream Segment No.: 1242 M	
Description of Site: Spring Creek @ Hwy 6 Upstream	

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

A. Stream Characteristics:

1. Check the following channel flow status that applies.

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

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

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

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

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

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

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

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. 1.7 cfs

4. Water Quality Data (Field Parameters)

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

Air Temp 26.4 °C Water Temp 24.2 °C

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

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

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

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

0122 Park N Bound side of lo, Access on S side of bridge walk down skirt + under bridge

8. Dominant Primary Substrate

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

Field Data Sheets – Basic RUAA Survey

Stream Name Spring 16394 Site: 16394
Date: 30Jun10 Time: 1005

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

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

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

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

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

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
Depth <0.5m, barbed wire fence just upstream of bridge.

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

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 Spring 16394 Site: 16394
Date: 30 Jun 18 Time: 1005

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

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

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
<0.5m depth, barbed wire just upstream of bridge.

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

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

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

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).
No true path to stream. No pull off area for vehicles.

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.
No evidence of recreation activities, much too shallow for swimming / fishing. Private property upstream + down from bridge.

Field Data Sheets – Basic RUAA Survey

Stream Name Spring 16394 Site: 16394
Date: 30 Jun 10 FDS Page 3 of 8 1030

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

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

Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters.
Photos #s (30 meters) Upstream 0123 Downstream 0124 Left Bank 0125 Right Bank 0126
Photos #s (150 meters) Upstream 0130 Downstream 0131 Left Bank 0132 Right Bank 0133
Photos #s (300 meters) Upstream 0135 Downstream 0136 Left Bank 0137 Right Bank 0138

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	46	8	1.05
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	0.45
60 meters	0.32
90 meters	0.16
120 meters	0.18
150 meters	0.48
180 meters	0.44
210 meters	0.78
240 meters	0.45
270 meters	0.54
300 meters	0.39
Average	0.42

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

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

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	4
Width at narrowest point of the stream within 300 meter reach	0.5
Width at the widest point of the stream within 300 meter reach	8

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

COMMENTS:
pool channelized

2. Non-wadeable Streams

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

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

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

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

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

0127

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

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

0122
0127

☐ 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: RR Crossing
☐ None of the Above

Comments:_____

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

0127

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

Comments:_____

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

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

Comments:_____

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

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

0139
0140

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

0128
0129

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

0134

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: Small household trash and fast food waste

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).
none

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream:_____ Date:_____

Site:_____ Site

Description:_____

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

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

Observations:_____

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

: Thu Jul 1 2010

16394-30JUN10.WAD
2010/06/30 10:11:41

JG

FlowTracker	**(English Units)**
P879	ft
3.7	ft/s
2.30	ft^2
0.0%	cfs

Accuracy	1.0%	1.0%
Depth	0.5%	1.3%
Velocity	2.2%	5.6%
Width	0.2%	0.2%
Method	2.5%	-
# Stations	3.9%	-
Overall	**5.3%**	**5.8%**

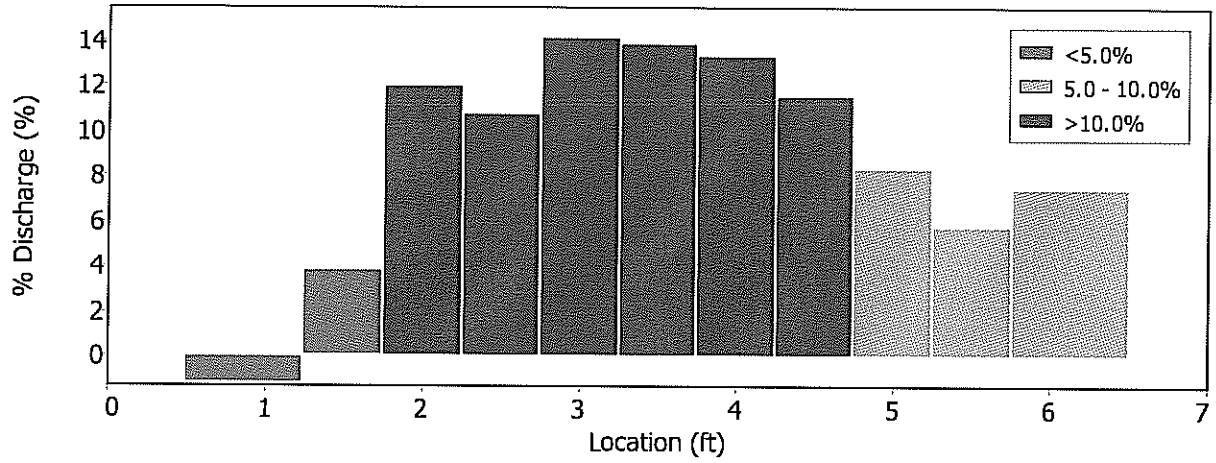
20	13
LEW	7.000
9.2 dB	2.562
14.00 °F	0.366
Mid-Section	0.6660
	1.7065

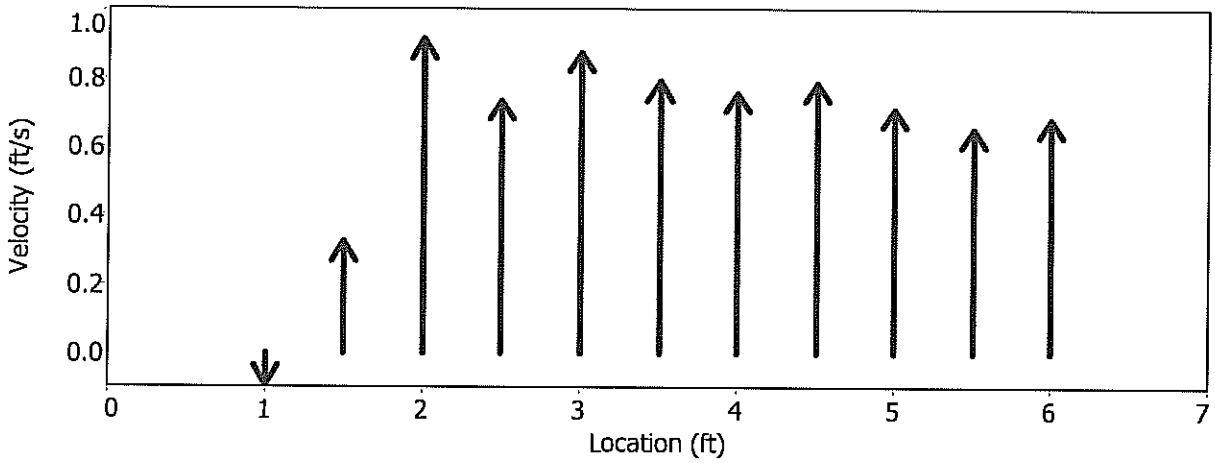
				Depth								
0	10:11	0.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
1	*10:12*	*1.00*	*0.6*	*0.300*	*0.6*	*0.120*	*-0.0932*	*1.00*	*-0.0932*	*0.225*	*-0.0210*	*-1.2*
2	*10:13*	*1.50*	*0.6*	*0.400*	*0.6*	*0.160*	*0.3258*	*1.00*	*0.3258*	*0.200*	*0.0651*	*3.8*
3	*10:16*	*2.00*	*0.6*	*0.450*	*0.6*	*0.180*	*0.9150*	*1.00*	*0.9150*	*0.225*	*0.2059*	*12.1*
4	10:16	2.50	0.6	0.500	0.6	0.200	0.7356	1.00	0.7356	0.250	0.1839	10.8
5	10:17	3.00	0.6	0.550	0.6	0.220	0.8770	1.00	0.8770	0.275	0.2411	14.1
6	*10:17*	*3.50*	*0.6*	*0.600*	*0.6*	*0.240*	*0.7927*	*1.00*	*0.7927*	*0.300*	*0.2378*	*13.9*
7	10:18	4.00	0.6	0.600	0.6	0.240	0.7585	1.00	0.7585	0.300	0.2276	13.3
8	10:19	4.50	0.6	0.500	0.6	0.200	0.7884	1.00	0.7884	0.250	0.1971	11.5
9	10:19	5.00	0.6	0.400	0.6	0.160	0.7119	1.00	0.7119	0.200	0.1424	8.3
10	10:20	5.50	0.6	0.300	0.6	0.120	0.6558	1.00	0.6558	0.150	0.0983	5.8
11	10:20	6.00	0.6	0.250	0.6	0.100	0.6837	1.00	0.6837	0.188	0.1282	7.5
12	10:20	7.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0

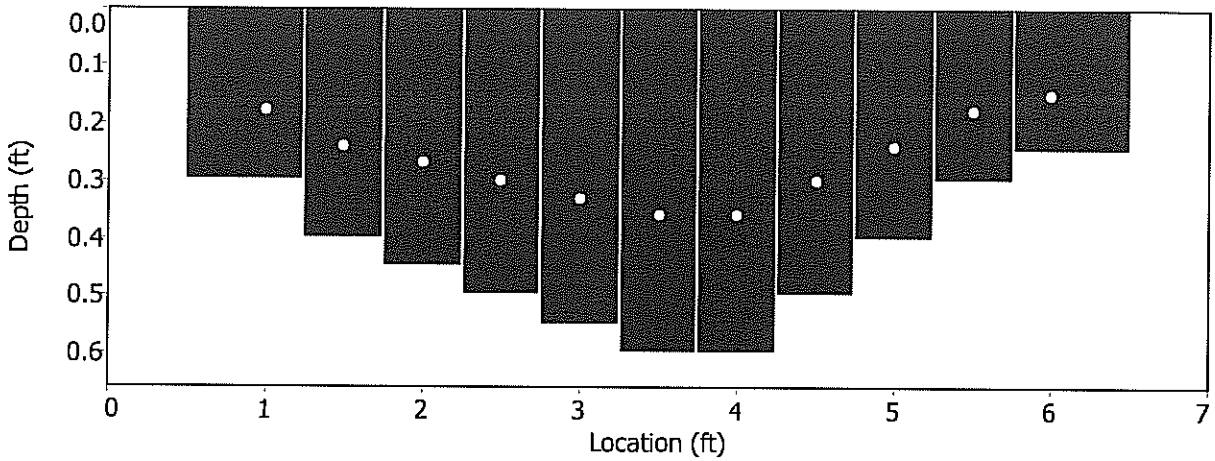
: Thu Jul 1 2010

16394-30JUN10.WAD
2010/06/30 10:11:41

JG







: Thu Jul 1 2010

16394-30JUN10.WAD
2010/06/30 10:11:41

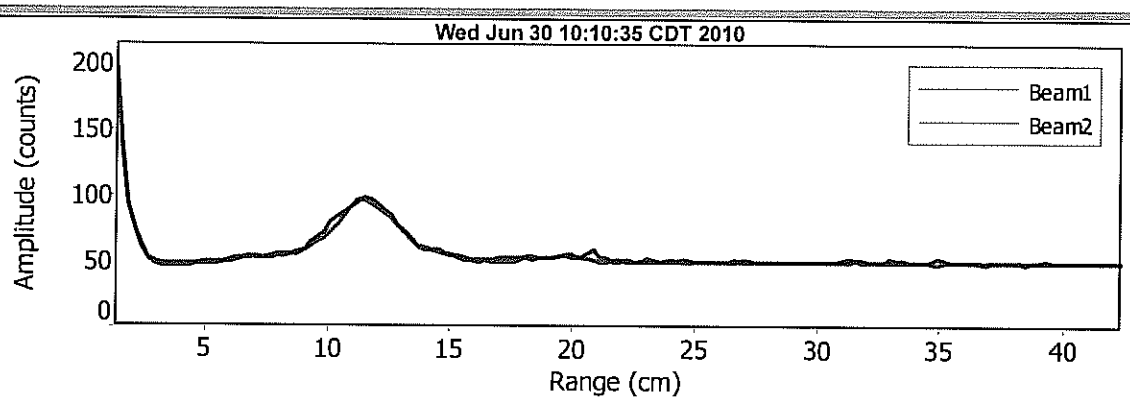
JG

1	1.00	0.6	High angle: 147
		0.6	SNR (20.8) is different from typical SNR (9.2)
		0.6	High standard error: 0.128
		0.6	Boundary QC is Fair; possible boundary interference
2	1.50	0.6	High standard error: 0.085
3	2.00	0.6	Boundary QC is Good; possible boundary interference
6	3.50	0.6	Boundary QC is Good; possible boundary interference

: Thu Jul 1 2010

16394-30JUN10.WAD
2010/06/30 10:11:41

JG



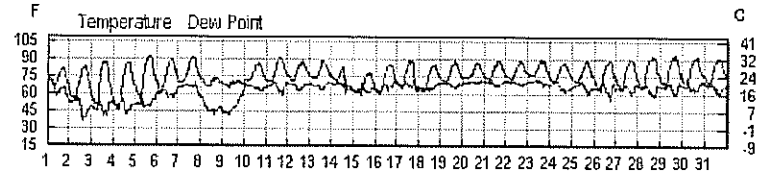
Noise level check - Pass
SNR check - Pass
Peak location check - Pass
Peak shape check - Pass

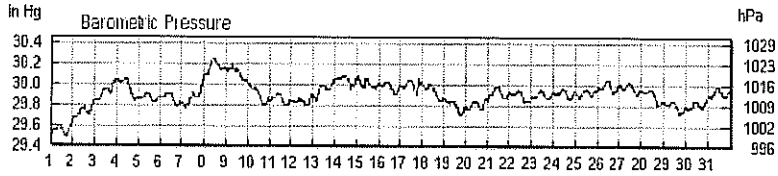
History for Hearne, TX

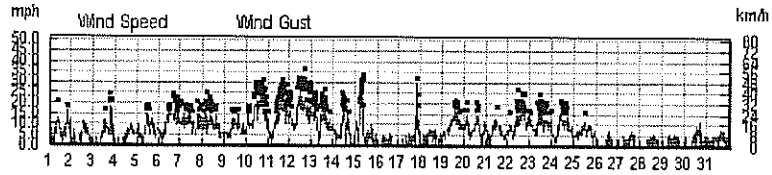
Month of May, 2010

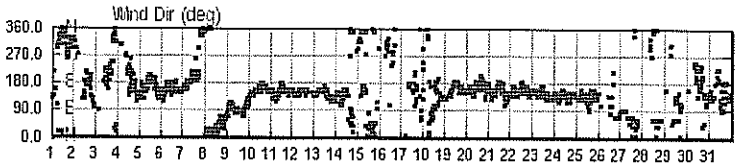
Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	94 °F	88 °F	71 °F	
Mean Temperature	83 °F	77 °F	67 °F	
Min Temperature	76 °F	66 °F	47 °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	18	12	2	374
Growing Degree Days (base 50)	33	27	17	835
Dew Point:				
Dew Point	73 °F	63 °F	38 °F	
Precipitation:				
Precipitation	1.67 in	0.08 in	0.00 in	2.52 in
Snowdepth	-	-	-	-
Wind:				
Wind	29 mph	6 mph	0 mph	
Gust Wind	41 mph	20 mph	10 mph	
Sea Level Pressure:				
Sea Level Pressure	30.26 in	29.91 in	29.48 in	









Monthly Calendar Overview

« Previous Month | « 2009 | May 2010 | 2011 » | Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1 Actual: 82 | 67 Precip: 0.00

Average: - | -
Precip: -

2	3	4	5	6	7	8
Actual: 83 | 55	Actual: 88 | 49	Actual: 87 | 47	Actual: 93 | 54	Actual: 91 | 62	Actual: 92 | 69	Actual: 74 | 67
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
9	10	11	12	13	14	15
Actual: 71 | 66	Actual: 88 | 69	Actual: 92 | 71	Actual: 89 | 71	Actual: 89 | 73	Actual: 83 | 65	Actual: 79 | 63
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 1.67	Precip: 0.38
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
16	17	18	19	20	21	22
Actual: 86 | 62	Actual: 89 | 66	Actual: 86 | 64	Actual: 88 | 71	Actual: 88 | 74	Actual: 90 | 72	Actual: 90 | 73
Precip: 0.00	Precip: 0.47	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
23	24	25	26	27	28	29
Actual: 90 | 76	Actual: 88 | 72	Actual: 89 | 71	Actual: 89 | 65	Actual: 91 | 66	Actual: 93 | 68	Actual: 94 | 68
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
30	31					
Actual: 93 | 70	Actual: 92 | 70					
Precip: 0.00	Precip: 0.00					
Average: - | -	Average: - | -					
Precip: -	Precip: -					

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear, Mostly Cloudy Partly Sunny, Partly Cloudy Mostly Sunny, Cloudy, Rain, Snow, Hail Flurries, Thunderstorms, Hazy Fog, Sleet, '?' denotes 'chance of', Unknown

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

Data Category, Condition, High Temp., Lo Temp., Precip. (in inches), Daily Avg. Temp., Temps in °F
-60 -30 0 30 60 90 120

Print This Calendar

Daily Observations

	2010 Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
May	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	82	74	67	72	65	56	96	73	54	29.60	29.55	29.48	10	8	2	16	6	21	0.00	
2	83	69	55	56	49	38	92	57	20	29.78	29.72	29.64	10	10	10	12	3	16	0.00	Rain
3	88	68	49	54	48	42	90	54	20	30.03	29.92	29.84	10	9	5	18	3	25	0.00	Rain
4	87	67	47	57	49	42	98	59	22	30.06	29.98	29.85	10	9	1	9	2	-	0.00	
5	93	74	54	56	51	48	87	47	22	29.92	29.87	29.83	10	10	10	15	7	20	0.00	
6	91	76	62	64	61	57	94	64	34	29.91	29.86	29.78	10	10	7	16	8	24	0.00	
7	92	80	69	70	67	65	89	67	42	29.92	29.85	29.77	10	9	7	15	11	21	0.00	
8	74	70	67	58	49	43	60	47	35	30.26	30.17	30.09	10	10	10	15	10	25	0.00	
9	71	68	66	57	47	43	61	46	40	30.20	30.13	30.05	10	10	10	15	7	17	0.00	
10	88	78	69	68	66	64	88	68	45	30.01	29.91	29.79	10	10	7	23	12	31	0.00	
11	92	82	71	70	66	59	90	64	37	29.92	29.86	29.79	10	9	5	23	11	31	0.00	
12	89	80	71	70	67	64	89	67	46	29.90	29.84	29.79	10	9	7	24	14	37	0.00	

13	89	81	73	70	68	64	82	67	43	30.02	29.94	29.84	10	10	7	20	13	30	0.00	
14	83	74	65	70	68	63	96	84	56	30.10	30.05	29.96	10	7	1	18	7	32	1.67	Rain , Thunderstorm
15	79	71	63	66	64	59	96	81	55	30.09	30.01	29.96	10	6	4	25	8	33	0.38	Rain , Thunderstorm
16	86	74	62	68	65	61	98	78	46	30.03	29.98	29.90	10	5	2	6	1	-	0.00	
17	89	78	66	73	68	63	100	79	47	30.06	29.99	29.91	10	7	1	29	2	41	0.47	Rain , Thunderstorm
18	86	75	64	69	65	63	96	75	51	30.02	29.96	29.85	10	7	5	8	3	-	0.00	
19	88	80	71	71	69	66	95	73	47	29.88	29.81	29.71	7	5	4	17	8	22	0.00	
20	88	81	74	72	71	70	89	76	55	29.85	29.80	29.76	7	6	4	14	9	21	0.00	Rain
21	90	81	72	72	70	67	95	71	48	29.98	29.92	29.85	10	6	4	13	7	18	0.00	
22	90	82	73	72	70	68	93	73	49	29.95	29.90	29.83	7	6	4	17	9	26	0.00	
23	90	83	76	73	71	68	86	69	51	29.95	29.90	29.87	10	6	4	16	10	24	0.00	Rain
24	88	80	72	72	68	61	94	69	42	29.97	29.92	29.86	7	5	3	16	8	22	0.00	
25	89	80	71	71	67	61	93	70	39	29.97	29.93	29.87	10	6	3	12	6	18	0.00	
26	89	77	65	71	65	55	96	68	31	30.05	29.98	29.92	10	7	4	7	1	-	0.00	
27	91	78	66	70	66	60	94	67	35	30.03	29.97	29.90	10	6	4	7	1	-	0.00	
28	93	80	68	69	65	59	93	62	32	29.96	29.90	29.81	10	6	3	6	1	-	0.00	
29	94	81	68	70	66	60	92	64	32	29.84	29.80	29.72	10	7	4	6	1	-	0.00	
30	93	82	70	72	67	63	91	65	38	29.85	29.81	29.77	10	9	5	12	2	-	0.00	Thunderstorm
31	92	81	70	71	67	62	94	65	36	29.98	29.92	29.88	10	9	4	8	3	-	0.00	

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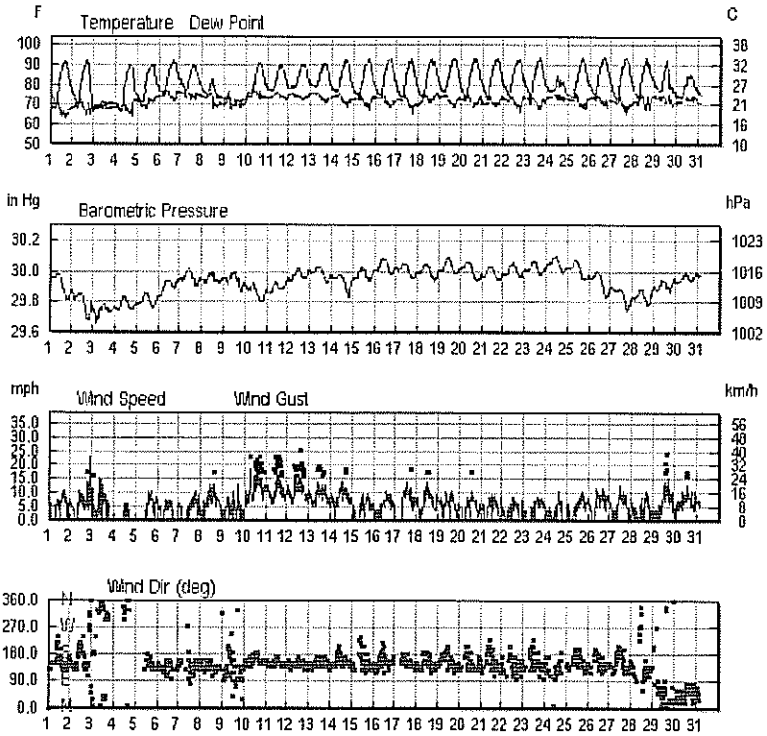
History for Hearne, TX

Month of June, 2010

Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	94 °F	90 °F	71 °F	
Mean Temperature	85 °F	82 °F	70 °F	
Min Temperature	78 °F	74 °F	67 °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	20	17	4	505
Growing Degree Days (base 50)	35	32	20	959
Dew Point:				
Dew Point	77 °F	72 °F	63 °F	
Precipitation:				
Precipitation	2.90 in	0.14 in	0.00 in	4.22 in
Snowdepth	-	-	-	-
Wind:				
Wind	23 mph	5 mph	0 mph	
Gust Wind	29 mph	18 mph	12 mph	
Sea Level Pressure:				
Sea Level Pressure	30.10 in	29.93 in	29.66 in	



Monthly Calendar Overview

« Previous Month « 2009 **June 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4	5
		Actual: 91 | 69	Actual: 92 | 69	Actual: 71 | 68	Actual: 89 | 67	Actual: 90 | 71
		Precip: 0.00	Precip: 0.47	Precip: 0.80	Precip: 0.00	Precip: 0.00
		Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -

		Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
6	7	8	9	10	11	12
Actual: 92 | 76	Actual: 90 | 76	Actual: 83 | 73	Actual: 77 | 70	Actual: 91 | 73	Actual: 90 | 77	Actual: 91 | 78
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 2.90	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
13	14	15	16	17	18	19
Actual: 91 | 78	Actual: 93 | 77	Actual: 93 | 74	Actual: 93 | 75	Actual: 93 | 74	Actual: 93 | 74	Actual: 93 | 76
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
20	21	22	23	24	25	26
Actual: 93 | 74	Actual: 93 | 73	Actual: 93 | 74	Actual: 93 | 73	Actual: 84 | 76	Actual: 94 | 74	Actual: 94 | 74
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.05	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
27	28	29	30			
Actual: 94 | 73	Actual: 93 | 72	Actual: 93 | 77	Actual: 85 | 73			
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00			
Average: - | -	Average: - | -	Average: - | -	Average: - | -			
Precip: -	Precip: -	Precip: -	Precip: -			

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear · Mostly Cloudy Partly Sunny · Partly Cloudy Mostly Sunny · Cloudy · Rain · Snow · Hail Flurries · Thunderstorms · Hazy Fog · Sleet · '?' denotes chance of · Unknown

Print This Calendar

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

Data Category · Condition · High Temp. · Lo Temp. · Precip. (in inches) · Daily Avg. Temp. · Temps in °F · -80 -30 0 30 60 90 120

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
June	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	91	80	69	71	67	63	94	64	39	29.99	29.92	29.81	10	10	5	10	3	16	0.00	
2	92	81	69	73	69	65	95	69	41	29.87	29.79	29.68	10	8	2	23	5	29	0.47	Rain , Thunderstorm
3	71	70	68	70	69	67	96	94	89	29.78	29.74	29.66	10	7	2	15	5	23	0.60	Rain , Thunderstorm
4	89	78	67	71	68	64	97	74	44	29.84	29.78	29.74	10	6	0	6	0	-	0.00	Fog
5	90	80	71	73	71	68	95	74	54	29.86	29.80	29.76	10	8	4	10	2	-	0.00	
6	92	84	76	77	75	72	95	76	52	29.93	29.89	29.83	7	4	2	7	4	-	0.00	
7	90	83	76	76	75	72	92	77	57	30.02	29.96	29.90	7	4	3	10	4	-	0.00	
8	83	78	73	76	73	68	94	86	63	30.00	29.95	29.92	10	7	5	13	5	18	0.00	Rain
9	77	74	70	74	70	68	96	94	91	30.00	29.94	29.86	10	6	1	13	3	17	2.90	Rain , Thunderstorm
10	91	82	73	77	75	71	96	80	54	29.92	29.87	29.80	7	4	3	18	8	24	0.00	Rain
11	90	84	77	77	74	72	91	76	59	29.93	29.89	29.85	7	5	3	17	10	23	0.00	
12	91	84	78	76	75	73	91	75	56	30.02	29.97	29.93	10	5	4	16	10	25	0.00	Rain
13	91	84	78	76	75	71	91	73	53	30.03	30.00	29.92	7	5	3	14	9	20	0.00	
14	93	85	77	76	73	68	93	72	46	29.98	29.94	29.83	7	5	3	14	8	21	0.00	Rain
15	93	84	74	75	72	67	96	72	42	30.03	29.98	29.93	7	5	2	9	4	-	0.00	
16	93	84	75	76	73	68	95	71	44	30.09	30.03	29.98	10	7	2	10	4	-	0.00	
17	93	84	74	76	72	66	95	72	44	30.05	30.02	29.96	10	6	0	14	4	18	0.00	Fog

18	93	84	74	76	73	70	93	71	49	30.05	30.00	29.93	10	10	7	14	6	18	0.00	
19	93	84	76	75	73	69	93	71	44	30.09	30.03	29.99	10	9	7	10	6	-	0.00	
20	93	84	74	75	72	69	94	69	45	30.06	30.01	29.93	10	10	7	10	4	17	0.00	
21	93	83	73	74	71	70	92	69	47	30.04	29.99	29.94	10	10	10	9	4	-	0.00	
22	93	84	74	75	72	67	92	67	42	30.06	30.00	29.97	10	10	10	8	3	-	0.00	
23	93	83	73	74	72	68	94	69	43	30.07	30.02	29.98	10	10	7	8	3	-	0.00	
24	84	80	76	76	74	72	91	83	68	30.10	30.05	29.99	10	10	5	10	3	-	0.05	Rain
25	94	84	74	76	72	68	95	71	44	30.08	30.01	29.94	10	10	5	10	3	16	0.00	
26	94	84	74	75	73	69	95	69	46	30.01	29.94	29.83	10	10	5	12	6	17	0.00	
27	94	84	73	74	71	66	94	67	39	29.90	29.84	29.74	10	10	7	13	5	-	0.00	
28	93	82	72	76	72	68	94	70	43	29.88	29.83	29.78	10	8	5	10	4	17	0.00	
29	93	85	77	75	73	70	91	78	49	29.94	29.90	29.86	10	7	4	15	4	24	0.00	Rain , Thunderstorm
30	85	79	73	74	73	71	92	81	66	29.99	29.95	29.92	7	6	4	13	5	17	0.00	Rain

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Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: Matt Baack Jeremy Nickolai	
Date & Time: 21May10 1015	County Name: Robertson
Stream Name: ~~Big Oak~~ Spring Creek MT 24May10	
Segment No. or nearest downstream Segment No.: 1242M	
Description of Site: 20564 Downstream from Jack Rabbit Lane	

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

A. Stream Characteristics:

1. Check the following channel flow status that applies.

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

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

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

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

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

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

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

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. 1.4 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 ~~23~~ 29.5 °C Water Temp 24.0 °C ~~75.2 F~~

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
R Shrub dominated corridor	L 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 with dense brush and vines

8. Dominant Primary Substrate

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

Stream Name_____ Site: _____
Date: _____ Time: _____

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

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

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

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

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

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
Very shallow and/or dry most of the year

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

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

Date: _____ Time: _____

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

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

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
Site is on private property with fence. Water is shallow or dry most of the year.

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

4. If infrequently, what is the reason? ☐ physical characteristics of the water body ☐ limited public access ☐ other n/a
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 or dry most of the year.

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 fence with dense vegetation

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.
none

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 715 Downstream 716 Left Bank 717 Right Bank 718

Photos #s (150 meters) Upstream 721 Downstream 722 Left Bank 723 Right Bank 724

Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

no photo available

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	8	1.2
Pool 2	10	4	1.3
Pool 3	16	5	1.2
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	0.15
60 meters	0.15
90 meters	0.25
120 meters	0.35
150 meters	0.23
180 meters	0.28
210 meters	0.30
240 meters	0.28
270 meters	0.5
300 meters	0.20
Average	0.27

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

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

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	2.5
Width at narrowest point of the stream within 300 meter reach	1.5
Width at the widest point of the stream within 300 meter reach	8.0

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

_____
_____

2. Non-wadeable Streams
If accessible, take 10 width measurements which represent typical widths of the 300 meter reach. If the water is too deep and not accessible record the estimated average width of the water body.

Also, take photos facing upstream, downstream, left bank, and right bank at .
Photos #s (30 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (150 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

# Measurements	Width (meters)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

☐ Drinking or water in mouth
☐ Bathing
☐ Walking
☐ Jogging/running
☐ Bicycling
☐ Standing
☐ Sitting
☐ Lying down/sleeping
☐ Playing on shoreline
☐ Picnicking
☐ Motorcycle/ATV
☐ Hunting/Trapping
☐ Wildlife watching
☑ None
☐ Other: _____

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☐ Yes ☑ No (If yes, please provide supporting documentation and photos.)
Comments: _____

3. Check any channel obstructions that apply (Attach photos).

☑ Culverts
☑ Barbed wire
☐ Utility pipe
☑ Fences
☐ Dams
☐ Other (specify):_____
☐ Log jams
☑ Thick vegetation
☐ Rip rap
☐ Low bridges
☐ Water control structure
☐ None

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest).

☐ Campgrounds
☐ Playgrounds
☐ Rural area
☐ Residential
☐ National forests
☐ Urban/suburban location
☐ Golf Course
☐ Sports Field
☐ Stairs/walkway
☐ Boating access (ramps)
☐ Beach
☐ Bridge crossing
☐ Commercial boating
☐ Trails/paths (hiking/biking)
☐ Paved parking lot
☐ Unimproved parking lot
☐ Roads (paved/unpaved)
☐ Populated area
☐ Docks or rafts
☐ Commercial outfitter
☐ Nearby school
☐ Power Line Corridor
☐ Parks (national/city/county/state)
☐ Public Property
☐ Other:_____
☑ None of the Above

Comments:_____

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).

☑ Private Property
☐ No trespass sign
☐ Wildlife
☐ Steep slopes
☑ No public access
☐ No roads
☑ Fence
☐ Barge/ship traffic
☐ Industrial
☐ None of the Above
☐ Other:_____

Comments:_____

6. Check any indications of human use (Attach photos).

☐ Roads
☐ Rope swings
☐ Dock/platform
☐ Foot paths/prints
☐ Other: _____
☐ RV/ATV Tracks
☐ Camping Sites
☐ Fire pit/ring
☐ Fishing Tackle
☐ NPDES Discharge
☐ Gates on corridor
☐ Children's toys
☐ Remnant's of Kid's play
☐ Organized event
☑ No Human Presence

Comments:_____

Stream Name_____ Site: _____
Date: _____ Time: _____

7. Check all water characteristics that apply (Attach photos).

Aquatic Vegetation: ☐ absent ☐ rare ☑ common ☐ abundant
Algae Cover: ☐ absent ☑ rare ☐ common ☐ abundant
Odor: ☑ none ☐ rare ☐ common ☐ abundant
Color: ☐ clear ☐ green ☐ red ☑ brown ☐ black
Bottom Deposit: ☐ sludge ☐ solids ☑ fine sediments ☐ none ☐ other
Water Surface: ☑ clear ☐ scum ☐ foam ☐ debris ☐ oil
Other:

8. Vertebrates Observed within 300 meter reach

Snakes	☑ None	☐ slight presence	☐ moderate presence	☐ large presence
Water Dependent Birds	☑ None	☐ slight presence	☐ moderate presence	☐ large presence
Alligators	☑ None	☐ slight presence	☐ moderate presence	☐ large presence

Comments: _____

9. Mammals Observed within 300 meter reach

Wild	☑ None	☐ slight presence	☐ moderate presence	☐ large presence
Domesticated Pets	☑ None	☐ slight presence	☐ moderate presence	☐ large presence
Livestock	☑ None	☐ slight presence	☐ moderate presence	☐ large presence
Feral Hogs	☑ None	☐ slight presence	☐ moderate presence	☐ large presence

Comments: _____

10. Evidence of wild animals or evidence of birds, cattle, hogs, etc.
☐ Tracks ☐ Fecal droppings ☐ Bird nests N/A

11. Garbage Observed

Large garbage in the channel	☐ None	☑ Rare	☐ Common	☐ Abundant
Small garbage in the channel	☐ None	☑ Rare	☐ Common	☐ Abundant
Bank Garbage	☐ None	☑ Rare	☐ Common	☐ Abundant

Briefly describe the kinds of garbage observed: Buckets dumped near culvert.

12. Is the site located in a wildlife preserve with large wildlife (i.e waterfowl) population? ☐ Yes ☑ No

13. Please document any other relevant information regarding recreational activities and the water body in general (for example, area outside of the stream reach evaluated).

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream:_____ Date:_____

Site:_____ Site

Description:_____

Time Begin:_____ Time End:_____ Meter Type:_____

Observers:_____ Stream Width*:_____ Section Width (W):_____

Observations:_____

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V)		Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
			At Point (ft/s)(m/s)	Average (ft/s)(m/s)	

: Mon May 24 2010

20564-21MAY10.WAD 2010/05/21 10:19:49	20561 JN

FlowTracker P879 3.7 2.30 0.0%	**(English Units)** ft ft/s ft^2 cfs

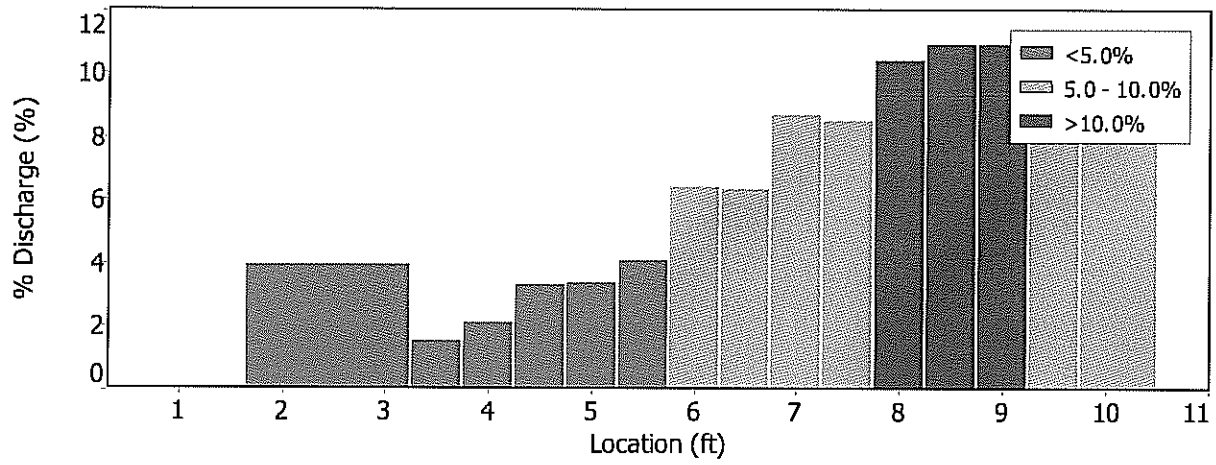
20	17
LEW	10.700
27.7 dB	4.230
75.17 °F	0.395
Mid-Section	0.3367
	1.4243

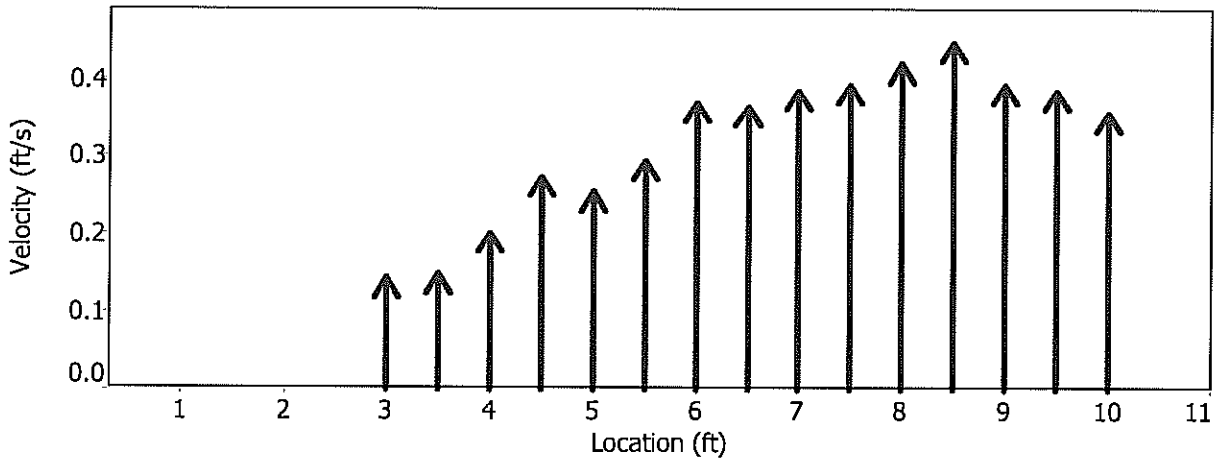
Accuracy	1.0%	1.0%
Depth	0.4%	2.3%
Velocity	0.5%	1.6%
Width	0.1%	0.1%
Method	2.2%	-
# Stations	3.0%	-
Overall	**3.8%**	**3.0%**

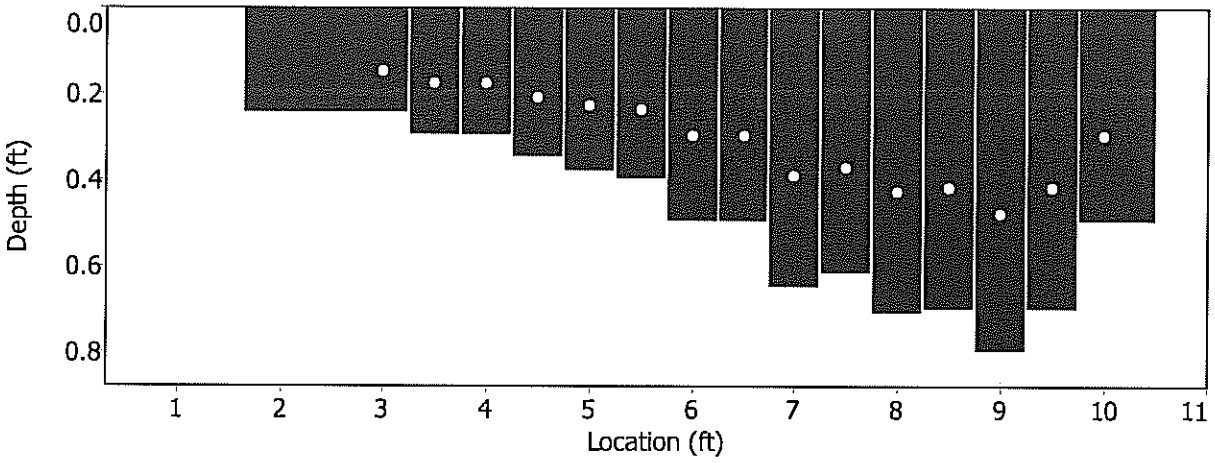
				Depth								
0	10:19	0.30	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
1	10:19	3.00	0.6	0.250	0.6	0.100	0.1427	1.00	0.1427	0.400	0.0571	4.0
2	10:20	3.50	0.6	0.300	0.6	0.120	0.1483	1.00	0.1483	0.150	0.0222	1.6
3	10:21	4.00	0.6	0.300	0.6	0.120	0.2008	1.00	0.2008	0.150	0.0301	2.1
4	10:22	4.50	0.6	0.350	0.6	0.140	0.2730	1.00	0.2730	0.175	0.0478	3.4
5	10:22	5.00	0.6	0.380	0.6	0.152	0.2546	1.00	0.2546	0.190	0.0484	3.4
6	10:23	5.50	0.6	0.400	0.6	0.160	0.2936	1.00	0.2936	0.200	0.0587	4.1
7	10:24	6.00	0.6	0.500	0.6	0.200	0.3691	1.00	0.3691	0.250	0.0923	6.5
8	10:24	6.50	0.6	0.500	0.6	0.200	0.3642	1.00	0.3642	0.250	0.0910	6.4
9	10:25	7.00	0.6	0.650	0.6	0.260	0.3848	1.00	0.3848	0.325	0.1251	8.8
10	10:26	7.50	0.6	0.620	0.6	0.248	0.3924	1.00	0.3924	0.310	0.1217	8.5
11	10:27	8.00	0.6	0.710	0.6	0.284	0.4199	1.00	0.4199	0.355	0.1491	10.5
12	10:27	8.50	0.6	0.700	0.6	0.280	0.4465	1.00	0.4465	0.350	0.1563	11.0
13	10:28	9.00	0.6	0.800	0.6	0.320	0.3917	1.00	0.3917	0.400	0.1567	11.0
14	10:29	9.50	0.6	0.700	0.6	0.280	0.3845	1.00	0.3845	0.350	0.1346	9.5
15	10:30	10.00	0.6	0.500	0.6	0.200	0.3556	1.00	0.3556	0.375	0.1334	9.4
16	10:30	11.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0

: Mon May 24 2010

20564-21MAY10.WAD 2010/05/21 10:19:49	20561 JN







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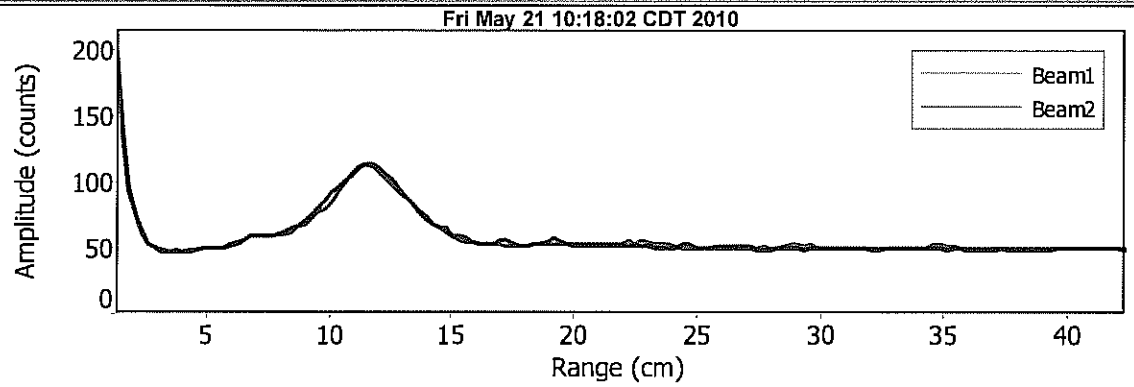


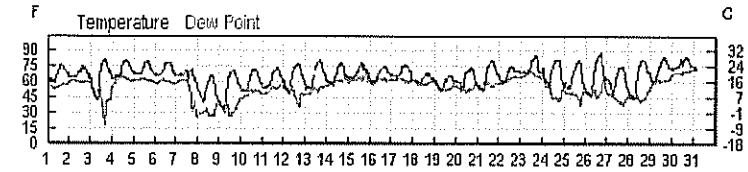
- Noise level check - Pass
- SNR check - Pass
- Peak location check - Pass
- Peak shape check - Pass

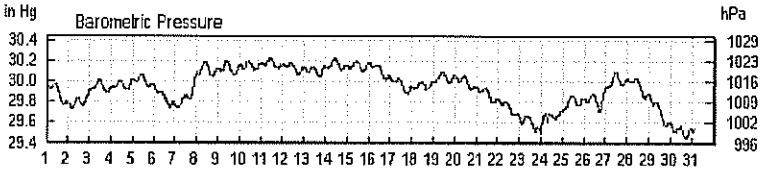
History for Hearne, TX

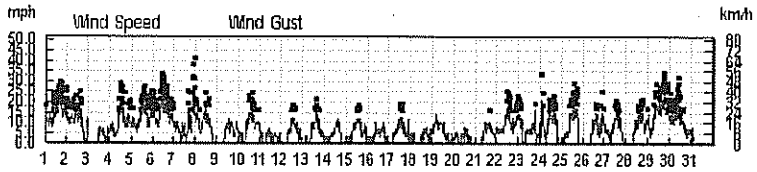
Month of April, 2010

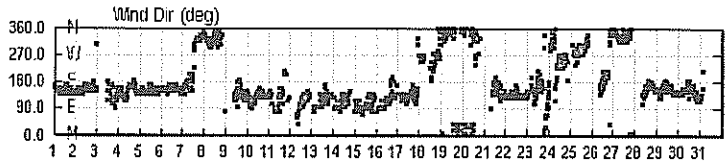
Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	88 °F	77 °F	65 °F	
Mean Temperature	78 °F	66 °F	52 °F	
Min Temperature	72 °F	56 °F	32 °F	
Degree Days:				
Heating Degree Days (base 65)	14	2	0	52
Cooling Degree Days (base 65)	13	3	0	89
Growing Degree Days (base 50)	28	16	2	494
Dew Point:				
Dew Point	72 °F	54 °F	17 °F	
Precipitation:				
Precipitation	0.08 in	0.01 in	0.00 in	0.32 in
Snowdepth	-	-	-	-
Wind:				
Wind	26 mph	6 mph	0 mph	
Gust Wind	34 mph	20 mph	14 mph	
Sea Level Pressure:				
Sea Level Pressure	30.24 in	29.94 in	29.46 in	









Monthly Calendar Overview

« Previous Month « 2009 April 2010 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
				Actual: 76 | 59	Actual: 74 | 64	Actual: 81 | 43
				Precip: 0.00	Precip: 0.00	Precip: 0.00
				Average: - | -	Average: - | -	Average: - | -

				Precip: -	Precip: -	Precip: -
4	5	6	7	8	9	10
Actual: 81 | 62	Actual: 79 | 67	Actual: 79 | 65	Actual: 72 | 62	Actual: 65 | 41	Actual: 71 | 32	Actual: 72 | 50
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.02	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
11	12	13	14	15	16	17
Actual: 73 | 53	Actual: 77 | 50	Actual: 80 | 52	Actual: 78 | 57	Actual: 78 | 83	Actual: 74 | 59	Actual: 77 | 65
Precip: 0.00	Precip: 0.00	Precip: 0.03	Precip: 0.01	Precip: 0.03	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
18	19	20	21	22	23	24
Actual: 68 | 59	Actual: 66 | 52	Actual: 73 | 52	Actual: 81 | 52	Actual: 75 | 60	Actual: 86 | 68	Actual: 82 | 57
Precip: 0.03	Precip: 0.08	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.06	Precip: 0.01
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
25	26	27	28	29	30	
Actual: 81 | 54	Actual: 88 | 47	Actual: 75 | 49	Actual: 81 | 45	Actual: 84 | 59	Actual: 84 | 72	
Precip: 0.00	Precip: 0.05	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear · Mostly Cloudy Partly Sunny · Partly Cloudy Mostly Sunny · Cloudy · Rain · Snow · Hail Flurries · Thunderstorms · Hazy Fog · Sleet · '?' denotes 'chance of' · Unknown

Print This Calendar

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

Data Category · Condition · High Temp. · Lo Temp. · Precip. (in inches) · Daily Avg. Temp. · Temps in °F (-60 -30 0 30 60 90 120)

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
April	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	76	68	59	58	56	53	81	66	51	20.98	29.90	29.77	10	10	10	23	13	30	0.00	
2	74	69	64	62	60	58	91	76	58	20.85	29.79	29.73	10	8	3	21	12	25	0.00	
3	81	62	43	61	42	17	94	57	9	30.02	29.95	20.89	10	7	0	8	1	-	0.00	Fog , Rain
4	81	72	62	66	62	56	02	74	52	30.01	29.96	29.92	10	7	2	21	8	29	0.00	
5	79	73	67	63	62	60	83	71	52	30.07	30.02	29.95	10	9	7	20	11	28	0.00	
6	79	72	65	62	60	57	83	68	50	29.98	29.86	29.75	10	9	7	26	15	33	0.00	
7	72	67	62	62	56	32	85	69	24	29.87	29.82	29.74	10	7	4	16	8	25	0.02	Rain
8	65	53	41	38	30	25	71	42	23	30.19	30.11	30.05	10	10	10	18	11	26	0.00	
9	71	52	32	39	33	27	92	56	21	30.20	30.13	30.07	10	10	10	12	3	20	0.00	
10	72	61	50	52	49	44	85	66	46	30.20	30.15	30.11	10	10	10	15	6	24	0.00	
11	73	63	53	58	52	48	83	70	50	30.23	30.18	30.13	10	9	4	9	4	-	0.00	
12	77	64	50	56	48	36	02	61	23	30.18	30.14	30.07	10	8	2	13	3	18	0.00	
13	80	66	52	56	51	47	88	62	35	30.14	30.10	30.05	10	10	7	16	3	22	0.03	
14	78	68	57	66	60	56	96	80	55	30.24	30.16	30.11	10	8	5	12	3	17	0.01	
15	78	70	63	67	63	59	94	80	58	30.20	30.15	30.10	10	9	7	12	4	18	0.03	Rain
16	74	66	59	64	61	57	93	80	60	30.18	30.12	30.02	10	8	4	10	3	16	0.00	
17	77	71	65	64	62	59	90	76	55	30.05	29.98	29.88	10	8	4	13	4	20	0.00	
18	68	64	59	62	59	57	96	86	70	30.00	29.96	29.93	10	10	7	8	2	-	0.03	Rain , Thunderstorm
19	66	59	52	61	54	51	97	82	62	30.10	30.04	29.99	10	6	3	14	7	20	0.08	Rain

20	73	62	52	58	54	50	94	70	48	30.06	30.01	29.93	10	6	4	8	2	-	0.00	
21	81	66	52	60	56	52	97	71	42	29.95	29.89	29.80	10	7	4	10	3	17	0.00	Rain
22	75	68	60	66	62	58	97	83	69	29.84	29.76	29.68	10	8	2	18	8	25	0.00	Rain
23	86	77	68	71	67	65	96	78	50	29.67	29.61	29.51	10	8	3	16	8	23	0.06	Rain , Thunderstorm
24	82	70	57	70	51	42	94	56	25	29.71	29.66	29.54	10	10	5	21	9	33	0.01	Rain
25	81	68	54	53	48	38	88	56	22	29.87	29.80	29.72	10	10	10	18	5	29	0.00	
26	88	68	47	63	50	45	95	61	25	29.88	29.82	29.71	10	10	3	15	3	20	0.05	Rain , Thunderstorm
27	75	62	49	50	44	38	90	52	27	30.10	30.01	29.95	10	10	7	16	8	21	0.00	
28	81	63	45	51	45	40	95	57	25	30.03	29.97	29.84	10	10	10	16	4	22	0.00	
29	84	72	59	63	61	55	94	69	46	29.88	29.75	29.57	10	9	5	24	12	34	0.00	
30	84	78	72	72	69	67	86	75	60	29.60	29.53	29.46	10	6	4	21	12	32	0.00	Rain

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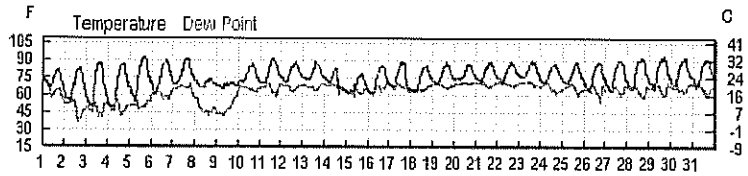
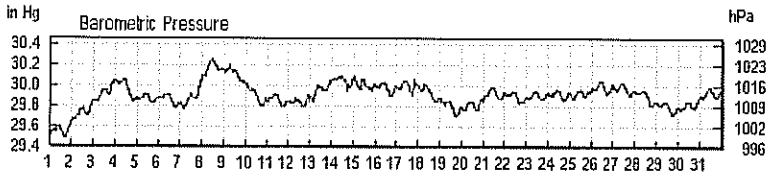
History for Hearne, TX

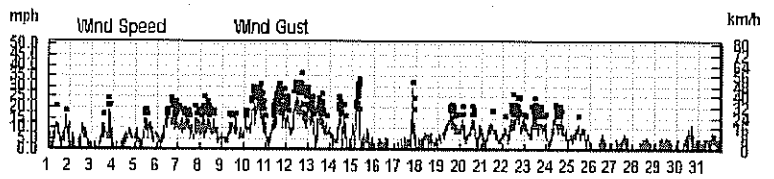
Month of May, 2010

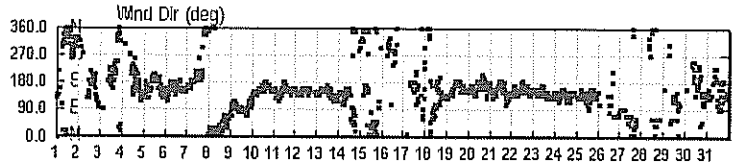
Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	94 °F	88 °F	71 °F	
Mean Temperature	83 °F	77 °F	67 °F	
Min Temperature	76 °F	66 °F	47 °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	18	12	2	374
Growing Degree Days (base 50)	33	27	17	835
Dew Point:				
Dew Point	73 °F	63 °F	38 °F	
Precipitation:				
Precipitation	1.67 in	0.08 in	0.00 in	2.52 in
Snowdepth	-	-	-	-
Wind:				
Wind	29 mph	6 mph	0 mph	
Gust Wind	41 mph	20 mph	10 mph	
Sea Level Pressure:				
Sea Level Pressure	30.26 in	29.91 in	29.48 in	









Monthly Calendar Overview

« Previous Month « 2009 May 2010 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1 Actual: 82 | 67 Precip: 0.00

Average: - | -
Precip: -

2	3	4	5	6	7	8
Actual: 83 | 55	Actual: 88 | 49	Actual: 87 | 47	Actual: 93 | 54	Actual: 91 | 62	Actual: 92 | 69	Actual: 74 | 67
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -

9	10	11	12	13	14	15
Actual: 71 | 66	Actual: 88 | 69	Actual: 92 | 71	Actual: 89 | 71	Actual: 89 | 73	Actual: 83 | 65	Actual: 79 | 63
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 1.67	Precip: 0.38
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -

16	17	18	19	20	21	22
Actual: 86 | 62	Actual: 89 | 66	Actual: 86 | 64	Actual: 88 | 71	Actual: 88 | 74	Actual: 90 | 72	Actual: 90 | 73
Precip: 0.00	Precip: 0.47	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -

23	24	25	26	27	28	29
Actual: 90 | 76	Actual: 88 | 72	Actual: 89 | 71	Actual: 89 | 65	Actual: 91 | 66	Actual: 93 | 68	Actual: 94 | 68
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -

30	31
Actual: 93 | 70	Actual: 92 | 70
Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -
Precip: -	Precip: -

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear, Mostly Cloudy Partly Sunny, Partly Cloudy Mostly Sunny, Cloudy, Rain, Snow, Hail Flurries, Thunderstorms, Hazy Fog, Sleet, '?' denotes 'chance of', Unknown

Print This Calendar

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

Data Category, Condition, High Temp., Lo Temp., Precip. (in inches), Daily Avg. Temp., Temps in °F (-80 -30 0 30 60 90 120)

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
May	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	82	74	67	72	65	56	96	73	54	29.60	29.55	29.48	10	8	2	16	6	21	0.00	
2	83	69	55	56	49	38	92	57	20	29.78	29.72	29.64	10	10	10	12	3	16	0.00	Rain
3	88	68	49	54	48	42	90	54	20	30.03	29.92	29.84	10	9	5	18	3	25	0.00	Rain
4	87	67	47	57	49	42	98	59	22	30.06	29.98	29.85	10	9	1	9	2	-	0.00	
5	93	74	54	56	51	48	87	47	22	29.92	29.87	29.83	10	10	10	15	7	20	0.00	
6	91	76	62	64	61	57	94	64	34	29.91	29.86	29.78	10	10	7	16	8	24	0.00	
7	92	80	69	70	67	65	89	67	42	29.92	29.85	29.77	10	9	7	15	11	21	0.00	
8	74	70	67	58	49	43	60	47	35	30.26	30.17	30.09	10	10	10	15	10	25	0.00	
9	71	68	66	57	47	43	61	46	40	30.20	30.13	30.05	10	10	10	15	7	17	0.00	
10	88	78	69	68	66	64	88	68	45	30.01	29.91	29.79	10	10	7	23	12	31	0.00	
11	92	82	71	70	66	59	90	64	37	29.92	29.86	29.79	10	9	5	23	11	31	0.00	
12	89	80	71	70	67	64	89	67	46	29.90	29.84	29.79	10	9	7	24	14	37	0.00	

13	89	81	73	70	68	64	82	67	43	30.02	29.94	29.84	10	10	7	20	13	30	0.00	
14	83	74	65	70	68	63	96	84	56	30.10	30.05	29.96	10	7	1	18	7	32	1.67	Rain , Thunderstorm
15	79	71	63	66	64	59	96	81	55	30.09	30.01	29.96	10	6	4	25	8	33	0.38	Rain , Thunderstorm
16	86	74	62	68	65	61	98	78	46	30.03	29.98	29.90	10	5	2	6	1	-	0.00	
17	89	78	66	73	68	63	100	79	47	30.06	29.99	29.91	10	7	1	29	2	41	0.47	Rain , Thunderstorm
18	86	75	64	69	65	63	96	75	51	30.02	29.96	29.85	10	7	5	8	3	-	0.00	
19	88	80	71	71	69	66	95	73	47	29.88	29.81	29.71	7	5	4	17	8	22	0.00	
20	88	81	74	72	71	70	89	76	55	29.85	29.80	29.76	7	6	4	14	9	21	0.00	Rain
21	90	81	72	72	70	67	95	71	48	29.98	29.92	29.85	10	6	4	13	7	18	0.00	
22	90	82	73	72	70	68	93	73	49	29.95	29.90	29.83	7	6	4	17	9	26	0.00	
23	90	83	76	73	71	68	86	69	51	29.95	29.90	29.87	10	6	4	16	10	24	0.00	Rain
24	88	80	72	72	68	61	94	69	42	29.97	29.92	29.86	7	5	3	16	8	22	0.00	
25	89	80	71	71	67	61	93	70	39	29.97	29.93	29.87	10	6	3	12	6	18	0.00	
26	89	77	65	71	65	55	96	68	31	30.05	29.98	29.92	10	7	4	7	1	-	0.00	
27	91	78	66	70	66	60	94	67	35	30.03	29.97	29.90	10	6	4	7	1	-	0.00	
28	93	80	68	69	65	59	93	62	32	29.96	29.90	29.81	10	6	3	6	1	-	0.00	
29	94	81	68	70	66	60	92	64	32	29.84	29.80	29.72	10	7	4	6	1	-	0.00	
30	93	82	70	72	67	63	91	65	38	29.85	29.81	29.77	10	9	5	12	2	-	0.00	Thunderstorm
31	92	81	70	71	67	62	94	65	36	29.98	29.92	29.88	10	9	4	8	3	-	0.00	

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Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: NICK CARMEAN Justin Gilman	
Date & Time: 1120 30 JUNO	County Name: Robertson
Stream Name: SPRING 99912	
Segment No. or nearest downstream Segment No.: 1242M	
Description of Site: Spring @ Old Hearne Road 99912	

At any point during the Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the use for the water body the investigator should stop conducting the UAA.

A. Stream Characteristics:

1. Check the following channel flow status that applies.

☐ dry ☐ no flow ☐ low ☒ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:

☐ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.

☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.

☒ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.

☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.

☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. 2.156 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 Manitoring Procedures, Volume 1.

Air Temp 27.1 °C Water Temp 24.6 °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	LR 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 at Old Hearne road with Barbed Wire fence

~~0140~~ 0141 0142

8. Dominant Primary Substrate

☐ Cobble ☒ Sand ☐ Silt ☐ Mud/Clay ☐ Gravel ☐ Bedrock ☐ Rip rap ☐ Concrete

Field Data Sheets – Basic RUAA Survey

Stream Name Spring Cr @ Old Hearne Rd Site: 99912
Date: 30 Jun 10 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	☐ Other: _____	
☐ Diving	☐ frequent public swimming-created by publicly owned land or commercial operations	

b. Check the number of individuals observed at the site: ☒ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Water in mouth or nose of the individual ☐ Primary touch: Individual's body (or portion) immersed in water
☐ Secondary touch: fishing, pets and related contact with water ☐ Individual is in a boat touching water
☐ Individual is on shore near water within 8 meters (25ft) of water ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☒ Not applicable

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
0142 shallow waters and fence

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
0141 Old Hearne road

4. Is an area with primary contact recreation activities or a bathing beach (e.g. state/local parks with swimming, etc.) located near (e.g. within 5 miles upstream and downstream) this site?

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 Spring Cr. @ Old Hearne Rd Site: 99912
Date: 30Jun10 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) n/a

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
shallow sandy stream in a ~~[illegible]~~ field

3. If secondary contact recreation activities are observed, how often do water recreational activities occur that do not involve a significant risk of water ingestion? ☐ frequently ☐ infrequently n/a
Please describe how often the activities occur? ☐ Unknown ☐ Never ☐ Daily ☐ Monthly ☐ Yearly n/a

4. If infrequently, what is the reason? ☐ physical characteristics of the water body ☐ limited public access ☐ other
If other, list reasons: n/a

5. Describe the physical characteristics of the water body that hinders the frequency of secondary contact recreation (depth, etc.) (Attach photos or depth measurements, etc. for documentation).
shallow water

6. Describe why there is limited public access (e.g. lack of roads, river or stream banks overgrown, etc.) (Attach photos, maps, etc. for documentation).
0142 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.
No noncontact rec. observed. Due to shallow water, private property, & fences

Field Data Sheets – Basic RUAA Survey

Stream Name Spring Cr @ Old Harry Rd Site: 99912
Date: 30 Jun 10 FDS Page 3 of 8 1120

E. Stream Channel and Substantial Pools
Please check the following which best describes the river or stream: ☒ Wadeable ☐ Non-wadeable

1. Wadeable Streams
Determine whether or not the average depth at the thalweg is greater than 0.5 meters and if there are substantial pools with a depth of 1 meter or greater. Walk an approximately 300 meter reach (total) at the site and take the following measurements within the 300 meter reach. Measurements should be taken during base flow conditions (sustained or typical dry, warm-weather flows between rainfall events, excluding unusual antecedent conditions of drought or wet weather

Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters.
Photos #s (30 meters) Upstream 0143 Downstream 0144 Left Bank 0145 Right Bank 0146
Photos #s (150 meters) Upstream 0148 Downstream 0149 Left Bank 0150 Right Bank 0151
Photos #s (300 meters) Upstream 0157 Downstream 0158 Left Bank 0159 Right Bank 0160

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	12	5	1.3
Pool 2	18	7	1.15
Pool 3	17	4	0.85
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	0.26
60 meters	0.20
90 meters	0.23
120 meters	1.15
150 meters	0.13
180 meters	0.24
210 meters	0.28
240 meters	0.24
270 meters	0.14
300 meters	0.19
Average	0.37

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

c) Stream width - Measure (1) the width at one point which represents the typical average width of the 300 meter reach; (2) the width at the narrowest point of the stream within the 300 meter reach; and (3) the width at the widest point of the stream within the 300 meter reach.

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	3
Width at narrowest point of the stream within 300 meter reach	0.5
Width at the widest point of the stream within 300 meter reach	7

d) Is there sufficient water within a 300 meter stream reach during base flow conditions to support primary contact recreation? ☐ Yes ☒ No
COMMENTS:
Too shallow & pools full of debris

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____ n/a
Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

# Measurements	Width (meters)
1	
2	
3	
4	
5	n/a
6	
7	
8	
9	
10	

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

☐ Drinking or water in mouth
☐ Bathing
☐ Walking
☐ Jogging/running
☐ Bicycling
☐ Standing
☐ Sitting
☐ Lying down/sleeping
☐ Playing on shoreline
☐ Picnicking
☐ Motorcycle/ATV
☐ Hunting/Trapping
☐ Wildlife watching
☒ None
☐ Other: _____

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☐ Yes ☒ No (If yes, please provide supporting documentation and photos.)
Comments: _____

0147

3. Check any channel obstructions that apply (Attach photos).

☐ Culverts ☒ Fences ☒ Log jams ☐ Rip rap ☐ Water control structure
☐ Barbed wire ☐ Dams ☐ Thick vegetation ☐ Low bridges ☐ None
☐ Utility pipe ☐ Other (specify):_____

0141

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:_____

0142

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).

☒ Private Property
☐ No trespass sign
☐ Wildlife
☐ Steep slopes
☐ No public access
☐ No roads
☒ Fence
☐ Barge/ship traffic
☐ Industrial
☐ None of the Above
☐ Other:_____

Comments:_____

6. Check any indications of human use (Attach photos).

☐ Roads
☐ Rope swings
☐ Dock/platform
☐ Foot paths/prints
☐ Other: _____
☐ RV/ATV Tracks
☐ Camping Sites
☐ Fire pit/ring
☐ Fishing Tackle
☐ NPDES Discharge
☐ Gates on corridor
☐ Children's toys
☐ Remnant's of Kid's play
☐ Organized event
☒ No Human Presence

Comments:_____

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

7. Check all water characteristics that apply (Attach photos).

Aquatic Vegetation: ☐ absent ☒ rare ☐common ☐abundant
Algae Cover: ☐ absent ☒ rare ☐common ☐abundant 161
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	0155
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	0161
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	156
Bank Garbage	☐ None	☒ Rare	☐ Common	☐ Abundant	

Briefly describe the kinds of garbage observed: Tires & Stuff

12. Is the site located in a wildlife preserve with large wildlife (i.e waterfowl) population? ☐ Yes ☒ No

13. Please document any other relevant information regarding recreational activities and the water body in general (for example, area outside of the stream reach evaluated).
Heavy livestock use

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream:_____ Date:_____

Site:_____ Site

Description:_____

Time Begin:_____ Time End:_____ Meter Type:_____

Observers:_____ Stream Width*:_____ Section Width (W):_____

Observations:_____

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V)		Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
			At Point (ft/s)(m/s)	Average (ft/s)(m/s)	

: Thu Jul 1 2010

99912-30JUN10.WAD
2010/06/30 11:28:51

JG

FlowTracker	**(English Units)**
P879	ft
3.7	ft/s
2.30	ft^2
0.0%	cfs

Accuracy	1.0%	1.0%
Depth	0.4%	1.2%
Velocity	1.9%	4.9%
Width	0.2%	0.2%
Method	2.7%	-
# Stations	4.6%	-
Overall	**5.8%**	**5.2%**

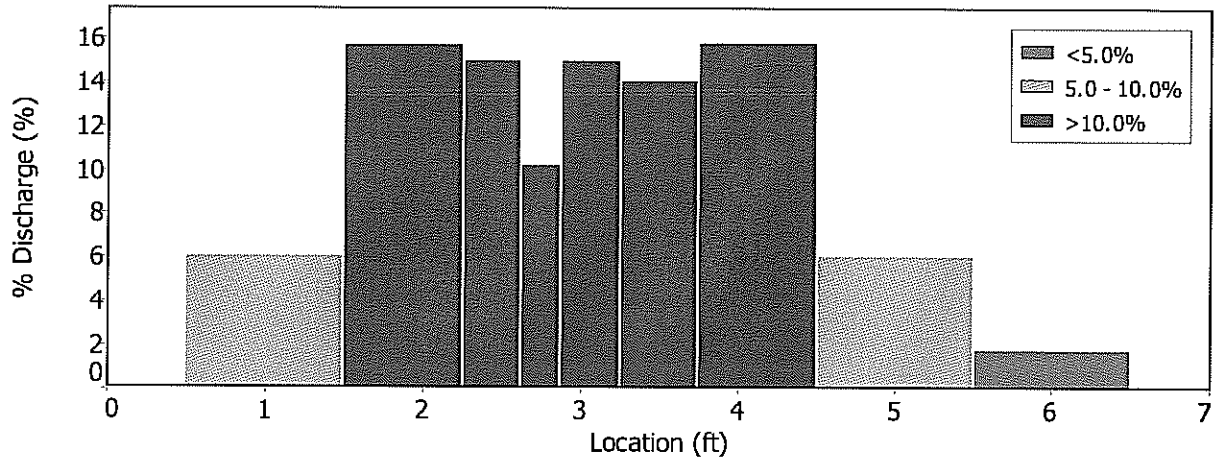
20	11
REW	7.000
21.4 dB	4.512
14.00 °F	0.645
Mid-Section	0.4778
	2.1559

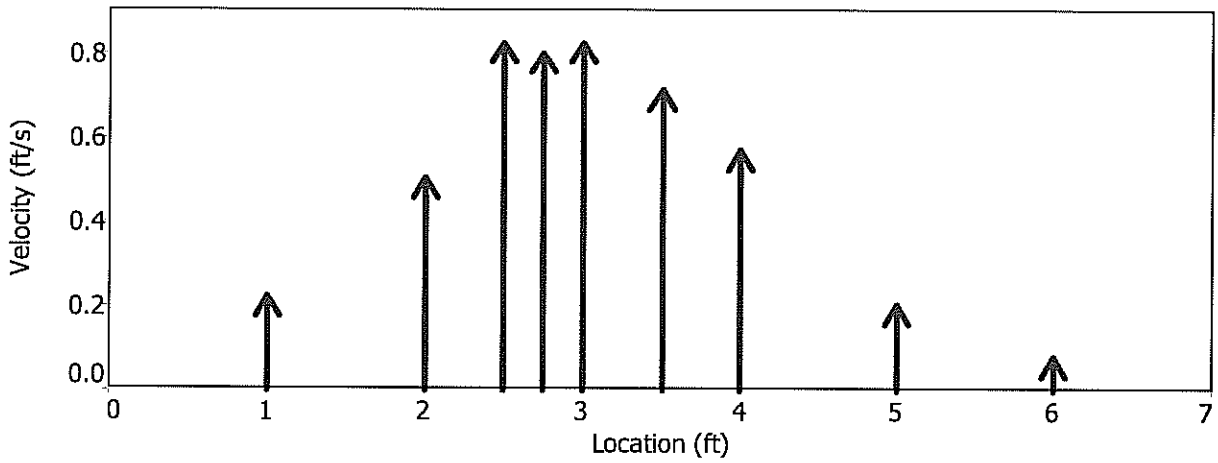
				Depth								
0	11:28	0.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
1	11:28	1.00	0.6	0.600	0.6	0.240	0.2205	1.00	0.2205	0.600	0.1323	6.1
2	*11:29*	*2.00*	*0.6*	*0.900*	*0.6*	*0.360*	*0.5030*	*1.00*	*0.5030*	*0.675*	*0.3395*	*15.7*
3	11:34	2.50	0.6	1.050	0.6	0.420	0.8245	1.00	0.8245	0.394	0.3246	15.1
4	11:36	2.75	0.6	1.100	0.6	0.440	0.7999	1.00	0.7999	0.275	0.2200	10.2
5	11:30	3.00	0.6	1.050	0.6	0.420	0.8241	1.00	0.8241	0.394	0.3245	15.1
6	11:35	3.50	0.6	0.850	0.6	0.340	0.7129	1.00	0.7129	0.425	0.3030	14.1
7	11:30	4.00	0.6	0.800	0.6	0.320	0.5699	1.00	0.5699	0.600	0.3419	15.9
8	11:32	5.00	0.6	0.650	0.6	0.260	0.2021	1.00	0.2021	0.650	0.1314	6.1
9	*11:32*	*6.00*	*0.6*	*0.500*	*0.6*	*0.200*	*0.0778*	*1.00*	*0.0778*	*0.500*	*0.0389*	*1.8*
10	11:32	7.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0

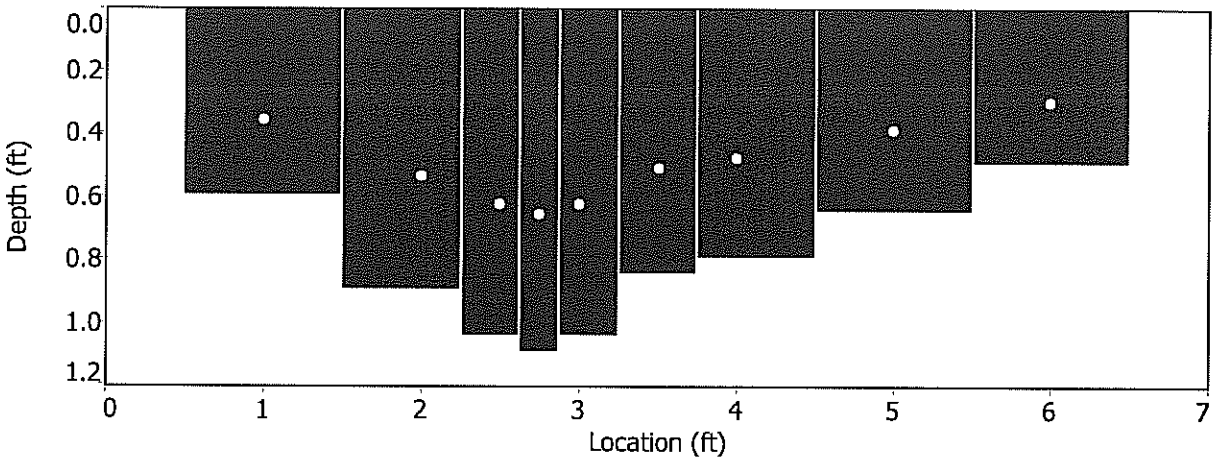
: Thu Jul 1 2010

99912-30JUN10.WAD
2010/06/30 11:28:51

JG







: Thu Jul 1 2010

99912-30JUN10.WAD
2010/06/30 11:28:51

JG

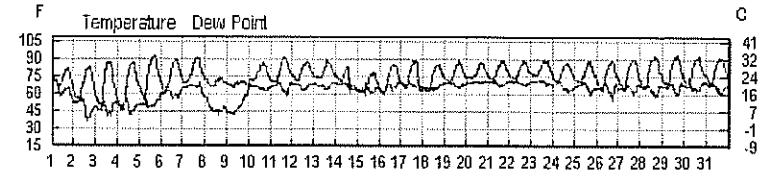
2	2.00	0.6	High standard error: 0.044
9	6.00	0.6	Boundary QC is Poor; possible boundary interference

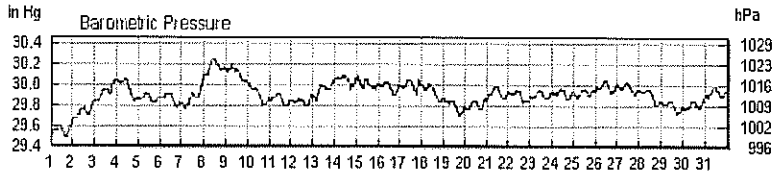
History for Hearne, TX

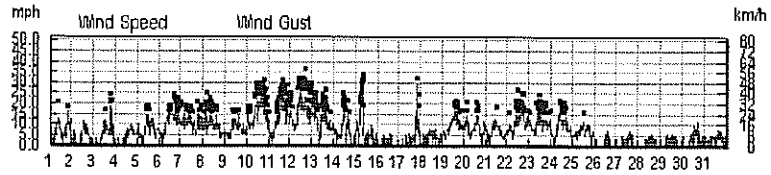
Month of May, 2010

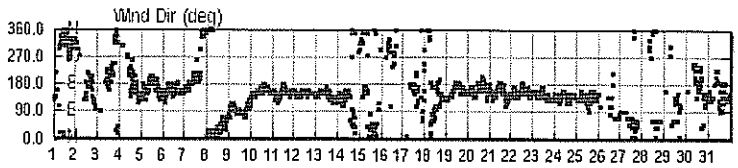
Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	94 °F	88 °F	71 °F	
Mean Temperature	83 °F	77 °F	67 °F	
Min Temperature	76 °F	66 °F	47 °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	18	12	2	374
Growing Degree Days (base 50)	33	27	17	835
Dew Point:				
Dew Point	73 °F	63 °F	38 °F	
Precipitation:				
Precipitation	1.67 in	0.08 in	0.00 in	2.52 in
Snowdepth	-	-	-	-
Wind:				
Wind	29 mph	6 mph	0 mph	
Gust Wind	41 mph	20 mph	10 mph	
Sea Level Pressure:				
Sea Level Pressure	30.26 in	29.91 in	29.48 in	









Monthly Calendar Overview

« Previous Month | « 2009 | **May 2010** | 2011 » | Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1 Actual: 82 | 67 Precip: 0.00

Average: - | -
Precip: -

2	3	4	5	6	7	8
Actual: 83 | 55	Actual: 88 | 49	Actual: 87 | 47	Actual: 93 | 54	Actual: 91 | 62	Actual: 92 | 69	Actual: 74 | 67
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
9	10	11	12	13	14	15
Actual: 71 | 66	Actual: 88 | 69	Actual: 92 | 71	Actual: 89 | 71	Actual: 89 | 73	Actual: 83 | 65	Actual: 79 | 63
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 1.67	Precip: 0.38
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
16	17	18	19	20	21	22
Actual: 86 | 62	Actual: 89 | 66	Actual: 86 | 64	Actual: 88 | 71	Actual: 88 | 74	Actual: 90 | 72	Actual: 90 | 73
Precip: 0.00	Precip: 0.47	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
23	24	25	26	27	28	29
Actual: 90 | 76	Actual: 88 | 72	Actual: 89 | 71	Actual: 89 | 65	Actual: 91 | 66	Actual: 93 | 68	Actual: 94 | 68
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
30	31					
Actual: 93 | 70	Actual: 92 | 70					
Precip: 0.00	Precip: 0.00					
Average: - | -	Average: - | -					
Precip: -	Precip: -					

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear, Mostly Cloudy Partly Sunny, Partly Cloudy Mostly Sunny, Cloudy, Rain, Snow, Hail Flurries, Thunderstorms, Hazy Fog, Sleet, '?' denotes 'chance of', Unknown

Print This Calendar

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

Data Category, Condition, High Temp., Lo Temp., Precip. (in inches), Daily Avg. Temp., Temps in °F
-30 -30 0 30 60 90 120

Daily Observations

	2010 Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
May	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	82	74	67	72	65	56	96	73	54	29.60	29.55	29.48	10	8	2	16	6	21	0.00	
2	83	69	55	56	49	38	92	57	20	29.78	29.72	29.64	10	10	10	12	3	16	0.00	Rain
3	88	68	49	54	48	42	90	54	20	30.03	29.92	29.84	10	9	5	18	3	25	0.00	Rain
4	87	67	47	57	49	42	98	59	22	30.06	29.98	29.85	10	9	1	9	2	-	0.00	
5	93	74	54	56	51	48	87	47	22	29.92	29.87	29.83	10	10	10	15	7	20	0.00	
6	91	76	62	64	61	57	94	64	34	29.91	29.86	29.78	10	10	7	16	8	24	0.00	
7	92	80	69	70	67	65	89	67	42	29.92	29.85	29.77	10	9	7	15	11	21	0.00	
8	74	70	67	58	49	43	60	47	35	30.26	30.17	30.09	10	10	10	15	10	25	0.00	
9	71	68	66	57	47	43	61	46	40	30.20	30.13	30.05	10	10	10	15	7	17	0.00	
10	88	78	69	68	66	64	88	68	45	30.01	29.91	29.79	10	10	7	23	12	31	0.00	
11	92	82	71	70	66	59	90	64	37	29.92	29.86	29.79	10	9	5	23	11	31	0.00	
12	89	80	71	70	67	64	89	67	46	29.90	29.84	29.79	10	9	7	24	14	37	0.00	

13	89	81	73	70	68	64	82	67	43	30.02	29.94	29.84	10	10	7	20	13	30	0.00	
14	83	74	65	70	68	63	96	84	56	30.10	30.05	29.96	10	7	1	18	7	32	1.67	Rain , Thunderstorm
15	79	71	63	66	64	59	96	81	55	30.09	30.01	29.96	10	6	4	25	8	33	0.38	Rain , Thunderstorm
16	86	74	62	68	65	61	98	76	46	30.03	29.98	29.90	10	5	2	6	1	-	0.00	
17	89	78	66	73	68	63	100	79	47	30.06	29.99	29.91	10	7	1	29	2	41	0.47	Rain , Thunderstorm
18	86	75	64	69	65	63	96	75	51	30.02	29.96	29.85	10	7	5	6	3	-	0.00	
19	88	80	71	71	69	66	95	73	47	29.88	29.81	29.71	7	5	4	17	8	22	0.00	
20	88	81	74	72	71	70	89	76	55	29.85	29.80	29.76	7	6	4	14	9	21	0.00	Rain
21	90	81	72	72	70	67	95	71	48	29.98	29.92	29.85	10	6	4	13	7	18	0.00	
22	90	82	73	72	70	68	93	73	49	29.95	29.90	29.83	7	6	4	17	9	26	0.00	
23	90	83	76	73	71	68	86	69	51	29.95	29.90	29.87	10	6	4	16	10	24	0.00	Rain
24	88	80	72	72	68	61	94	69	42	29.97	29.92	29.86	7	5	3	16	8	22	0.00	
25	89	80	71	71	67	61	93	70	39	29.97	29.93	29.87	10	6	3	12	6	18	0.00	
26	89	77	65	71	65	55	96	68	31	30.05	29.98	29.92	10	7	4	7	1	-	0.00	
27	91	78	66	70	66	60	94	67	35	30.03	29.97	29.90	10	6	4	7	1	-	0.00	
28	93	80	68	69	65	59	93	62	32	29.96	29.90	29.81	10	6	3	6	1	-	0.00	
29	94	81	68	70	66	60	92	64	32	29.84	29.80	29.72	10	7	4	6	1	-	0.00	
30	93	82	70	72	67	63	91	65	38	29.85	29.81	29.77	10	9	5	12	2	-	0.00	Thunderstorm
31	92	81	70	71	67	62	94	65	36	29.98	29.92	29.88	10	9	4	8	3	-	0.00	

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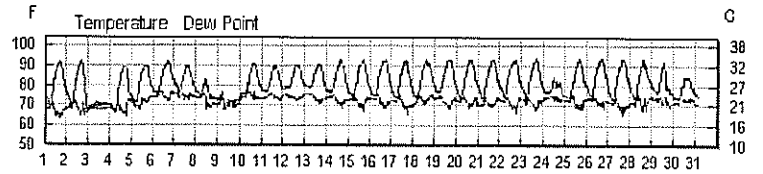
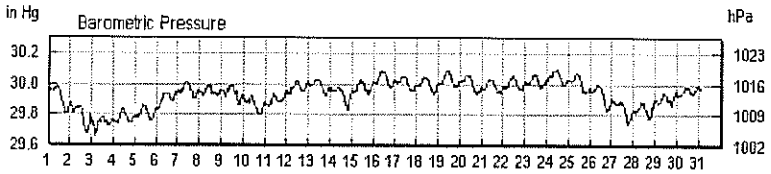
History for Hearne, TX

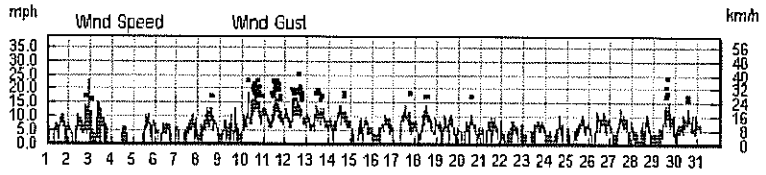
Month of June, 2010

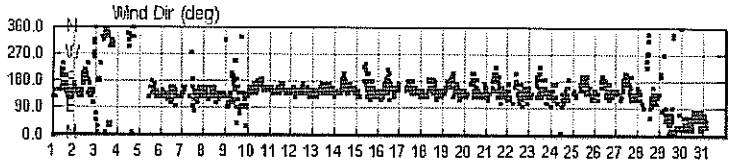
Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	94 °F	90 °F	71 °F	
Mean Temperature	85 °F	82 °F	70 °F	
Min Temperature	78 °F	74 °F	67 °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	20	17	4	505
Growing Degree Days (base 50)	35	32	20	959
Dew Point:				
Dew Point	77 °F	72 °F	63 °F	
Precipitation:				
Precipitation	2.90 in	0.14 in	0.00 in	4.22 in
Snowdepth	-	-	-	-
Wind:				
Wind	23 mph	5 mph	0 mph	
Gust Wind	29 mph	18 mph	12 mph	
Sea Level Pressure:				
Sea Level Pressure	30.10 in	29.93 in	29.66 in	









Monthly Calendar Overview

« Previous Month « 2009 **June 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4	5
		Actual: 91 | 69	Actual: 92 | 69	Actual: 71 | 68	Actual: 89 | 67	Actual: 90 | 71
		Precip: 0.00	Precip: 0.47	Precip: 0.80	Precip: 0.00	Precip: 0.00
		Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -

								Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-						
6		7		8		9		10		11		12											
Actual:	92 | 76	Actual:	90 | 76	Actual:	83 | 73	Actual:	77 | 70	Actual:	91 | 73	Actual:	90 | 77	Actual:	91 | 78										
Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	2.90	Precip:	0.00	Precip:	0.00	Precip:	0.00										
Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -									
Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-										
13		14		15		16		17		18		19											
Actual:	91 | 78	Actual:	93 | 77	Actual:	93 | 74	Actual:	93 | 75	Actual:	93 | 74	Actual:	93 | 74	Actual:	93 | 76										
Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00										
Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -									
Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-										
20		21		22		23		24		25		26											
Actual:	93 | 74	Actual:	93 | 73	Actual:	93 | 74	Actual:	93 | 73	Actual:	84 | 76	Actual:	94 | 74	Actual:	94 | 74										
Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.05	Precip:	0.00	Precip:	0.00										
Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -									
Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-										
27		28		29		30																	
Actual:	94 | 73	Actual:	93 | 72	Actual:	93 | 77	Actual:	85 | 73																
Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00																
Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -																
Precip:	-	Precip:	-	Precip:	-	Precip:	-																

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear · Mostly Cloudy Partly Sunny · Partly Cloudy Mostly Sunny · Cloudy · Rain · Snow · Hail Flurries · Thunderstorms · Hazy Fog · Sleet · '?' denotes 'chance of' · Unknown

Print This Calendar

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

Data Category · Condition · High Temp. · Lo Temp. · Precip. (in inches) · Daily Avg. Temp. · Temps in °F · -60 -30 0 30 60 90 120

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
June	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	91	80	69	71	67	63	94	64	39	29.99	29.92	29.81	10	10	5	10	3	16	0.00	
2	92	81	69	73	69	65	95	69	41	29.87	29.79	29.68	10	8	2	23	5	29	0.47	Rain , Thunderstorm
3	71	70	68	70	69	67	96	94	89	29.78	29.74	29.66	10	7	2	15	5	23	0.80	Rain , Thunderstorm
4	89	78	67	71	68	64	97	74	44	29.84	29.78	29.74	10	6	0	6	0	-	0.00	Fog
5	90	80	71	73	71	68	95	74	54	29.86	29.80	29.76	10	8	4	10	2	-	0.00	
6	92	84	76	77	75	72	95	76	52	29.93	29.89	29.83	7	4	2	7	4	-	0.00	
7	90	83	76	76	75	72	92	77	57	30.02	29.96	29.90	7	4	3	10	4	-	0.00	
8	83	78	73	76	73	68	94	86	63	30.00	29.95	29.92	10	7	5	13	5	18	0.00	Rain
9	77	74	70	74	70	68	96	94	91	30.00	29.94	29.86	10	6	1	13	3	17	2.90	Rain , Thunderstorm
10	91	82	73	77	75	71	96	80	54	29.92	29.87	29.80	7	4	3	18	8	24	0.00	Rain
11	90	84	77	77	74	72	91	76	59	29.93	29.89	29.85	7	5	3	17	10	23	0.00	
12	91	84	78	76	75	73	91	75	56	30.02	29.97	29.93	10	5	4	16	10	25	0.00	Rain
13	91	84	78	76	75	71	91	73	53	30.03	30.00	29.92	7	5	3	14	9	20	0.00	
14	93	85	77	76	73	68	93	72	46	29.98	29.94	29.83	7	5	3	14	8	21	0.00	Rain
15	93	84	74	75	72	67	96	72	42	30.03	29.98	29.93	7	5	2	9	4	-	0.00	
16	93	84	75	76	73	68	95	71	44	30.09	30.03	29.98	10	7	2	10	4	-	0.00	
17	93	84	74	76	72	66	95	72	44	30.05	30.02	29.96	10	6	0	14	4	18	0.00	Fog

18	93	84	74	76	73	70	93	71	49	30.05	30.00	29.93	10	10	7	14	6	18	0.00	
19	93	84	76	75	73	69	93	71	44	30.09	30.03	29.99	10	9	7	10	6	-	0.00	
20	93	84	74	75	72	69	94	69	45	30.06	30.01	29.93	10	10	7	10	4	17	0.00	
21	93	83	73	74	71	70	92	69	47	30.04	29.99	29.94	10	10	10	9	4	-	0.00	
22	93	84	74	75	72	67	92	67	42	30.06	30.00	29.97	10	10	10	8	3	-	0.00	
23	93	83	73	74	72	68	94	69	43	30.07	30.02	29.98	10	10	7	8	3	-	0.00	
24	84	80	76	76	74	72	91	83	68	30.10	30.05	29.99	10	10	5	10	3	-	0.05	Rain
25	94	84	74	76	72	68	95	71	44	30.08	30.01	29.94	10	10	5	10	3	16	0.00	
26	94	84	74	75	73	69	95	69	46	30.01	29.94	29.83	10	10	5	12	6	17	0.00	
27	94	84	73	74	71	66	94	67	39	29.90	29.84	29.74	10	10	7	13	5	-	0.00	
28	93	82	72	76	72	68	94	70	43	29.88	29.83	29.78	10	8	5	10	4	17	0.00	
29	93	85	77	75	73	70	91	78	49	29.94	29.90	29.86	10	7	4	15	4	24	0.00	Rain , Thunderstorm
30	85	79	73	74	73	71	92	81	66	29.99	29.95	29.92	7	6	4	13	5	17	0.00	Rain

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Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: MS NC - BRA	
Date & Time: 10 Aug 10 0915	County Name:
Stream Name: Spring Creek	
Segment No. or nearest downstream Segment No.: 1242M	
Description of Site: 99913 Private Property	

At any point during the Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the use for the water body the investigator should stop conducting the UAA.

A. Stream Characteristics:

1. Check the following channel flow status that applies.

☑ dry ☐ no flow ☐ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:

☐ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.

☑ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.

☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.

☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.

☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. N/A cfs

4. Water Quality Data (Field Parameters)

Field parameters should be collected in accordance with the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1.

Air Temp ~~85 °F~~ 29.4 °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):

Deep into Private Property. Extremely thick brush and thorny vines #835 - 838

8. Dominant Primary Substrate

☐Cobble ☐Sand ☐Silt ☑Mud/Clay ☐Gravel ☐Bedrock ☐Rip rap ☐ Concrete

Stream Name_____ Site: _____
Date: _____ Time: _____

B. Primary Contact Water Recreation Evaluation:
- Primary contact recreation draft definition: Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, and whitewater kayaking, canoeing, and rafting, involving a significant risk of ingestion of water.

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?
☐ Yes ☑ No primary contact recreation activities were observed
a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).

☐ Wading-Children	☐ Tubing	☑ No primary contact activities that commonly occur were observed
☐ Wading-Adults	☐ Surfing	
☐ Swimming	☐ Whitewater-kayaking, canoeing, rafting	
☐ Water skiing	☐ Other: _____	
☐ Diving	☐ frequent public swimming-created by publicly owned land or commercial operations	

b. Check the number of individuals observed at the site: ☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Water in mouth or nose of the individual ☐ Primary touch: Individual's body (or portion) immersed in water
☐ Secondary touch: fishing, pets and related contact with water ☐ Individual is in a boat touching water
☐ Individual is on shore near water within 8 meters (25ft) of water ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☑ Not applicable

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
No water. Shallow narrow channel. Very thick vegetation.

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
Boy Scout Camp is adjacent to property with this site. Boy scouts are not allowed on creek. No water in creek.
#835-838

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: _____

Date: _____ Time: _____

b. Check the number of individuals observed at the site.
☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body well away from water between 8 and 30 meters (100 ft)

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
No water. Thick vegetation #835-838

3. If secondary contact recreation activities are observed, how often do water recreational activities occur that do not involve a significant risk of water ingestion? ☐ frequently ☐ infrequently
Please describe how often the activities occur? ☐ Unknown ☐ Never ☐ Daily ☐ Monthly ☐ Yearly

4. If infrequently, what is the reason? ☐ physical characteristics of the water body ☐ limited public access ☐ other
If other, list reasons: _____

5. Describe the physical characteristics of the water body that hinders the frequency of secondary contact recreation (depth, etc.) (Attach photos or depth measurements, etc. for documentation).
No water. Thick Vegetation #835-838

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).
Deep into private property. Seperated by fence. #834
#835-838

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.
No water. #835-838

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 839 Downstream 840 Left Bank 841 Right Bank 842
Photos #s (150 meters) Upstream 843 Downstream 844 Left Bank 845 Right Bank 846
Photos #s (300 meters) Upstream 847 Downstream 848 Left Bank 849 Right Bank 850

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	— Dry
60 meters	— "
90 meters	— "
120 meters	— "
150 meters	— "
180 meters	— "
210 meters	— "
240 meters	— "
270 meters	— "
300 meters	— "
Average	N/A

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

c) Stream width - Measure (1) the width at one point which represents the typical average width of the 300 meter reach; (2) the width at the narrowest point of the stream within the 300 meter reach; and (3) the width at the widest point of the stream within the 300 meter reach.

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	Dry
Width at narrowest point of the stream within 300 meter reach	Dry
Width at the widest point of the stream within 300 meter reach	Dry

d) Is there sufficient water within a 300 meter stream reach during base flow conditions to support primary contact recreation? ☐ Yes ☑ No

COMMENTS: Dry Creek

2. Non-wadeable Streams

If accessible, take 10 width measurements which represent typical widths of the 300 meter reach. If the water is too deep and not accessible record the estimated average width of the water body.

Also, take photos facing upstream, downstream, left bank, and right bank at .
Photos #s (30 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (150 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

# Measurements	Width (meters)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

☐ Drinking or water in mouth
☐ Bathing
☐ Walking
☐ Jogging/running
☐ Bicycling
☐ Standing
☐ Sitting
☐ Lying down/sleeping
☐ Playing on shoreline
☐ Picnicking
☐ Motorcycle/ATV
☐ Hunting/Trapping
☐ Wildlife watching
☑ None
☐ Other: _____

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☐ Yes ☑ No (If yes, please provide supporting documentation and photos.)
Comments: _____

3. Check any channel obstructions that apply (Attach photos).

☐ Culverts ☐ Fences ☐ Log jams ☐ Rip rap ☐ Water control structure
☐ Barbed wire ☐ Dams ☐ Thick vegetation ☐ Low bridges ☑ None
☐ Utility pipe ☐ Other (specify):_____

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest).

☐ Campgrounds ☐ Stairs/walkway ☐ Roads (paved/unpaved) ☐ Other:_____
☐ Playgrounds ☐ Boating access (ramps) ☐ Populated area ☑ None of the Above
☐ Rural area ☐ Beach ☐ Docks or rafts
☐ Residential ☐ Bridge crossing ☐ Commercial outfitter
☐ National forests ☐ Commercial boating ☐ Nearby school
☐ Urban/suburban location ☐ Trails/paths (hiking/biking) ☐ Power Line Corridor
☐ Golf Course ☐ Paved parking lot ☐ Parks (national/city/county/state)
☐ Sports Field ☐ Unimproved parking lot ☐ Public Property
Comments: Big creek on Private Property. Has Fence

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).

☑ Private Property ☑ Fence
☐ No trespass sign ☐ Barge/ship traffic
☐ Wildlife ☐ Industrial
☐ Steep slopes ☐ None of the Above
☐ No public access ☐ Other:_____
☐ No roads
Comments: Thick brush

6. Check any indications of human use (Attach photos).

☐ Roads ☐ RV/ATV Tracks ☐ NPDES Discharge ☐ Organized event
☐ Rope swings ☐ Camping Sites ☐ Gates on corridor ☑ No Human Presence
☐ Dock/platform ☐ Fire pit/ring ☐ Children's toys
☐ Foot paths/prints ☐ Fishing Tackle ☐ Remnant's of Kid's play
☐ Other: _____
Comments:_____

Stream Name _____ Site: _____
Date: _____ Time: _____

7. Check all water characteristics that apply (Attach photos).

Aquatic Vegetation: ☑ absent ☐ rare ☐ common ☐ abundant
Algae Cover: ☑ absent ☐ rare ☐ common ☐ abundant
Odor: ☑ none ☐ rare ☐ common ☐ abundant
Color: ☑ clear ☐ green ☐ red ☐ brown ☐ black
Bottom Deposit: ☑ sludge ☐ solids ☐ fine sediments ☐ none ☐ other
Water Surface: ☐ clear ☐ scum ☐ foam ☐ debris ☐ oil
Other: 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 N/A

11. Garbage Observed

Large garbage in the channel	☑ None	☐ Rare	☐ Common	☐ Abundant
Small garbage in the channel	☑ None	☐ Rare	☐ Common	☐ Abundant
Bank Garbage	☑ None	☐ Rare	☐ Common	☐ Abundant

Briefly describe the kinds of garbage observed: _____

12. Is the site located in a wildlife preserve with large wildlife (i.e waterfowl) population? ☐ Yes ☑ No

13. Please document any other relevant information regarding recreational activities and the water body in general (for example, area outside of the stream reach evaluated).

N/A

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream:_____ Date:_____

Site:_____ Site

Description:_____

Time Begin:_____ Time End:_____ Meter Type:_____

Observers:_____ Stream Width*:_____ Section Width (W):_____

Observations:_____

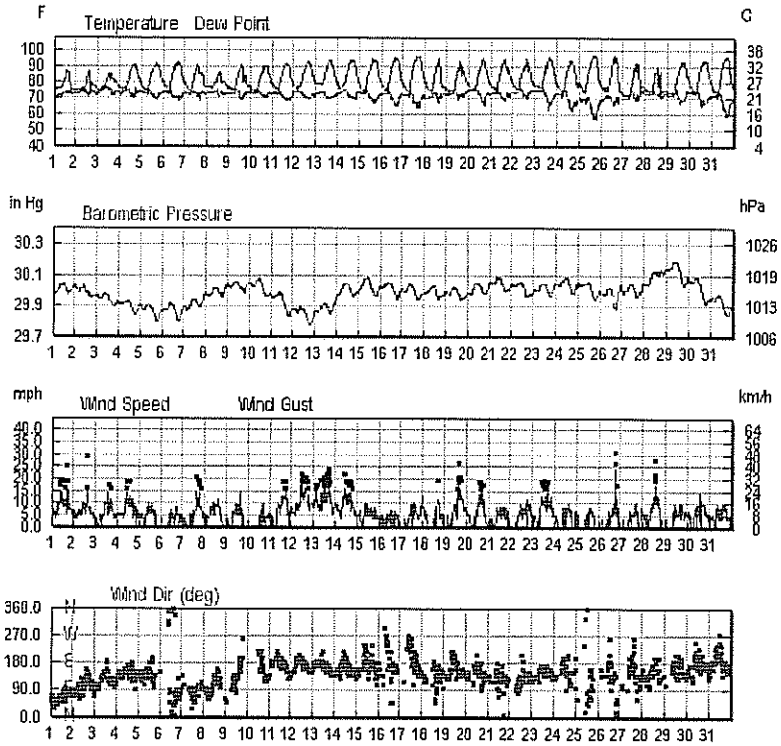
Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V)		Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
			At Point (ft/s)(m/s)	Average (ft/s)(m/s)	

History for Hearne, TX

Month of July, 2010

Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	97 °F	93 °F	85 °F	
Mean Temperature	86 °F	84 °F	80 °F	
Min Temperature	78 °F	75 °F	72 °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	21	19	15	579
Growing Degree Days (base 50)	36	34	30	1047
Dew Point:				
Dew Point	77 °F	72 °F	58 °F	
Precipitation:				
Precipitation	0.46 in	0.02 in	0.00 in	0.65 in
Snowdepth	-	-	-	-
Wind:				
Wind	24 mph	4 mph	0 mph	
Gust Wind	34 mph	18 mph	9 mph	
Sea Level Pressure:				
Sea Level Pressure	30.20 in	29.98 in	29.78 in	



Monthly Calendar Overview

« Previous Month « 2009 July 2010 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1 Actual: 87 | 75 Precip: 0.07	2 Actual: 87 | 75 Precip: 0.46	3 Actual: 85 | 75 Precip: 0.00

				Average: - | - Precip: -	Average: - | - Precip: -	Average: - | - Precip: -
4 Actual: 91 | 76 Precip: 0.00 Average: - | - Precip: -	5 Actual: 92 | 74 Precip: 0.00 Average: - | - Precip: -	6 Actual: 93 | 75 Precip: 0.00 Average: - | - Precip: -	7 Actual: 91 | 74 Precip: 0.00 Average: - | - Precip: -	8 Actual: 86 | 76 Precip: 0.00 Average: - | - Precip: -	9 Actual: 91 | 75 Precip: 0.00 Average: - | - Precip: -	10 Actual: 90 | 74 Precip: 0.00 Average: - | - Precip: -
11 Actual: 92 | 75 Precip: 0.00 Average: - | - Precip: -	12 Actual: 93 | 76 Precip: 0.00 Average: - | - Precip: -	13 Actual: 94 | 78 Precip: 0.00 Average: - | - Precip: -	14 Actual: 94 | 76 Precip: 0.00 Average: - | - Precip: -	15 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	16 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	17 Actual: 96 | 73 Precip: 0.00 Average: - | - Precip: -
18 Actual: 95 | 74 Precip: 0.00 Average: - | - Precip: -	19 Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	20 Actual: 95 | 76 Precip: 0.00 Average: - | - Precip: -	21 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	22 Actual: 95 | 76 Precip: 0.00 Average: - | - Precip: -	23 Actual: 95 | 77 Precip: 0.00 Average: - | - Precip: -	24 Actual: 94 | 73 Precip: 0.00 Average: - | - Precip: -
25 Actual: 97 | 74 Precip: 0.00 Average: - | - Precip: -	26 Actual: 97 | 75 Precip: 0.00 Average: - | - Precip: -	27 Actual: 92 | 72 Precip: 0.01 Average: - | - Precip: -	28 Actual: 90 | 74 Precip: 0.11 Average: - | - Precip: -	29 Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	30 Actual: 94 | 74 Precip: 0.00 Average: - | - Precip: -	31 Actual: 96 | 73 Precip: 0.00 Average: - | - Precip: -

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear; Mostly Cloudy Partly Sunny; Partly Cloudy Mostly Sunny; Cloudy; Rain; Snow; Hail Flurries; Thunderstorms; Hazy Fog; Sleet; '?' denotes 'chance of'; Unknown

Actual: 90 | 58 — Data Category, Condition, High Temp., Lo Temp.
Precip: 0.00 — Precip. (in inches)
Average: 71 | 53 — Daily Avg. Temp.
Precip: 0.03 — Temps in °F (-60 -30 0 30 60 90 120)

Print This Calendar

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
July	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	87	81	75	75	73	71	94	80	64	30.04	30.00	29.97	10	6	4	16	8	25	0.07	Rain
2	87	81	75	76	74	72	94	88	63	30.03	29.99	29.95	10	7	4	16	6	29	0.46	Rain
3	85	80	75	77	75	72	95	85	68	29.98	29.94	29.90	10	5	3	14	4	20	0.00	Rain
4	91	84	76	77	74	71	94	75	51	29.94	29.90	29.84	7	5	3	14	7	18	0.00	Rain
5	92	83	74	76	73	70	95	74	48	29.91	29.87	29.80	7	5	3	10	5	9	0.00	
6	93	84	75	75	72	69	94	69	44	29.92	29.87	29.80	7	5	3	8	2	-	0.00	
7	91	82	74	75	73	69	94	75	53	29.94	29.91	29.87	7	5	4	15	3	25	0.00	
8	86	81	76	75	74	72	90	81	63	30.02	29.98	29.95	10	6	3	12	5	16	0.00	Rain
9	91	83	75	76	73	70	94	79	51	30.06	30.02	29.98	7	5	3	15	2	18	0.00	Rain
10	90	82	74	75	73	71	96	77	53	30.08	30.02	29.96	7	4	3	9	1	-	0.00	
11	92	84	75	75	72	69	94	72	46	29.99	29.94	29.83	7	5	4	15	5	20	0.00	
12	93	84	76	75	73	70	92	70	47	29.90	29.86	29.78	7	5	4	21	9	22	0.00	
13	94	86	78	75	73	71	86	68	46	29.92	29.88	29.85	7	4	3	18	11	24	0.00	
14	94	85	76	76	73	70	91	69	46	30.05	30.00	29.95	7	5	3	16	9	22	0.00	
15	95	85	75	76	72	68	95	69	41	30.09	30.02	29.96	7	5	2	10	5	16	0.00	
16	95	85	75	75	71	66	94	67	38	30.06	30.02	29.94	10	6	3	7	2	-	0.00	Rain
17	96	84	73	74	71	65	94	63	35	30.05	30.00	29.94	10	9	3	10	2	16	0.00	

18	95	84	74	75	72	68	90	73	42	30.03	29.99	29.94	10	10	7	12	5	20	0.00	Thunderstorm
19	93	84	74	76	73	70	96	76	48	30.02	29.98	29.94	10	8	0	18	4	26	0.00	Fog
20	95	86	76	76	73	65	95	73	39	30.05	30.01	29.97	10	9	5	15	6	18	0.00	
21	95	85	75	75	73	69	95	71	42	30.09	30.05	29.99	10	9	5	8	2	16	0.00	Rain
22	95	86	76	76	74	70	94	75	45	30.06	30.01	29.96	10	9	7	12	3	20	0.00	
23	95	86	77	77	73	64	94	70	35	30.05	30.01	29.96	10	9	5	14	4	20	0.00	
24	94	84	73	76	71	63	96	69	37	30.09	30.04	29.98	10	9	4	10	3	-	0.00	
25	97	86	74	72	67	58	88	58	26	30.06	30.02	29.94	10	10	7	8	2	-	0.00	Rain
26	97	86	75	73	70	67	87	67	38	30.02	29.97	29.88	10	7	4	24	2	34	0.00	Rain , Thunderstorm
27	92	82	72	76	72	69	95	79	46	30.05	30.00	29.96	10	6	4	10	2	-	0.01	Rain , Thunderstorm
28	90	82	74	76	74	71	95	83	56	30.14	30.09	30.03	10	9	3	17	6	31	0.11	Rain , Thunderstorm
29	93	84	74	77	72	68	96	74	45	30.20	30.14	30.03	10	9	5	10	3	-	0.00	
30	94	84	74	76	72	66	95	71	41	30.09	30.04	29.91	10	9	2	14	5	18	0.00	
31	96	84	73	74	69	59	94	66	29	29.98	29.93	29.85	10	9	5	10	4	-	0.00	

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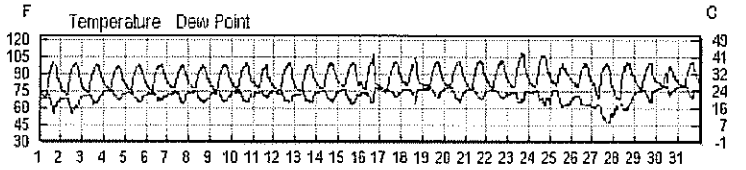
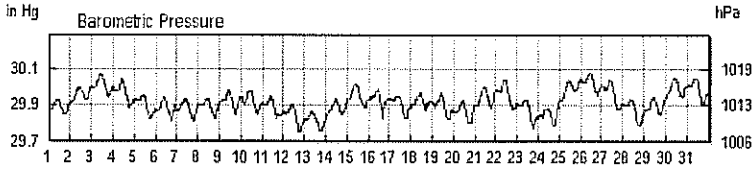
History for Hearne, TX

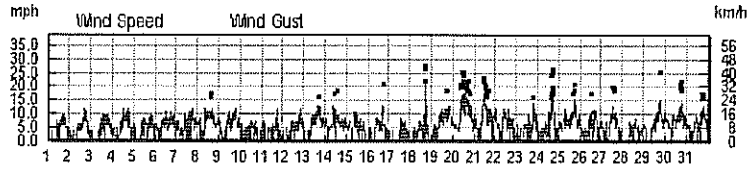
Month of August, 2010

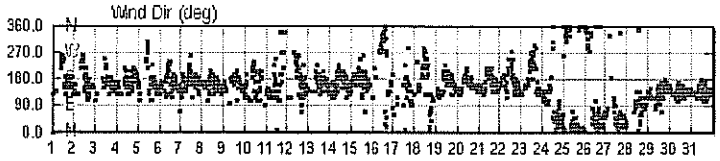
Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	109 °F	101 °F	97 °F	
Mean Temperature	94 °F	88 °F	84 °F	
Min Temperature	81 °F	76 °F	68 °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	29	24	19	730
Growing Degree Days (base 50)	44	38	34	1189
Dew Point:				
Dew Point	81 °F	71 °F	48 °F	
Precipitation:				
Precipitation	0.00 in	0.00 in	0.00 in	0.00 in
Snowdepth	-	-	-	-
Wind:				
Wind	21 mph	4 mph	0 mph	
Gust Wind	29 mph	18 mph	9 mph	
Sea Level Pressure:				
Sea Level Pressure	30.09 in	29.92 in	29.75 in	









Monthly Calendar Overview

« Previous Month « 2009 **August 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
Actual: 100 | 69	**Actual:** 99 | 71	**Actual:** 98 | 73	**Actual:** 97 | 76	**Actual:** 98 | 75	**Actual:** 98 | 75	**Actual:** 98 | 78
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -

8		9		10		11		12		13		14	
Actual:	98 | 77	Actual:	98 | 74	Actual:	100 | 75	Actual:	99 | 78	Actual:	99 | 75	Actual:	99 | 75	Actual:	100 | 77
Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00
Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -
Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-
15		16		17		18		19		20		21	
Actual:	100 | 79	Actual:	109 | 76	Actual:	101 | 76	Actual:	104 | 81	Actual:	101 | 79	Actual:	101 | 80	Actual:	102 | 77
Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00
Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -
Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-
22		23		24		25		26		27		28	
Actual:	103 | 77	Actual:	109 | 79	Actual:	108 | 79	Actual:	100 | 80	Actual:	100 | 79	Actual:	99 | 69	Actual:	101 | 68
Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00
Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -
Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-
29		30		31									
Actual:	100 | 77	Actual:	99 | 81	Actual:	101 | 80								
Precip:	0.00	Precip:	0.00	Precip:	0.00								
Average:	- | -	Average:	- | -	Average:	- | -								
Precip:	-	Precip:	-	Precip:	-								

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear | Mostly Cloudy Partly Sunny | Partly Cloudy Mostly Sunny | Cloudy | Rain | Snow | Hail Flurries | Thunderstorms | Hazy Fog | Sleet | '?' denotes 'chance of' | Unknown

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

Data Category
Condition
High Temp.
Lo Temp.
Precip. (in inches)
Daily Avg. Temp.
Temps in °F
-60 -30 0 30 60 90 120

Print This Calendar

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
August	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	100	84	69	74	67	55	95	60	22	29.93	29.89	29.84	10	9	7	9	2	-	0.00	
2	99	85	71	70	64	55	90	55	25	30.00	29.96	29.91	10	9	4	12	2	16	0.00	
3	98	86	73	73	69	64	94	60	32	30.08	30.01	29.95	10	8	4	9	2	16	0.00	
4	97	86	76	77	73	68	94	66	38	30.05	29.98	29.89	7	6	3	12	4	17	0.00	Rain
5	98	86	75	74	71	65	92	62	34	29.96	29.91	29.83	7	5	3	6	3	-	0.00	
6	98	86	75	74	71	67	92	63	36	29.95	29.89	29.81	10	8	4	10	5	-	0.00	
7	98	88	78	75	71	64	86	60	33	29.94	29.88	29.81	10	10	10	12	5	16	0.00	
8	98	88	77	76	71	65	92	63	34	29.94	29.90	29.83	10	10	10	12	6	20	0.00	
9	98	86	74	76	71	66	95	63	34	29.99	29.93	29.85	10	10	7	12	5	16	0.00	
10	100	88	75	77	72	65	94	64	33	29.98	29.93	29.85	10	10	3	7	2	9	0.00	
11	99	88	78	76	73	68	89	64	36	29.96	29.90	29.83	10	10	10	12	3	24	0.00	Rain , Thunderstorm
12	99	87	75	76	71	65	92	63	33	29.90	29.85	29.75	10	10	7	9	2	-	0.00	
13	99	87	75	75	70	65	91	62	33	29.87	29.82	29.76	10	10	10	13	4	17	0.00	
14	100	88	77	76	72	66	92	62	33	29.94	29.88	29.83	10	10	7	13	6	18	0.00	
15	100	90	79	77	72	63	90	62	30	30.02	29.96	29.89	10	10	10	10	5	-	0.00	
16	109	92	76	79	72	65	90	64	26	29.99	29.93	29.83	10	10	10	13	3	23	0.00	
17	101	88	76	78	75	70	96	69	36	29.95	29.91	29.83	10	9	5	6	1	-	0.00	
18	104	92	81	78	75	65	88	65	28	29.97	29.92	29.87	10	10	10	21	3	29	0.00	Thunderstorm
19	101	90	79	79	75	69	94	67	35	29.97	29.90	29.83	10	10	10	13	4	21	0.00	
20	101	90	80	80	74	66	95	62	33	29.93	29.86	29.80	10	10	7	17	8	25	0.00	
21	102	90	77	79	74	68	96	64	33	30.01	29.94	29.89	10	10	10	17	7	23	0.00	

22	103	90	77	78	74	69	94	62	34	30.04	29.97	29.88	10	10	7	12	6	-	0.00	
23	109	94	79	74	71	65	85	54	26	29.93	29.88	29.77	10	10	10	14	2	22	0.00	
24	108	94	79	77	71	63	88	53	24	29.90	29.85	29.78	10	10	10	17	4	26	0.00	
25	100	90	80	77	69	62	86	54	30	30.04	29.99	29.93	10	10	10	15	7	21	0.00	
26	100	90	79	72	67	62	76	50	29	30.09	30.04	29.96	10	10	10	12	5	18	0.00	
27	99	84	69	64	57	48	83	42	17	30.04	29.98	29.88	10	10	10	13	5	21	0.00	
28	101	84	68	65	61	54	82	49	25	29.94	29.89	29.79	10	10	10	8	1	-	0.00	
29	100	88	77	77	74	66	92	65	33	29.95	29.89	29.85	10	10	10	15	5	29	0.00	
30	99	90	81	81	77	72	93	73	42	30.06	30.00	29.94	10	10	10	14	7	22	0.00	
31	101	90	80	80	76	68	96	70	33	30.05	30.00	29.91	10	10	7	12	5	17	0.00	

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Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: MJ JD – BRA	
Date & Time: 29Jun10 1335	County Name: Robertson
Stream Name: Spring Creek	
Segment No. or nearest downstream Segment No.: 1242M	
Description of Site: 99914 downstream from FM391	

At any point during the Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the use for the water body the investigator should stop conducting the UAA.

A. Stream Characteristics:

1. Check the following channel flow status that applies.

☑ dry ☐ no flow ☐ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:

☐ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.

☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.

☑ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.

☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.

☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. 0 cfs

4. Water Quality Data (Field Parameters)

Field parameters should be collected in accordance with the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1.

Air Temp 34.4°C 94 °F Water Temp NA °C

5. Riparian Zone (Mark dominant categories with L (Left Bank) and R (Right Bank). Bank orientation is determined by the investigator facing downstream.)

RF 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): Gentle slope – no fence #107

8. Dominant Primary Substrate

☐Cobble ☐Sand ☐Silt ☑Mud/Clay ☐Gravel ☐Bedrock ☐Rip rap ☐ Concrete

Stream Name_____ Site: _____
Date: _____ Time: _____

B. Primary Contact Water Recreation Evaluation:
- Primary contact recreation draft definition: Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, and whitewater kayaking, canoeing, and rafting, involving a significant risk of ingestion of water.

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?
☐ Yes ☑ No primary contact recreation activities were observed
a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).

☐ Wading-Children	☐ Tubing	☑ No primary contact activities that commonly occur were observed
☐ Wading-Adults	☐ Surfing	
☐ Swimming	☐ Whitewater-kayaking, canoeing, rafting	
☐ Water skiing	☐ Other: _____	
☐ Diving	☐ frequent public swimming-created by publicly owned land or commercial operations	

b. Check the number of individuals observed at the site: ☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Water in mouth or nose of the individual ☐ Primary touch: Individual's body (or portion) immersed in water
☐ Secondary touch: fishing, pets and related contact with water ☐ Individual is in a boat touching water
☐ Individual is on shore near water within 8 meters (25ft) of water ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☑ Not applicable

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
Dry stream bed, shallow channel,

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
FM 391 crosses. #108

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: _____

Date: _____ Time: _____

b. Check the number of individuals observed at the site.
☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water n/a
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body well away from water between 8 and 30 meters (100 ft)

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
No Water - shallow channel - high in drainage area #109

3. If secondary contact recreation activities are observed, how often do water recreational activities occur that do not involve a significant risk of water ingestion? ☐ frequently ☐ infrequently n/a
Please describe how often the activities occur? ☐ Unknown ☐ Never ☐ Daily ☐ Monthly ☐ Yearly

4. If infrequently, what is the reason? ☐ physical characteristics of the water body ☐ limited public access ☐ other
If other, list reasons: _____

5. Describe the physical characteristics of the water body that hinders the frequency of secondary contact recreation (depth, etc.) (Attach photos or depth measurements, etc. for documentation).
No Water #109

6. Describe why there is limited public access (e.g. lack of roads, river or stream banks overgrown, etc.) (Attach photos, maps, etc. for documentation).

D. Noncontact Recreation Evaluation

Noncontact recreation applies to water bodies where recreation activities do not involve a significant risk of water ingestion, and where primary and secondary contact recreation uses do not occur because of unsafe conditions, such as barge traffic.

1. Provide site-specific information and documentation (including photographs) regarding unsafe conditions, recreation activities, and presence or absence of water recreation activities.
no water #109

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 110 Downstream 111 Left Bank 112 Right Bank 113
Photos #s (150 meters) Upstream 114 Downstream 115 Left Bank 116 Right Bank 117
Photos #s (300 meters) Upstream 118 Downstream 119 Left Bank 120 Right Bank 121

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	0.17
60 meters	0.0
90 meters	0.0
120 meters	0.0
150 meters	0.0
180 meters	0.0
210 meters	0.0
240 meters	0.0
270 meters	0.0
300 meters	0.0
Average	0.0

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

c) Stream width - Measure (1) the width at one point which represents the typical average width of the 300 meter reach; (2) the width at the narrowest point of the stream within the 300 meter reach; and (3) the width at the widest point of the stream within the 300 meter reach.

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	N/A
Width at narrowest point of the stream within 300 meter reach	N/A
Width at the widest point of the stream within 300 meter reach	N/A

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 small shallow pools in reach

2. Non-wadeable Streams

If accessible, take 10 width measurements which represent typical widths of the 300 meter reach. If the water is too deep and not accessible record the estimated average width of the water body.

Also, take photos facing upstream, downstream, left bank, and right bank at .
Photos #s (30 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (150 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

# Measurements	Width (meters)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

☐ Drinking or water in mouth
☐ Bathing
☐ Walking
☐ Jogging/running
☐ Bicycling
☐ Standing
☐ Sitting
☐ Lying down/sleeping
☐ Playing on shoreline
☐ Picnicking
☐ Motorcycle/ATV
☐ Hunting/Trapping
☐ Wildlife watching
☑ None
☐ Other: _____

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☐ Yes ☑ No (If yes, please provide supporting documentation and photos.)
Comments: _____

3. Check any channel obstructions that apply (Attach photos).

☐ Culverts ☐ Fences ☐ Log jams ☐ Rip rap ☐ Water control structure
☐ Barbed wire ☐ Dams ☑ Thick vegetation ☐ Low bridges ☐ None
☐ Utility pipe ☐ Other (specify): No discernable channel

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest).

☐ Campgrounds ☐ Stairs/walkway ☑ Roads (paved/unpaved) ☐ Other:_____
☐ Playgrounds ☐ Boating access (ramps) ☐ Populated area ☑ None of the Above
☐ Rural area ☐ Beach ☐ Docks or rafts
☐ Residential ☐ Bridge crossing ☐ Commercial outfitter
☐ National forests ☐ Commercial boating ☐ Nearby school
☐ Urban/suburban location ☐ Trails/paths (hiking/biking) ☐ Power Line Corridor
☐ Golf Course ☐ Paved parking lot ☐ Parks (national/city/county/state)
☐ Sports Field ☐ Unimproved parking lot ☐ Public Property
Comments:_____

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).

☑ Private Property ☑ Fence
☐ No trespass sign ☐ Barge/ship traffic
☐ Wildlife ☐ Industrial
☐ Steep slopes ☐ None of the Above
☐ No public access ☐ Other:_____
☐ No roads
Comments: No water or discernable channel #107

6. Check any indications of human use (Attach photos).

☐ Roads ☐ RV/ATV Tracks ☐ NPDES Discharge ☐ Organized event
☐ Rope swings ☐ Camping Sites ☐ Gates on corridor ☑ No Human Presence
☐ Dock/platform ☐ Fire pit/ring ☐ Children's toys
☐ Foot paths/prints ☐ Fishing Tackle ☐ Remnant's of Kid's play
☐ Other: _____
Comments:_____

Stream Name_____ Site: _____
Date: _____ Time: _____

7. Check all water characteristics that apply (Attach photos).

Aquatic Vegetation: ☑ absent ☐ rare ☐ common ☐ abundant
Algae Cover: ☑ absent ☐ rare ☐ common ☐ abundant
Odor: ☑ none ☐ rare ☐ common ☐ abundant
Color: ☐ clear ☐ green ☐ red ☐ brown ☑ black
Bottom Deposit: ☐ sludge ☐ solids ☑ fine sediments ☐ none ☐ other
Water Surface: ☑ clear ☐ scum ☐ foam ☐ debris ☐ oil
Other: No water flow

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: Deer

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).
No water / 2 small shallow pools

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream:_____ Date:_____

Site:_____ Site

Description:_____

Time Begin:_____ Time End:_____ Meter Type:_____

Observers:_____ Stream Width*:_____ Section Width (W):_____

Observations:_____

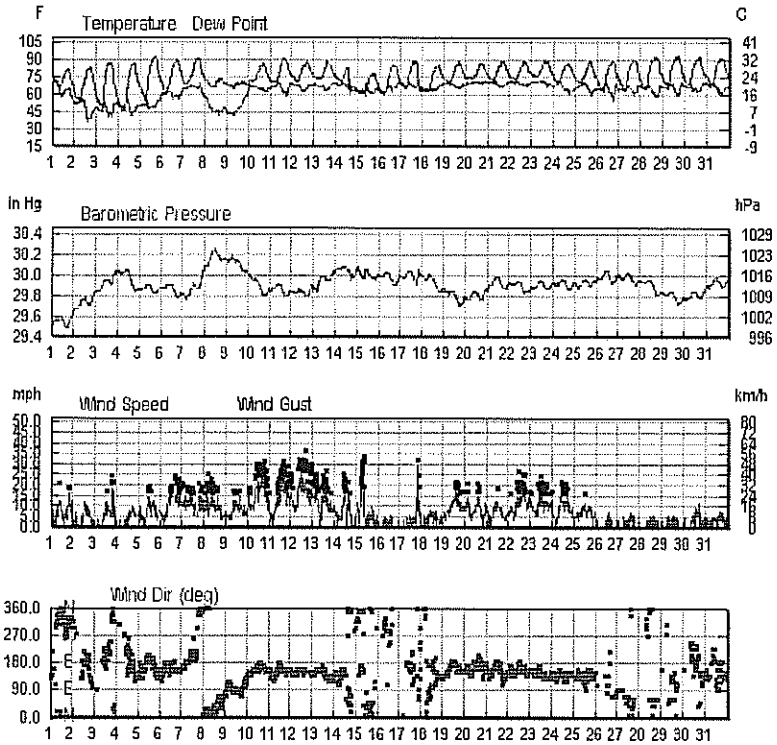
Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V)		Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
			At Point (ft/s)(m/s)	Average (ft/s)(m/s)	

History for Hearne, TX

Month of May, 2010

Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	94 °F	88 °F	71 °F	
Mean Temperature	83 °F	77 °F	67 °F	
Min Temperature	76 °F	66 °F	47 °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	18	12	2	374
Growing Degree Days (base 50)	33	27	17	835
Dew Point:				
Dew Point	73 °F	63 °F	38 °F	
Precipitation:				
Precipitation	1.67 in	0.08 in	0.00 in	2.52 in
Snowdepth	-	-	-	-
Wind:				
Wind	29 mph	6 mph	0 mph	
Gust Wind	41 mph	20 mph	10 mph	
Sea Level Pressure:				
Sea Level Pressure	30.26 in	29.91 in	29.48 in	



Monthly Calendar Overview

« Previous Month « 2009 **May 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1 Actual: 82 | 67 Precip: 0.00

Average: - | -
Precip: -

2	3	4	5	6	7	8
Actual: 83 | 55	Actual: 88 | 49	Actual: 87 | 47	Actual: 93 | 54	Actual: 91 | 62	Actual: 92 | 69	Actual: 74 | 67
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
9	10	11	12	13	14	15
Actual: 71 | 66	Actual: 88 | 69	Actual: 92 | 71	Actual: 89 | 71	Actual: 89 | 73	Actual: 83 | 65	Actual: 79 | 63
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 1.67	Precip: 0.38
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
16	17	18	19	20	21	22
Actual: 86 | 62	Actual: 89 | 66	Actual: 86 | 64	Actual: 88 | 71	Actual: 88 | 74	Actual: 90 | 72	Actual: 90 | 73
Precip: 0.00	Precip: 0.47	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
23	24	25	26	27	28	29
Actual: 90 | 76	Actual: 88 | 72	Actual: 89 | 71	Actual: 89 | 65	Actual: 91 | 66	Actual: 93 | 68	Actual: 94 | 68
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
30	31					
Actual: 93 | 70	Actual: 92 | 70					
Precip: 0.00	Precip: 0.00					
Average: - | -	Average: - | -					
Precip: -	Precip: -					

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear; Mostly Cloudy Partly Sunny; Partly Cloudy Mostly Sunny; Cloudy; Rain; Snow; Hail Flurries; Thunderstorms; Hazy Fog; Sleet; '?' denotes 'chance of'; Unknown

Print This Calendar

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

Data Category
Condition
High Temp.
Lo Temp.
Precip. (in inches)
Daily Avg. Temp.
Temps in °F
-60 -30 0 30 60 90 120

Daily Observations

	2010 Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
May	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	82	74	67	72	65	56	96	73	54	29.60	29.55	29.48	10	8	2	16	6	21	0.00	
2	83	69	55	56	49	38	92	57	20	29.78	29.72	29.64	10	10	10	12	3	16	0.00	Rain
3	88	68	49	54	48	42	90	54	20	30.03	29.92	29.84	10	9	5	18	3	25	0.00	Rain
4	87	67	47	57	49	42	98	59	22	30.06	29.98	29.85	10	9	1	9	2	-	0.00	
5	93	74	54	56	51	48	87	47	22	29.92	29.87	29.83	10	10	10	15	7	20	0.00	
6	91	76	62	64	61	57	94	64	34	29.91	29.86	29.78	10	10	7	16	8	24	0.00	
7	92	80	69	70	67	65	89	67	42	29.92	29.85	29.77	10	9	7	15	11	21	0.00	
8	74	70	67	58	49	43	60	47	35	30.26	30.17	30.09	10	10	10	15	10	25	0.00	
9	71	68	66	57	47	43	61	46	40	30.20	30.13	30.05	10	10	10	15	7	17	0.00	
10	88	78	69	68	66	64	88	68	45	30.01	29.91	29.79	10	10	7	23	12	31	0.00	
11	92	82	71	70	66	59	90	64	37	29.92	29.86	29.79	10	9	5	23	11	31	0.00	
12	89	80	71	70	67	64	89	67	46	29.90	29.84	29.79	10	9	7	24	14	37	0.00	

13	89	81	73	70	68	64	82	67	43	30.02	29.94	29.84	10	10	7	20	13	30	0.00	
14	83	74	65	70	68	63	96	84	56	30.10	30.05	29.96	10	7	1	18	7	32	1.67	Rain , Thunderstorm
15	79	71	63	66	64	59	96	81	55	30.09	30.01	29.96	10	6	4	25	8	33	0.38	Rain , Thunderstorm
16	86	74	62	68	65	61	98	78	46	30.03	29.98	29.90	10	5	2	6	1	-	0.00	
17	89	78	66	73	68	63	100	79	47	30.06	29.99	29.91	10	7	1	29	2	41	0.47	Rain , Thunderstorm
18	86	75	64	69	65	63	96	75	51	30.02	29.96	29.85	10	7	5	8	3	-	0.00	
19	88	80	71	71	69	66	95	73	47	29.88	29.81	29.71	7	5	4	17	8	22	0.00	
20	88	81	74	72	71	70	89	76	55	29.85	29.80	29.76	7	6	4	14	9	21	0.00	Rain
21	90	81	72	72	70	67	95	71	48	29.98	29.92	29.85	10	6	4	13	7	18	0.00	
22	90	82	73	72	70	68	93	73	49	29.95	29.90	29.83	7	6	4	17	9	26	0.00	
23	90	83	76	73	71	68	86	69	51	29.95	29.90	29.87	10	6	4	16	10	24	0.00	Rain
24	88	80	72	72	68	61	94	69	42	29.97	29.92	29.86	7	5	3	16	8	22	0.00	
25	89	80	71	71	67	61	93	70	39	29.97	29.93	29.87	10	6	3	12	6	18	0.00	
26	89	77	65	71	65	55	96	68	31	30.05	29.98	29.92	10	7	4	7	1	-	0.00	
27	91	78	66	70	66	60	94	67	35	30.03	29.97	29.90	10	6	4	7	1	-	0.00	
28	93	80	68	69	65	59	93	62	32	29.96	29.90	29.81	10	6	3	6	1	-	0.00	
29	94	81	68	70	66	60	92	64	32	29.84	29.80	29.72	10	7	4	6	1	-	0.00	
30	93	82	70	72	67	63	91	65	38	29.85	29.81	29.77	10	9	5	12	2	-	0.00	Thunderstorm
31	92	81	70	71	67	62	94	65	36	29.98	29.92	29.88	10	9	4	8	3	-	0.00	

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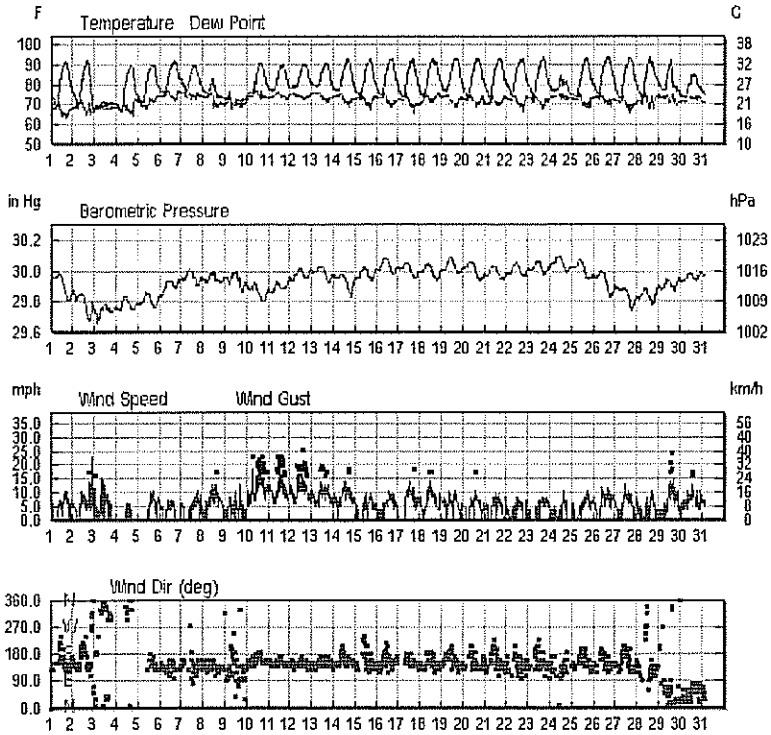
History for Hearne, TX

Month of June, 2010

Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	94 °F	90 °F	71 °F	
Mean Temperature	85 °F	82 °F	70 °F	
Min Temperature	78 °F	74 °F	67 °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	20	17	4	505
Growing Degree Days (base 50)	35	32	20	959
Dew Point:				
Dew Point	77 °F	72 °F	63 °F	
Precipitation:				
Precipitation	2.90 in	0.14 in	0.00 in	4.22 in
Snowdepth	-	-	-	-
Wind:				
Wind	23 mph	5 mph	0 mph	
Gust Wind	29 mph	18 mph	12 mph	
Sea Level Pressure:				
Sea Level Pressure	30.10 in	29.93 in	29.66 in	



Monthly Calendar Overview

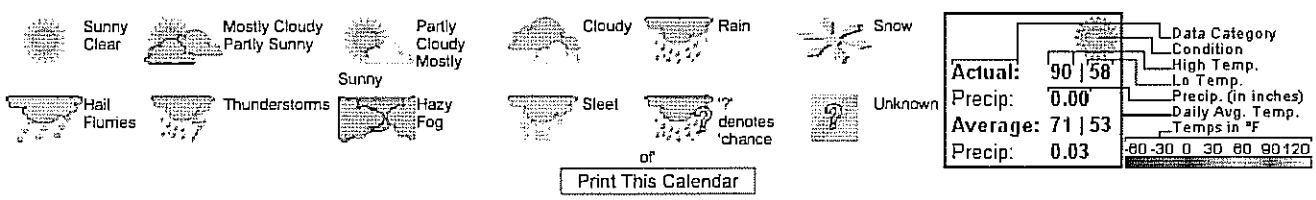
« Previous Month « 2009 **June 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4	5
		Actual: 91 | 69	Actual: 92 | 69	Actual: 71 | 68	Actual: 89 | 67	Actual: 90 | 71
		Precip: 0.00	Precip: 0.47	Precip: 0.80	Precip: 0.00	Precip: 0.00
		Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -

								Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-						
6		7		8		9		10		11		12		13		14		15		16		17	
Actual:	92 | 76	Actual:	90 | 76	Actual:	83 | 73	Actual:	77 | 70	Actual:	91 | 73	Actual:	90 | 77	Actual:	91 | 78	Actual:	91 | 78	Actual:	93 | 77	Actual:	93 | 74	Actual:	93 | 75	Actual:	93 | 74
Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	2.90	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00
Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -
Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-
18		19		20		21		22		23		24		25		26		27		28		29	
Actual:	93 | 74	Actual:	93 | 76	Actual:	93 | 74	Actual:	93 | 73	Actual:	93 | 74	Actual:	93 | 73	Actual:	84 | 76	Actual:	94 | 74	Actual:	94 | 74	Actual:	94 | 73	Actual:	93 | 72	Actual:	93 | 77
Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.05	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00
Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -
Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-
30																							
Actual:	85 | 73																						
Precip:	0.00																						
Average:	- | -																						
Precip:	-																						

« Previous Month « 2009 2011 » Next Month »

Calendar Key:



Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
June	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	91	80	69	71	67	63	94	64	39	29.99	29.92	29.81	10	10	5	10	3	16	0.00	
2	92	81	69	73	69	65	95	69	41	29.87	29.79	29.68	10	8	2	23	5	29	0.47	Rain , Thunderstorm
3	71	70	68	70	69	67	96	94	89	29.78	29.74	29.66	10	7	2	15	5	23	0.80	Rain , Thunderstorm
4	89	78	67	71	68	64	97	74	44	29.84	29.78	29.74	10	6	0	6	0	-	0.00	Fog
5	90	80	71	73	71	68	95	74	54	29.86	29.80	29.76	10	8	4	10	2	-	0.00	
6	92	84	76	77	75	72	95	76	52	29.93	29.89	29.83	7	4	2	7	4	-	0.00	
7	90	83	76	76	75	72	92	77	57	30.02	29.96	29.90	7	4	3	10	4	-	0.00	
8	83	78	73	76	73	68	94	86	63	30.00	29.95	29.92	10	7	5	13	5	18	0.00	Rain
9	77	74	70	74	70	68	96	94	91	30.00	29.94	29.86	10	6	1	13	3	17	2.90	Rain , Thunderstorm
10	91	82	73	77	75	71	96	80	54	29.92	29.87	29.80	7	4	3	18	8	24	0.00	Rain
11	90	84	77	77	74	72	91	76	59	29.93	29.89	29.85	7	5	3	17	10	23	0.00	
12	91	84	78	76	75	73	91	75	56	30.02	29.97	29.93	10	5	4	16	10	25	0.00	Rain
13	91	84	78	76	75	71	91	73	53	30.03	30.00	29.92	7	5	3	14	9	20	0.00	
14	93	85	77	76	73	68	93	72	46	29.98	29.94	29.83	7	5	3	14	8	21	0.00	Rain
15	93	84	74	75	72	67	96	72	42	30.03	29.98	29.93	7	5	2	9	4	-	0.00	
16	93	84	75	76	73	68	95	71	44	30.09	30.03	29.98	10	7	2	10	4	-	0.00	
17	93	84	74	76	72	66	95	72	44	30.05	30.02	29.96	10	6	0	14	4	18	0.00	Fog

18	93	84	74	76	73	70	93	71	49	30.05	30.00	29.93	10	10	7	14	6	18	0.00	
19	93	84	76	75	73	69	93	71	44	30.09	30.03	29.99	10	9	7	10	6	-	0.00	
20	93	84	74	75	72	69	94	69	45	30.06	30.01	29.93	10	10	7	10	4	17	0.00	
21	93	83	73	74	71	70	92	69	47	30.04	29.99	29.94	10	10	10	9	4	-	0.00	
22	93	84	74	75	72	67	92	67	42	30.06	30.00	29.97	10	10	10	8	3	-	0.00	
23	93	83	73	74	72	68	94	69	43	30.07	30.02	29.98	10	10	7	8	3	-	0.00	
24	84	80	76	76	74	72	91	83	68	30.10	30.05	29.99	10	10	5	10	3	-	0.05	Rain
25	94	84	74	76	72	68	95	71	44	30.08	30.01	29.94	10	10	5	10	3	16	0.00	
26	94	84	74	75	73	69	95	69	46	30.01	29.94	29.83	10	10	5	12	6	17	0.00	
27	94	84	73	74	71	66	94	67	39	29.90	29.84	29.74	10	10	7	13	5	-	0.00	
28	93	82	72	76	72	68	94	70	43	29.88	29.83	29.78	10	8	5	10	4	17	0.00	
29	93	85	77	75	73	70	91	76	49	29.94	29.90	29.86	10	7	4	15	4	24	0.00	Rain , Thunderstorm
30	85	79	73	74	73	71	92	81	66	29.99	29.95	29.92	7	6	4	13	5	17	0.00	Rain

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Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: MD/JD - BRA	
Date & Time: 18 Aug 10 0925	County Name: Robertson
Stream Name: Sand Creek	
Segment No. or nearest downstream Segment No.: 1242M	
Description of Site: 16394 upstream from SH 6.	

At any point during the Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the use for the water body the investigator should stop conducting the UAA.

A. Stream Characteristics:

1. Check the following channel flow status that applies.

☐ dry ☐ no flow ☑ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:

☐ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.

☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.

☑ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.

☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.

☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. 2.072 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 ~~88 °F~~ °C 31.7 °C Water Temp 26.8 °C 80.2 °F

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
RL 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): Access from SH 6 ROW. Gentle slope. Fence across stream at train trestle. #1045 - 1047

8. Dominant Primary Substrate

☐Cobble ☑Sand ☐Silt ☐Mud/Clay ☐Gravel ☐Bedrock ☐Rip rap ☐ Concrete

Stream Name_____ Site: _____
Date: _____ Time: _____

B. Primary Contact Water Recreation Evaluation:

- Primary contact recreation draft definition: Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, and whitewater kayaking, canoeing, and rafting, involving a significant risk of ingestion of water.

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?

☐ Yes ☑ No primary contact recreation activities were observed

a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).

☐ Wading-Children ☐ Tubing ☑ No primary contact activities that commonly occur were observed
☐ Wading-Adults ☐ Surfing
☐ Swimming ☐ Whitewater-kayaking, canoeing, rafting
☐ Water skiing ☐ Other: _____
☐ Diving ☐ frequent public swimming-created by publicly owned land or commercial operations

b. Check the number of individuals observed at the site: ☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.

☐ Water in mouth or nose of the individual ☐ Primary touch: Individual's body (or portion) immersed in water
☐ Secondary touch: fishing, pets and related contact with water ☐ Individual is in a boat touching water
☐ Individual is on shore near water within 8 meters (25ft) of water ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☑ Not applicable

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).

Low flow, only 1 significant pool in reach. See all pics for this transect

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).

SHG crosses creek Easy access from ROW, # 1045-1047

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: _____

Date: _____ Time: _____

b. Check the number of individuals observed at the site.
☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body well away from water between 8 and 30 meters (100 ft)

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
Low flow, shallow pools 1048, 1049

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).
Low flow, shallow pools .05 depth at riffle 1m wide
Pic # 1052 Fence, 1049

6. Describe why there is limited public access (e.g. lack of roads, river or stream banks overgrown, etc.) (Attach photos, maps, etc. for documentation).
N/A Pic # 1045-1049, Fence 1049

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.
See assoc. pics, No sign of any recreation. Only 1 significant pool within reach. Trash Trestle # 1049, 1050, 1051

Field Data Sheets – Basic RUAA Survey

Stream Name _____ Site: _____
Date: _____

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 1048 Downstream 1049 Left Bank 1050 Right Bank 1051
Photos #s (150 meters) Upstream 1053 Downstream 1054 Left Bank 1055 Right Bank 1056
Photos #s (300 meters) Upstream 1057 Downstream 1058 Left Bank 1059 Right Bank 1060

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	59	5	0.75
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	0.36
60 meters	0.20
90 meters	0.10
120 meters	0.10
150 meters	0.35
180 meters	0.49
210 meters	0.50
240 meters	0.45
270 meters	0.29
300 meters	0.51
Average	0.34

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

c) Stream width - Measure (1) the width at one point which represents the typical average width of the 300 meter reach; (2) the width at the narrowest point of the stream within the 300 meter reach; and (3) the width at the widest point of the stream within the 300 meter reach.

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	3
Width at narrowest point of the stream within 300 meter reach	0.70
Width at the widest point of the stream within 300 meter reach	5m

d) Is there sufficient water within a 300 meter stream reach during base flow conditions to support primary contact recreation? ☐ Yes ☑ No

COMMENTS: No significant pools to speak of.

2. Non-wadeable Streams

If accessible, take 10 width measurements which represent typical widths of the 300 meter reach. If the water is too deep and not accessible record the estimated average width of the water body.

Also, take photos facing upstream, downstream, left bank, and right bank at .
Photos #s (30 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (150 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

# Measurements	Width (meters)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

☐ Drinking or water in mouth
☐ Bathing
☐ Walking
☐ Jogging/running
☐ Bicycling
☐ Standing
☐ Sitting
☐ Lying down/sleeping
☐ Playing on shoreline
☐ Picnicking
☐ Motorcycle/ATV
☐ Hunting/Trapping
☐ Wildlife watching
☑ None
☐ Other: _____

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☐ Yes ☑ No (If yes, please provide supporting documentation and photos.)
Comments: _____

3. Check any channel obstructions that apply (Attach photos).

☐ Culverts ☐ Fences ☐ Log jams ☐ Rip rap ☐ Water control structure
☐ Barbed wire ☐ Dams ☐ Thick vegetation ☐ Low bridges ☑ None
☐ Utility pipe ☐ Other (specify):_____

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest).

☐ Campgrounds
☐ Playgrounds
☑ Rural area
☐ Residential
☐ National forests
☐ Urban/suburban location
☐ Golf Course
☐ Sports Field
☐ Stairs/walkway
☐ Boating access (ramps)
☐ Beach
☑ Bridge crossing
☐ Commercial boating
☐ Trails/paths (hiking/biking)
☐ Paved parking lot
☐ Unimproved parking lot
☑ Roads (paved/unpaved)
☐ Populated area
☐ Docks or rafts
☐ Commercial outfitter
☐ Nearby school
☐ Power Line Corridor
☐ Parks (national/city/county/state)
☐ Public Property
☐ Other:_____
☐ None of the Above

Comments: SH 6 access pt 1045-1047

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).

☑ Private Property
☐ No trespass sign
☐ Wildlife
☐ Steep slopes
☐ No public access
☐ No roads
☑ Fence
☐ Barge/ship traffic
☐ Industrial
☐ None of the Above
☐ Other:_____

Comments: pic #1049 Fence

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:_____

Stream Name_____ Site: _____
Date: _____ Time: _____

7. Check all water characteristics that apply (Attach photos).
Aquatic Vegetation: ☐ absent ☑ rare ☐ common ☐ abundant
Algae Cover: ☐ absent ☑ rare ☐ common ☐ abundant
Odor: ☑ none ☐ rare ☐ common ☐ abundant
Color: ☑ clear ☐ green ☐ red ☐ brown ☐ black
Bottom Deposit: ☐ sludge ☑ solids ☑ fine sediments ☐ none ☐ other
Water Surface: ☑ clear ☐ scum ☐ foam ☐ debris ☐ oil
Other:
#1052

8. Vertebrates Observed within 300 meter reach
Snakes ☑ None ☑ slight presence ☐ moderate presence ☐ large presence
Water Dependent Birds ☑ None ☐ slight presence ☐ moderate presence ☐ large presence
Alligators ☑ None ☐ slight presence ☐ moderate presence ☐ large presence
Comments: Snake 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: Snake in water

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).
Rural area, Private Pastures, Low flow, Only 1 pool within reach

Field Data Sheet - Basic RUAA Survey
Stream Flow (Discharge) Measurement

Stream:_____ Date:_____

Site:_____ Site

Description:_____

Time Begin:_____ Time End:_____ Meter Type:_____

Observers:_____ Stream Width*:_____ Section Width (W):_____

Observations:_____

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V)		Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
			At Point (ft/s)(m/s)	Average (ft/s)(m/s)	

: Thu Sep 23 2010

16394-18AUG10.WAD
2010/08/18 09:10:53

MB

FlowTracker	**(English Units)**
P872	ft
3.7	ft/s
2.30	ft^2
0.0%	cfs

Accuracy	1.0%	1.0%
Depth	1.1%	0.0%
Velocity	6.5%	68.8%
Width	0.4%	0.4%
Method	5.4%	-
# Stations	5.1%	-
Overall	**10.0%**	**68.9%**

40	10
LEW	4.000
37.0 dB	0.650
80.55 °F	0.163
Mid-Section	0.1103
	0.0718

				Depth								
0	09:10	0.60	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
1	09:10	1.60	0.6	0.200	0.6	0.080	0.0046	1.00	0.0046	0.150	0.0007	1.0
2	09:12	2.10	0.6	0.200	0.6	0.080	0.2762	1.00	0.2762	0.080	0.0221	30.8
3	09:22	2.40	0.6	0.200	0.6	0.080	0.0007	1.00	0.0007	0.050	0.0000	0.0
4	09:14	2.60	0.6	0.200	0.6	0.080	0.0128	1.00	0.0128	0.070	0.0009	1.2
5	09:15	3.10	0.6	0.200	0.6	0.080	-0.0039	1.00	-0.0039	0.060	-0.0002	-0.3
6	09:21	3.20	0.6	0.200	0.6	0.080	0.0020	1.00	0.0020	0.050	0.0001	0.1
7	09:17	3.60	0.6	0.200	0.6	0.080	0.5203	1.00	0.5203	0.090	0.0469	65.3
8	09:20	4.10	0.6	0.200	0.6	0.080	0.0131	1.00	0.0131	0.100	0.0013	1.8
9	09:20	4.60	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0

: Thu Sep 23 2010

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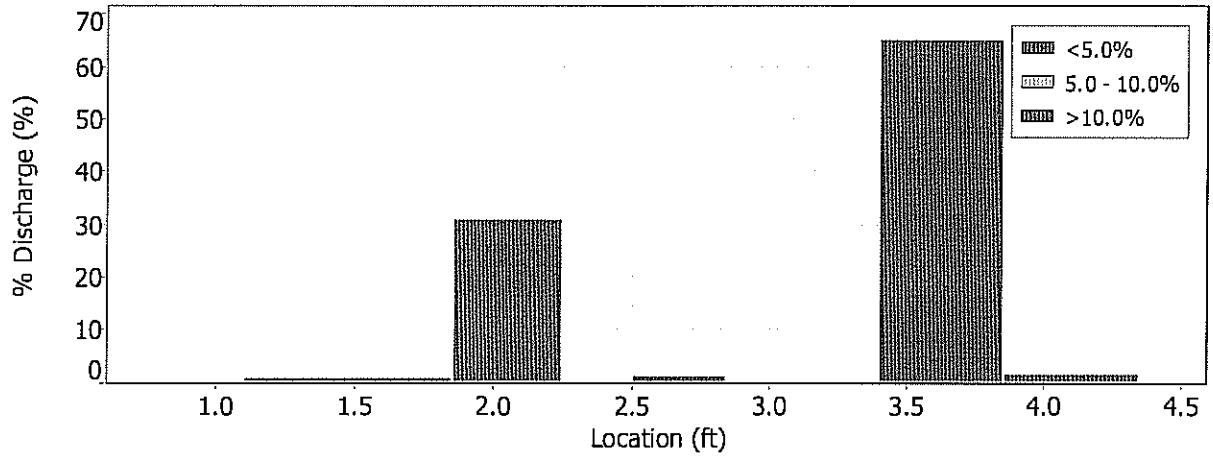
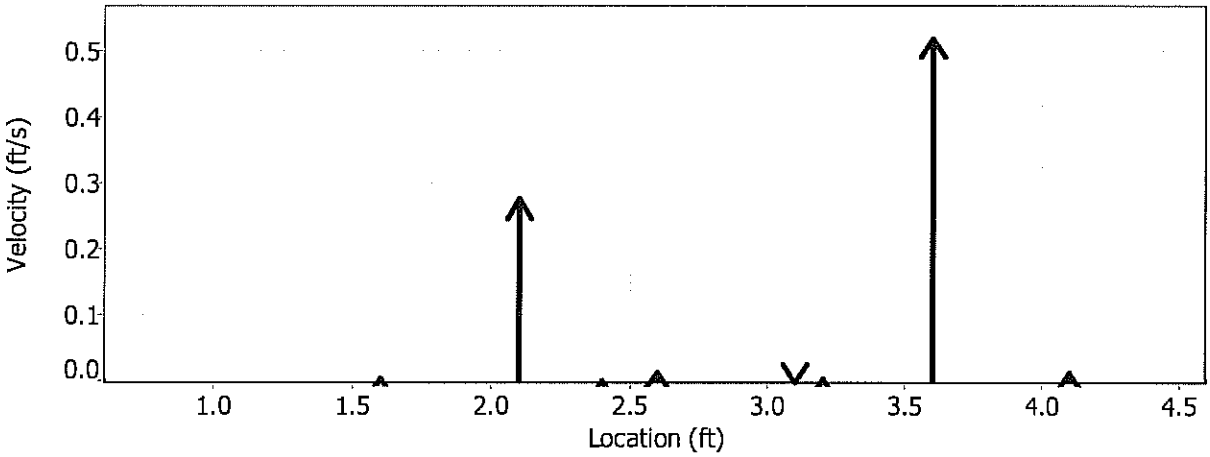
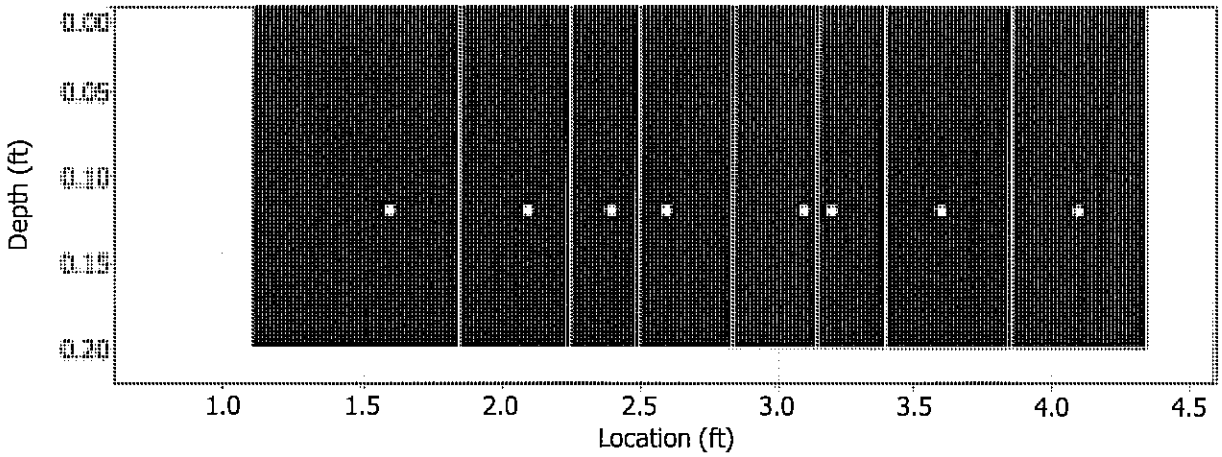
2010/08/18 09:10:53

MB







: Thu Sep 23 2010

16394-18AUG10.WAD
2010/08/18 09:10:53

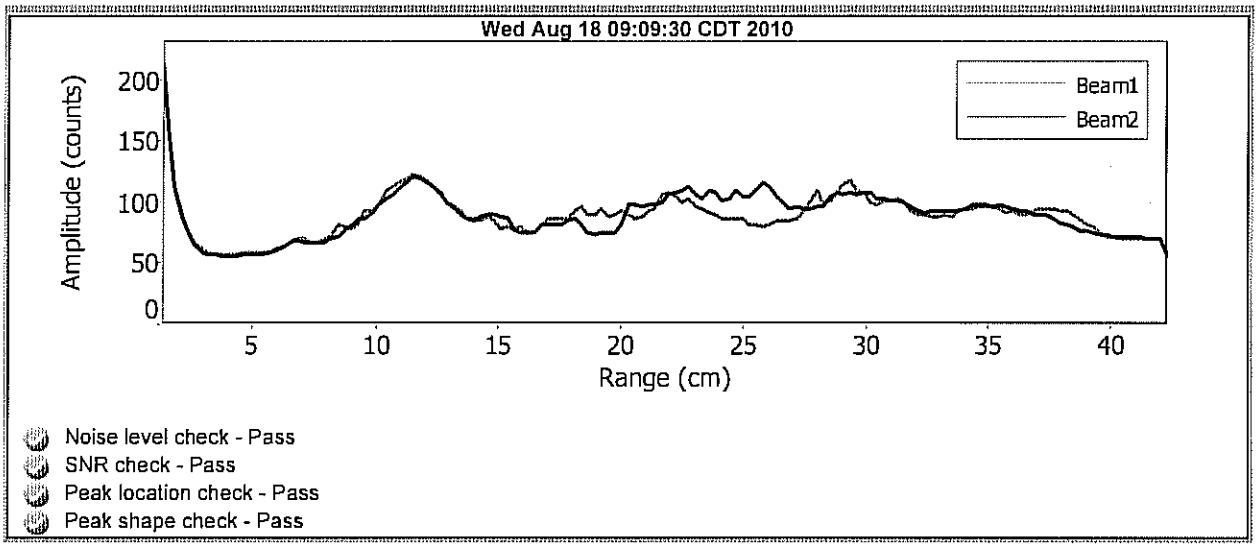
MB

1	1.60	0.6	Boundary QC is Good; possible boundary interference
2	2.10	0.6	SNR (26.8) is different from typical SNR (37.0)
		0.6	High standard error: 0.034
		0.6	Boundary QC is Poor; possible boundary interference
3	2.40	0.6	High SNR variation during measurement: 3.0,5.2
		0.6	Boundary QC is Good; possible boundary interference
4	2.60	0.6	SNR (49.6) is different from typical SNR (37.0)
5	3.10	0.6	Boundary QC is Fair; possible boundary interference
6	3.20	0.6	SNR (48.1) is different from typical SNR (37.0)
		0.6	Boundary QC is Fair; possible boundary interference
7	3.60	0.6	SNR (23.4) is different from typical SNR (37.0)
		0.6	High standard error: 0.041
		0.6	Boundary QC is Fair; possible boundary interference

: Thu Sep 23 2010

16394-18AUG10.WAD
2010/08/18 09:10:53

MB



Noise level check - Pass
SNR check - Pass
Peak location check - Pass
Peak shape check - Pass

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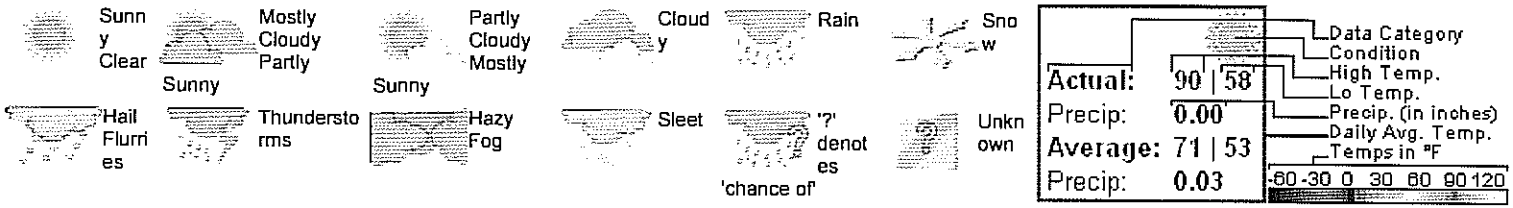
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1 **Actual:** 87 | 75 Precip: 0.07 **Average:** - | - Precip: -	2 **Actual:** 87 | 75 Precip: 0.46 **Average:** - | - Precip: -	3 **Actual:** 85 | 75 Precip: 0.00 **Average:** - | - Precip: -
4 **Actual:** 91 | 76 Precip: 0.00 **Average:** - | - Precip: -	5 **Actual:** 92 | 74 Precip: 0.00 **Average:** - | - Precip: -	6 **Actual:** 93 | 75 Precip: 0.00 **Average:** - | - Precip: -	7 **Actual:** 91 | 74 Precip: 0.00 **Average:** - | - Precip: -	8 **Actual:** 86 | 76 Precip: 0.00 **Average:** - | - Precip: -	9 **Actual:** 91 | 75 Precip: 0.00 **Average:** - | - Precip: -	10 **Actual:** 90 | 74 Precip: 0.00 **Average:** - | - Precip: -
11 **Actual:** 92 | 75 Precip: 0.00 **Average:** - | - Precip: -	12 **Actual:** 93 | 76 Precip: 0.00 **Average:** - | - Precip: -	13 **Actual:** 94 | 78 Precip: 0.00 **Average:** - | - Precip: -	14 **Actual:** 94 | 76 Precip: 0.00 **Average:** - | - Precip: -	15 **Actual:** 95 | 75 Precip: 0.00 **Average:** - | - Precip: -	16 **Actual:** 95 | 75 Precip: 0.00 **Average:** - | - Precip: -	17 **Actual:** 96 | 73 Precip: 0.00 **Average:** - | - Precip: -
18 **Actual:** 95 | 74 Precip: 0.00 **Average:** - | - Precip: -	19 **Actual:** 93 | 74 Precip: 0.00 **Average:** - | - Precip: -	20 **Actual:** 95 | 76 Precip: 0.00 **Average:** - | - Precip: -	21 **Actual:** 95 | 75 Precip: 0.00 **Average:** - | - Precip: -	22 **Actual:** 95 | 76 Precip: 0.00 **Average:** - | - Precip: -	23 **Actual:** 95 | 77 Precip: 0.00 **Average:** - | - Precip: -	24 **Actual:** 94 | 73 Precip: 0.00 **Average:** - | - Precip: -

25	26	27	28	29	30	31
Actual: 97 | 74	**Actual:** 97 | 75	**Actual:** 92 | 72	**Actual:** 90 | 74	**Actual:** 93 | 74	**Actual:** 94 | 74	**Actual:** 96 | 73
Precip: 0.00	Precip: 0.00	Precip: 0.01	Precip: 0.11	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -

« Previous Month « 2009 2011 » Next Month »

Calendar Key:



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Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
July	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	87	81	75	75	73	71	94	80	64	30.04	30.00	29.97	10	6	4	16	8	25	0.07	Rain
2	87	81	75	76	74	72	94	88	63	30.03	29.99	29.95	10	7	4	16	6	29	0.46	Rain
3	85	80	75	77	75	72	95	85	68	29.98	29.94	29.90	10	5	3	14	4	20	0.00	Rain
4	91	84	76	77	74	71	94	75	51	29.94	29.90	29.84	7	5	3	14	7	18	0.00	Rain
5	92	83	74	76	73	70	95	74	48	29.91	29.87	29.80	7	5	3	10	5	9	0.00	
6	93	84	75	75	72	69	94	69	44	29.92	29.87	29.80	7	5	3	8	2	-	0.00	
7	91	82	74	75	73	69	94	75	53	29.94	29.91	29.87	7	5	4	15	3	25	0.00	
8	86	81	76	75	74	72	90	81	63	30.02	29.98	29.95	10	6	3	12	5	16	0.00	Rain
9	91	83	75	76	73	70	94	79	51	30.06	30.02	29.98	7	5	3	15	2	18	0.00	Rain
10	90	82	74	75	73	71	96	77	53	30.08	30.02	29.96	7	4	3	9	1	-	0.00	
11	92	84	75	75	72	69	94	72	46	29.99	29.94	29.83	7	5	4	15	5	20	0.00	
12	93	84	76	75	73	70	92	70	47	29.90	29.86	29.78	7	5	4	21	9	22	0.00	
13	94	86	78	75	73	71	86	68	46	29.92	29.88	29.85	7	4	3	18	11	24	0.00	
14	94	85	76	76	73	70	91	69	46	30.05	30.00	29.95	7	5	3	16	9	22	0.00	
15	95	85	75	76	72	68	95	69	41	30.09	30.02	29.96	7	5	2	10	5	16	0.00	
16	95	85	75	75	71	66	94	67	38	30.06	30.02	29.94	10	6	3	7	2	-	0.00	Rain
17	96	84	73	74	71	65	94	63	35	30.05	30.00	29.94	10	9	3	10	2	16	0.00	

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)			Gust Speed (mph)	Precip (in)	Events
18	95	84	74	75	72	68	90	73	42	30.03	29.99	29.94	10	10	7	12	5	20		0.00	Thunderstorm
19	93	84	74	76	73	70	96	76	48	30.02	29.98	29.94	10	8	0	18	4	26		0.00	Fog
20	95	86	76	76	73	65	95	73	39	30.05	30.01	29.97	10	9	5	15	6	18		0.00	
21	95	85	75	75	73	69	95	71	42	30.09	30.05	29.99	10	9	5	8	2	16		0.00	Rain
22	95	86	76	76	74	70	94	75	45	30.06	30.01	29.96	10	9	7	12	3	20		0.00	
23	95	86	77	77	73	64	94	70	35	30.05	30.01	29.96	10	9	5	14	4	20		0.00	
24	94	84	73	76	71	63	96	69	37	30.09	30.04	29.98	10	9	4	10	3	-		0.00	
25	97	86	74	72	67	58	88	58	26	30.06	30.02	29.94	10	10	7	8	2	-		0.00	Rain
26	97	86	75	73	70	67	87	67	38	30.02	29.97	29.88	10	7	4	24	2	34		0.00	Rain , Thunderstorm
27	92	82	72	76	72	69	95	79	46	30.05	30.00	29.96	10	6	4	10	2	-		0.01	Rain , Thunderstorm
28	90	82	74	76	74	71	95	83	56	30.14	30.09	30.03	10	9	3	17	6	31		0.11	Rain , Thunderstorm
29	93	84	74	77	72	68	96	74	45	30.20	30.14	30.03	10	9	5	10	3	-		0.00	
30	94	84	74	76	72	66	95	71	41	30.09	30.04	29.91	10	9	2	14	5	18		0.00	
31	96	84	73	74	69	59	94	66	29	29.98	29.93	29.85	10	9	5	10	4	-		0.00	

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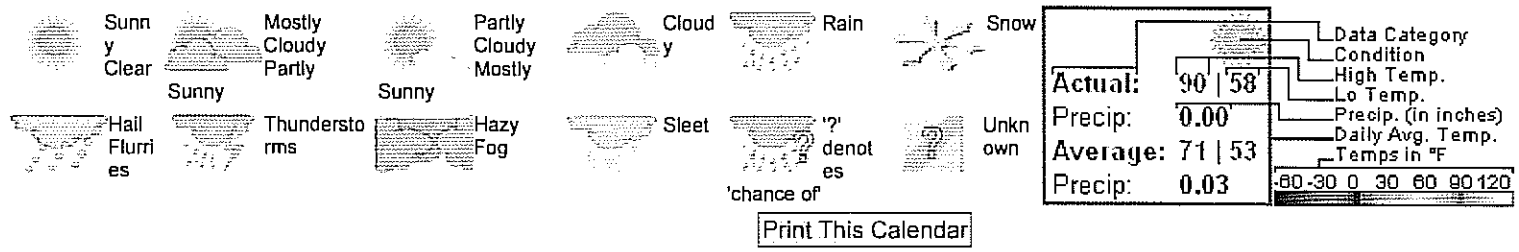
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1 Actual: 100 | 69 Precip: 0.00 Average: - | - Precip: -	2 Actual: 99 | 71 Precip: 0.00 Average: - | - Precip: -	3 Actual: 98 | 73 Precip: 0.00 Average: - | - Precip: -	4 Actual: 97 | 76 Precip: 0.00 Average: - | - Precip: -	5 Actual: 98 | 75 Precip: 0.00 Average: - | - Precip: -	6 Actual: 98 | 75 Precip: 0.00 Average: - | - Precip: -	7 Actual: 98 | 78 Precip: 0.00 Average: - | - Precip: -
8 Actual: 98 | 77 Precip: 0.00 Average: - | - Precip: -	9 Actual: 98 | 74 Precip: 0.00 Average: - | - Precip: -	10 Actual: 100 | 75 Precip: 0.00 Average: - | - Precip: -	11 Actual: 99 | 78 Precip: 0.00 Average: - | - Precip: -	12 Actual: 99 | 75 Precip: 0.00 Average: - | - Precip: -	13 Actual: 99 | 75 Precip: 0.00 Average: - | - Precip: -	14 Actual: 100 | 77 Precip: 0.00 Average: - | - Precip: -
15 Actual: 100 | 79 Precip: 0.00 Average: - | - Precip: -	16 Actual: 109 | 76 Precip: 0.00 Average: - | - Precip: -	17 Actual: 101 | 76 Precip: 0.00 Average: - | - Precip: -	18 Actual: 104 | 81 Precip: 0.00 Average: - | - Precip: -	19 Actual: 101 | 79 Precip: 0.00 Average: - | - Precip: -	20 Actual: 101 | 80 Precip: 0.00 Average: - | - Precip: -	21 Actual: 102 | 77 Precip: 0.00 Average: - | - Precip: -
22 Actual: 103 | 77 Precip: 0.00 Average: - | - Precip: -	23 Actual: 109 | 79 Precip: 0.00 Average: - | - Precip: -	24 Actual: 108 | 79 Precip: 0.00 Average: - | - Precip: -	25 Actual: 100 | 80 Precip: 0.00 Average: - | - Precip: -	26 Actual: 100 | 79 Precip: 0.00 Average: - | - Precip: -	27 Actual: 99 | 69 Precip: 0.00 Average: - | - Precip: -	28 Actual: 101 | 68 Precip: 0.00 Average: - | - Precip: -
29 Actual: 100 | 77	30 Actual: 99 | 81	31 Actual: 101 | 80				

Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -

« Previous Month « 2009 2011 » Next Month »

Calendar Key:



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Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
August	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	100	84	69	74	67	55	95	60	22	29.93	29.89	29.84	10	9	7	9	2	-	0.00	
2	99	85	71	70	64	55	90	55	25	30.00	29.96	29.91	10	9	4	12	2	16	0.00	
3	98	86	73	73	69	64	94	60	32	30.08	30.01	29.95	10	8	4	9	2	16	0.00	
4	97	86	76	77	73	68	94	66	38	30.05	29.98	29.89	7	6	3	12	4	17	0.00	Rain
5	98	86	75	74	71	65	92	62	34	29.96	29.91	29.83	7	5	3	8	3	-	0.00	
6	98	86	75	74	71	67	92	63	36	29.95	29.89	29.81	10	8	4	10	5	-	0.00	
7	98	88	78	75	71	64	86	60	33	29.94	29.88	29.81	10	10	10	12	5	16	0.00	
8	98	88	77	76	71	65	92	63	34	29.94	29.90	29.83	10	10	10	12	6	20	0.00	
9	98	86	74	76	71	66	95	63	34	29.99	29.93	29.85	10	10	7	12	5	16	0.00	
10	100	88	75	77	72	65	94	64	33	29.98	29.93	29.85	10	10	3	7	2	9	0.00	
11	99	88	78	76	73	68	89	64	36	29.96	29.90	29.83	10	10	10	12	3	24	0.00	Rain , Thunderstorm
12	99	87	75	76	71	65	92	63	33	29.90	29.85	29.75	10	10	7	9	2	-	0.00	
13	99	87	75	75	70	65	91	62	33	29.87	29.82	29.76	10	10	10	13	4	17	0.00	
14	100	88	77	76	72	66	92	62	33	29.94	29.88	29.83	10	10	7	13	6	18	0.00	
15	100	90	79	77	72	63	90	62	30	30.02	29.96	29.89	10	10	10	10	5	-	0.00	

2010	Temp. (°F)				Dew Point (°F)			Humidity (%)		Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
16	109	92	76	79	72	65	90	64	26	29.99	29.93	29.83	10	10	10	13	3	23	0.00	
17	101	88	76	78	75	70	96	69	36	29.95	29.91	29.83	10	9	5	8	1	-	0.00	
18	104	92	81	78	75	65	88	65	28	29.97	29.92	29.87	10	10	10	21	3	29	0.00	Thunderstorm
19	101	90	79	79	75	69	94	67	35	29.97	29.90	29.83	10	10	10	13	4	21	0.00	
20	101	90	80	80	74	66	95	62	33	29.93	29.86	29.80	10	10	7	17	8	25	0.00	
21	102	90	77	79	74	68	96	64	33	30.01	29.94	29.89	10	10	10	17	7	23	0.00	
22	103	90	77	78	74	69	94	62	34	30.04	29.97	29.88	10	10	7	12	6	-	0.00	
23	109	94	79	74	71	65	85	54	26	29.93	29.88	29.77	10	10	10	14	2	22	0.00	
24	108	94	79	77	71	63	88	53	24	29.90	29.85	29.78	10	10	10	17	4	26	0.00	
25	100	90	80	77	69	62	86	54	30	30.04	29.99	29.93	10	10	10	15	7	21	0.00	
26	100	90	79	72	67	62	76	50	29	30.09	30.04	29.96	10	10	10	12	5	18	0.00	
27	99	84	69	64	57	48	83	42	17	30.04	29.98	29.88	10	10	10	13	5	21	0.00	
28	101	84	68	65	61	54	82	49	25	29.94	29.89	29.79	10	10	10	8	1	-	0.00	
29	100	88	77	77	74	66	92	65	33	29.95	29.89	29.85	10	10	10	15	5	29	0.00	
30	99	90	81	81	77	72	93	73	42	30.06	30.00	29.94	10	10	10	14	7	22	0.00	
31	101	90	80	80	76	68	96	70	33	30.05	30.00	29.91	10	10	7	12	5	17	0.00	

Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: MFDM - BRA	
Date & Time: 12 Aug 10 1245	County Name: Robertson
Stream Name: Spring Creek	
Segment No. or nearest downstream Segment No.: 1242M	
Description of Site: 20564 Downstream from Jack Rabbit Lane	

At any point during the Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the use for the water body the investigator should stop conducting the UAA.

A. Stream Characteristics:

1. Check the following channel flow status that applies.

☐ dry ☐ no flow ☑ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:

☐ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.

☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.

☑ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.

☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.

☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. 0.17 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 97°F 36.1°C Water Temp 81°F 27.2°C

5. Riparian Zone (Mark dominant categories with L (Left Bank) and R (Right Bank). Bank orientation is determined by the investigator facing downstream.)

____ Forest	____ Urban	____ Rip rap
L Shrub dominated corridor	R Pasture	____ Concrete
____ Herbaceous marsh	____ Row crops	Other (specify): ____
____ Mowed/maintained corridor	____ Denuded/Eroded bank	

6. Ease of bank access to the water body: ☐ Easy ☑ Moderately easy ☐ Moderately difficult ☐ Difficult

7. Please describe access opportunities or explain why the site is not easily accessible (Attach photos for documentation):

County road crosses Creek Private property on each side is fenced, #921-923, 924

8. Dominant Primary Substrate

☐Cobble ☐Sand ☐Silt ☐Mud/Clay ☑Gravel ☐Bedrock ☐Rip rap ☐ Concrete

Stream Name_____ Site: _____
Date: _____ Time: _____

B. Primary Contact Water Recreation Evaluation:

- Primary contact recreation draft definition: Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, and whitewater kayaking, canoeing, and rafting, involving a significant risk of ingestion of water.

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?
☐ Yes ☑ No primary contact recreation activities were observed

a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).

☐ Wading-Children ☐ Tubing ☑ No primary contact activities that commonly occur were observed
☐ Wading-Adults ☐ Surfing
☐ Swimming ☐ Whitewater-kayaking, canoeing, rafting
☐ Water skiing ☐ Other: _____
☐ Diving ☐ frequent public swimming-created by publicly owned land or commercial operations

b. Check the number of individuals observed at the site: ☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Water in mouth or nose of the individual ☐ Primary touch: Individual's body (or portion) immersed in water
☐ Secondary touch: fishing, pets and related contact with water ☐ Individual is in a boat touching water
☐ Individual is on shore near water within 8 meters (25ft) of water ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☑ Not applicable

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
Low flow, few shallow pools. #924, 925

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
County road with fence around private property #921-923

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: _____

Date: _____ Time: _____

b. Check the number of individuals observed at the site.
☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body well away from water between 8 and 30 meters (100 ft)

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
Low flow, few shallow pools, # 924, 925 926, 927

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).
Low flow, few shallow pools #924, 925, 927, 926

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).
Fence with brush and vines. # 921-923

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.
Have never seen evidence of any type of recreation at this site.

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 926 Downstream 927 Left Bank 928 Right Bank 929
Photos #s (150 meters) Upstream 932 Downstream 933 Left Bank 934 Right Bank 935
Photos #s (300 meters) Upstream 936 Downstream 937 Left Bank 938 Right Bank 939

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	10	2.75	0.75
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	0.04
60 meters	0.15
90 meters	0.9
120 meters	0.14
150 meters	0.39
180 meters	0.25
210 meters	~~0.3~~ 0.30
240 meters	0.40
270 meters	~~0.2~~ 0.05
300 meters	0.78
Average	0.34

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

c) Stream width - Measure (1) the width at one point which represents the typical average width of the 300 meter reach; (2) the width at the narrowest point of the stream within the 300 meter reach; and (3) the width at the widest point of the stream within the 300 meter reach.

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	2.5
Width at narrowest point of the stream within 300 meter reach	4
Width at the widest point of the stream within 300 meter reach	0.65

d) Is there sufficient water within a 300 meter stream reach during base flow conditions to support primary contact recreation? ☐ Yes ☑ No
COMMENTS:
No deep pools

2. Non-wadeable Streams
If accessible, take 10 width measurements which represent typical widths of the 300 meter reach. If the water is too deep and not accessible record the estimated average width of the water body.

Also, take photos facing upstream, downstream, left bank, and right bank at .
Photos #s (30 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (150 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

# Measurements	Width (meters)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

☐ Drinking or water in mouth
☐ Bathing
☐ Walking
☐ Jogging/running
☐ Bicycling
☐ Standing
☐ Sitting
☐ Lying down/sleeping
☐ Playing on shoreline
☐ Picnicking
☐ Motorcycle/ATV
☐ Hunting/Trapping
☐ Wildlife watching
☑ None
☐ Other: _____

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☐ Yes ☑ No (If yes, please provide supporting documentation and photos.)
Comments: _____

3. Check any channel obstructions that apply (Attach photos). at road, see pic # 941

☑ Culverts ☑ Fences ☐ Log jams ☐ Rip rap ☐ Water control structure
☐ Barbed wire ☐ Dams ☐ Thick vegetation ☐ Low bridges ☐ None
☐ Utility pipe ☐ Other (specify):_____

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest).

☐ Campgrounds
☐ Playgrounds
☑ Rural area
☐ Residential
☐ National forests
☐ Urban/suburban location
☐ Golf Course
☐ Sports Field
☐ Stairs/walkway
☐ Boating access (ramps)
☐ Beach
☐ Bridge crossing
☐ Commercial boating
☐ Trails/paths (hiking/biking)
☐ Paved parking lot
☐ Unimproved parking lot
☑ Roads (paved/unpaved)
☐ Populated area
☐ Docks or rafts
☐ Commercial outfitter
☐ Nearby school
☐ Power Line Corridor
☐ Parks (national/city/county/state)
☐ Public Property
☐ Other:_____
☐ None of the Above

Comments: County road, fences # 921, 922, 924

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).

☑ Private Property
☐ No trespass sign
☐ Wildlife
☐ Steep slopes
☐ No public access
☐ No roads
☑ Fence
☐ Barge/ship traffic
☐ Industrial
☐ None of the Above
☐ Other:_____

Comments: See road & fence pics # 921, 922, 924
Sand coming out of ground # 930, 931, 940

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:_____

Stream Name_____ Site: _____
Date: _____ Time: _____

7. Check all water characteristics that apply (Attach photos).
Aquatic Vegetation: ☐ absent ☐ rare ☐ common ☑ abundant
Algae Cover: ☐ absent ☐ rare ☑ common ☐ abundant
Odor: ☑ none ☐ rare ☐ common ☐ abundant
Color: ☑ clear ☐ green ☐ red ☐ brown ☐ black
Bottom Deposit: ☐ sludge ☐ solids ☑ fine sediments ☐ none ☐ other
Water Surface: ☑ clear ☐ scum ☐ foam ☐ debris ☐ oil
Other:
#926, 927, 933, 937, 941

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, bogs, 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).
Not enough water or deep pools for recreation
Sand bathing up from ground #~~939~~ 940, 930, 931 (See F5)

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream:_____ Date:_____

Site:_____ Site

Description:_____

Time Begin:_____ Time End:_____ Meter Type:_____

Observers:_____ Stream Width*:_____ Section Width (W):_____

Observations:_____

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V)		Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
			At Point (ft/s)(m/s)	Average (ft/s)(m/s)	

: Fri Aug 13 2010

20564-12AUG10.WAD
2010/08/12 11:49:05

MB

FlowTracker
P872
3.7
2.30
0.0%

(English Units)
ft
ft/s
ft^2
cfs

Accuracy	1.0%	1.0%
Depth	0.5%	1.1%
Velocity	6.4%	19.4%
Width	0.2%	0.2%
Method	2.7%	-
# Stations	3.9%	-
Overall	**8.1%**	**19.5%**

40	13
LEW	6.700
21.4 dB	2.593
81.31 °F	0.387
Mid-Section	0.0656
	0.1702

				Depth								
0	11:49	4.40	None	0.100	0.0	0.0	0.0000	1.00	0.0381	0.050	0.0019	1.1
1	11:50	5.40	0.6	0.550	0.6	0.220	0.0381	1.00	0.0381	0.412	0.0157	9.2
2	11:51	5.90	0.6	0.500	0.6	0.200	0.0220	1.00	0.0220	0.250	0.0055	3.2
3	11:52	6.40	0.6	0.500	0.6	0.200	0.0928	1.00	0.0928	0.250	0.0232	13.6
4	11:53	6.90	0.6	0.500	0.6	0.200	0.1532	1.00	0.1532	0.250	0.0383	22.5
5	11:54	7.40	0.6	0.500	0.6	0.200	0.0696	1.00	0.0696	0.250	0.0174	10.2
6	11:55	7.90	0.6	0.500	0.6	0.200	0.0955	1.00	0.0955	0.250	0.0239	14.0
7	11:56	8.40	0.6	0.450	0.6	0.180	0.0574	1.00	0.0574	0.225	0.0129	7.6
8	11:57	8.90	0.6	0.400	0.6	0.160	0.1089	1.00	0.1089	0.200	0.0218	12.8
9	11:58	9.40	0.6	0.350	0.6	0.140	0.0003	1.00	0.0003	0.175	0.0001	0.0
10	12:01	9.90	0.6	0.250	0.6	0.100	0.0075	1.00	0.0075	0.125	0.0009	0.6
11	12:02	10.40	0.6	0.200	0.6	0.080	0.0554	1.00	0.0554	0.120	0.0067	3.9
12	12:02	11.10	None	0.100	0.0	0.0	0.0000	1.00	0.0554	0.035	0.0019	1.1

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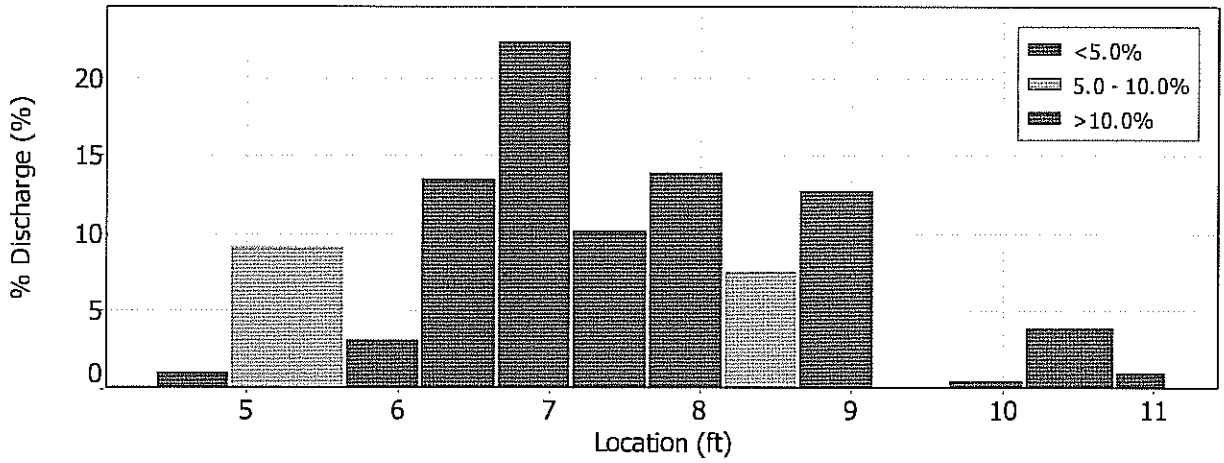

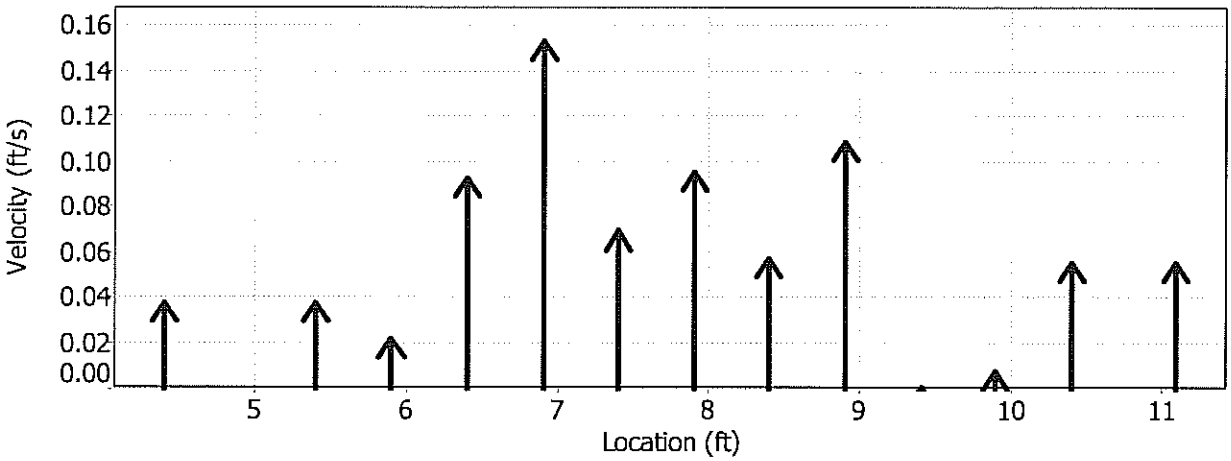

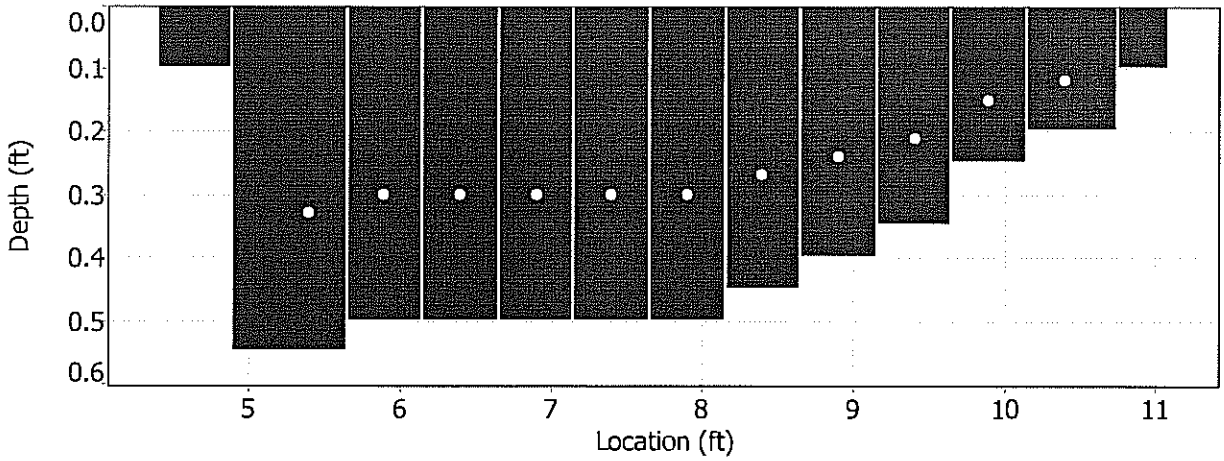

: Fri Aug 13 2010

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2010/08/12 11:49:05

MB

1	5.40	0.6	High SNR variation during measurement: 9.5,9.0
		0.6	Boundary QC is Fair; possible boundary interference
2	5.90	0.6	High SNR variation during measurement: 9.0,9.9
3	6.40	0.6	Boundary QC is Fair; possible boundary interference
6	7.90	0.6	High angle: 20
7	8.40	0.6	High angle: 28
		0.6	High standard error: 0.048
		0.6	Boundary QC is Fair; possible boundary interference
8	8.90	0.6	Boundary QC is Good; possible boundary interference
9	9.40	0.6	SNR (38.7) is different from typical SNR (21.4)
		0.6	Boundary QC is Good; possible boundary interference
10	9.90	0.6	High SNR variation during measurement: 3.4,6.0
		0.6	Boundary QC is Fair; possible boundary interference
11	10.40	0.6	Boundary QC is Good; possible boundary interference

: Fri Aug 13 2010

20564-12AUG10.WAD
2010/08/12 11:49:05

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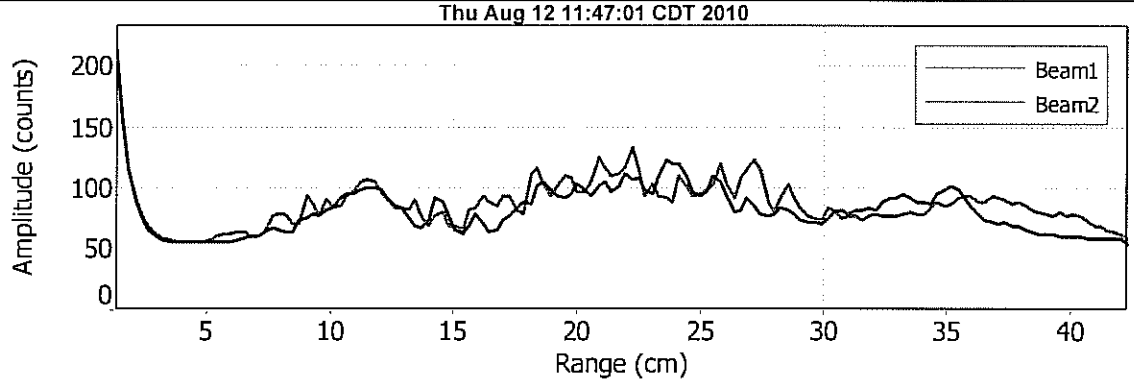
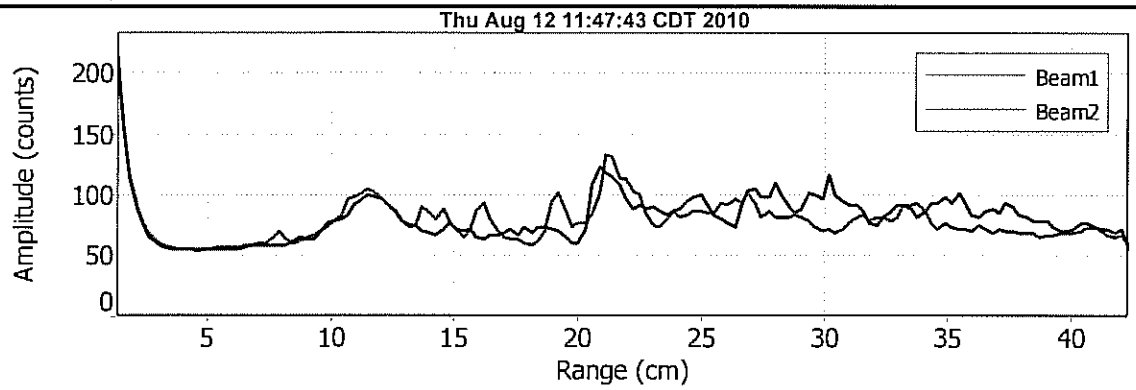


Noise level check - Pass
SNR check - Pass
Peak location check - Pass
Peak shape check - Fail



Noise level check - Pass
SNR check - Pass
Peak location check - Pass
Peak shape check - Pass

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Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1 **Actual:** 87 | 75 Precip: 0.07 **Average:** - | - Precip: -	2 **Actual:** 87 | 75 Precip: 0.46 **Average:** - | - Precip: -	3 **Actual:** 85 | 75 Precip: 0.00 **Average:** - | - Precip: -
4 **Actual:** 91 | 76 Precip: 0.00 **Average:** - | - Precip: -	5 **Actual:** 92 | 74 Precip: 0.00 **Average:** - | - Precip: -	6 **Actual:** 93 | 75 Precip: 0.00 **Average:** - | - Precip: -	7 **Actual:** 91 | 74 Precip: 0.00 **Average:** - | - Precip: -	8 **Actual:** 86 | 76 Precip: 0.00 **Average:** - | - Precip: -	9 **Actual:** 91 | 75 Precip: 0.00 **Average:** - | - Precip: -	10 **Actual:** 90 | 74 Precip: 0.00 **Average:** - | - Precip: -
11 **Actual:** 92 | 75 Precip: 0.00 **Average:** - | - Precip: -	12 **Actual:** 93 | 76 Precip: 0.00 **Average:** - | - Precip: -	13 **Actual:** 94 | 78 Precip: 0.00 **Average:** - | - Precip: -	14 **Actual:** 94 | 76 Precip: 0.00 **Average:** - | - Precip: -	15 **Actual:** 95 | 75 Precip: 0.00 **Average:** - | - Precip: -	16 **Actual:** 95 | 75 Precip: 0.00 **Average:** - | - Precip: -	17 **Actual:** 96 | 73 Precip: 0.00 **Average:** - | - Precip: -
18 **Actual:** 95 | 74 Precip: 0.00 **Average:** - | - Precip: -	19 **Actual:** 93 | 74 Precip: 0.00 **Average:** - | - Precip: -	20 **Actual:** 95 | 76 Precip: 0.00 **Average:** - | - Precip: -	21 **Actual:** 95 | 75 Precip: 0.00 **Average:** - | - Precip: -	22 **Actual:** 95 | 76 Precip: 0.00 **Average:** - | - Precip: -	23 **Actual:** 95 | 77 Precip: 0.00 **Average:** - | - Precip: -	24 **Actual:** 94 | 73 Precip: 0.00 **Average:** - | - Precip: -

25	26	27	28	29	30	31
Actual: 97 | 74	**Actual:** 97 | 75	**Actual:** 92 | 72	**Actual:** 90 | 74	**Actual:** 93 | 74	**Actual:** 94 | 74	**Actual:** 96 | 73
Precip: 0.00	Precip: 0.00	Precip: 0.01	Precip: 0.11	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -

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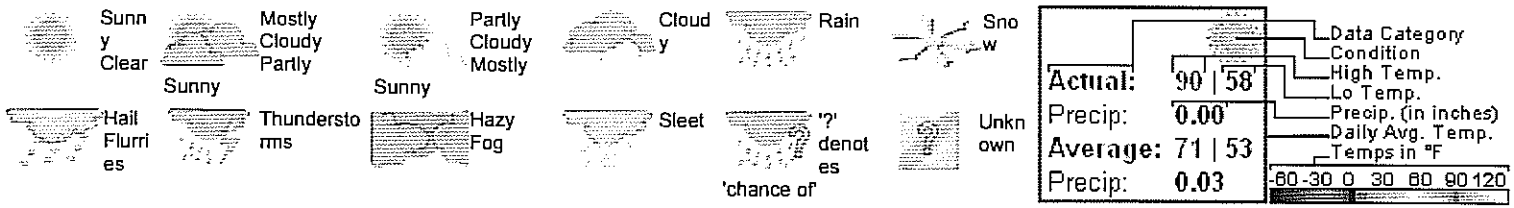
Calendar Key:



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Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
July	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	87	81	75	75	73	71	94	80	64	30.04	30.00	29.97	10	6	4	16	8	25	0.07	Rain
2	87	81	75	76	74	72	94	88	63	30.03	29.99	29.95	10	7	4	16	6	29	0.46	Rain
3	85	80	75	77	75	72	95	85	68	29.98	29.94	29.90	10	5	3	14	4	20	0.00	Rain
4	91	84	76	77	74	71	94	75	51	29.94	29.90	29.84	7	5	3	14	7	18	0.00	Rain
5	92	83	74	76	73	70	95	74	48	29.91	29.87	29.80	7	5	3	10	5	9	0.00	
6	93	84	75	75	72	69	94	69	44	29.92	29.87	29.80	7	5	3	8	2	-	0.00	
7	91	82	74	75	73	69	94	75	53	29.94	29.91	29.87	7	5	4	15	3	25	0.00	
8	86	81	76	75	74	72	90	81	63	30.02	29.98	29.95	10	6	3	12	5	16	0.00	Rain
9	91	83	75	76	73	70	94	79	51	30.06	30.02	29.98	7	5	3	15	2	18	0.00	Rain
10	90	82	74	75	73	71	96	77	53	30.08	30.02	29.96	7	4	3	9	1	-	0.00	
11	92	84	75	75	72	69	94	72	46	29.99	29.94	29.83	7	5	4	15	5	20	0.00	
12	93	84	76	75	73	70	92	70	47	29.90	29.86	29.78	7	5	4	21	9	22	0.00	
13	94	86	78	75	73	71	86	68	46	29.92	29.88	29.85	7	4	3	18	11	24	0.00	
14	94	85	76	76	73	70	91	69	46	30.05	30.00	29.95	7	5	3	16	9	22	0.00	
15	95	85	75	76	72	68	95	69	41	30.09	30.02	29.96	7	5	2	10	5	16	0.00	
16	95	85	75	75	71	66	94	67	38	30.06	30.02	29.94	10	6	3	7	2	-	0.00	Rain
17	96	84	73	74	71	65	94	63	35	30.05	30.00	29.94	10	9	3	10	2	16	0.00	

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
18	95	84	74	75	72	68	90	73	42	30.03	29.99	29.94	10	10	7	12	5	20	0.00	Thunderstorm
19	93	84	74	76	73	70	96	76	48	30.02	29.98	29.94	10	8	0	18	4	26	0.00	Fog
20	95	86	76	76	73	65	95	73	39	30.05	30.01	29.97	10	9	5	15	6	18	0.00	
21	95	85	75	75	73	69	95	71	42	30.09	30.05	29.99	10	9	5	8	2	16	0.00	Rain
22	95	86	76	76	74	70	94	75	45	30.06	30.01	29.96	10	9	7	12	3	20	0.00	
23	95	86	77	77	73	64	94	70	35	30.05	30.01	29.96	10	9	5	14	4	20	0.00	
24	94	84	73	76	71	63	96	69	37	30.09	30.04	29.98	10	9	4	10	3	-	0.00	
25	97	86	74	72	67	58	88	58	26	30.06	30.02	29.94	10	10	7	8	2	-	0.00	Rain
26	97	86	75	73	70	67	87	67	38	30.02	29.97	29.88	10	7	4	24	2	34	0.00	Rain , Thunderstorm
27	92	82	72	76	72	69	95	79	46	30.05	30.00	29.96	10	6	4	10	2	-	0.01	Rain , Thunderstorm
28	90	82	74	76	74	71	95	83	56	30.14	30.09	30.03	10	9	3	17	6	31	0.11	Rain , Thunderstorm
29	93	84	74	77	72	68	96	74	45	30.20	30.14	30.03	10	9	5	10	3	-	0.00	
30	94	84	74	76	72	66	95	71	41	30.09	30.04	29.91	10	9	2	14	5	18	0.00	
31	96	84	73	74	69	59	94	66	29	29.98	29.93	29.85	10	9	5	10	4	-	0.00	

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Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1 **Actual:** 100 | 69 Precip: 0.00 **Average:** - | - Precip: -	2 **Actual:** 99 | 71 Precip: 0.00 **Average:** - | - Precip: -	3 **Actual:** 98 | 73 Precip: 0.00 **Average:** - | - Precip: -	4 **Actual:** 97 | 76 Precip: 0.00 **Average:** - | - Precip: -	5 **Actual:** 98 | 75 Precip: 0.00 **Average:** - | - Precip: -	6 **Actual:** 98 | 75 Precip: 0.00 **Average:** - | - Precip: -	7 **Actual:** 98 | 78 Precip: 0.00 **Average:** - | - Precip: -
8 **Actual:** 98 | 77 Precip: 0.00 **Average:** - | - Precip: -	9 **Actual:** 98 | 74 Precip: 0.00 **Average:** - | - Precip: -	10 **Actual:** 100 | 75 Precip: 0.00 **Average:** - | - Precip: -	11 **Actual:** 99 | 78 Precip: 0.00 **Average:** - | - Precip: -	12 **Actual:** 99 | 75 Precip: 0.00 **Average:** - | - Precip: -	13 **Actual:** 99 | 75 Precip: 0.00 **Average:** - | - Precip: -	14 **Actual:** 100 | 77 Precip: 0.00 **Average:** - | - Precip: -
15 **Actual:** 100 | 79 Precip: 0.00 **Average:** - | - Precip: -	16 **Actual:** 109 | 76 Precip: 0.00 **Average:** - | - Precip: -	17 **Actual:** 101 | 76 Precip: 0.00 **Average:** - | - Precip: -	18 **Actual:** 104 | 81 Precip: 0.00 **Average:** - | - Precip: -	19 **Actual:** 101 | 79 Precip: 0.00 **Average:** - | - Precip: -	20 **Actual:** 101 | 80 Precip: 0.00 **Average:** - | - Precip: -	21 **Actual:** 102 | 77 Precip: 0.00 **Average:** - | - Precip: -
22 **Actual:** 103 | 77 Precip: 0.00 **Average:** - | - Precip: -	23 **Actual:** 109 | 79 Precip: 0.00 **Average:** - | - Precip: -	24 **Actual:** 108 | 79 Precip: 0.00 **Average:** - | - Precip: -	25 **Actual:** 100 | 80 Precip: 0.00 **Average:** - | - Precip: -	26 **Actual:** 100 | 79 Precip: 0.00 **Average:** - | - Precip: -	27 **Actual:** 99 | 69 Precip: 0.00 **Average:** - | - Precip: -	28 **Actual:** 101 | 68 Precip: 0.00 **Average:** - | - Precip: -
29 **Actual:** 100 | 77	30 **Actual:** 99 | 81	31 **Actual:** 101 | 80				

Precip: 0.00 **Average: - | -** Precip: -	Precip: 0.00 **Average: - | -** Precip: -	Precip: 0.00 **Average: - | -** Precip: -

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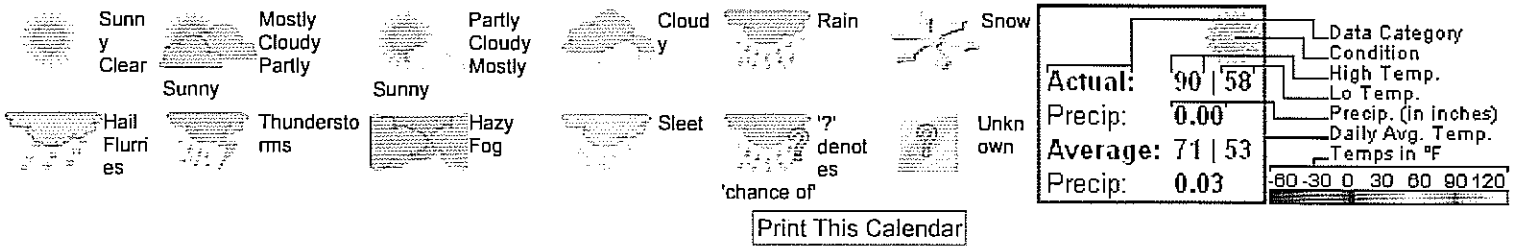
Calendar Key:



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Daily Observations

2010 August	Temp. (°F) high	avg	low	Dew Point (°F) high	avg	low	Humidity (%) high	avg	low	Sea Level Pressure (in) high	avg	low	Visibility (mi) high	avg	low	Wind (mph) high	avg	Gust Speed (mph) high	Precip (in) sum	Events
1	100	84	69	74	67	55	95	60	22	29.93	29.89	29.84	10	9	7	9	2	-	0.00	
2	99	85	71	70	64	55	90	55	25	30.00	29.96	29.91	10	9	4	12	2	16	0.00	
3	98	86	73	73	69	64	94	60	32	30.08	30.01	29.95	10	8	4	9	2	16	0.00	
4	97	86	76	77	73	68	94	66	38	30.05	29.98	29.89	7	6	3	12	4	17	0.00	Rain
5	98	86	75	74	71	65	92	62	34	29.96	29.91	29.83	7	5	3	8	3	-	0.00	
6	98	86	75	74	71	67	92	63	36	29.95	29.89	29.81	10	8	4	10	5	-	0.00	
7	98	88	78	75	71	64	86	60	33	29.94	29.88	29.81	10	10	10	12	5	16	0.00	
8	98	88	77	76	71	65	92	63	34	29.94	29.90	29.83	10	10	10	12	6	20	0.00	
9	98	86	74	76	71	66	95	63	34	29.99	29.93	29.85	10	10	7	12	5	16	0.00	
10	100	88	75	77	72	65	94	64	33	29.98	29.93	29.85	10	10	3	7	2	9	0.00	
11	99	88	78	76	73	68	89	64	36	29.96	29.90	29.83	10	10	10	12	3	24	0.00	Rain , Thunderstorm
12	99	87	75	76	71	65	92	63	33	29.90	29.85	29.75	10	10	7	9	2	-	0.00	
13	99	87	75	75	70	65	91	62	33	29.87	29.82	29.76	10	10	10	13	4	17	0.00	
14	100	88	77	76	72	66	92	62	33	29.94	29.88	29.83	10	10	7	13	6	18	0.00	
15	100	90	79	77	72	63	90	62	30	30.02	29.96	29.89	10	10	10	10	5	-	0.00	

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
16	109	92	76	79	72	65	90	64	26	29.99	29.93	29.83	10	10	10	13	3	23	0.00	
17	101	88	76	78	75	70	96	69	36	29.95	29.91	29.83	10	9	5	8	1	-	0.00	
18	104	92	81	78	75	65	88	65	28	29.97	29.92	29.87	10	10	10	21	3	29	0.00	Thunderstorm
19	101	90	79	79	75	69	94	67	35	29.97	29.90	29.83	10	10	10	13	4	21	0.00	
20	101	90	80	80	74	66	95	62	33	29.93	29.86	29.80	10	10	7	17	8	25	0.00	
21	102	90	77	79	74	68	96	64	33	30.01	29.94	29.89	10	10	10	17	7	23	0.00	
22	103	90	77	78	74	69	94	62	34	30.04	29.97	29.88	10	10	7	12	6	-	0.00	
23	109	94	79	74	71	65	85	54	26	29.93	29.88	29.77	10	10	10	14	2	22	0.00	
24	108	94	79	77	71	63	88	53	24	29.90	29.85	29.78	10	10	10	17	4	26	0.00	
25	100	90	80	77	69	62	86	54	30	30.04	29.99	29.93	10	10	10	15	7	21	0.00	
26	100	90	79	72	67	62	76	50	29	30.09	30.04	29.96	10	10	10	12	5	18	0.00	
27	99	84	69	64	57	48	83	42	17	30.04	29.98	29.88	10	10	10	13	5	21	0.00	
28	101	84	68	65	61	54	82	49	25	29.94	29.89	29.79	10	10	10	8	1	-	0.00	
29	100	88	77	77	74	66	92	65	33	29.95	29.89	29.85	10	10	10	15	5	29	0.00	
30	99	90	81	81	77	72	93	73	42	30.06	30.00	29.94	10	10	10	14	7	22	0.00	
31	101	90	80	80	76	68	96	70	33	30.05	30.00	29.91	10	10	7	12	5	17	0.00	

Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: MD / NC	
Date & Time: 20Aug 10 0900	County Name: Robertson
Stream Name: Spring Creek	
Segment No. or nearest downstream Segment No.: 1247M	
Description of Site: 99912 Downstream from Old Hearne Road	

At any point during the Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the use for the water body the investigator should stop conducting the UAA.

A. Stream Characteristics:

1. Check the following channel flow status that applies.

☐ dry ☐ no flow ☐ low ☑ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:

☐ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.

☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.

☑ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.

☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.

☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. 0.159 cfs

4. Water Quality Data (Field Parameters)

Field parameters should be collected in accordance with the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1.

Air Temp 85°F 29.4°C Water Temp 26.8 °C 80.3°F

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	RL 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):

County Road crosses creek. Fence on both sides of road. Private property. ± 1041-1044

8. Dominant Primary Substrate

☐Cobble ☑Sand ☐Silt ☐Mud/Clay ☐Gravel ☐Bedrock ☐Rip rap ☐ Concrete

Stream Name_____ Site: _____
Date: _____ Time: _____

B. Primary Contact Water Recreation Evaluation:

- Primary contact recreation draft definition: Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, and whitewater kayaking, canoeing, and rafting, involving a significant risk of ingestion of water.

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?
☐ Yes ☑ No primary contact recreation activities were observed

a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).

☐ Wading-Children ☐ Tubing ☑ No primary contact activities that commonly occur were observed
☐ Wading-Adults ☐ Surfing
☐ Swimming ☐ Whitewater-kayaking, canoeing, rafting
☐ Water skiing ☐ Other: _____
☐ Diving ☐ frequent public swimming-created by publicly owned land or commercial operations

b. Check the number of individuals observed at the site: ☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Water in mouth or nose of the individual ☐ Primary touch: Individual's body (or portion) immersed in water
☐ Secondary touch: fishing, pets and related contact with water ☐ Individual is in a boat touching water
☐ Individual is on shore near water within 8 meters (25ft) of water ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☑ Not applicable

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
Narrow water channel, lots of vegetation- Depth 0.25 ft 5 ft wide #1095, 1096, 1097 Full of brush #1111, 1107

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
County road crosses creek, Private property on all sides, with fences. # 1091-1094

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: _____

Date: _____ Time: _____

b. Check the number of individuals observed at the site.
☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body well away from water between 8 and 30 meters (100 ft)

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
Narrow stream, Low flow, lots of vegetation. #1096, 1097

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).
Low flow, narrow stream. lots of vegetation. Private property.
#1096, 1097, 1098, 1111

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 closed off by fence. #1091-1094, 1111

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.
Pic #1096, 1097 Shallow, narrow stream. Lots of vegetation. #1096, 1097, 1095

Field Data Sheets – Basic RUAA Survey

Stream Name _____ Site: _____
Date: _____

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 1098 Downstream 1099 Left Bank 1100 Right Bank 1101
Photos #s (150 meters) Upstream 1102 Downstream 1103 Left Bank 1104 Right Bank 1105
Photos #s (300 meters) Upstream 1106 Downstream 1107 Left Bank 1108 Right Bank 1109

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	11	6	>1.2
Pool 2	61	4	0.74
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	0.06
60 meters	0.09
90 meters	0.21
120 meters	0.11
150 meters	0.38
180 meters	0.10
210 meters	0.21
240 meters	0.74
270 meters	0.09
300 meters	0.35
Average	0.23

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

c) Stream width - Measure (1) the width at one point which represents the typical average width of the 300 meter reach; (2) the width at the narrowest point of the stream within the 300 meter reach; and (3) the width at the widest point of the stream within the 300 meter reach.

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	2.5
Width at narrowest point of the stream within 300 meter reach	0.90
Width at the widest point of the stream within 300 meter reach	6 m

d) Is there sufficient water within a 300 meter stream reach during base flow conditions to support primary contact recreation? ☐ Yes ☑ No

COMMENTS: only 2 pools > 10m length, very shallow & narrow

2. Non-wadeable Streams

If accessible, take 10 width measurements which represent typical widths of the 300 meter reach. If the water is too deep and not accessible record the estimated average width of the water body.

Also, take photos facing upstream, downstream, left bank, and right bank at .

Photos #s (30 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (150 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

# Measurements	Width (meters)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

☐ Drinking or water in mouth
☐ Bathing
☐ Walking
☐ Jogging/running
☐ Bicycling
☐ Standing
☐ Sitting
☐ Lying down/sleeping
☐ Playing on shoreline
☐ Picnicking
☐ Motorcycle/ATV
☐ Hunting/Trapping
☐ Wildlife watching
☑ None
☐ Other: _____

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☐ Yes ☑ No (If yes, please provide supporting documentation and photos.)
Comments: _____

3. Check any channel obstructions that apply (Attach photos).

☐ Culverts ☐ Fences ☐ Log jams ☐ Rip rap ☐ Water control structure
☐ Barbed wire ☐ Dams ☐ Thick vegetation ☐ Low bridges ☑ None
☐ Utility pipe ☐ Other (specify):_____

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest).

☐ Campgrounds
☐ Playgrounds
☑ Rural area
☐ Residential
☐ National forests
☐ Urban/suburban location
☐ Golf Course
☐ Sports Field
☐ Stairs/walkway
☐ Boating access (ramps)
☐ Beach
☐ Bridge crossing
☐ Commercial boating
☐ Trails/paths (hiking/biking)
☐ Paved parking lot
☐ Unimproved parking lot
☑ Roads (paved/unpaved)
☐ Populated area
☐ Docks or rafts
☐ Commercial outfitter
☐ Nearby school
☐ Power Line Corridor
☐ Parks (national/city/county/state)
☐ Public Property
☐ Other:_____
☐ None of the Above

Comments: County road crosses creek. Private property on all sides with fence, #1091 - 1094

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).

☑ Private Property
☐ No trespass sign
☐ Wildlife
☐ Steep slopes
☐ No public access
☐ No roads
☑ Fence
☐ Barge/ship traffic
☐ Industrial
☐ None of the Above
☐ Other:_____

Comments: Pic # 1091-1094 #1110 Narrow & shallow.

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:_____

Stream Name_____ Site: _____
Date: _____ Time: _____

7. Check all water characteristics that apply (Attach photos).

Aquatic Vegetation: ☐ absent ☐ rare ☑ common ☐ abundant
Algae Cover: ☐ absent ☑ rare ☐ common ☐ abundant
Odor: ☑ none ☐ rare ☐ common ☐ abundant
Color: ☑ clear ☑ green ☐ red ☐ brown ☐ black
Bottom Deposit: ☑ sludge ☐ solids ☑ fine sediments ☐ none ☐ other
Water Surface: ☑ clear ☐ scum ☐ foam ☐ debris ☐ oil
Other: Thick Aquatic vegetation near bridge. #1096-1099

8. Vertebrates Observed within 300 meter reach

Snakes	☐ None	☑ slight presence	☐ moderate presence	☐ large presence
Water Dependent Birds	☑ None	☐ slight presence	☐ moderate presence	☐ large presence
Alligators	☑ None	☐ slight presence	☐ moderate presence	☐ large presence

Comments: Saw 3 snakes

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: Saw many trails from livestock leading to stream

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: Household garbage dumped into stream from bridge, TV
#1112-1114

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).
Fallen brush. Too narrow & shallow, See Transect pics 1098-1109

Field Data Sheet - Basic RUAA Survey
Stream Flow (Discharge) Measurement

Stream:_____ Date:_____
Site:_____ Site
Description:_____
Time Begin:_____ Time End:_____ Meter Type:_____
Observers:_____ Stream Width*:_____ Section Width (W):_____
Observations:_____

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V)		Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
			At Point (ft/s)(m/s)	Average (ft/s)(m/s)	

: Thu Sep 23 2010

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2010/08/20 08:06:17

NC

FlowTracker	**(English Units)**
P872	ft
3.7	ft/s
2.30	ft^2
0.0%	cfs

Accuracy	1.0%	1.0%
Depth	0.6%	3.6%
Velocity	1.9%	15.7%
Width	0.2%	0.2%
Method	3.2%	-
# Stations	4.6%	-
Overall	**6.1%**	**16.2%**

40	11
REW	4.500
33.9 dB	1.487
80.33 °F	0.331
Mid-Section	0.1070
	0.1592

				Depth								
0	08:06	0.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
1	*08:07*	*0.50*	*0.6*	*0.200*	*0.6*	*0.080*	*0.0249*	*1.00*	*0.0249*	*0.100*	*0.0025*	*1.6*
2	08:08	1.00	0.6	0.250	0.6	0.100	0.0673	1.00	0.0673	0.125	0.0084	5.3
3	08:09	1.50	0.6	0.300	0.6	0.120	0.1654	1.00	0.1654	0.112	0.0186	11.7
4	08:19	1.75	0.6	0.400	0.6	0.160	0.2552	1.00	0.2552	0.100	0.0255	16.0
5	08:10	2.00	0.6	0.400	0.6	0.160	0.2238	1.00	0.2238	0.150	0.0336	21.1
6	08:11	2.50	0.6	0.400	0.6	0.160	0.1201	1.00	0.1201	0.200	0.0240	15.1
7	*08:12*	*3.00*	*0.6*	*0.500*	*0.6*	*0.200*	*0.1726*	*1.00*	*0.1726*	*0.250*	*0.0431*	*27.1*
8	*08:14*	*3.50*	*0.6*	*0.500*	*0.6*	*0.200*	*0.0138*	*1.00*	*0.0138*	*0.250*	*0.0034*	*2.2*
9	*08:16*	*4.00*	*0.6*	*0.400*	*0.6*	*0.160*	*0.0000*	*1.00*	*0.0000*	*0.200*	*0.0000*	*0.0*
10	08:16	4.50	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0

: Thu Sep 23 2010

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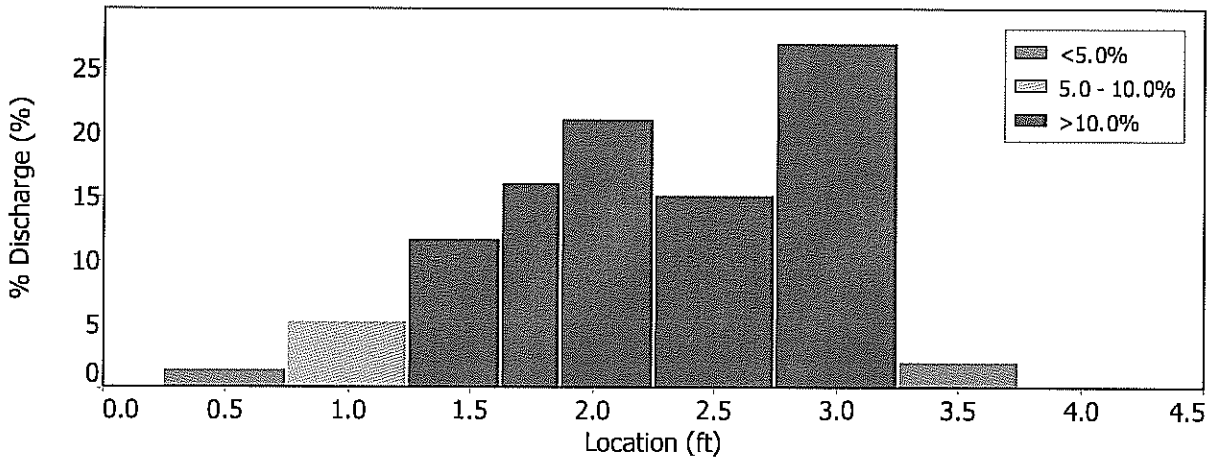
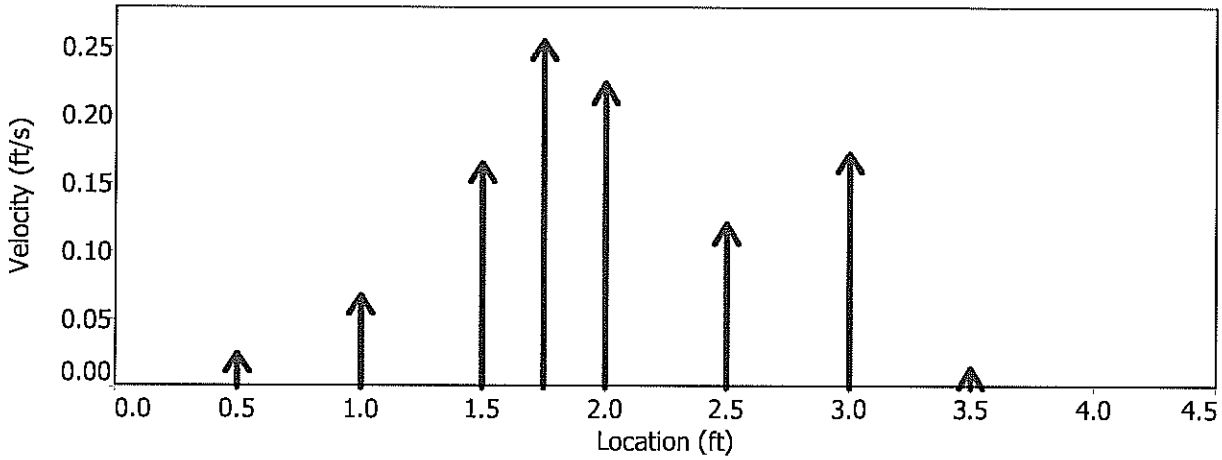
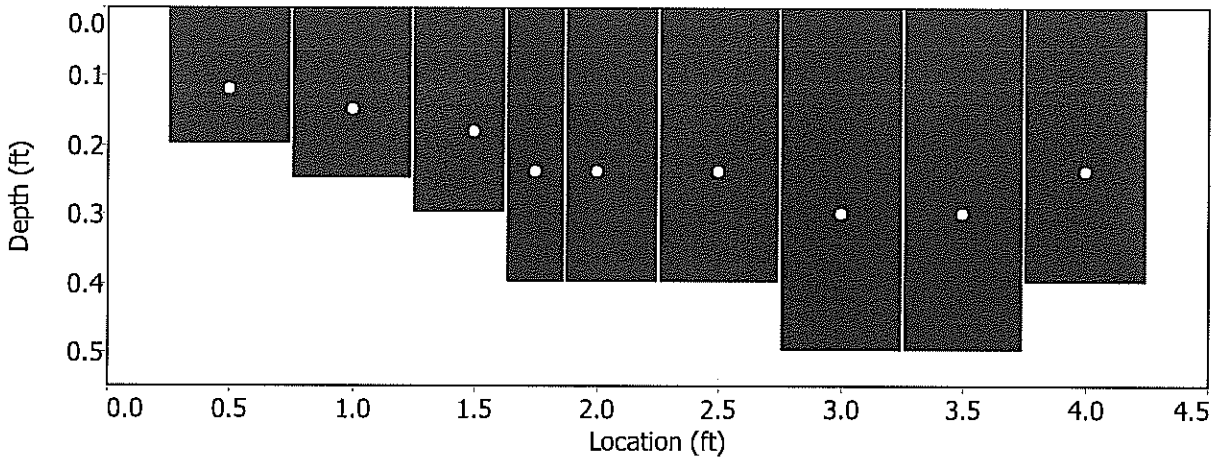
2010/08/20 08:06:17

NC







: Thu Sep 23 2010

99912-20AUG10.WAD
2010/08/20 08:06:17

NC

1	0.50	0.6	High angle: 52
		0.6	SNR (52.4) is different from typical SNR (33.9)
		0.6	High SNR variation during measurement: 5.2,4.7
7	3.00	0.6	Boundary QC is Good; possible boundary interference
8	3.50	0.6	High SNR variation during measurement: 5.2,5.6
9	4.00	0.6	High differences in beam SNR: 45.5,24.0

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Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1 **Actual:** 87 | 75 Precip: 0.07 **Average:** - | - Precip: -	2 **Actual:** 87 | 75 Precip: 0.46 **Average:** - | - Precip: -	3 **Actual:** 85 | 75 Precip: 0.00 **Average:** - | - Precip: -
4 **Actual:** 91 | 76 Precip: 0.00 **Average:** - | - Precip: -	5 **Actual:** 92 | 74 Precip: 0.00 **Average:** - | - Precip: -	6 **Actual:** 93 | 75 Precip: 0.00 **Average:** - | - Precip: -	7 **Actual:** 91 | 74 Precip: 0.00 **Average:** - | - Precip: -	8 **Actual:** 86 | 76 Precip: 0.00 **Average:** - | - Precip: -	9 **Actual:** 91 | 75 Precip: 0.00 **Average:** - | - Precip: -	10 **Actual:** 90 | 74 Precip: 0.00 **Average:** - | - Precip: -
11 **Actual:** 92 | 75 Precip: 0.00 **Average:** - | - Precip: -	12 **Actual:** 93 | 76 Precip: 0.00 **Average:** - | - Precip: -	13 **Actual:** 94 | 78 Precip: 0.00 **Average:** - | - Precip: -	14 **Actual:** 94 | 76 Precip: 0.00 **Average:** - | - Precip: -	15 **Actual:** 95 | 75 Precip: 0.00 **Average:** - | - Precip: -	16 **Actual:** 95 | 75 Precip: 0.00 **Average:** - | - Precip: -	17 **Actual:** 96 | 73 Precip: 0.00 **Average:** - | - Precip: -
18 **Actual:** 95 | 74 Precip: 0.00 **Average:** - | - Precip: -	19 **Actual:** 93 | 74 Precip: 0.00 **Average:** - | - Precip: -	20 **Actual:** 95 | 76 Precip: 0.00 **Average:** - | - Precip: -	21 **Actual:** 95 | 75 Precip: 0.00 **Average:** - | - Precip: -	22 **Actual:** 95 | 76 Precip: 0.00 **Average:** - | - Precip: -	23 **Actual:** 95 | 77 Precip: 0.00 **Average:** - | - Precip: -	24 **Actual:** 94 | 73 Precip: 0.00 **Average:** - | - Precip: -

25	26	27	28	29	30	31
Actual: 97 | 74	**Actual:** 97 | 75	**Actual:** 92 | 72	**Actual:** 90 | 74	**Actual:** 93 | 74	**Actual:** 94 | 74	**Actual:** 96 | 73
Precip: 0.00	Precip: 0.00	Precip: 0.01	Precip: 0.11	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -

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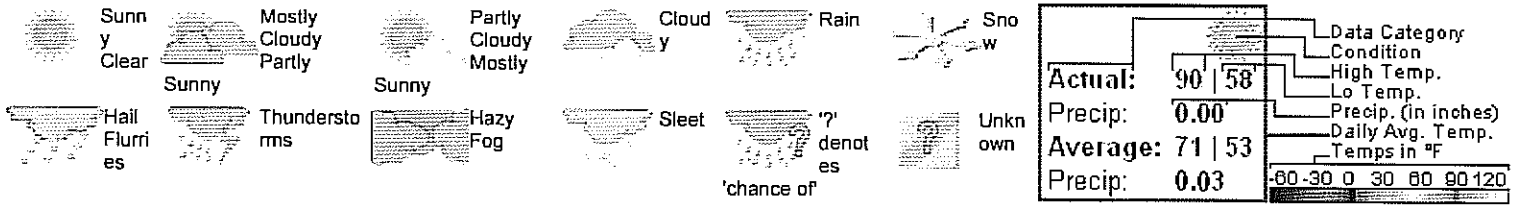
Calendar Key:



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Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
July	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	87	81	75	75	73	71	94	80	64	30.04	30.00	29.97	10	6	4	16	8	25	0.07	Rain
2	87	81	75	76	74	72	94	88	63	30.03	29.99	29.95	10	7	4	16	6	29	0.46	Rain
3	85	80	75	77	75	72	95	85	68	29.98	29.94	29.90	10	5	3	14	4	20	0.00	Rain
4	91	84	76	77	74	71	94	75	51	29.94	29.90	29.84	7	5	3	14	7	18	0.00	Rain
5	92	83	74	76	73	70	95	74	48	29.91	29.87	29.80	7	5	3	10	5	9	0.00	
6	93	84	75	75	72	69	94	69	44	29.92	29.87	29.80	7	5	3	8	2	-	0.00	
7	91	82	74	75	73	69	94	75	53	29.94	29.91	29.87	7	5	4	15	3	25	0.00	
8	86	81	76	75	74	72	90	81	63	30.02	29.98	29.95	10	6	3	12	5	16	0.00	Rain
9	91	83	75	76	73	70	94	79	51	30.06	30.02	29.98	7	5	3	15	2	18	0.00	Rain
10	90	82	74	75	73	71	96	77	53	30.08	30.02	29.96	7	4	3	9	1	-	0.00	
11	92	84	75	75	72	69	94	72	46	29.99	29.94	29.83	7	5	4	15	5	20	0.00	
12	93	84	76	75	73	70	92	70	47	29.90	29.86	29.78	7	5	4	21	9	22	0.00	
13	94	86	78	75	73	71	86	68	46	29.92	29.88	29.85	7	4	3	18	11	24	0.00	
14	94	85	76	76	73	70	91	69	46	30.05	30.00	29.95	7	5	3	16	9	22	0.00	
15	95	85	75	76	72	68	95	69	41	30.09	30.02	29.96	7	5	2	10	5	16	0.00	
16	95	85	75	75	71	66	94	67	38	30.06	30.02	29.94	10	6	3	7	2	-	0.00	Rain
17	96	84	73	74	71	65	94	63	35	30.05	30.00	29.94	10	9	3	10	2	16	0.00	

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
18	95	84	74	75	72	68	90	73	42	30.03	29.99	29.94	10	10	7	12	5	20	0.00	Thunderstorm
19	93	84	74	76	73	70	96	76	48	30.02	29.98	29.94	10	8	0	18	4	26	0.00	Fog
20	95	86	76	76	73	65	95	73	39	30.05	30.01	29.97	10	9	5	15	6	18	0.00	
21	95	85	75	75	73	69	95	71	42	30.09	30.05	29.99	10	9	5	8	2	16	0.00	Rain
22	95	86	76	76	74	70	94	75	45	30.06	30.01	29.96	10	9	7	12	3	20	0.00	
23	95	86	77	77	73	64	94	70	35	30.05	30.01	29.96	10	9	5	14	4	20	0.00	
24	94	84	73	76	71	63	96	69	37	30.09	30.04	29.98	10	9	4	10	3	-	0.00	
25	97	86	74	72	67	58	88	58	26	30.06	30.02	29.94	10	10	7	8	2	-	0.00	Rain
26	97	86	75	73	70	67	87	67	38	30.02	29.97	29.88	10	7	4	24	2	34	0.00	Rain , Thunderstorm
27	92	82	72	76	72	69	95	79	46	30.05	30.00	29.96	10	6	4	10	2	-	0.01	Rain , Thunderstorm
28	90	82	74	76	74	71	95	83	56	30.14	30.09	30.03	10	9	3	17	6	31	0.11	Rain , Thunderstorm
29	93	84	74	77	72	68	96	74	45	30.20	30.14	30.03	10	9	5	10	3	-	0.00	
30	94	84	74	76	72	66	95	71	41	30.09	30.04	29.91	10	9	2	14	5	18	0.00	
31	96	84	73	74	69	59	94	66	29	29.98	29.93	29.85	10	9	5	10	4	-	0.00	

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Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1 Actual: 100 | 69 Precip: 0.00 Average: - | - Precip: -	2 Actual: 99 | 71 Precip: 0.00 Average: - | - Precip: -	3 Actual: 98 | 73 Precip: 0.00 Average: - | - Precip: -	4 Actual: 97 | 76 Precip: 0.00 Average: - | - Precip: -	5 Actual: 98 | 75 Precip: 0.00 Average: - | - Precip: -	6 Actual: 98 | 75 Precip: 0.00 Average: - | - Precip: -	7 Actual: 98 | 78 Precip: 0.00 Average: - | - Precip: -
8 Actual: 98 | 77 Precip: 0.00 Average: - | - Precip: -	9 Actual: 98 | 74 Precip: 0.00 Average: - | - Precip: -	10 Actual: 100 | 75 Precip: 0.00 Average: - | - Precip: -	11 Actual: 99 | 78 Precip: 0.00 Average: - | - Precip: -	12 Actual: 99 | 75 Precip: 0.00 Average: - | - Precip: -	13 Actual: 99 | 75 Precip: 0.00 Average: - | - Precip: -	14 Actual: 100 | 77 Precip: 0.00 Average: - | - Precip: -
15 Actual: 100 | 79 Precip: 0.00 Average: - | - Precip: -	16 Actual: 109 | 76 Precip: 0.00 Average: - | - Precip: -	17 Actual: 101 | 76 Precip: 0.00 Average: - | - Precip: -	18 Actual: 104 | 81 Precip: 0.00 Average: - | - Precip: -	19 Actual: 101 | 79 Precip: 0.00 Average: - | - Precip: -	20 Actual: 101 | 80 Precip: 0.00 Average: - | - Precip: -	21 Actual: 102 | 77 Precip: 0.00 Average: - | - Precip: -
22 Actual: 103 | 77 Precip: 0.00 Average: - | - Precip: -	23 Actual: 109 | 79 Precip: 0.00 Average: - | - Precip: -	24 Actual: 108 | 79 Precip: 0.00 Average: - | - Precip: -	25 Actual: 100 | 80 Precip: 0.00 Average: - | - Precip: -	26 Actual: 100 | 79 Precip: 0.00 Average: - | - Precip: -	27 Actual: 99 | 69 Precip: 0.00 Average: - | - Precip: -	28 Actual: 101 | 68 Precip: 0.00 Average: - | - Precip: -
29 Actual: 100 | 77	30 Actual: 99 | 81	31 Actual: 101 | 80				

Precip: 0.00 **Average:** - | - Precip: -	Precip: 0.00 **Average:** - | - Precip: -	Precip: 0.00 **Average:** - | - Precip: -

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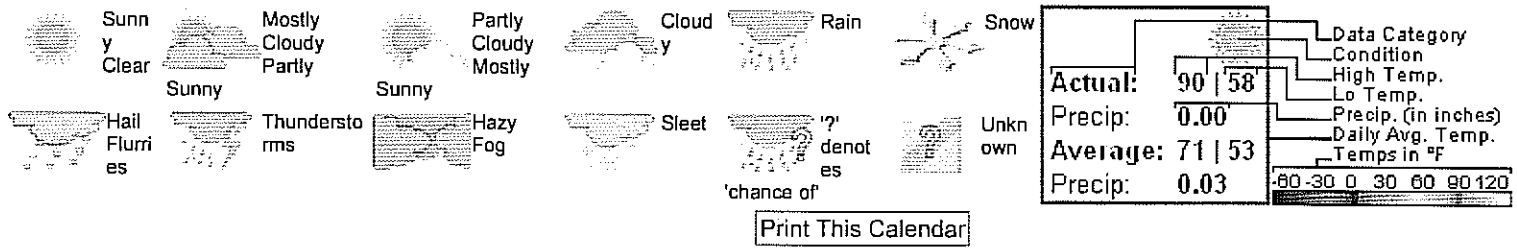
Calendar Key:



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Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
August	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	100	84	69	74	67	55	95	60	22	29.93	29.89	29.84	10	9	7	9	2	-	0.00	
2	99	85	71	70	64	55	90	55	25	30.00	29.96	29.91	10	9	4	12	2	16	0.00	
3	98	86	73	73	69	64	94	60	32	30.08	30.01	29.95	10	8	4	9	2	16	0.00	
4	97	86	76	77	73	68	94	66	38	30.05	29.98	29.89	7	6	3	12	4	17	0.00	Rain
5	98	86	75	74	71	65	92	62	34	29.96	29.91	29.83	7	5	3	8	3	-	0.00	
6	98	86	75	74	71	67	92	63	36	29.95	29.89	29.81	10	8	4	10	5	-	0.00	
7	98	88	78	75	71	64	86	60	33	29.94	29.88	29.81	10	10	10	12	5	16	0.00	
8	98	88	77	76	71	65	92	63	34	29.94	29.90	29.83	10	10	10	12	6	20	0.00	
9	98	86	74	76	71	66	95	63	34	29.99	29.93	29.85	10	10	7	12	5	16	0.00	
10	100	88	75	77	72	65	94	64	33	29.98	29.93	29.85	10	10	3	7	2	9	0.00	
11	99	88	78	76	73	68	89	64	36	29.96	29.90	29.83	10	10	10	12	3	24	0.00	Rain , Thunderstorm
12	99	87	75	76	71	65	92	63	33	29.90	29.85	29.75	10	10	7	9	2	-	0.00	
13	99	87	75	75	70	65	91	62	33	29.87	29.82	29.76	10	10	10	13	4	17	0.00	
14	100	88	77	76	72	66	92	62	33	29.94	29.88	29.83	10	10	7	13	6	18	0.00	
15	100	90	79	77	72	63	90	62	30	30.02	29.96	29.89	10	10	10	10	5	-	0.00	

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
16	109	92	76	79	72	65	90	64	26	29.99	29.93	29.83	10	10	10	13	3	23	0.00	
17	101	88	76	78	75	70	96	69	36	29.95	29.91	29.83	10	9	5	8	1	-	0.00	
18	104	92	81	78	75	65	88	65	28	29.97	29.92	29.87	10	10	10	21	3	29	0.00	Thunderstorm
19	101	90	79	79	75	69	94	67	35	29.97	29.90	29.83	10	10	10	13	4	21	0.00	
20	101	90	80	80	74	66	95	62	33	29.93	29.86	29.80	10	10	7	17	8	25	0.00	
21	102	90	77	79	74	68	96	64	33	30.01	29.94	29.89	10	10	10	17	7	23	0.00	
22	103	90	77	78	74	69	94	62	34	30.04	29.97	29.88	10	10	7	12	6	-	0.00	
23	109	94	79	74	71	65	85	54	26	29.93	29.88	29.77	10	10	10	14	2	22	0.00	
24	108	94	79	77	71	63	88	53	24	29.90	29.85	29.78	10	10	10	17	4	26	0.00	
25	100	90	80	77	69	62	86	54	30	30.04	29.99	29.93	10	10	10	15	7	21	0.00	
26	100	90	79	72	67	62	76	50	29	30.09	30.04	29.96	10	10	10	12	5	18	0.00	
27	99	84	69	64	57	48	83	42	17	30.04	29.98	29.88	10	10	10	13	5	21	0.00	
28	101	84	68	65	61	54	82	49	25	29.94	29.89	29.79	10	10	10	8	1	-	0.00	
29	100	88	77	77	74	66	92	65	33	29.95	29.89	29.85	10	10	10	15	5	29	0.00	
30	99	90	81	81	77	72	93	73	42	30.06	30.00	29.94	10	10	10	14	7	22	0.00	
31	101	90	80	80	76	68	96	70	33	30.05	30.00	29.91	10	10	7	12	5	17	0.00	

Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: MD / JD - BRA	
Date & Time: 18 Aug 10 1115	County Name: Robertson
Stream Name: Sandy Creek	
Segment No. or nearest downstream Segment No.: 1242M	
Description of Site: 99913 Past Boy Scout Camp, on Private Property.	

At any point during the Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the use for the water body the investigator should stop conducting the UAA.

A. Stream Characteristics:

1. Check the following channel flow status that applies.

☑ dry ☐ no flow ☐ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:

☑ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.

☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.

☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.

☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.

☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. N/A cfs

4. Water Quality Data (Field Parameters)

Field parameters should be collected in accordance with the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1.

Air Temp 33.3 °C (92°F) Water Temp N/A °C

5. Riparian Zone (Mark dominant categories with L (Left Bank) and R (Right Bank). Bank orientation is determined by the investigator facing downstream.)

____ Forest	____ Urban	____ Rip rap
RL 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):

Deep into private property, Very thick brush & vines. #1061, 1062, 1063 Locked gate #1061

8. Dominant Primary Substrate

☐Cobble ☐Sand ☑Silt ☐Mud/Clay ☐Gravel ☐Bedrock ☐Rip rap ☐ Concrete

Stream Name_____ Site: _____
Date: _____ Time: _____

B. Primary Contact Water Recreation Evaluation:

- Primary contact recreation draft definition: Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, and whitewater kayaking, canoeing, and rafting, involving a significant risk of ingestion of water.

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?
☐ Yes ☐ No primary contact recreation activities were observed

a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).

☐ Wading-Children
☐ Wading-Adults
☐ Swimming
☐ Water skiing
☐ Diving
☐ Tubing
☐ Surfing
☐ Whitewater-kayaking, canoeing, rafting
☐ Other: _____
☐ frequent public swimming-created by publicly owned land or commercial operations
☑ No primary contact activities that commonly occur were observed

b. Check the number of individuals observed at the site: ☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Water in mouth or nose of the individual ☐ Primary touch: Individual's body (or portion) immersed in water
☐ Secondary touch: fishing, pets and related contact with water ☐ Individual is in a boat touching water
☐ Individual is on shore near water within 8 meters (25ft) of water ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☑ Not applicable

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
Dry creek. Pics # 1064-1075

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
No public access. Private Property, Borders Boy Scout Camp. Seperated by fence. Very thick brush & vines. #1061-1063

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: _____

Date: _____ Time: _____

b. Check the number of individuals observed at the site.
☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body well away from water between 8 and 30 meters (100 ft)

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
No water. Very thick brush & vines #1061-1063

3. If secondary contact recreation activities are observed, how often do water recreational activities occur that do not involve a significant risk of water ingestion? ☐ frequently ☐ infrequently
Please describe how often the activities occur? ☐ Unknown ☐ Never ☐ Daily ☐ Monthly ☐ Yearly

4. If infrequently, what is the reason? ☐ physical characteristics of the water body ☐ limited public access ☐ other
If other, list reasons: _____

5. Describe the physical characteristics of the water body that hinders the frequency of secondary contact recreation (depth, etc.) (Attach photos or depth measurements, etc. for documentation).
No water. See transect pics 1064-1075

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).
No road leading to creek. Thick brush & vines
#1062 1063

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.
#1062, 1063, Transect Pics. No Water
#1064-1075

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 anteeedent 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 1064 Downstream 1065 Left Bank 1066 Right Bank 1067
Photos #s (150 meters) Upstream 1068 Downstream 1069 Left Bank 1070 Right Bank 1071
Photos #s (300 meters) Upstream 1072 Downstream 1073 Left Bank 1074 Right Bank 1075

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	NO WATER		
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	0.0
60 meters	0.0
90 meters	0.0
120 meters	0.0
150 meters	0.0
180 meters	0.0
210 meters	0.0
240 meters	0.0
270 meters	0.0
300 meters	0.0
Average	N/A

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

c) Stream width - Measure (1) the width at one point which represents the typical average width of the 300 meter reach; (2) the width at the narrowest point of the stream within the 300 meter reach; and (3) the width at the widest point of the stream within the 300 meter reach.

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	N/A
Width at narrowest point of the stream within 300 meter reach	N/A
Width at the widest point of the stream within 300 meter reach	N/A

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 _____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

☐ Drinking or water in mouth
☐ Bathing
☐ Walking
☐ Jogging/running
☐ Bicycling
☐ Standing
☐ Sitting
☐ Lying down/sleeping
☐ Playing on shoreline
☐ Picnicking
☐ Motorcycle/ATV
☐ Hunting/Trapping
☐ Wildlife watching
☑ None
☐ Other: _____

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☐ Yes ☑ No (If yes, please provide supporting documentation and photos.)
Comments: _____

3. Check any channel obstructions that apply (Attach photos).

☐ Culverts ☐ Fences ☐ Log jams ☐ Rip rap ☐ Water control structure
☐ Barbed wire ☐ Dams ☐ Thick vegetation ☐ Low bridges ☑ None
☐ Utility pipe ☐ Other (specify): _____

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest).

☑ Campgrounds
☐ Playgrounds
☐ Rural area
☐ Residential
☐ National forests
☐ Urban/suburban location
☐ Golf Course
☐ Sports Field
☐ Stairs/walkway
☐ Boating access (ramps)
☐ Beach
☐ Bridge crossing
☐ Commercial boating
☐ Trails/paths (hiking/biking)
☐ Paved parking lot
☐ Unimproved parking lot
☐ Roads (paved/unpaved)
☐ Populated area
☐ Docks or rafts
☐ Commercial outfitter
☐ Nearby school
☐ Power Line Corridor
☐ Parks (national/city/county/state)
☐ Public Property
☐ Other: _____
☐ None of the Above

Comments: Boy scout camp nearby, but they do not come onto this property. See transect pics # 1064-1075. Dry creek

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).

☑ Private Property
☐ No trespass sign
☐ Wildlife
☐ Steep slopes
☑ No public access
☐ No roads
☑ Fence
☐ Barge/ship traffic
☐ Industrial
☐ None of the Above
☐ Other: _____

Comments: Dry creek

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: _____

Stream Name _____ Site: _____
Date: _____ Time: _____

7. Check all water characteristics that apply (Attach photos).
Aquatic Vegetation: ☑ absent ☐ rare ☐ common ☐ abundant
Algae Cover: ☑ absent ☐ rare ☐ common ☐ abundant
Odor: ☑ none ☐ rare ☐ common ☐ abundant
Color: ☑ clear ☐ green ☐ red ☐ brown ☐ black
Bottom Deposit: ☐ sludge ☐ solids ☑ fine sediments ☐ none ☐ other
Water Surface: ☐ clear ☐ scum ☐ foam ☐ debris ☐ oil N/A
Other: Dry Creek

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: Garter Snake in creek

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).
All pasture, thick trees, brush + vines, well away from public roads
Dry creek

Field Data Sheet - Basic RUAA Survey
Stream Flow (Discharge) Measurement

Stream:_____ Date:_____
Site:_____ Site
Description:_____
Time Begin:_____ Time End:_____ Meter Type:_____
Observers:_____ Stream Width*:_____ Section Width (W):_____
Observations:_____

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V)		Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
			At Point (ft/s)(m/s)	Average (ft/s)(m/s)	

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Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1 **Actual:** 87 | 75 Precip: 0.07 **Average:** - | - Precip: -	2 **Actual:** 87 | 75 Precip: 0.46 **Average:** - | - Precip: -	3 **Actual:** 85 | 75 Precip: 0.00 **Average:** - | - Precip: -
4 **Actual:** 91 | 76 Precip: 0.00 **Average:** - | - Precip: -	5 **Actual:** 92 | 74 Precip: 0.00 **Average:** - | - Precip: -	6 **Actual:** 93 | 75 Precip: 0.00 **Average:** - | - Precip: -	7 **Actual:** 91 | 74 Precip: 0.00 **Average:** - | - Precip: -	8 **Actual:** 86 | 76 Precip: 0.00 **Average:** - | - Precip: -	9 **Actual:** 91 | 75 Precip: 0.00 **Average:** - | - Precip: -	10 **Actual:** 90 | 74 Precip: 0.00 **Average:** - | - Precip: -
11 **Actual:** 92 | 75 Precip: 0.00 **Average:** - | - Precip: -	12 **Actual:** 93 | 76 Precip: 0.00 **Average:** - | - Precip: -	13 **Actual:** 94 | 78 Precip: 0.00 **Average:** - | - Precip: -	14 **Actual:** 94 | 76 Precip: 0.00 **Average:** - | - Precip: -	15 **Actual:** 95 | 75 Precip: 0.00 **Average:** - | - Precip: -	16 **Actual:** 95 | 75 Precip: 0.00 **Average:** - | - Precip: -	17 **Actual:** 96 | 73 Precip: 0.00 **Average:** - | - Precip: -
18 **Actual:** 95 | 74 Precip: 0.00 **Average:** - | - Precip: -	19 **Actual:** 93 | 74 Precip: 0.00 **Average:** - | - Precip: -	20 **Actual:** 95 | 76 Precip: 0.00 **Average:** - | - Precip: -	21 **Actual:** 95 | 75 Precip: 0.00 **Average:** - | - Precip: -	22 **Actual:** 95 | 76 Precip: 0.00 **Average:** - | - Precip: -	23 **Actual:** 95 | 77 Precip: 0.00 **Average:** - | - Precip: -	24 **Actual:** 94 | 73 Precip: 0.00 **Average:** - | - Precip: -

25	26	27	28	29	30	31
Actual: 97 | 74	**Actual:** 97 | 75	**Actual:** 92 | 72	**Actual:** 90 | 74	**Actual:** 93 | 74	**Actual:** 94 | 74	**Actual:** 96 | 73
Precip: 0.00	Precip: 0.00	Precip: 0.01	Precip: 0.11	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -

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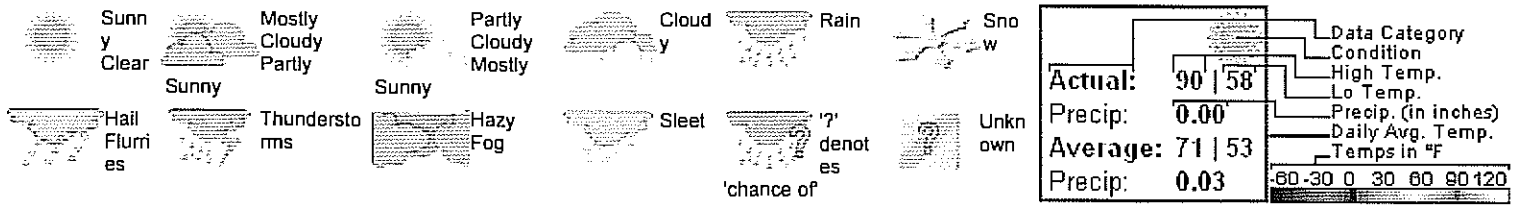
Calendar Key:



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Daily Observations

2010 July	Temp. (°F) high	avg	low	Dew Point (°F) high	avg	low	Humidity (%) high	avg	low	Sea Level Pressure (in) high	avg	low	Visibility (mi) high	avg	low	Wind (mph) high	avg	Gust Speed (mph) high	Precip (in) sum	Events
1	87	81	75	75	73	71	94	80	64	30.04	30.00	29.97	10	6	4	16	8	25	0.07	Rain
2	87	81	75	76	74	72	94	88	63	30.03	29.99	29.95	10	7	4	16	6	29	0.46	Rain
3	85	80	75	77	75	72	95	85	68	29.98	29.94	29.90	10	5	3	14	4	20	0.00	Rain
4	91	84	76	77	74	71	94	75	51	29.94	29.90	29.84	7	5	3	14	7	18	0.00	Rain
5	92	83	74	76	73	70	95	74	48	29.91	29.87	29.80	7	5	3	10	5	9	0.00	
6	93	84	75	75	72	69	94	69	44	29.92	29.87	29.80	7	5	3	8	2	-	0.00	
7	91	82	74	75	73	69	94	75	53	29.94	29.91	29.87	7	5	4	15	3	25	0.00	
8	86	81	76	75	74	72	90	81	63	30.02	29.98	29.95	10	6	3	12	5	16	0.00	Rain
9	91	83	75	76	73	70	94	79	51	30.06	30.02	29.98	7	5	3	15	2	18	0.00	Rain
10	90	82	74	75	73	71	96	77	53	30.08	30.02	29.96	7	4	3	9	1	-	0.00	
11	92	84	75	75	72	69	94	72	46	29.99	29.94	29.83	7	5	4	15	5	20	0.00	
12	93	84	76	75	73	70	92	70	47	29.90	29.86	29.78	7	5	4	21	9	22	0.00	
13	94	86	78	75	73	71	86	68	46	29.92	29.88	29.85	7	4	3	18	11	24	0.00	
14	94	85	76	76	73	70	91	69	46	30.05	30.00	29.95	7	5	3	16	9	22	0.00	
15	95	85	75	76	72	68	95	69	41	30.09	30.02	29.96	7	5	2	10	5	16	0.00	
16	95	85	75	75	71	66	94	67	38	30.06	30.02	29.94	10	6	3	7	2	-	0.00	Rain
17	96	84	73	74	71	65	94	63	35	30.05	30.00	29.94	10	9	3	10	2	16	0.00	

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
18	95	84	74	75	72	68	90	73	42	30.03	29.99	29.94	10	10	7	12	5	20	0.00	Thunderstorm
19	93	84	74	76	73	70	96	76	48	30.02	29.98	29.94	10	8	0	18	4	26	0.00	Fog
20	95	86	76	76	73	65	95	73	39	30.05	30.01	29.97	10	9	5	15	6	18	0.00	
21	95	85	75	75	73	69	95	71	42	30.09	30.05	29.99	10	9	5	8	2	16	0.00	Rain
22	95	86	76	76	74	70	94	75	45	30.06	30.01	29.96	10	9	7	12	3	20	0.00	
23	95	86	77	77	73	64	94	70	35	30.05	30.01	29.96	10	9	5	14	4	20	0.00	
24	94	84	73	76	71	63	96	69	37	30.09	30.04	29.98	10	9	4	10	3	-	0.00	
25	97	86	74	72	67	58	88	58	26	30.06	30.02	29.94	10	10	7	8	2	-	0.00	Rain
26	97	86	75	73	70	67	87	67	38	30.02	29.97	29.88	10	7	4	24	2	34	0.00	Rain , Thunderstorm
27	92	82	72	76	72	69	95	79	46	30.05	30.00	29.96	10	6	4	10	2	-	0.01	Rain , Thunderstorm
28	90	82	74	76	74	71	95	83	56	30.14	30.09	30.03	10	9	3	17	6	31	0.11	Rain , Thunderstorm
29	93	84	74	77	72	68	96	74	45	30.20	30.14	30.03	10	9	5	10	3	-	0.00	
30	94	84	74	76	72	66	95	71	41	30.09	30.04	29.91	10	9	2	14	5	18	0.00	
31	96	84	73	74	69	59	94	66	29	29.98	29.93	29.85	10	9	5	10	4	-	0.00	

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Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1 **Actual:** 100 | 69 Precip: 0.00 **Average:** - | - Precip: -	2 **Actual:** 99 | 71 Precip: 0.00 **Average:** - | - Precip: -	3 **Actual:** 98 | 73 Precip: 0.00 **Average:** - | - Precip: -	4 **Actual:** 97 | 76 Precip: 0.00 **Average:** - | - Precip: -	5 **Actual:** 98 | 75 Precip: 0.00 **Average:** - | - Precip: -	6 **Actual:** 98 | 75 Precip: 0.00 **Average:** - | - Precip: -	7 **Actual:** 98 | 78 Precip: 0.00 **Average:** - | - Precip: -
8 **Actual:** 98 | 77 Precip: 0.00 **Average:** - | - Precip: -	9 **Actual:** 98 | 74 Precip: 0.00 **Average:** - | - Precip: -	10 **Actual:** 100 | 75 Precip: 0.00 **Average:** - | - Precip: -	11 **Actual:** 99 | 78 Precip: 0.00 **Average:** - | - Precip: -	12 **Actual:** 99 | 75 Precip: 0.00 **Average:** - | - Precip: -	13 **Actual:** 99 | 75 Precip: 0.00 **Average:** - | - Precip: -	14 **Actual:** 100 | 77 Precip: 0.00 **Average:** - | - Precip: -
15 **Actual:** 100 | 79 Precip: 0.00 **Average:** - | - Precip: -	16 **Actual:** 109 | 76 Precip: 0.00 **Average:** - | - Precip: -	17 **Actual:** 101 | 76 Precip: 0.00 **Average:** - | - Precip: -	18 **Actual:** 104 | 81 Precip: 0.00 **Average:** - | - Precip: -	19 **Actual:** 101 | 79 Precip: 0.00 **Average:** - | - Precip: -	20 **Actual:** 101 | 80 Precip: 0.00 **Average:** - | - Precip: -	21 **Actual:** 102 | 77 Precip: 0.00 **Average:** - | - Precip: -
22 **Actual:** 103 | 77 Precip: 0.00 **Average:** - | - Precip: -	23 **Actual:** 109 | 79 Precip: 0.00 **Average:** - | - Precip: -	24 **Actual:** 108 | 79 Precip: 0.00 **Average:** - | - Precip: -	25 **Actual:** 100 | 80 Precip: 0.00 **Average:** - | - Precip: -	26 **Actual:** 100 | 79 Precip: 0.00 **Average:** - | - Precip: -	27 **Actual:** 99 | 69 Precip: 0.00 **Average:** - | - Precip: -	28 **Actual:** 101 | 68 Precip: 0.00 **Average:** - | - Precip: -
29 **Actual:** 100 | 77	30 **Actual:** 99 | 81	31 **Actual:** 101 | 80				

Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -

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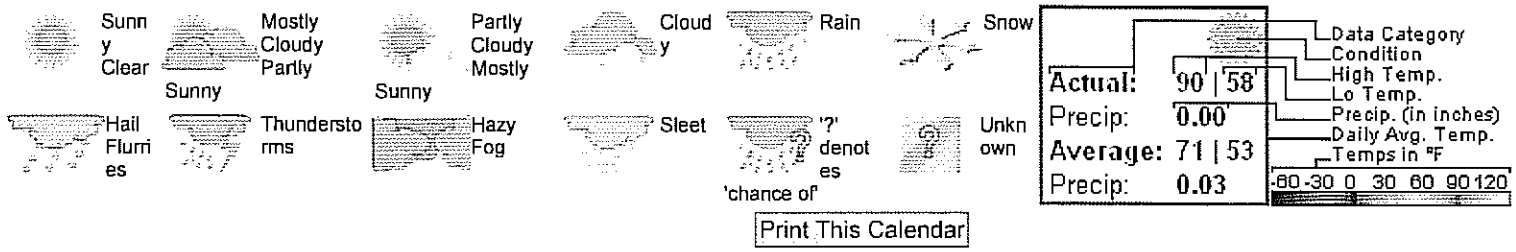
Calendar Key:



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Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
August	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	100	84	69	74	67	55	95	60	22	29.93	29.89	29.84	10	9	7	9	2	-	0.00	
2	99	85	71	70	64	55	90	55	25	30.00	29.96	29.91	10	9	4	12	2	16	0.00	
3	98	86	73	73	69	64	94	60	32	30.08	30.01	29.95	10	8	4	9	2	16	0.00	
4	97	86	76	77	73	68	94	66	38	30.05	29.98	29.89	7	6	3	12	4	17	0.00	Rain
5	98	86	75	74	71	65	92	62	34	29.96	29.91	29.83	7	5	3	8	3	-	0.00	
6	98	86	75	74	71	67	92	63	36	29.95	29.89	29.81	10	8	4	10	5	-	0.00	
7	98	88	78	75	71	64	86	60	33	29.94	29.88	29.81	10	10	10	12	5	16	0.00	
8	98	88	77	76	71	65	92	63	34	29.94	29.90	29.83	10	10	10	12	6	20	0.00	
9	98	86	74	76	71	66	95	63	34	29.99	29.93	29.85	10	10	7	12	5	16	0.00	
10	100	88	75	77	72	65	94	64	33	29.98	29.93	29.85	10	10	3	7	2	9	0.00	
11	99	88	78	76	73	68	89	64	36	29.96	29.90	29.83	10	10	10	12	3	24	0.00	Rain , Thunderstorm
12	99	87	75	76	71	65	92	63	33	29.90	29.85	29.75	10	10	7	9	2	-	0.00	
13	99	87	75	75	70	65	91	62	33	29.87	29.82	29.76	10	10	10	13	4	17	0.00	
14	100	88	77	76	72	66	92	62	33	29.94	29.88	29.83	10	10	7	13	6	18	0.00	
15	100	90	79	77	72	63	90	62	30	30.02	29.96	29.89	10	10	10	10	5	-	0.00	

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
16	109	92	76	79	72	65	90	64	26	29.99	29.93	29.83	10	10	10	13	3	23	0.00	
17	101	88	76	78	75	70	96	69	36	29.95	29.91	29.83	10	9	5	8	1	-	0.00	
18	104	92	81	78	75	65	88	65	28	29.97	29.92	29.87	10	10	10	21	3	29	0.00	Thunderstorm
19	101	90	79	79	75	69	94	67	35	29.97	29.90	29.83	10	10	10	13	4	21	0.00	
20	101	90	80	80	74	66	95	62	33	29.93	29.86	29.80	10	10	7	17	8	25	0.00	
21	102	90	77	79	74	68	96	64	33	30.01	29.94	29.89	10	10	10	17	7	23	0.00	
22	103	90	77	78	74	69	94	62	34	30.04	29.97	29.88	10	10	7	12	6	-	0.00	
23	109	94	79	74	71	65	85	54	26	29.93	29.88	29.77	10	10	10	14	2	22	0.00	
24	108	94	79	77	71	63	88	53	24	29.90	29.85	29.78	10	10	10	17	4	26	0.00	
25	100	90	80	77	69	62	86	54	30	30.04	29.99	29.93	10	10	10	15	7	21	0.00	
26	100	90	79	72	67	62	76	50	29	30.09	30.04	29.96	10	10	10	12	5	18	0.00	
27	99	84	69	64	57	48	83	42	17	30.04	29.98	29.88	10	10	10	13	5	21	0.00	
28	101	84	68	65	61	54	82	49	25	29.94	29.89	29.79	10	10	10	8	1	-	0.00	
29	100	88	77	77	74	66	92	65	33	29.95	29.89	29.85	10	10	10	15	5	29	0.00	
30	99	90	81	81	77	72	93	73	42	30.06	30.00	29.94	10	10	10	14	7	22	0.00	
31	101	90	80	80	76	68	96	70	33	30.05	30.00	29.91	10	10	7	12	5	17	0.00	

Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: AB/JD - BLA	
Date & Time: 18 Aug 10 1240	County Name: Robertson
Stream Name: Spring Creek	
Segment No. or nearest downstream Segment No.: 1242 M	
Description of Site: 99914 Downstream from FM391	

At any point during the Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the use for the water body the investigator should stop conducting the UAA.

A. Stream Characteristics:

1. Check the following channel flow status that applies.

☑ dry ☐ no flow ☐ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:

☑ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.

☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.

☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.

☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.

☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. N/A 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 94°F ~~°C~~ 34.4°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.)

____ Forest	____ Urban	____ Rip rap
RL 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):

Fence along private Property & FM 391. AB 18 Aug 10 ~~#1077-1080~~ 1076-1078

1076, 1077

8. Dominant Primary Substrate

☐Cobble ☐Sand ☐Silt ☑Mud/Clay ☐Gravel ☐Bedrock ☐Rip rap ☐ Concrete

Stream Name_____ Site: _____
Date: _____ Time: _____

B. Primary Contact Water Recreation Evaluation:

- Primary contact recreation draft definition: Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, and whitewater kayaking, canoeing, and rafting, involving a significant risk of ingestion of water.

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?

☐ Yes ☑ No primary contact recreation activities were observed

a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).

☐ Wading-Children ☐ Tubing ☑ No primary contact activities that commonly occur were observed
☐ Wading-Adults ☐ Surfing
☐ Swimming ☐ Whitewater-kayaking, canoeing, rafting
☐ Water skiing ☐ Other: _____
☐ Diving ☐ frequent public swimming-created by publicly owned land or commercial operations

b. Check the number of individuals observed at the site: ☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.

☐ Water in mouth or nose of the individual ☐ Primary touch: Individual's body (or portion) immersed in water
☐ Secondary touch: fishing, pets and related contact with water ☐ Individual is in a boat touching water
☐ Individual is on shore near water within 8 meters (25ft) of water ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☑ Not applicable

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).

Dry creek #1078, 1079, 1080, 1083

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).

FM 391 crosses creek 1078, ~~1080~~ 1081
MP 18 Aug 10

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: _____

Date: _____ Time: _____

b. Check the number of individuals observed at the site.
☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body well away from water between 8 and 30 meters (100 ft)

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
Dry Creek #1078 & Transect Pics

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).
Dry creek, no discernable channel 1083,

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 with fence. #~~1078~~ 18 Aug 10, ~~1081~~ 1076, 1077

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.
Dry creek #1078 and transect pics,

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ _____

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 1079 Downstream 1080 Left Bank 1081 Right Bank 1082

Photos #s (150 meters) Upstream 1083 Downstream 1084 Left Bank 1085 Right Bank 1086

Photos #s (300 meters) Upstream 1087 Downstream 1088 Left Bank 1089 Right Bank 1090

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	0.0
60 meters	0.0
90 meters	0.0
120 meters	0.0
150 meters	0.0
180 meters	0.0
210 meters	0.0
240 meters	0.0
270 meters	0.0
300 meters	0.0
Average	N/A

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

c) Stream width - Measure (1) the width at one point which represents the typical average width of the 300 meter reach; (2) the width at the narrowest point of the stream within the 300 meter reach; and (3) the width at the widest point of the stream within the 300 meter reach.

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	dry
Width at narrowest point of the stream within 300 meter reach	dry
Width at the widest point of the stream within 300 meter reach	dry

d) Is there sufficient water within a 300 meter stream reach during base flow conditions to support primary contact recreation? ☐ Yes ☑ No

COMMENTS: Completely 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 _____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

☐ Drinking or water in mouth
☐ Bathing
☐ Walking
☐ Jogging/running
☐ Bicycling
☐ Standing
☐ Sitting
☐ Lying down/sleeping
☐ Playing on shoreline
☐ Picnicking
☐ Motorcycle/ATV
☐ Hunting/Trapping
☐ Wildlife watching
☑ None
☐ Other: _____

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☐ Yes ☑ No (If yes, please provide supporting documentation and photos.)
Comments: _____

3. Check any channel obstructions that apply (Attach photos).

☑ Culverts
☐ Barbed wire
☐ Utility pipe
☐ Fences
☐ Dams
☐ Other (specify): pic # 1018 1076, 1077
☐ 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: All overgrown pasture. Dry creek

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).

☑ Private Property
☐ No trespass sign
☐ Wildlife
☐ Steep slopes
☐ No public access
☐ No roads
☑ Fence
☐ Barge/ship traffic
☐ Industrial
☐ None of the Above
☐ Other: _____

Comments: All pasture. Overgrown by trees, brush, vines. No water

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: _____

Stream Name _____ Site: _____
Date: _____ Time: _____

7. Check all water characteristics that apply (Attach photos).
Aquatic Vegetation: ☑ absent ☐ rare ☐ common ☐ abundant
Algae Cover: ☑ absent ☐ rare ☐ common ☐ abundant
Odor: ☑ none ☐ rare ☐ common ☐ abundant
Color: N/A ☐ clear ☐ green ☐ red ☐ brown ☐ black
Bottom Deposit: ☐ sludge ☐ solids ☑ fine sediments ☐ none ☐ other
Water Surface: N/A ☐ clear ☐ scum ☐ foam ☐ debris ☐ oil
Other:
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: Deer near creek

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 creek, Thick with brush & vines, No discernable channel

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream:_____ Date:_____

Site:_____ Site

Description:_____

Time Begin:_____ Time End:_____ Meter Type:_____

Observers:_____ Stream Width*:_____ Section Width (W):_____

Observations:_____

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V)		Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
			At Point (ft/s)(m/s)	Average (ft/s)(m/s)	

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Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1 **Actual:** 87 | 75 Precip: 0.07 **Average:** - | - Precip: -	2 **Actual:** 87 | 75 Precip: 0.46 **Average:** - | - Precip: -	3 **Actual:** 85 | 75 Precip: 0.00 **Average:** - | - Precip: -
4 **Actual:** 91 | 76 Precip: 0.00 **Average:** - | - Precip: -	5 **Actual:** 92 | 74 Precip: 0.00 **Average:** - | - Precip: -	6 **Actual:** 93 | 75 Precip: 0.00 **Average:** - | - Precip: -	7 **Actual:** 91 | 74 Precip: 0.00 **Average:** - | - Precip: -	8 **Actual:** 86 | 76 Precip: 0.00 **Average:** - | - Precip: -	9 **Actual:** 91 | 75 Precip: 0.00 **Average:** - | - Precip: -	10 **Actual:** 90 | 74 Precip: 0.00 **Average:** - | - Precip: -
11 **Actual:** 92 | 75 Precip: 0.00 **Average:** - | - Precip: -	12 **Actual:** 93 | 76 Precip: 0.00 **Average:** - | - Precip: -	13 **Actual:** 94 | 78 Precip: 0.00 **Average:** - | - Precip: -	14 **Actual:** 94 | 76 Precip: 0.00 **Average:** - | - Precip: -	15 **Actual:** 95 | 75 Precip: 0.00 **Average:** - | - Precip: -	16 **Actual:** 95 | 75 Precip: 0.00 **Average:** - | - Precip: -	17 **Actual:** 96 | 73 Precip: 0.00 **Average:** - | - Precip: -
18 **Actual:** 95 | 74 Precip: 0.00 **Average:** - | - Precip: -	19 **Actual:** 93 | 74 Precip: 0.00 **Average:** - | - Precip: -	20 **Actual:** 95 | 76 Precip: 0.00 **Average:** - | - Precip: -	21 **Actual:** 95 | 75 Precip: 0.00 **Average:** - | - Precip: -	22 **Actual:** 95 | 76 Precip: 0.00 **Average:** - | - Precip: -	23 **Actual:** 95 | 77 Precip: 0.00 **Average:** - | - Precip: -	24 **Actual:** 94 | 73 Precip: 0.00 **Average:** - | - Precip: -

25	26	27	28	29	30	31
Actual: 97 | 74	**Actual:** 97 | 75	**Actual:** 92 | 72	**Actual:** 90 | 74	**Actual:** 93 | 74	**Actual:** 94 | 74	**Actual:** 96 | 73
Precip: 0.00	Precip: 0.00	Precip: 0.01	Precip: 0.11	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -

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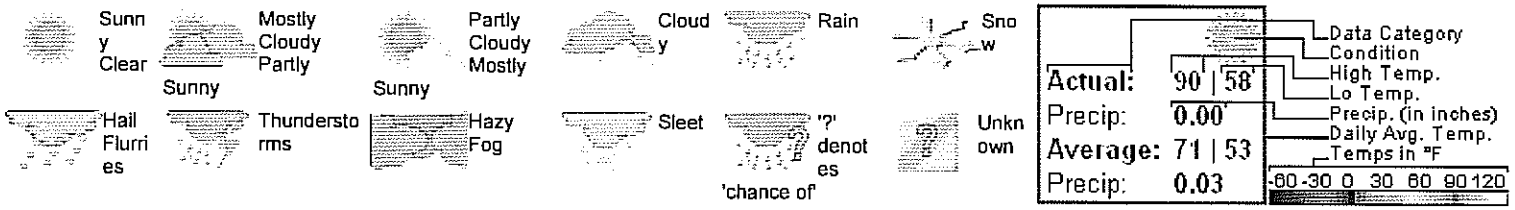
Calendar Key:



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Daily Observations

2010 July	Temp. (°F) high	avg	low	Dew Point (°F) high	avg	low	Humidity (%) high	avg	low	Sea Level Pressure (in) high	avg	low	Visibility (mi) high	avg	low	Wind (mph) high	avg	Gust Speed (mph) high	Precip (in) sum	Events
1	87	81	75	75	73	71	94	80	64	30.04	30.00	29.97	10	6	4	16	8	25	0.07	Rain
2	87	81	75	76	74	72	94	88	63	30.03	29.99	29.95	10	7	4	16	6	29	0.46	Rain
3	85	80	75	77	75	72	95	85	68	29.98	29.94	29.90	10	5	3	14	4	20	0.00	Rain
4	91	84	76	77	74	71	94	75	51	29.94	29.90	29.84	7	5	3	14	7	18	0.00	Rain
5	92	83	74	76	73	70	95	74	48	29.91	29.87	29.80	7	5	3	10	5	9	0.00	
6	93	84	75	75	72	69	94	69	44	29.92	29.87	29.80	7	5	3	8	2	-	0.00	
7	91	82	74	75	73	69	94	75	53	29.94	29.91	29.87	7	5	4	15	3	25	0.00	
8	86	81	76	75	74	72	90	81	63	30.02	29.98	29.95	10	6	3	12	5	16	0.00	Rain
9	91	83	75	76	73	70	94	79	51	30.06	30.02	29.98	7	5	3	15	2	18	0.00	Rain
10	90	82	74	75	73	71	96	77	53	30.08	30.02	29.96	7	4	3	9	1	-	0.00	
11	92	84	75	75	72	69	94	72	46	29.99	29.94	29.83	7	5	4	15	5	20	0.00	
12	93	84	76	75	73	70	92	70	47	29.90	29.86	29.78	7	5	4	21	9	22	0.00	
13	94	86	78	75	73	71	86	68	46	29.92	29.88	29.85	7	4	3	18	11	24	0.00	
14	94	85	76	76	73	70	91	69	46	30.05	30.00	29.95	7	5	3	16	9	22	0.00	
15	95	85	75	76	72	68	95	69	41	30.09	30.02	29.96	7	5	2	10	5	16	0.00	
16	95	85	75	75	71	66	94	67	38	30.06	30.02	29.94	10	6	3	7	2	-	0.00	Rain
17	96	84	73	74	71	65	94	63	35	30.05	30.00	29.94	10	9	3	10	2	16	0.00	

2010	Temp. (°F)				Dew Point (°F)			Humidity (%)		Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
18	95	84	74	75	72	68	90	73	42	30.03	29.99	29.94	10	10	7	12	5	20	0.00	Thunderstorm
19	93	84	74	76	73	70	96	76	48	30.02	29.98	29.94	10	8	0	18	4	26	0.00	Fog
20	95	86	76	76	73	65	95	73	39	30.05	30.01	29.97	10	9	5	15	6	18	0.00	
21	95	85	75	75	73	69	95	71	42	30.09	30.05	29.99	10	9	5	8	2	16	0.00	Rain
22	95	86	76	76	74	70	94	75	45	30.06	30.01	29.96	10	9	7	12	3	20	0.00	
23	95	86	77	77	73	64	94	70	35	30.05	30.01	29.96	10	9	5	14	4	20	0.00	
24	94	84	73	76	71	63	96	69	37	30.09	30.04	29.98	10	9	4	10	3	-	0.00	
25	97	86	74	72	67	58	88	58	26	30.06	30.02	29.94	10	10	7	8	2	-	0.00	Rain
26	97	86	75	73	70	67	87	67	38	30.02	29.97	29.88	10	7	4	24	2	34	0.00	Rain , Thunderstorm
27	92	82	72	76	72	69	95	79	46	30.05	30.00	29.96	10	6	4	10	2	-	0.01	Rain , Thunderstorm
28	90	82	74	76	74	71	95	83	56	30.14	30.09	30.03	10	9	3	17	6	31	0.11	Rain , Thunderstorm
29	93	84	74	77	72	68	96	74	45	30.20	30.14	30.03	10	9	5	10	3	-	0.00	
30	94	84	74	76	72	66	95	71	41	30.09	30.04	29.91	10	9	2	14	5	18	0.00	
31	96	84	73	74	69	59	94	66	29	29.98	29.93	29.85	10	9	5	10	4	-	0.00	

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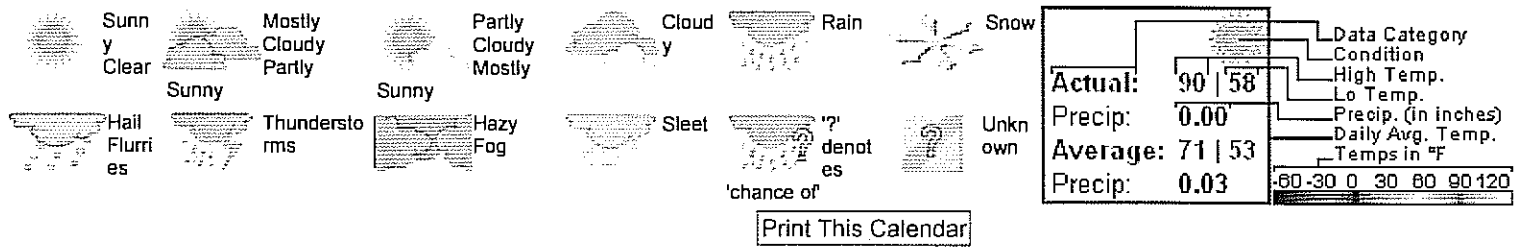
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1 Actual: 100 | 69 Precip: 0.00 Average: - | - Precip: -	2 Actual: 99 | 71 Precip: 0.00 Average: - | - Precip: -	3 Actual: 98 | 73 Precip: 0.00 Average: - | - Precip: -	4 Actual: 97 | 76 Precip: 0.00 Average: - | - Precip: -	5 Actual: 98 | 75 Precip: 0.00 Average: - | - Precip: -	6 Actual: 98 | 75 Precip: 0.00 Average: - | - Precip: -	7 Actual: 98 | 78 Precip: 0.00 Average: - | - Precip: -
8 Actual: 98 | 77 Precip: 0.00 Average: - | - Precip: -	9 Actual: 98 | 74 Precip: 0.00 Average: - | - Precip: -	10 Actual: 100 | 75 Precip: 0.00 Average: - | - Precip: -	11 Actual: 99 | 78 Precip: 0.00 Average: - | - Precip: -	12 Actual: 99 | 75 Precip: 0.00 Average: - | - Precip: -	13 Actual: 99 | 75 Precip: 0.00 Average: - | - Precip: -	14 Actual: 100 | 77 Precip: 0.00 Average: - | - Precip: -
15 Actual: 100 | 79 Precip: 0.00 Average: - | - Precip: -	16 Actual: 109 | 76 Precip: 0.00 Average: - | - Precip: -	17 Actual: 101 | 76 Precip: 0.00 Average: - | - Precip: -	18 Actual: 104 | 81 Precip: 0.00 Average: - | - Precip: -	19 Actual: 101 | 79 Precip: 0.00 Average: - | - Precip: -	20 Actual: 101 | 80 Precip: 0.00 Average: - | - Precip: -	21 Actual: 102 | 77 Precip: 0.00 Average: - | - Precip: -
22 Actual: 103 | 77 Precip: 0.00 Average: - | - Precip: -	23 Actual: 109 | 79 Precip: 0.00 Average: - | - Precip: -	24 Actual: 108 | 79 Precip: 0.00 Average: - | - Precip: -	25 Actual: 100 | 80 Precip: 0.00 Average: - | - Precip: -	26 Actual: 100 | 79 Precip: 0.00 Average: - | - Precip: -	27 Actual: 99 | 69 Precip: 0.00 Average: - | - Precip: -	28 Actual: 101 | 68 Precip: 0.00 Average: - | - Precip: -
29 Actual: 100 | 77	30 Actual: 99 | 81	31 Actual: 101 | 80				

Precip: 0.00 **Average:** - | - Precip: -	Precip: 0.00 **Average:** - | - Precip: -	Precip: 0.00 **Average:** - | - Precip: -

« Previous Month « 2009 2011 » Next Month »

Calendar Key:



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Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
August	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	100	84	69	74	67	55	95	60	22	29.93	29.89	29.84	10	9	7	9	2	-	0.00	
2	99	85	71	70	64	55	90	55	25	30.00	29.96	29.91	10	9	4	12	2	16	0.00	
3	98	86	73	73	69	64	94	60	32	30.08	30.01	29.95	10	8	4	9	2	16	0.00	
4	97	86	76	77	73	68	94	66	38	30.05	29.98	29.89	7	6	3	12	4	17	0.00	Rain
5	98	86	75	74	71	65	92	62	34	29.96	29.91	29.83	7	5	3	8	3	-	0.00	
6	98	86	75	74	71	67	92	63	36	29.95	29.89	29.81	10	8	4	10	5	-	0.00	
7	98	88	78	75	71	64	86	60	33	29.94	29.88	29.81	10	10	10	12	5	16	0.00	
8	98	88	77	76	71	65	92	63	34	29.94	29.90	29.83	10	10	10	12	6	20	0.00	
9	98	86	74	76	71	66	95	63	34	29.99	29.93	29.85	10	10	7	12	5	16	0.00	
10	100	88	75	77	72	65	94	64	33	29.98	29.93	29.85	10	10	3	7	2	9	0.00	
11	99	88	78	76	73	68	89	64	36	29.96	29.90	29.83	10	10	10	12	3	24	0.00	Rain , Thunderstorm
12	99	87	75	76	71	65	92	63	33	29.90	29.85	29.75	10	10	7	9	2	-	0.00	
13	99	87	75	75	70	65	91	62	33	29.87	29.82	29.76	10	10	10	13	4	17	0.00	
14	100	88	77	76	72	66	92	62	33	29.94	29.88	29.83	10	10	7	13	6	18	0.00	
15	100	90	79	77	72	63	90	62	30	30.02	29.96	29.89	10	10	10	10	5	-	0.00	

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
16	109	92	76	79	72	65	90	64	26	29.99	29.93	29.83	10	10	10	13	3	23	0.00	
17	101	88	76	78	75	70	96	69	36	29.95	29.91	29.83	10	9	5	8	1	-	0.00	
18	104	92	81	78	75	65	88	65	28	29.97	29.92	29.87	10	10	10	21	3	29	0.00	Thunderstorm
19	101	90	79	79	75	69	94	67	35	29.97	29.90	29.83	10	10	10	13	4	21	0.00	
20	101	90	80	80	74	66	95	62	33	29.93	29.86	29.80	10	10	7	17	8	25	0.00	
21	102	90	77	79	74	68	96	64	33	30.01	29.94	29.89	10	10	10	17	7	23	0.00	
22	103	90	77	78	74	69	94	62	34	30.04	29.97	29.88	10	10	7	12	6	-	0.00	
23	109	94	79	74	71	65	85	54	26	29.93	29.88	29.77	10	10	10	14	2	22	0.00	
24	108	94	79	77	71	63	88	53	24	29.90	29.85	29.78	10	10	10	17	4	26	0.00	
25	100	90	80	77	69	62	86	54	30	30.04	29.99	29.93	10	10	10	15	7	21	0.00	
26	100	90	79	72	67	62	76	50	29	30.09	30.04	29.96	10	10	10	12	5	18	0.00	
27	99	84	69	64	57	48	83	42	17	30.04	29.98	29.88	10	10	10	13	5	21	0.00	
28	101	84	68	65	61	54	82	49	25	29.94	29.89	29.79	10	10	10	8	1	-	0.00	
29	100	88	77	77	74	66	92	65	33	29.95	29.89	29.85	10	10	10	15	5	29	0.00	
30	99	90	81	81	77	72	93	73	42	30.06	30.00	29.94	10	10	10	14	7	22	0.00	
31	101	90	80	80	76	68	96	70	33	30.05	30.00	29.91	10	10	7	12	5	17	0.00	

Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: MJ/DM BRA	
Date & Time: 9 Aug 10 1045	County Name: Robertson
Stream Name: Pin Oak	
Segment No. or nearest downstream Segment No.: 1242L	
Description of Site: 16401 Downstream from SH 6 on private property	

At any point during the Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the use for the water body the investigator should stop conducting the UAA.

A. Stream Characteristics:

1. Check the following channel flow status that applies.

☐ dry ☑ no flow ☐ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:

☐ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.

☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.

☑ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.

☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.

☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. <0.05 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 ~~<0.05~~ °C 9 Aug 10 33.2 92 °F Water Temp 30.7 °C 87.3 °F

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	RL 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):

On private property Downstream from SH 6. Locked gate Lanek #818

8. Dominant Primary Substrate

☐ Cobble ☐ Sand ☐ Silt ☑ Mud/Clay ☐ Gravel ☐ Bedrock ☐ Rip rap ☐ Concrete

Stream Name_____ Site: _____
Date: _____ Time: _____

B. Primary Contact Water Recreation Evaluation:

- Primary contact recreation draft definition: Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, and whitewater kayaking, canoeing, and rafting, involving a significant risk of ingestion of water.

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?

☐ Yes ☐ No primary contact recreation activities were observed

a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).

☐ Wading-Children
☐ Wading-Adults
☐ Swimming
☐ Water skiing
☐ Diving
☐ Tubing
☐ Surfing
☐ Whitewater-kayaking, canoeing, rafting
☐ Other: _____
☐ frequent public swimming-created by publicly owned land or commercial operations
☑ No primary contact activities that commonly occur were observed

b. Check the number of individuals observed at the site: ☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.

☐ Water in mouth or nose of the individual ☐ Primary touch: Individual's body (or portion) immersed in water
☐ Secondary touch: fishing, pets and related contact with water ☐ Individual is in a boat touching water
☐ Individual is on shore near water within 8 meters (25ft) of water ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☑ Not applicable

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).

Long wide, stagnant pool >1m deep

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).

#818 Down stream from SH6 on private property with locked gate.

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: _____

Date: _____ Time: _____

b. Check the number of individuals observed at the site.
☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body well away from water between 8 and 30 meters (100 ft)

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
Long wide stagnant pool. 60m long X 18m wide; Scum on water #819 & 820

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).
Same as above

6. Describe why there is limited public access (e.g. lack of roads, river or stream banks overgrown, etc.) (Attach photos, maps, etc. for documentation).
Private property with fence & locked gate #818

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.
Same as #2 above

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 821 Downstream 822 Left Bank 823 Right Bank 824

Photos #s (150 meters) Upstream 825 Downstream 826 Left Bank 827 Right Bank 828

Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____ No Pics

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	60	18	>1.2	N/A
Pool 2	27	6	>1.2	N/A
Pool 3	71	7	>1.2	N/A
Pool 4	12	5	0.90	
Pool 5	38	5	>1.2	N/A
Pool 6				
Pool 7				
Pool 8				
Pool 9				
Pool 10				

b)Average depth at the thalweg –Take depth measurements approximately every 30 meters to calculate an average depth at the thalweg (at least 10 measurements needed). If depth and/or width measurements were not attainable, explain why.

Distance	Depth (meters)	
30 meters	>1.2	N/A
60 meters	0.7	
90 meters	0.33	
120 meters	0.73	
150 meters	0.71	
180 meters	>1.2	N/A
210 meters	0.15	
240 meters	0.51	
270 meters	0.68	
300 meters	0.72	
Average	0.69	

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

- ☐ Drinking or water in mouth
- ☐ Bathing
- ☐ Walking
- ☐ Jogging/running
- ☐ Bicycling
- ☐ Standing
- ☐ Sitting
- ☐ Lying down/sleeping
- ☐ Playing on shoreline
- ☐ Picnicking
- ☐ Motorcycle/ATV
- ☐ Hunting/Trapping
- ☐ Wildlife watching
- ☑ None
- ☐ Other: _____

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☐ Yes ☑ No (If yes, please provide supporting documentation and photos.)
Comments: _____

3. Check any channel obstructions that apply (Attach photos).

- ☐ Culverts
- ☐ Barbed wire
- ☐ Utility pipe
- ☐ Fences
- ☐ Dams
- ☐ Other (specify):_____
- ☐ Log jams
- ☐ Thick vegetation
- ☐ Rip rap
- ☐ Low bridges
- ☐ Water control structure
- ☑ None

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest).

- ☐ Campgrounds
- ☐ Playgrounds
- ☑ Rural area
- ☐ Residential
- ☐ National forests
- ☐ Urban/suburban location
- ☐ Golf Course
- ☐ Sports Field
- ☐ Stairs/walkway
- ☐ Boating access (ramps)
- ☐ Beach
- ☐ Bridge crossing
- ☐ Commercial boating
- ☐ Trails/paths (hiking/biking)
- ☐ Paved parking lot
- ☐ Unimproved parking lot
- ☐ Roads (paved/unpaved)
- ☐ Populated area
- ☐ Docks or rafts
- ☐ Commercial outfitter
- ☐ Nearby school
- ☐ Power Line Corridor
- ☐ Parks (national/city/county/state)
- ☐ Public Property
- ☐ Other:_____
- ☑ None of the Above

Comments:_____

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).

- ☑ Private Property
- ☑ No trespass sign
- ☐ Wildlife
- ☐ Steep slopes
- ☐ No public access
- ☐ No roads
- ☑ Fence
- ☐ Barge/ship traffic
- ☐ Industrial
- ☐ None of the Above
- ☐ Other:_____

Comments: Locked gate & Fence

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:_____

Stream Name _____ Site: _____
Date: _____ Time: _____

7. Check all water characteristics that apply (Attach photos).

Aquatic Vegetation: ☐ absent ☐ rare ☐ common ☑ abundant
Algae Cover: ☐ absent ☐ rare ☑ common ☐ abundant
Odor: ☐ none ☑ rare ☐ common ☐ abundant
Color: ☐ clear ☐ green ☐ red ☑ brown ☑ black
Bottom Deposit: ☑ sludge ☐ solids ☐ fine sediments ☐ none ☐ other
Water Surface: ☑ clear ☑ scum ☐ foam ☐ debris ☐ oil
Other:
See all associated pics

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: Cows

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).
Some pools are deep enough. Water is stagnant, Private property with fence & lockedgate. Land owner stated that he had recently taken his grandkids fishing in this creek

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream:_____ Date:_____

Site:_____ Site

Description:_____

Time Begin:_____ Time End:_____ Meter Type:_____

Observers:_____ Stream Width*:_____ Section Width (W):_____

Observations:_____

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V)		Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
			At Point (ft/s)(m/s)	Average (ft/s)(m/s)	

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FlowTracker
P872
3.7
2.30
0.0%

(English Units)
ft
ft/s
ft^2
cfs

Accuracy	1.0%	1.0%
Depth	1.3%	6.9%
Velocity	13.8%	11.8%
Width	0.4%	0.4%
Method	6.7%	-
# Stations	5.8%	-
Overall	**16.4%**	**13.7%**

40	9
LEW	4.700
47.8 dB	0.940
87.33 °F	0.200
Mid-Section	0.0015
	0.0014

				Depth								
0	09:49	5.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
1	*09:49*	*6.00*	*0.6*	*0.200*	*0.6*	*0.080*	*0.0000*	*1.00*	*0.0000*	*0.150*	*0.0000*	*0.0*
2	*09:50*	*6.50*	*0.6*	*0.150*	*0.6*	*0.060*	*-0.0003*	*1.00*	*-0.0003*	*0.075*	*0.0000*	*-1.8*
3	*09:51*	*7.00*	*0.6*	*0.150*	*0.6*	*0.060*	*0.0000*	*1.00*	*0.0000*	*0.075*	*0.0000*	*0.0*
4	*09:53*	*7.50*	*0.6*	*0.200*	*0.6*	*0.080*	*-0.0003*	*1.00*	*-0.0003*	*0.100*	*0.0000*	*-2.4*
5	*09:54*	*8.00*	*0.6*	*0.300*	*0.6*	*0.120*	*-0.0003*	*1.00*	*-0.0003*	*0.150*	*0.0000*	*-3.6*
6	09:55	8.50	0.6	0.300	0.6	0.120	0.0020	1.00	0.0020	0.150	0.0003	21.6
7	*09:56*	*9.00*	*0.6*	*0.400*	*0.6*	*0.160*	*0.0049*	*1.00*	*0.0049*	*0.240*	*0.0012*	*86.2*
8	09:56	9.70	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0

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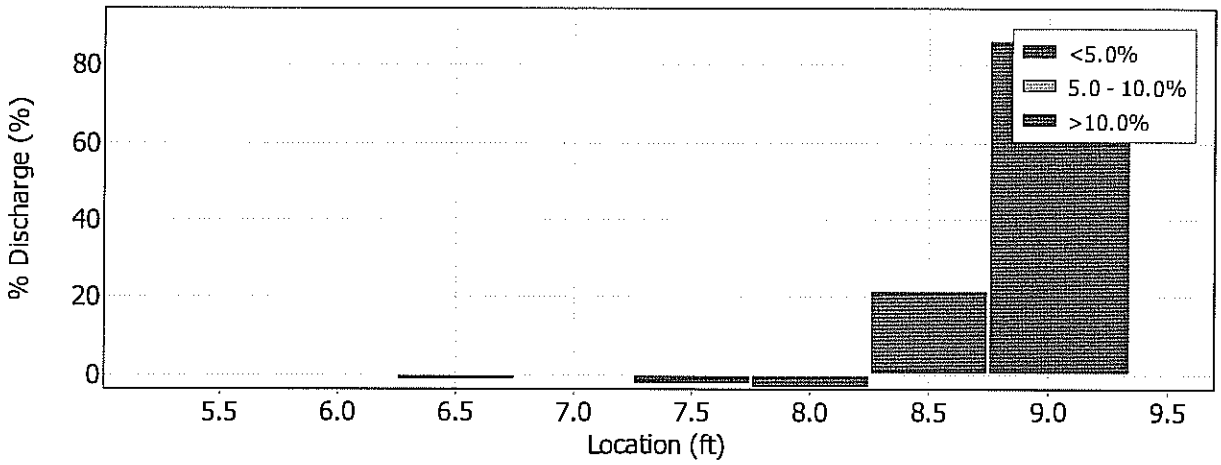

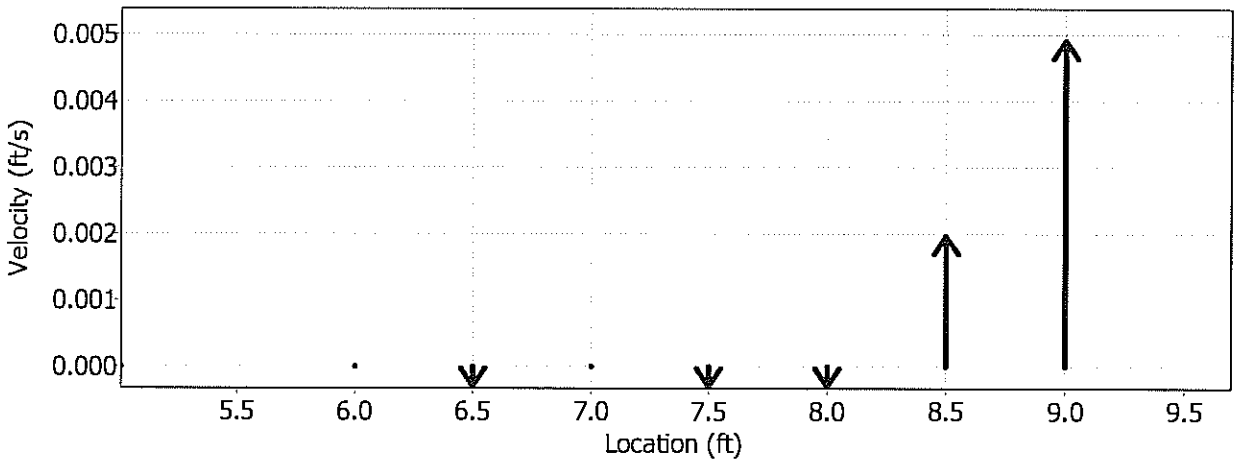

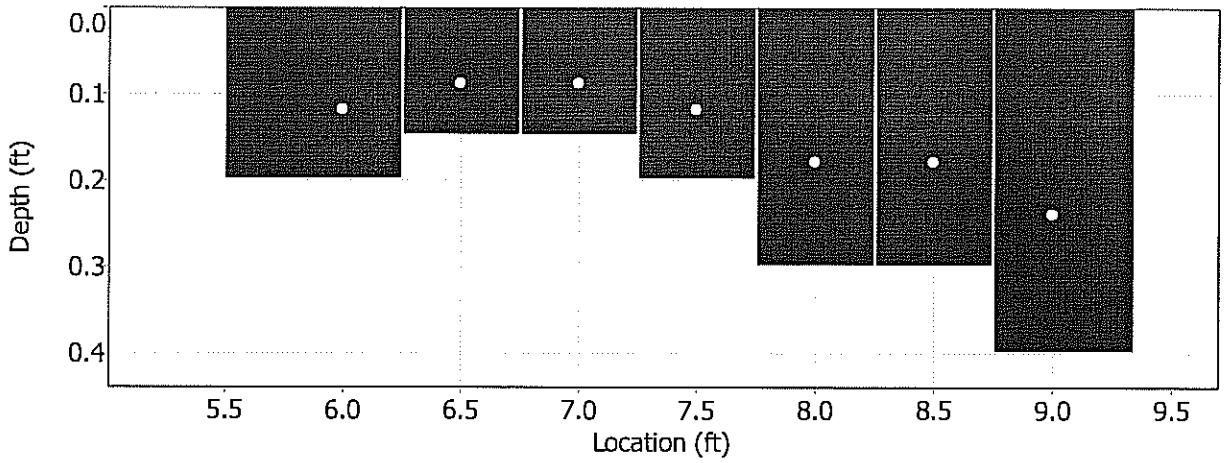

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1	6.00	0.6	SNR (30.3) is different from typical SNR (47.8)
		0.6	Boundary QC is Good; possible boundary interference
2	6.50	0.6	SNR (70.7) is different from typical SNR (47.8)
		0.6	High standard error: 0.000
		0.6	Boundary QC is Good; possible boundary interference
3	7.00	0.6	SNR (67.9) is different from typical SNR (47.8)
		0.6	High standard error: 0.000
4	7.50	0.6	SNR (34.4) is different from typical SNR (47.8)
		0.6	Boundary QC is Fair; possible boundary interference
5	8.00	0.6	High standard error: 0.000
		0.6	Boundary QC is Good; possible boundary interference
7	9.00	0.6	SNR (32.2) is different from typical SNR (47.8)
		0.6	Boundary QC is Good; possible boundary interference

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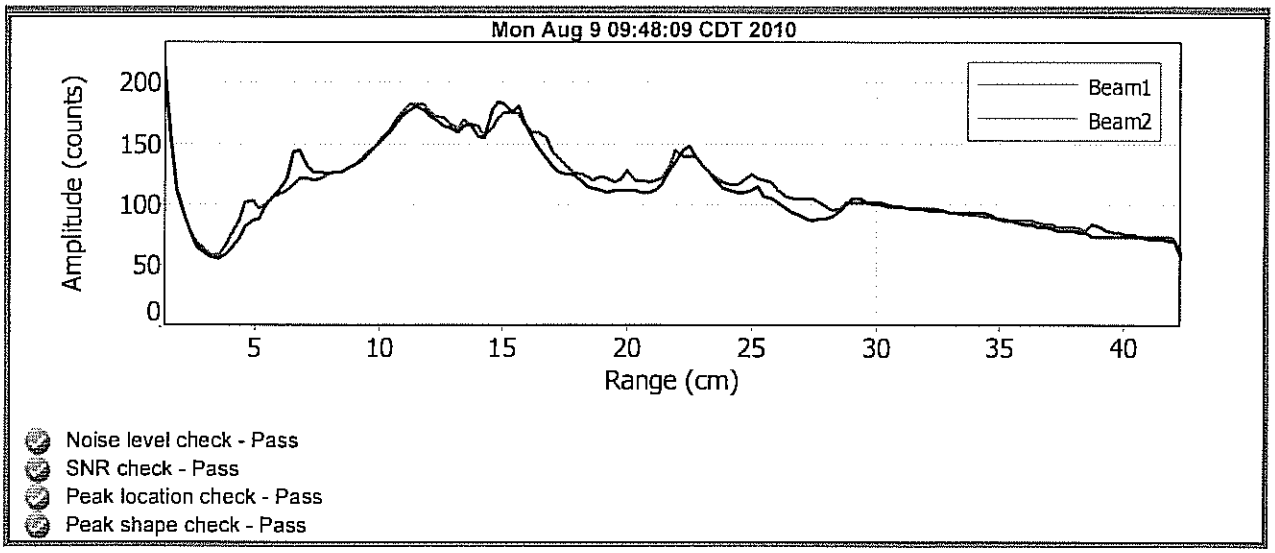


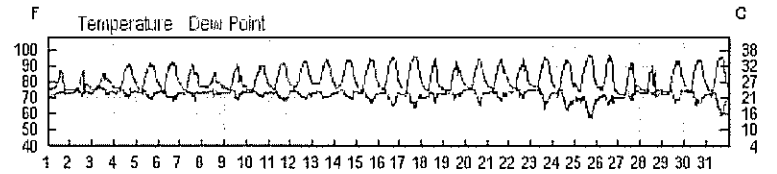
Noise level check - Pass
SNR check - Pass
Peak location check - Pass
Peak shape check - Pass

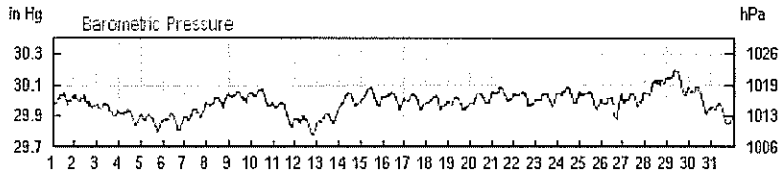
History for Hearne, TX

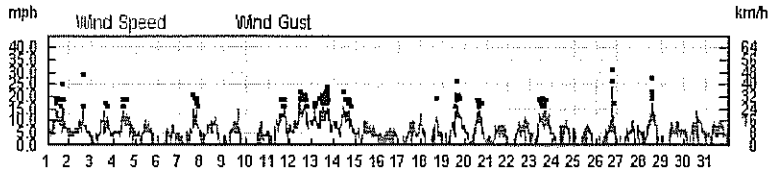
Month of July, 2010

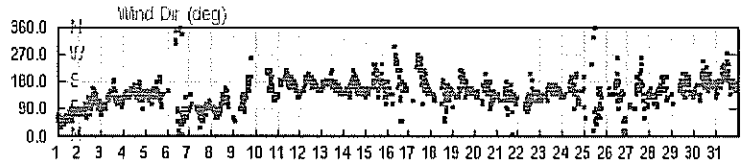
Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	**97** °F	**93** °F	**85** °F	
Mean Temperature	**86** °F	**84** °F	**80** °F	
Min Temperature	**78** °F	**75** °F	**72** °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	21	19	15	579
Growing Degree Days (base 50)	36	34	30	1047
Dew Point:				
Dew Point	**77** °F	**72** °F	**58** °F	
Precipitation:				
Precipitation	**0.46** in	**0.02** in	**0.00** in	**0.65** in
Snowdepth	-	-	-	-
Wind:				
Wind	**24** mph	**4** mph	**0** mph	
Gust Wind	**34** mph	**18** mph	**9** mph	
Sea Level Pressure:				
Sea Level Pressure	**30.20** in	**29.98** in	**29.78** in	









Monthly Calendar Overview

« Previous Month « 2009 **July 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1 **Actual:** 87 | 75 Precip: 0.07	2 **Actual:** 87 | 75 Precip: 0.46	3 **Actual:** 85 | 75 Precip: 0.00

				Average: - | - Precip: -	Average: - | - Precip: -	Average: - | - Precip: -
4 Actual: 91 | 76 Precip: 0.00 Average: - | - Precip: -	5 Actual: 92 | 74 Precip: 0.00 Average: - | - Precip: -	6 Actual: 93 | 75 Precip: 0.00 Average: - | - Precip: -	7 Actual: 91 | 74 Precip: 0.00 Average: - | - Precip: -	8 Actual: 86 | 76 Precip: 0.00 Average: - | - Precip: -	9 Actual: 91 | 75 Precip: 0.00 Average: - | - Precip: -	10 Actual: 90 | 74 Precip: 0.00 Average: - | - Precip: -
11 Actual: 92 | 75 Precip: 0.00 Average: - | - Precip: -	12 Actual: 93 | 76 Precip: 0.00 Average: - | - Precip: -	13 Actual: 94 | 78 Precip: 0.00 Average: - | - Precip: -	14 Actual: 94 | 76 Precip: 0.00 Average: - | - Precip: -	15 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	16 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	17 Actual: 96 | 73 Precip: 0.00 Average: - | - Precip: -
18 Actual: 95 | 74 Precip: 0.00 Average: - | - Precip: -	19 Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	20 Actual: 95 | 76 Precip: 0.00 Average: - | - Precip: -	21 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	22 Actual: 95 | 76 Precip: 0.00 Average: - | - Precip: -	23 Actual: 95 | 77 Precip: 0.00 Average: - | - Precip: -	24 Actual: 94 | 73 Precip: 0.00 Average: - | - Precip: -
25 Actual: 97 | 74 Precip: 0.00 Average: - | - Precip: -	26 Actual: 97 | 75 Precip: 0.00 Average: - | - Precip: -	27 Actual: 92 | 72 Precip: 0.01 Average: - | - Precip: -	28 Actual: 90 | 74 Precip: 0.11 Average: - | - Precip: -	29 Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	30 Actual: 94 | 74 Precip: 0.00 Average: - | - Precip: -	31 Actual: 96 | 73 Precip: 0.00 Average: - | - Precip: -

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear, Mostly Cloudy Partly Sunny, Partly Cloudy Mostly Sunny, Cloudy, Rain, Snow, Hail Flurries, Thunderstorms, Hazy Fog, Sleet, '?' denotes chance of, Unknown

Print This Calendar

Actual: 90 | 58 Precip: 0.00 Average: 71 | 53 Precip: 0.03

Data Category, Condition, High Temp., Lo Temp., Precip. (in inches), Daily Avg. Temp., Temps in °F

-60 -30 0 30 60 90 120

Daily Observations

2010 Temp. (°F)				Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
July	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	87	81	75	75	73	71	94	80	64	30.04	30.00	29.97	10	6	4	16	8	25	0.07	Rain
2	87	81	75	76	74	72	94	88	63	30.03	29.99	29.95	10	7	4	16	6	29	0.46	Rain
3	85	80	75	77	75	72	95	85	68	29.98	29.94	29.90	10	5	3	14	4	20	0.00	Rain
4	91	84	76	77	74	71	94	75	51	29.94	29.90	29.84	7	5	3	14	7	18	0.00	Rain
5	92	83	74	76	73	70	95	74	48	29.91	29.87	29.80	7	5	3	10	5	9	0.00	
6	93	84	75	75	72	69	94	69	44	29.92	29.87	29.80	7	5	3	8	2	-	0.00	
7	91	82	74	75	73	69	94	75	53	29.94	29.91	29.87	7	5	4	15	3	25	0.00	
8	86	81	76	75	74	72	90	81	63	30.02	29.98	29.95	10	6	3	12	5	16	0.00	Rain
9	91	83	75	76	73	70	94	79	51	30.06	30.02	29.98	7	5	3	15	2	18	0.00	Rain
10	90	82	74	75	73	71	96	77	53	30.08	30.02	29.96	7	4	3	9	1	-	0.00	
11	92	84	75	75	72	69	94	72	46	29.99	29.94	29.83	7	5	4	15	5	20	0.00	
12	93	84	76	75	73	70	92	70	47	29.90	29.86	29.78	7	5	4	21	9	22	0.00	
13	94	86	78	75	73	71	86	68	46	29.92	29.88	29.85	7	4	3	18	11	24	0.00	
14	94	85	76	76	73	70	91	69	46	30.05	30.00	29.95	7	5	3	16	9	22	0.00	
15	95	85	75	76	72	68	95	69	41	30.09	30.02	29.96	7	5	2	10	5	16	0.00	
16	95	85	75	75	71	66	94	67	38	30.06	30.02	29.94	10	6	3	7	2	-	0.00	Rain
17	96	84	73	74	71	65	94	63	35	30.05	30.00	29.94	10	9	3	10	2	16	0.00	

18	95	84	74	75	72	68	90	73	42	30.03	29.99	29.94	10	10	7	12	5	20	0.00	Thunderstorm
19	93	84	74	76	73	70	96	76	48	30.02	29.98	29.94	10	8	0	18	4	26	0.00	Fog
20	95	86	76	76	73	65	95	73	39	30.05	30.01	29.97	10	9	5	15	6	18	0.00	
21	95	85	75	75	73	69	95	71	42	30.09	30.05	29.99	10	9	5	8	2	16	0.00	Rain
22	95	86	76	76	74	70	94	75	45	30.06	30.01	29.96	10	9	7	12	3	20	0.00	
23	95	86	77	77	73	64	94	70	35	30.05	30.01	29.96	10	9	5	14	4	20	0.00	
24	94	84	73	76	71	63	96	69	37	30.09	30.04	29.98	10	9	4	10	3	-	0.00	
25	97	86	74	72	67	58	88	58	26	30.06	30.02	29.94	10	10	7	8	2	-	0.00	Rain
26	97	86	75	73	70	67	87	67	36	30.02	29.97	29.68	10	7	4	24	2	34	0.00	Rain , Thunderstorm
27	92	82	72	76	72	69	95	79	46	30.05	30.00	29.96	10	6	4	10	2	-	0.01	Rain , Thunderstorm
28	90	82	74	76	74	71	95	83	56	30.14	30.09	30.03	10	9	3	17	6	31	0.11	Rain , Thunderstorm
29	93	84	74	77	72	68	96	74	45	30.20	30.14	30.03	10	9	5	10	3	-	0.00	
30	94	84	74	76	72	66	95	71	41	30.09	30.04	29.91	10	9	2	14	5	18	0.00	
31	96	84	73	74	69	59	94	66	29	29.98	29.93	29.85	10	9	5	10	4	-	0.00	

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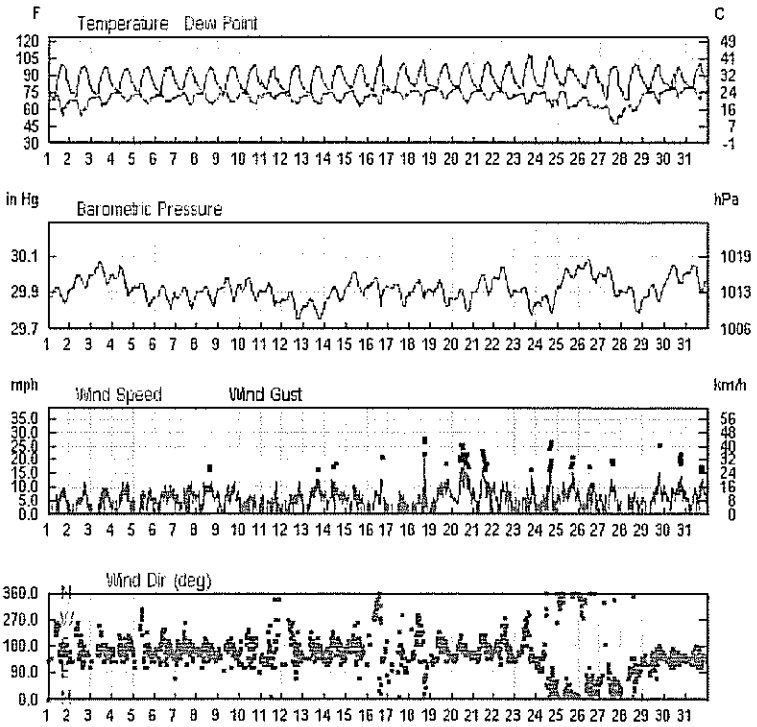
History for Hearne, TX

Month of August, 2010

Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	**109** °F	**101** °F	**97** °F	
Mean Temperature	**94** °F	**88** °F	**84** °F	
Min Temperature	**81** °F	**76** °F	**68** °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	29	24	19	730
Growing Degree Days (base 50)	44	38	34	1189
Dew Point:				
Dew Point	**81** °F	**71** °F	**48** °F	
Precipitation:				
Precipitation	**0.00** in	**0.00** in	**0.00** in	**0.00** in
Snowdepth	-	-	-	-
Wind:				
Wind	**21** mph	**4** mph	**0** mph	
Gust Wind	**29** mph	**18** mph	**9** mph	
Sea Level Pressure:				
Sea Level Pressure	**30.09** in	**29.92** in	**29.75** in	



Monthly Calendar Overview

« Previous Month « 2009 **August 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
Actual: 100 | 69	**Actual:** 99 | 71	**Actual:** 98 | 73	**Actual:** 97 | 76	**Actual:** 98 | 75	**Actual:** 98 | 75	**Actual:** 98 | 78
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -

8	9	10	11	12	13	14
Actual: 98 | 77	**Actual:** 98 | 74	**Actual:** 100 | 75	**Actual:** 99 | 78	**Actual:** 99 | 75	**Actual:** 99 | 75	**Actual:** 100 | 77
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
15	16	17	18	19	20	21
Actual: 100 | 79	**Actual:** 109 | 76	**Actual:** 101 | 76	**Actual:** 104 | 81	**Actual:** 101 | 79	**Actual:** 101 | 80	**Actual:** 102 | 77
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
22	23	24	25	26	27	28
Actual: 103 | 77	**Actual:** 109 | 79	**Actual:** 108 | 79	**Actual:** 100 | 80	**Actual:** 100 | 79	**Actual:** 99 | 69	**Actual:** 101 | 68
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
29	30	31				
Actual: 100 | 77	**Actual:** 99 | 81	**Actual:** 101 | 80				
Precip: 0.00	Precip: 0.00	Precip: 0.00				
Average: - | -	**Average:** - | -	**Average:** - | -				
Precip: -	Precip: -	Precip: -				

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear · Mostly Cloudy Partly Sunny · Partly Cloudy Mostly Sunny · Cloudy · Rain · Snow · Hail Flurries · Thunderstorms · Hazy Fog · Sleet · '?' denotes 'chance of' · Unknown

Print This Calendar

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

Data Category · Condition · High Temp. · Lo Temp. · Precip. (in inches) · Daily Avg. Temp. · Temps in °F

-60 -30 0 30 60 90 120

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
August	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	100	84	69	74	67	55	95	60	22	29.93	29.89	29.84	10	9	7	9	2	-	0.00	
2	99	85	71	70	64	55	90	55	25	30.00	29.96	29.91	10	9	4	12	2	16	0.00	
3	98	86	73	73	69	64	94	60	32	30.08	30.01	29.95	10	8	4	9	2	16	0.00	
4	97	86	76	77	73	68	94	66	38	30.05	29.98	29.89	7	6	3	12	4	17	0.00	Rain
5	98	86	75	74	71	65	92	62	34	29.96	29.91	29.83	7	5	3	8	3	-	0.00	
6	98	86	75	74	71	67	92	63	36	29.95	29.89	29.81	10	8	4	10	5	-	0.00	
7	98	88	78	75	71	64	86	60	33	29.94	29.88	29.81	10	10	10	12	5	16	0.00	
8	98	88	77	76	71	65	92	63	34	29.94	29.90	29.83	10	10	10	12	6	20	0.00	
9	98	86	74	76	71	66	95	63	34	29.99	29.93	29.85	10	10	7	12	5	16	0.00	
10	100	88	75	77	72	65	94	64	33	29.98	29.93	29.85	10	10	3	7	2	9	0.00	
11	99	88	78	76	73	68	89	64	36	29.96	29.90	29.83	10	10	10	12	3	24	0.00	Rain , Thunderstorm
12	99	87	75	76	71	65	92	63	33	29.90	29.85	29.75	10	10	7	9	2	-	0.00	
13	99	87	75	75	70	65	91	62	33	29.87	29.82	29.76	10	10	10	13	4	17	0.00	
14	100	88	77	76	72	66	92	62	33	29.94	29.88	29.83	10	10	7	13	6	18	0.00	
15	100	90	79	77	72	63	90	62	30	30.02	29.96	29.89	10	10	10	10	5	-	0.00	
16	109	92	76	79	72	65	90	64	26	29.99	29.93	29.83	10	10	10	13	3	23	0.00	
17	101	88	76	78	75	70	96	69	36	29.95	29.91	29.83	10	9	5	8	1	-	0.00	
18	104	92	81	78	75	65	88	65	28	29.97	29.92	29.87	10	10	10	21	3	29	0.00	Thunderstorm
19	101	90	79	79	75	69	94	67	35	29.97	29.90	29.83	10	10	10	13	4	21	0.00	
20	101	90	80	80	74	66	95	62	33	29.93	29.86	29.80	10	10	7	17	8	25	0.00	
21	102	90	77	79	74	68	96	64	33	30.01	29.94	29.89	10	10	10	17	7	23	0.00	

22	103	90	77	76	74	69	94	62	34	30.04	29.97	29.88	10	10	7	12	6	-	0.00
23	109	94	79	74	71	65	85	54	26	29.93	29.88	29.77	10	10	10	14	2	22	0.00
24	108	94	79	77	71	63	88	53	24	29.90	29.85	29.76	10	10	10	17	4	26	0.00
25	100	90	80	77	69	62	86	54	30	30.04	29.99	29.93	10	10	10	15	7	21	0.00
26	100	90	79	72	67	62	76	50	29	30.09	30.04	29.96	10	10	10	12	5	18	0.00
27	99	84	69	64	57	48	83	42	17	30.04	29.98	29.88	10	10	10	13	5	21	0.00
28	101	84	68	65	61	54	82	49	25	29.94	29.89	29.79	10	10	10	8	1	-	0.00
29	100	88	77	77	74	66	92	65	33	29.95	29.89	29.85	10	10	10	15	5	29	0.00
30	99	90	81	81	77	72	93	73	42	30.06	30.00	29.94	10	10	10	14	7	22	0.00
31	101	90	80	80	76	68	96	70	33	30.05	30.00	29.91	10	10	7	12	5	17	0.00

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Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: MB JD - BRH	
Date & Time: 29 Jun 10 1015	County Name: Robertson
Stream Name: Pin Oak 1045 MB 29 Jun 10	
Segment No. or nearest downstream Segment No.: 1242L	
Description of Site: 20385 Upstream from FM 2549	

At any point during the Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the use for the water body the investigator should stop conducting the UAA.

A. Stream Characteristics:

1. Check the following channel flow status that applies.

☐ dry ☐ no flow ☐ low ☑ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:

☐ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.

☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.

☑ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.

☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.

☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. 9.540 cfs

4. Water Quality Data (Field Parameters)

Field parameters should be collected in accordance with the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1.

Air Temp 27.8°C 82 °F Water Temp 25.9°C 78.7 °F

5. Riparian Zone (Mark dominant categories with L (Left Bank) and R (Right Bank). Bank orientation is determined by the investigator facing downstream.)

R Forest MB 29 Jun 10	____ Urban	____ Rip rap
R Shrub dominated corridor	L 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):

County Road MB 29 Jun 10 FM 2549 access, gentle slope to stream #91

8. Dominant Primary Substrate

☐Cobble ☐Sand ☑Silt ☐Mud/Clay ☐Gravel ☐Bedrock ☐Rip rap ☐ Concrete

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

B. Primary Contact Water Recreation Evaluation:
- Primary contact recreation draft definition: Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, and whitewater kayaking, canoeing, and rafting, involving a significant risk of ingestion of water.

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?
☐ Yes ☑ No primary contact recreation activities were observed
a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).

☐ Wading-Children	☐ Tubing	☑ No primary contact activities that commonly occur were observed
☐ Wading-Adults	☐ Surfing	
☐ Swimming	☐ Whitewater-kayaking, canoeing, rafting	
☐ Water skiing	☐ Other: _____	
☐ Diving	☐ frequent public swimming-created by publicly owned land or commercial operations	

b. Check the number of individuals observed at the site: ☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Water in mouth or nose of the individual ☐ Primary touch: Individual's body (or portion) immersed in water
☐ Secondary touch: fishing, pets and related contact with water ☐ Individual is in a boat touching water
☐ Individual is on shore near water within 8 meters (25ft) of water ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☑ Not applicable

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
Low water, narrow stream, shallow pools #92

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
FM 2549 #93

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_____ Site: _____
Date: _____ Time: _____

b. Check the number of individuals observed at the site.
☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body well away from water between 8 and 30 meters (100 ft)

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
Shallow, narrow stream. Shallow pools #92

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).
Shallow stream, narrow, shallow pools #92

6. Describe why there is limited public access (e.g. lack of roads, river or stream banks overgrown, etc.) (Attach photos, maps, etc. for documentation).

D. Noncontact Recreation Evaluation

Noncontact recreation applies to water bodies where recreation activities do not involve a significant risk of water ingestion, and where primary and secondary contact recreation uses do not occur because of unsafe conditions, such as barge traffic.

1. Provide site-specific information and documentation (including photographs) regarding unsafe conditions, recreation activities, and presence or absence of water recreation activities.
Low flow, narrow stream

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ FDS Page 3 of 8 _____

E. Stream Channel and Substantial Pool:
Please check the following which best describes the river or stream: ☐ 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 94 Downstream 95 Left Bank 96 Right Bank 97
Photos #s (150 meters) Upstream 98 Downstream 99 Left Bank 100 Right Bank 101
Photos #s (300 meters) Upstream 102 Downstream 103 Left Bank 104 Right Bank 105

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	0.63
Pool 2	20	~~[illegible]~~ 7	0.69
Pool 3	10	5	0.75
Pool 4	43	4.5	~~[illegible]~~ .88
Pool 5	15	4.5	0.77
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	0.27
60 meters	0.34
90 meters	0.16
120 meters	0.65
150 meters	0.83
180 meters	0.15
210 meters	0.13
240 meters	0.20
270 meters	0.25
300 meters	0.25
Average	0.323

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

c) Stream width - Measure (1) the width at one point which represents the typical average width of the 300 meter reach; (2) the width at the narrowest point of the stream within the 300 meter reach; and (3) the width at the widest point of the stream within the 300 meter reach.

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	4.5
Width at narrowest point of the stream within 300 meter reach	0.6
Width at the widest point of the stream within 300 meter reach	7.0

d) Is there sufficient water within a 300 meter stream reach during base flow conditions to support primary contact recreation? ☐ Yes ☑ No
COMMENTS: Too shallow

2. Non-wadeable Streams
If accessible, take 10 width measurements which represent typical widths of the 300 meter reach. If the water is too deep and not accessible record the estimated average width of the water body.

Also, take photos facing upstream, downstream, left bank, and right bank at .
Photos #s (30 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (150 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

# Measurements	Width (meters)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

☐ Drinking or water in mouth
☐ Bathing
☐ Walking
☐ Jogging/running
☐ Bicycling
☐ Standing
☐ Sitting
☐ Lying down/sleeping
☐ Playing on shoreline
☐ Picnicking
☐ Motorcycle/ATV
☐ Hunting/Trapping
☐ Wildlife watching
☑ None
☐ Other: _____

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☐ Yes ☑ No (If yes, please provide supporting documentation and photos.)
Comments: _____

3. Check any channel obstructions that apply (Attach photos).

☐ Culverts ☐ Fences ☐ Log jams ☐ Rip rap ☐ Water control structure
☐ Barbed wire ☐ Dams ☐ Thick vegetation ☐ Low bridges ☑ None
☐ Utility pipe ☐ Other (specify): _____

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest).

☐ Campgrounds
☐ Playgrounds
☑ Rural area
☐ Residential
☐ National forests
☐ Urban/suburban location
☐ Golf Course
☐ Sports Field
☐ Stairs/walkway
☐ Boating access (ramps)
☐ Beach
☑ Bridge crossing
☐ Commercial boating
☐ Trails/paths (hiking/biking)
☐ Paved parking lot
☐ Unimproved parking lot
☑ Roads (paved/unpaved)
☐ Populated area
☐ Docks or rafts
☐ Commercial outfitter
☐ Nearby school
☐ Power Line Corridor
☐ Parks (national/city/county/state)
☐ Public Property
☐ Other: _____
☐ None of the Above

Comments: FM 2549 crosses stream #91

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).

☑ Private Property
☐ No trespass sign
☐ Wildlife
☐ Steep slopes
☑ No public access
☐ No roads
☐ Fence
☐ Barge/ship traffic
☐ Industrial
☐ None of the Above
☐ Other: _____

Comments: FM 2549 crosse stream #91

6. Check any indications of human use (Attach photos).

☐ Roads
☐ Rope swings
☐ Dock/platform
☐ Foot paths/prints
☐ Other: _____
☐ RV/ATV Tracks
☐ Camping Sites
☐ Fire pit/ring
☐ Fishing Tackle
☐ NPDES Discharge
☐ Gates on corridor
☐ Children's toys
☐ Remnant's of Kid's play
☐ Organized event
☑ No Human Presence

Comments: _____

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

7. Check all water characteristics that apply (Attach photos).

Aquatic Vegetation: ☑ absent ☐ rare ☐ common ☐ abundant
Algae Cover: ☑ absent ☐ rare ☐ common ☐ abundant
Odor: ☐ none ☑ rare ☐ common ☐ abundant
Color: ☐ clear ☐ green ☐ red ☑ brown ☐ black
Bottom Deposit: ☐ sludge ☐ solids ☑ fine sediments ☐ none ☐ other
Water Surface: ☑ clear ☐ scum ☐ foam ☐ debris ☐ oil
Other: #106 = water

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: Lots of hog tracks and wallows

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: House hold garbage dumped from bridge

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).
Water too shallow

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream:_____ Date:_____

Site:_____ Site

Description:_____

Time Begin:_____ Time End:_____ Meter Type:_____

Observers:_____ Stream Width*:_____ Section Width (W):_____

Observations:_____

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V)		Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
			At Point (ft/s)(m/s)	Average (ft/s)(m/s)	

: Thu Jul 1 2010

20385-29JUN10.WAD
2010/06/29 09:39:24

MB

FlowTracker	**(English Units)**
P872	ft
3.7	ft/s
2.30	ft^2
0.0%	cfs

Accuracy	1.0%	1.0%
Depth	0.8%	2.8%
Velocity	1.7%	30.8%
Width	0.3%	0.3%
Method	3.8%	-
# Stations	6.6%	-
Overall	**7.9%**	**30.9%**

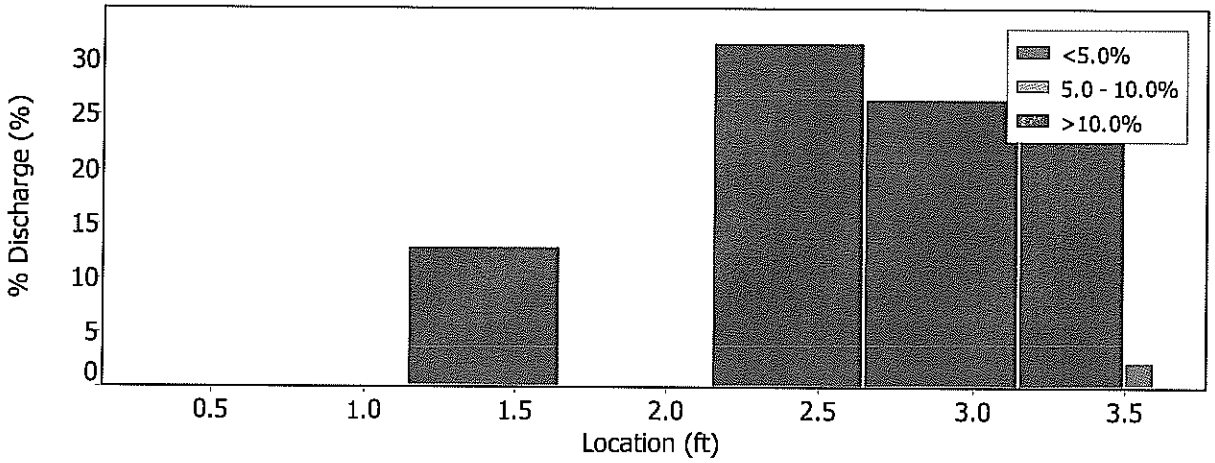
20	8
LEW	3.300
43.6 dB	0.703
78.66 °F	0.213
Mid-Section	0.7688
	0.5401

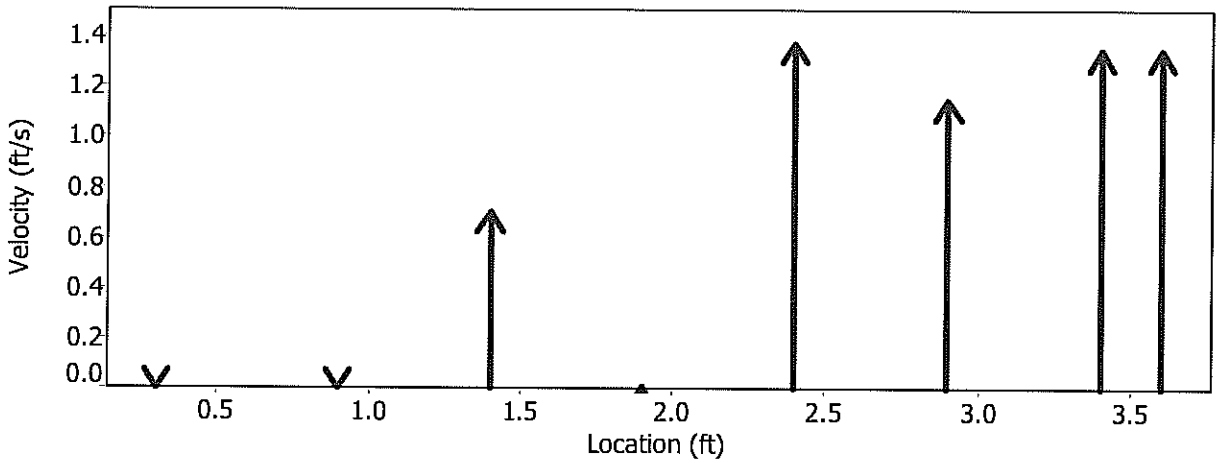
				Depth								
0	09:39	0.30	None	0.100	0.0	0.0	0.0000	1.00	-0.0020	0.030	-0.0001	0.0
1	*09:39*	*0.90*	*0.6*	*0.150*	*0.6*	*0.060*	*-0.0020*	*1.00*	*-0.0020*	*0.082*	*-0.0002*	*0.0*
2	*09:40*	*1.40*	*0.6*	*0.200*	*0.6*	*0.080*	*0.6998*	*1.00*	*0.6998*	*0.100*	*0.0700*	*13.0*
3	*09:41*	*1.90*	*0.6*	*0.250*	*0.6*	*0.100*	*0.0079*	*1.00*	*0.0079*	*0.125*	*0.0010*	*0.2*
4	09:42	2.40	0.6	0.250	0.6	0.100	1.3717	1.00	1.3717	0.125	0.1715	31.7
5	09:42	2.90	0.6	0.250	0.6	0.100	1.1447	1.00	1.1447	0.125	0.1431	26.5
6	09:44	3.40	0.6	0.300	0.6	0.120	1.3458	1.00	1.3458	0.105	0.1413	26.2
7	09:44	3.60	None	0.100	0.0	0.0	0.0000	1.00	1.3458	0.010	0.0135	2.5

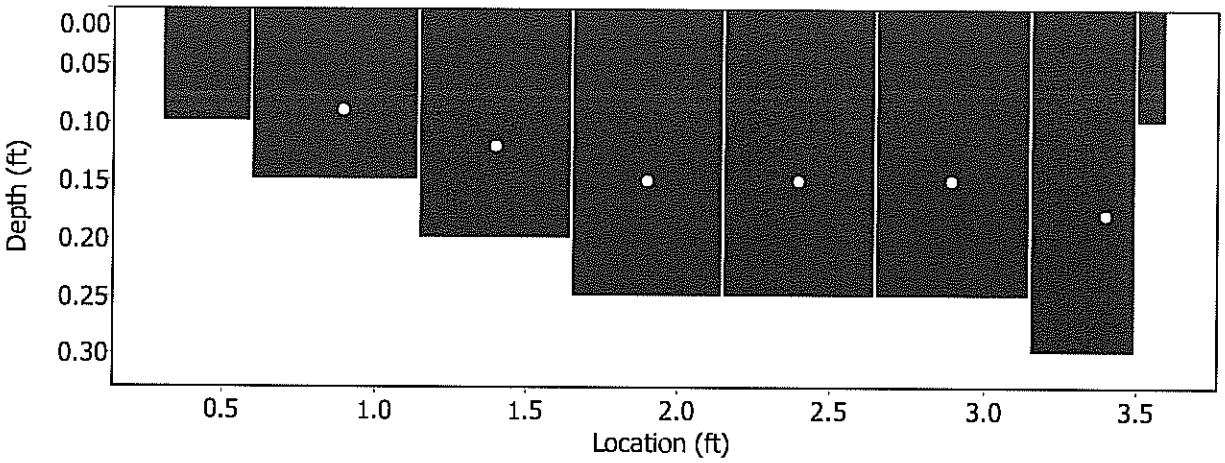
: Thu Jul 1 2010

20385-29JUN10.WAD
2010/06/29 09:39:24

MB







: Thu Jul 1 2010

20385-29JUN10.WAD
2010/06/29 09:39:24

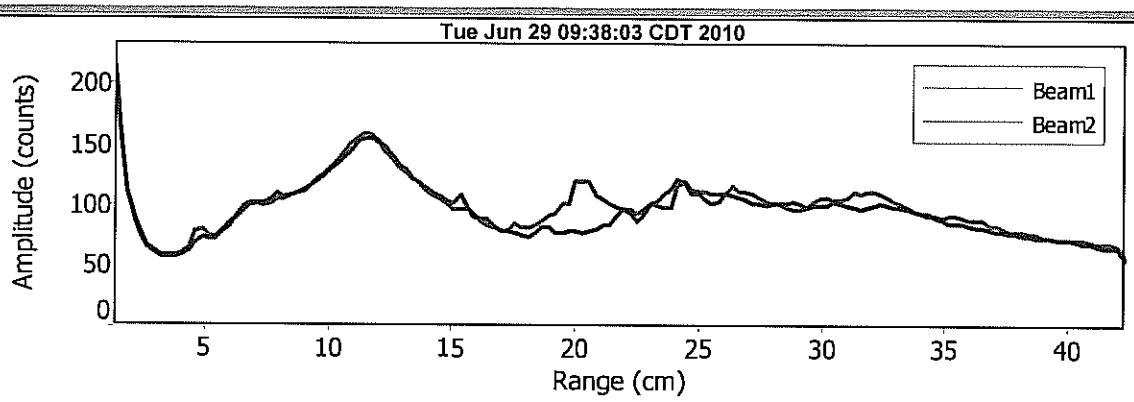
MB

1	0.90	0.6	SNR (60.4) is different from typical SNR (43.6)
2	1.40	0.6	High standard error: 0.044
		0.6	Boundary QC is Fair; possible boundary interference
3	1.90	0.6	SNR (33.1) is different from typical SNR (43.6)
		0.6	Boundary QC is Good; possible boundary interference

: Thu Jul 1 2010

20385-29JUN10.WAD
2010/06/29 09:39:24

MB



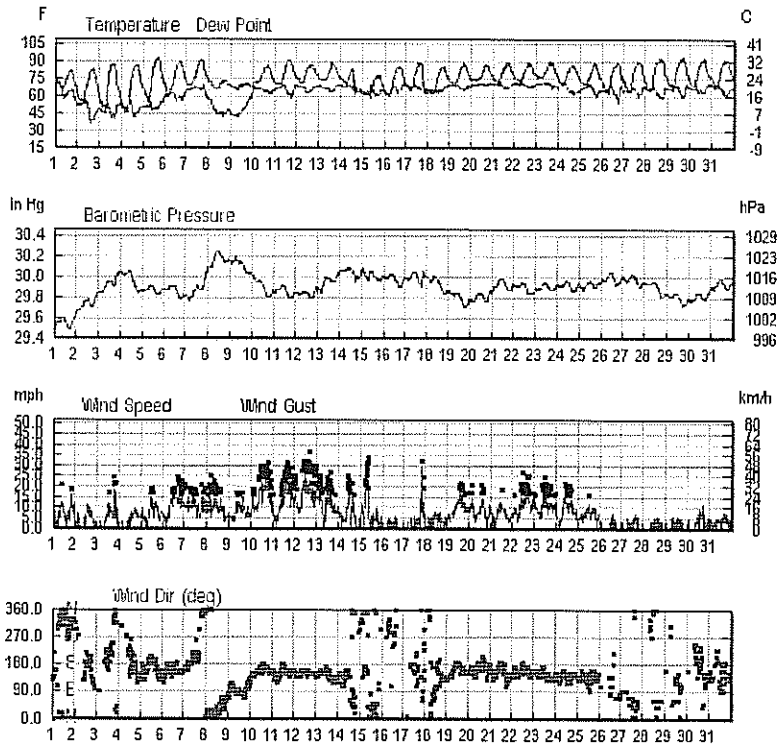
Noise level check - Pass
SNR check - Pass
Peak location check - Pass
Peak shape check - Pass

History for Hearne, TX

Month of May, 2010

Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	94 °F	88 °F	71 °F	
Mean Temperature	83 °F	77 °F	67 °F	
Min Temperature	76 °F	66 °F	47 °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	18	12	2	374
Growing Degree Days (base 50)	33	27	17	835
Dew Point:				
Dew Point	73 °F	63 °F	38 °F	
Precipitation:				
Precipitation	1.67 in	0.08 in	0.00 in	2.52 in
Snowdepth	-	-	-	-
Wind:				
Wind	29 mph	6 mph	0 mph	
Gust Wind	41 mph	20 mph	10 mph	
Sea Level Pressure:				
Sea Level Pressure	30.26 in	29.91 in	29.48 in	



Monthly Calendar Overview

« Previous Month | « 2009 | **May 2010** | 2011 » | Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1 Actual: 82 | 67 Precip: 0.00

Average: - | -
Precip: -

2	3	4	5	6	7	8
Actual: 83 | 55	Actual: 88 | 49	Actual: 87 | 47	Actual: 93 | 54	Actual: 91 | 62	Actual: 92 | 69	Actual: 74 | 67
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
9	10	11	12	13	14	15
Actual: 71 | 66	Actual: 88 | 69	Actual: 92 | 71	Actual: 89 | 71	Actual: 89 | 73	Actual: 83 | 65	Actual: 79 | 63
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 1.67	Precip: 0.38
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
16	17	18	19	20	21	22
Actual: 86 | 62	Actual: 89 | 66	Actual: 86 | 64	Actual: 88 | 71	Actual: 88 | 74	Actual: 90 | 72	Actual: 90 | 73
Precip: 0.00	Precip: 0.47	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
23	24	25	26	27	28	29
Actual: 90 | 76	Actual: 88 | 72	Actual: 89 | 71	Actual: 89 | 65	Actual: 91 | 66	Actual: 93 | 68	Actual: 94 | 68
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
30	31					
Actual: 93 | 70	Actual: 92 | 70					
Precip: 0.00	Precip: 0.00					
Average: - | -	Average: - | -					
Precip: -	Precip: -					

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear, Mostly Cloudy Partly Sunny, Partly Sunny Cloudy Mostly, Cloudy, Rain, Snow, Hail Flurries, Thunderstorms, Hazy Fog, Sleet, '?' denotes 'chance of', Unknown

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

Data Category, Condition, High Temp., Lo Temp., Precip. (in inches), Daily Avg. Temp., Temps in °F
-60 -30 0 30 60 90 120

Print This Calendar

Daily Observations

	2010 Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
May	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	82	74	67	72	65	56	96	73	54	29.60	29.55	29.48	10	8	2	16	6	21	0.00	
2	83	69	55	56	49	38	92	57	20	29.78	29.72	29.64	10	10	10	12	3	16	0.00	Rain
3	88	68	49	54	48	42	90	54	20	30.03	29.92	29.84	10	9	5	18	3	25	0.00	Rain
4	87	67	47	57	49	42	98	59	22	30.06	29.98	29.85	10	9	1	9	2	-	0.00	
5	93	74	54	56	51	48	87	47	22	29.92	29.87	29.83	10	10	10	15	7	20	0.00	
6	91	76	62	64	61	57	94	64	34	29.91	29.86	29.78	10	10	7	16	8	24	0.00	
7	92	80	69	70	67	65	89	67	42	29.92	29.85	29.77	10	9	7	15	11	21	0.00	
8	74	70	67	58	49	43	60	47	35	30.26	30.17	30.09	10	10	10	15	10	25	0.00	
9	71	68	66	57	47	43	61	46	40	30.20	30.13	30.05	10	10	10	15	7	17	0.00	
10	88	78	69	68	66	64	88	68	45	30.01	29.91	29.79	10	10	7	23	12	31	0.00	
11	92	82	71	70	66	59	90	64	37	29.92	29.86	29.79	10	9	5	23	11	31	0.00	
12	89	80	71	70	67	64	89	67	46	29.90	29.84	29.79	10	9	7	24	14	37	0.00	

13	89	81	73	70	68	64	82	67	43	30.02	29.94	29.84	10	10	7	20	13	30	0.00	
14	83	74	65	70	68	63	96	84	56	30.10	30.05	29.96	10	7	1	18	7	32	1.67	Rain , Thunderstorm
15	79	71	63	66	64	59	96	81	55	30.09	30.01	29.96	10	6	4	25	8	33	0.38	Rain , Thunderstorm
16	86	74	62	68	65	61	98	78	46	30.03	29.98	29.90	10	5	2	6	1	-	0.00	
17	89	78	66	73	68	63	100	79	47	30.06	29.99	29.91	10	7	1	29	2	41	0.47	Rain , Thunderstorm
18	86	75	64	69	65	63	96	75	51	30.02	29.96	29.85	10	7	5	8	3	-	0.00	
19	88	80	71	71	69	66	95	73	47	29.88	29.81	29.71	7	5	4	17	8	22	0.00	
20	88	81	74	72	71	70	89	76	55	29.85	29.80	29.76	7	6	4	14	9	21	0.00	Rain
21	90	81	72	72	70	67	95	71	48	29.98	29.92	29.85	10	6	4	13	7	18	0.00	
22	90	82	73	72	70	68	93	73	49	29.95	29.90	29.83	7	6	4	17	9	26	0.00	
23	90	83	76	73	71	68	86	69	51	29.95	29.90	29.87	10	6	4	16	10	24	0.00	Rain
24	88	80	72	72	68	61	94	69	42	29.97	29.92	29.86	7	5	3	16	8	22	0.00	
25	89	80	71	71	67	61	93	70	39	29.97	29.93	29.87	10	6	3	12	6	18	0.00	
26	89	77	65	71	65	55	96	68	31	30.05	29.98	29.92	10	7	4	7	1	-	0.00	
27	91	78	66	70	66	60	94	67	35	30.03	29.97	29.90	10	6	4	7	1	-	0.00	
28	93	80	68	69	65	59	93	62	32	29.96	29.90	29.81	10	6	3	6	1	-	0.00	
29	94	81	68	70	66	60	92	64	32	29.84	29.80	29.72	10	7	4	6	1	-	0.00	
30	93	82	70	72	67	63	91	65	38	29.85	29.81	29.77	10	9	5	12	2	-	0.00	Thunderstorm
31	92	81	70	71	67	62	94	65	36	29.98	29.92	29.88	10	9	4	8	3	-	0.00	

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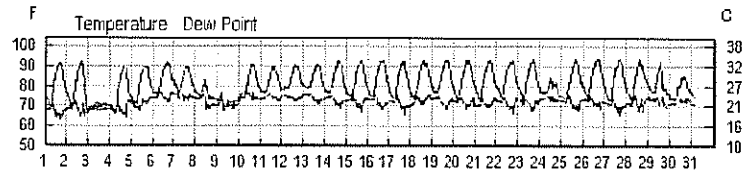
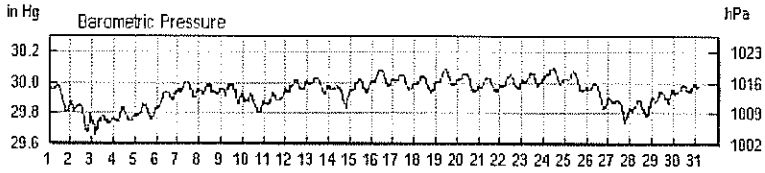
History for Hearne, TX

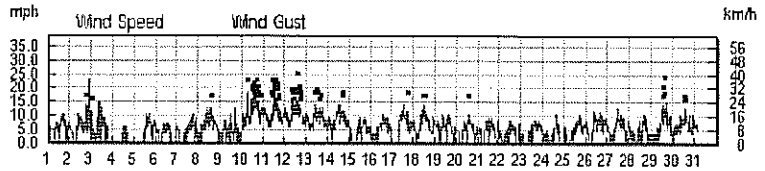
Month of June, 2010

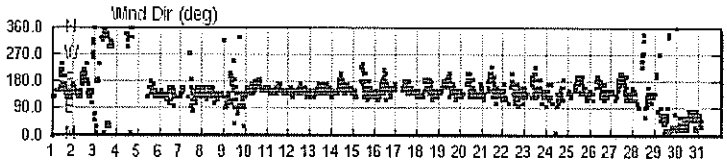
Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	94 °F	90 °F	71 °F	
Mean Temperature	85 °F	82 °F	70 °F	
Min Temperature	78 °F	74 °F	67 °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	20	17	4	505
Growing Degree Days (base 50)	35	32	20	959
Dew Point:				
Dew Point	77 °F	72 °F	63 °F	
Precipitation:				
Precipitation	2.90 in	0.14 in	0.00 in	4.22 in
Snowdepth	-	-	-	-
Wind:				
Wind	23 mph	5 mph	0 mph	
Gust Wind	29 mph	18 mph	12 mph	
Sea Level Pressure:				
Sea Level Pressure	30.10 in	29.93 in	29.66 in	









Monthly Calendar Overview

« Previous Month « 2009 **June 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4	5
		Actual: 91 | 69	Actual: 92 | 69	Actual: 71 | 68	Actual: 89 | 67	Actual: 90 | 71
		Precip: 0.00	Precip: 0.47	Precip: 0.80	Precip: 0.00	Precip: 0.00
		Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -

								Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-						
6		7		8		9		10		11		12		13		14		15		16		17	
Actual:	92 | 76	Actual:	90 | 76	Actual:	83 | 73	Actual:	77 | 70	Actual:	91 | 73	Actual:	90 | 77	Actual:	91 | 78	Actual:	91 | 78	Actual:	93 | 77	Actual:	93 | 74	Actual:	93 | 75	Actual:	93 | 74
Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	2.90	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00
Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -
Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-
18		19		20		21		22		23		24		25		26		27		28		29	
Actual:	93 | 74	Actual:	93 | 76	Actual:	93 | 74	Actual:	93 | 73	Actual:	93 | 74	Actual:	93 | 73	Actual:	84 | 76	Actual:	94 | 74	Actual:	94 | 74	Actual:	94 | 73	Actual:	93 | 72	Actual:	93 | 77
Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.05	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00
Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -
Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-
30																							
Actual:	85 | 73																						
Precip:	0.00																						
Average:	- | -																						
Precip:	-																						

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear · Mostly Cloudy Partly Sunny · Partly Cloudy Mostly Sunny · Cloudy · Rain · Snow · Hail Flurries · Thunderstorms · Hazy Fog · Sleet · '?' denotes chance of · Unknown

Print This Calendar

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

Data Category · Condition · High Temp. · Lo Temp. · Precip. (in inches) · Daily Avg. Temp. · Temps in °F · -60 -30 0 30 60 90 120

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
June	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	91	80	69	71	67	63	94	64	39	29.99	29.92	29.81	10	10	5	10	3	16	0.00	
2	92	81	69	73	69	65	95	69	41	29.87	29.79	29.68	10	8	2	23	5	29	0.47	Rain , Thunderstorm
3	71	70	68	70	69	67	96	94	89	29.78	29.74	29.66	10	7	2	15	5	23	0.80	Rain , Thunderstorm
4	89	78	67	71	68	64	97	74	44	29.84	29.78	29.74	10	6	0	6	0	-	0.00	Fog
5	90	80	71	73	71	68	95	74	54	29.86	29.80	29.76	10	8	4	10	2	-	0.00	
6	92	84	76	77	75	72	95	76	52	29.93	29.89	29.83	7	4	2	7	4	-	0.00	
7	90	83	76	76	75	72	92	77	57	30.02	29.96	29.90	7	4	3	10	4	-	0.00	
8	83	78	73	76	73	68	94	86	63	30.00	29.95	29.92	10	7	5	13	5	18	0.00	Rain
9	77	74	70	74	70	68	96	94	91	30.00	29.94	29.86	10	6	1	13	3	17	2.90	Rain , Thunderstorm
10	91	82	73	77	75	71	96	80	54	29.92	29.87	29.80	7	4	3	18	8	24	0.00	Rain
11	90	84	77	77	74	72	91	76	59	29.93	29.89	29.85	7	5	3	17	10	23	0.00	
12	91	84	78	76	75	73	91	75	56	30.02	29.97	29.93	10	5	4	16	10	25	0.00	Rain
13	91	84	78	76	75	71	91	73	53	30.03	30.00	29.92	7	5	3	14	9	20	0.00	
14	93	85	77	76	73	68	93	72	46	29.98	29.94	29.83	7	5	3	14	8	21	0.00	Rain
15	93	84	74	75	72	67	96	72	42	30.03	29.98	29.93	7	5	2	9	4	-	0.00	
16	93	84	75	76	73	68	95	71	44	30.09	30.03	29.98	10	7	2	10	4	-	0.00	
17	93	84	74	76	72	66	95	72	44	30.05	30.02	29.96	10	6	0	14	4	18	0.00	Fog

18	93	84	74	76	73	70	93	71	49	30.05	30.00	29.93	10	10	7	14	6	18	0.00	
19	93	84	76	75	73	69	93	71	44	30.09	30.03	29.99	10	9	7	10	6	-	0.00	
20	93	84	74	75	72	69	94	69	45	30.06	30.01	29.93	10	10	7	10	4	17	0.00	
21	93	83	73	74	71	70	92	69	47	30.04	29.99	29.94	10	10	10	9	4	-	0.00	
22	93	84	74	75	72	67	92	67	42	30.06	30.00	29.97	10	10	10	8	3	-	0.00	
23	93	83	73	74	72	68	94	69	43	30.07	30.02	29.98	10	10	7	8	3	-	0.00	
24	84	80	76	76	74	72	91	83	68	30.10	30.05	29.99	10	10	5	10	3	-	0.05	Rain
25	94	84	74	76	72	68	95	71	44	30.08	30.01	29.94	10	10	5	10	3	16	0.00	
26	94	84	74	75	73	69	95	69	46	30.01	29.94	29.83	10	10	5	12	6	17	0.00	
27	94	84	73	74	71	66	94	67	39	29.90	29.84	29.74	10	10	7	13	5	-	0.00	
28	93	82	72	76	72	68	94	70	43	29.88	29.83	29.78	10	8	5	10	4	17	0.00	
29	93	85	77	75	73	70	91	78	49	29.94	29.90	29.86	10	7	4	15	4	24	0.00	Rain , Thunderstorm
30	85	79	73	74	73	71	92	81	66	29.99	29.95	29.92	7	6	4	13	5	17	0.00	Rain

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Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: MJN - BRA	
Date & Time: 28 Jun 10 1430	County Name: Robertson
Stream Name: Pin Oak	
Segment No. or nearest downstream Segment No.: 1242L	
Description of Site: 20563 Downstream from FM 391	

At any point during the Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the use for the water body the investigator should stop conducting the UAA.

A. Stream Characteristics:

1. Check the following channel flow status that applies.

☐ dry ☐ no flow ☐ low ☑ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:

☐ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.

☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.

☑ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.

☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.

☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. 0.3 cfs

4. Water Quality Data (Field Parameters)

Field parameters should be collected in accordance with the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1.

Air Temp 35.0°C 95 °F Water Temp 80°F 26.7°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
RL	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):

Road crosses stream, steep banks, large rip-rap down to stream bed #77

8. Dominant Primary Substrate

☐Cobble ☐Sand ☐Silt ☐Mud/Clay ☐Gravel ☐Bedrock ☑Rip rap ☐ Concrete

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

B. Primary Contact Water Recreation Evaluation:
- Primary contact recreation draft definition: Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, and whitewater kayaking, canoeing, and rafting, involving a significant risk of ingestion of water.

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?
☐ Yes ☑ No primary contact recreation activities were observed
a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).

☐ Wading-Children ☐ Tubing ☑ No primary contact activities that commonly occur were observed
☐ Wading-Adults ☐ Surfing
☐ Swimming ☐ Whitewater-kayaking, canoeing, rafting
☐ Water skiing ☐ Other: _____
☐ Diving ☐ frequent public swimming-created by publicly owned land or commercial operations

b. Check the number of individuals observed at the site: ☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Water in mouth or nose of the individual ☐ Primary touch: Individual's body (or portion) immersed in water
☐ Secondary touch: fishing, pets and related contact with water ☐ Individual is in a boat touching water
☐ Individual is on shore near water within 8 meters (25ft) of water ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☐ Not applicable

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
Shallow depth - frequently goes dry #78

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
Road #77

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_____ Site: _____
Date: _____ Time: _____

b. Check the number of individuals observed at the site.
☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body well away from water between 8 and 30 meters (100 ft)

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
Shallow water, frequently no flow #18

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).
Shallow water, frequently dry #18

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).
Steep bank, large rip-rap – dense brush on each bank

D. Noncontact Recreation Evaluation

Noncontact recreation applies to water bodies where recreation activities do not involve a significant risk of water ingestion, and where primary and secondary contact recreation uses do not occur because of unsafe conditions, such as barge traffic.

1. Provide site-specific information and documentation (including photographs) regarding unsafe conditions, recreation activities, and presence or absence of water recreation activities.

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ FDS Page 3 of 8 _____

E. Stream Channel and Substantial Pools
Please check the following which best describes the river or stream: ☑ Wadeable ☐ Non-wadeable

1. Wadeable Streams
Determine whether or not the average depth at the thalweg is greater than 0.5 meters and if there are substantial pools with a depth of 1 meter or greater. Walk an approximately 300 meter reach (total) at the site and take the following measurements within the 300 meter reach. Measurements should be taken during base flow conditions (sustained or typical dry, warm-weather flows between rainfall events, excluding unusual antecedent conditions of drought or wet weather

Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters.
Photos #s (30 meters) Upstream 79 Downstream 80 Left Bank 81 Right Bank 82
Photos #s (150 meters) Upstream 83 Downstream 84 Left Bank 85 Right Bank 86
Photos #s (300 meters) Upstream 87 Downstream 88 Left Bank 89 Right Bank 90

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	23	8	0.55
Pool 2	MD 28 Jun 10 ~~25~~ 23	5	0.39
Pool 3	12	6	0.6
Pool 4	20	4	0.6
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	0.47
60 meters	0.24
90 meters	0.017
120 meters	0.3
150 meters	0.23
180 meters	0.11
210 meters	0.13
240 meters	0.6
270 meters	0.1
300 meters	0.13
Average	0.218

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

c) Stream width - Measure (1) the width at one point which represents the typical average width of the 300 meter reach; (2) the width at the narrowest point of the stream within the 300 meter reach; and (3) the width at the widest point of the stream within the 300 meter reach.

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	2.5
Width at narrowest point of the stream within 300 meter reach	0.7
Width at the widest point of the stream within 300 meter reach	8m

d) Is there sufficient water within a 300 meter stream reach during base flow conditions to support primary contact recreation? ☐ Yes ☑ No
COMMENTS: Shallow pools - low flow

2. Non-wadeable Streams
If accessible, take 10 width measurements which represent typical widths of the 300 meter reach. If the water is too deep and not accessible record the estimated average width of the water body.

Also, take photos facing upstream, downstream, left bank, and right bank at .
Photos #s (30 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (150 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

# Measurements	Width (meters)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

☐ Drinking or water in mouth
☐ Bathing
☐ Walking
☐ Jogging/running
☐ Bicycling
☐ Standing
☐ Sitting
☐ Lying down/sleeping
☐ Playing on shoreline
☐ Picnicking
☐ Motorcycle/ATV
☐ Hunting/Trapping
☐ Wildlife watching
☑ None
☐ Other: _____

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☐ Yes ☑ No (If yes, please provide supporting documentation and photos.)
Comments: _____

3. Check any channel obstructions that apply (Attach photos).

☐ Culverts ☐ Fences ☐ Log jams ☐ Rip rap ☐ Water control structure
☐ Barbed wire ☐ Dams ☐ Thick vegetation ☐ Low bridges ☑ None
☐ Utility pipe ☐ Other (specify):_____

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest).

☐ Campgrounds ☐ Stairs/walkway ☐ Roads (paved/unpaved) ☐ Other:_____
☐ Playgrounds ☐ Boating access (ramps) ☐ Populated area ☑ None of the Above
☐ Rural area ☐ Beach ☐ Docks or rafts
☐ Residential ☐ Bridge crossing ☐ Commercial outfitter
☐ National forests ☐ Commercial boating ☐ Nearby school
☐ Urban/suburban location ☐ Trails/paths (hiking/biking) ☐ Power Line Corridor
☐ Golf Course ☐ Paved parking lot ☐ Parks (national/city/county/state)
☐ Sports Field ☐ Unimproved parking lot ☐ Public Property
Comments:_____

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).

☑ Private Property ☐ Fence
☐ No trespass sign ☐ Barge/ship traffic
☐ Wildlife ☐ Industrial
☑ Steep slopes ☐ None of the Above
☐ No public access ☐ Other:_____
☐ No roads
Comments: #77

6. Check any indications of human use (Attach photos).

☐ Roads ☐ RV/ATV Tracks ☐ NPDES Discharge ☐ Organized event
☐ Rope swings ☐ Camping Sites ☐ Gates on corridor ☑ No Human Presence
☐ Dock/platform ☐ Fire pit/ring ☐ Children's toys
☐ Foot paths/prints ☐ Fishing Tackle ☐ Remnant's of Kid's play
☐ Other: _____
Comments:_____

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

7. Check all water characteristics that apply (Attach photos).

Aquatic Vegetation: ☐ absent ☑ rare ☐ common ☐ abundant
Algae Cover: ☐ absent ☐ rare ☑ common ☐ abundant
Odor: ☑ none ☐ rare ☐ common ☐ abundant
Color: ☑ clear ☐ green ☐ red ☐ brown ☐ black
Bottom Deposit: ☐ sludge ☐ solids ☑ fine sediments ☐ none ☐ other
Water Surface: ☑ clear ☐ scum ☐ foam ☐ debris ☐ oil
Other:

8. Vertebrates Observed within 300 meter reach

Snakes	☑ None	☐ slight presence	☐ moderate presence	☐ large presence
Water Dependent Birds	☑ None	☐ slight presence	☐ moderate presence	☐ large presence
Alligators	☑ None	☐ slight presence	☐ moderate presence	☐ large presence

Comments: _____

9. Mammals Observed within 300 meter reach

Wild	☑ None	☐ slight presence	☐ moderate presence	☐ large presence
Domesticated Pets	☑ None	☐ slight presence	☐ moderate presence	☐ large presence
Livestock	☑ None	☐ slight presence	☐ moderate presence	☐ large presence
Feral Hogs	☑ None	☐ slight presence	☐ moderate presence	☐ large presence

Comments: _____

10. Evidence of wild animals or evidence of birds, cattle, hogs, etc.
☑ Tracks ☐ Fecal droppings ☐ Bird nests Tracks and wallows for hogs

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: Bridge is common spot to dump house hold garbage

12. Is the site located in a wildlife preserve with large wildlife (i.e waterfowl) population? ☐ Yes ☑ No

13. Please document any other relevant information regarding recreational activities and the water body in general (for example, area outside of the stream reach evaluated).

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream:_____ Date:_____

Site:_____ Site

Description:_____

Time Begin:_____ Time End:_____ Meter Type:_____

Observers:_____ Stream Width*:_____ Section Width (W):_____

Observations:_____

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V)		Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
			At Point (ft/s)(m/s)	Average (ft/s)(m/s)	

: Thu Jul 1 2010

20563.WAD
2010/06/28 13:39:47

JN

FlowTracker	**(English Units)**
P872	ft
3.7	ft/s
2.30	ft^2
0.0%	cfs

Accuracy	1.0%	1.0%
Depth	0.5%	1.7%
Velocity	1.6%	11.0%
Width	0.2%	0.2%
Method	2.4%	-
# Stations	3.3%	-
Overall	**4.6%**	**11.2%**

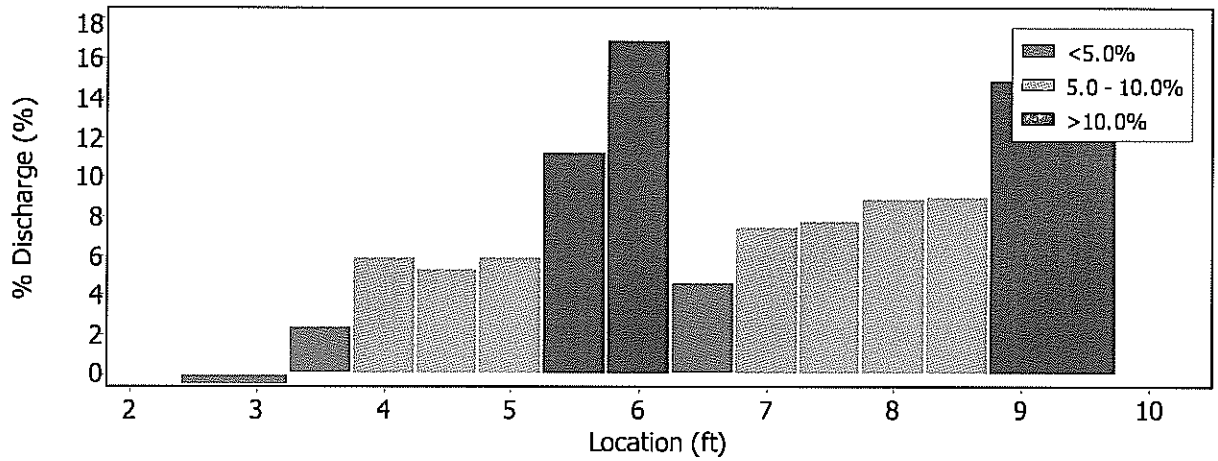
20	15
LEW	8.700
30.5 dB	4.080
80.51 °F	0.469
Mid-Section	0.0673
	0.2746

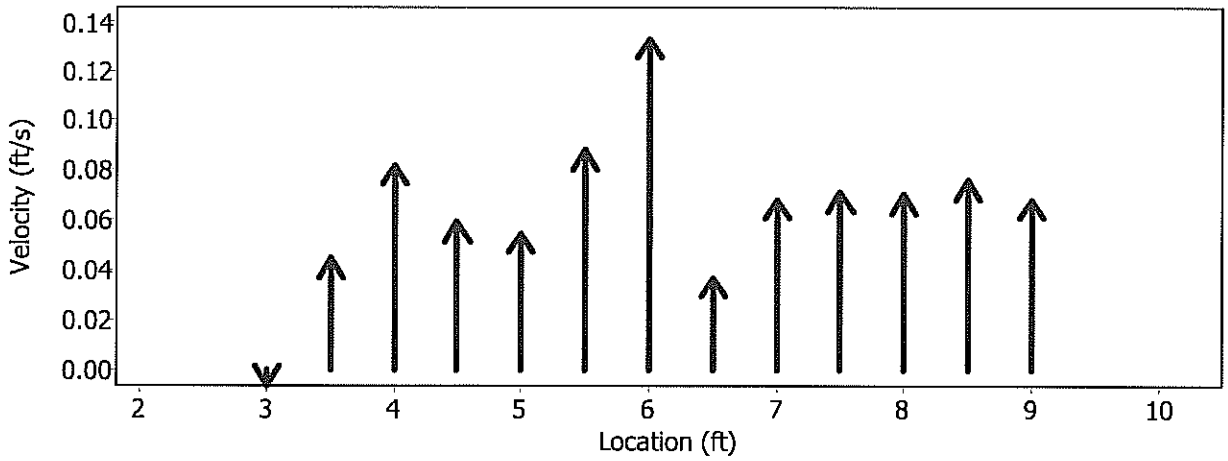
				Depth								
0	13:39	1.80	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
1	*13:39*	*3.00*	*0.6*	*0.300*	*0.6*	*0.120*	*-0.0066*	*1.00*	*-0.0066*	*0.255*	*-0.0017*	*-0.6*
2	13:41	3.50	0.6	0.300	0.6	0.120	0.0446	1.00	0.0446	0.150	0.0067	2.4
3	13:42	4.00	0.6	0.400	0.6	0.160	0.0820	1.00	0.0820	0.200	0.0164	6.0
4	*13:43*	*4.50*	*0.6*	*0.500*	*0.6*	*0.200*	*0.0591*	*1.00*	*0.0591*	*0.250*	*0.0148*	*5.4*
5	*13:43*	*5.00*	*0.6*	*0.600*	*0.6*	*0.240*	*0.0545*	*1.00*	*0.0545*	*0.300*	*0.0163*	*6.0*
6	13:44	5.50	0.6	0.700	0.6	0.280	0.0879	1.00	0.0879	0.350	0.0308	11.2
7	*13:45*	*6.00*	*0.6*	*0.700*	*0.6*	*0.280*	*0.1325*	*1.00*	*0.1325*	*0.350*	*0.0464*	*16.9*
8	*13:46*	*6.50*	*0.6*	*0.700*	*0.6*	*0.280*	*0.0367*	*1.00*	*0.0367*	*0.350*	*0.0129*	*4.7*
9	13:47	7.00	0.6	0.600	0.6	0.240	0.0682	1.00	0.0682	0.300	0.0205	7.5
10	13:47	7.50	0.6	0.600	0.6	0.240	0.0712	1.00	0.0712	0.300	0.0214	7.8
11	13:48	8.00	0.6	0.700	0.6	0.280	0.0702	1.00	0.0702	0.350	0.0246	9.0
12	13:49	8.50	0.6	0.650	0.6	0.260	0.0758	1.00	0.0758	0.325	0.0246	9.0
13	13:49	9.00	0.6	0.600	0.6	0.240	0.0682	1.00	0.0682	0.600	0.0409	14.9
14	13:49	10.50	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0

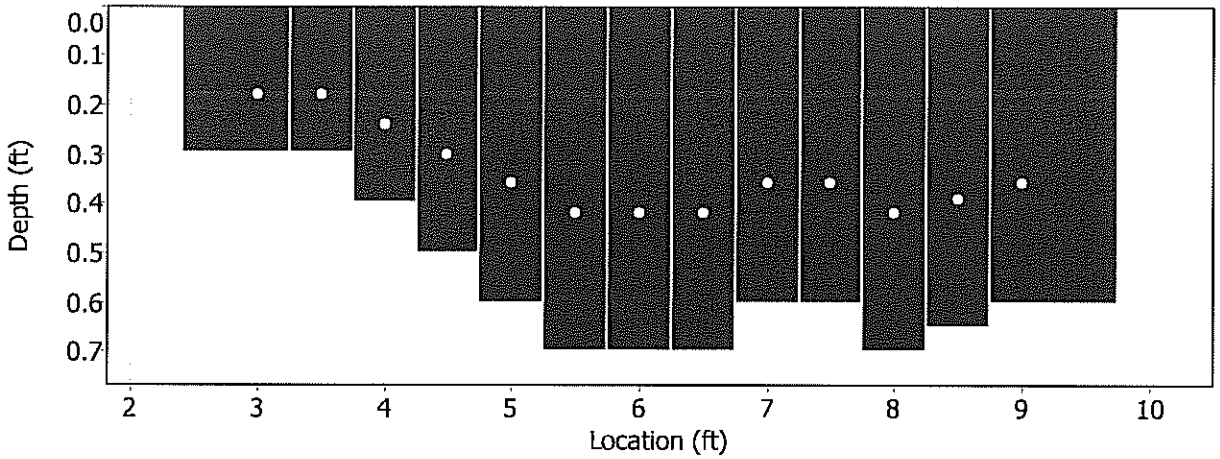
: Thu Jul 1 2010

20563.WAD
2010/06/28 13:39:47

JN







: Thu Jul 1 2010

20563.WAD
2010/06/28 13:39:47

JN

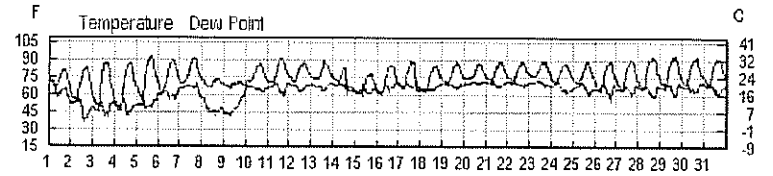
1	3.00	0.6	SNR (43.0) is different from typical SNR (30.5)
4	4.50	0.6	High SNR variation during measurement: 6.5,6.0
5	5.00	0.6	High angle: -25
7	6.00	0.6	High SNR variation during measurement: 6.5,5.6
8	6.50	0.6	High angle: 41
		0.6	SNR (47.5) is different from typical SNR (30.5)

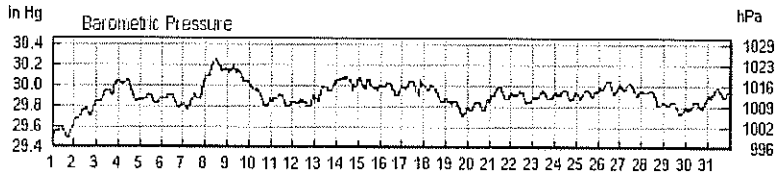
History for Hearne, TX

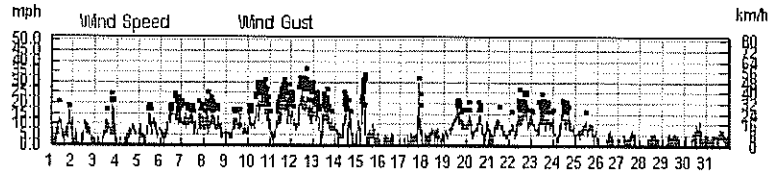
Month of May, 2010

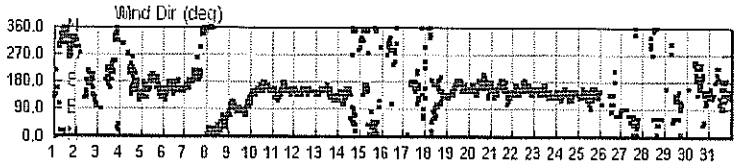
Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	94 °F	88 °F	71 °F	
Mean Temperature	83 °F	77 °F	67 °F	
Min Temperature	76 °F	66 °F	47 °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	18	12	2	374
Growing Degree Days (base 50)	33	27	17	835
Dew Point:				
Dew Point	73 °F	63 °F	38 °F	
Precipitation:				
Precipitation	1.67 in	0.08 in	0.00 in	2.52 in
Snowdepth	-	-	-	-
Wind:				
Wind	29 mph	6 mph	0 mph	
Gust Wind	41 mph	20 mph	10 mph	
Sea Level Pressure:				
Sea Level Pressure	30.26 in	29.91 in	29.48 in	









Monthly Calendar Overview

« Previous Month | « 2009 | **May 2010** | 2011 » | Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1 Actual: 82 | 67 Precip: 0.00

Average: - | -
Precip: -

2	3	4	5	6	7	8
Actual: 83 | 55	Actual: 88 | 49	Actual: 87 | 47	Actual: 93 | 54	Actual: 91 | 62	Actual: 92 | 69	Actual: 74 | 67
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
9	10	11	12	13	14	15
Actual: 71 | 66	Actual: 88 | 69	Actual: 92 | 71	Actual: 89 | 71	Actual: 89 | 73	Actual: 83 | 65	Actual: 79 | 63
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 1.67	Precip: 0.38
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
16	17	18	19	20	21	22
Actual: 86 | 62	Actual: 89 | 66	Actual: 86 | 64	Actual: 88 | 71	Actual: 88 | 74	Actual: 90 | 72	Actual: 90 | 73
Precip: 0.00	Precip: 0.47	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
23	24	25	26	27	28	29
Actual: 90 | 76	Actual: 88 | 72	Actual: 89 | 71	Actual: 89 | 65	Actual: 91 | 66	Actual: 93 | 68	Actual: 94 | 68
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
30	31					
Actual: 93 | 70	Actual: 92 | 70					
Precip: 0.00	Precip: 0.00					
Average: - | -	Average: - | -					
Precip: -	Precip: -					

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear, Mostly Cloudy Partly Sunny, Partly Cloudy Mostly Sunny, Cloudy, Rain, Snow, Hail Flurries, Thunderstorms, Hazy Fog, Sleet, '?' denotes 'chance of', Unknown

Print This Calendar

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

Data Category, Condition, High Temp., Lo Temp., Precip. (in inches), Daily Avg. Temp., Temps in °F
-60 -30 0 30 60 90 120

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
May	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	82	74	67	72	65	56	96	73	54	29.60	29.55	29.48	10	8	2	16	6	21	0.00	
2	83	69	55	56	49	38	92	57	20	29.78	29.72	29.64	10	10	10	12	3	16	0.00	Rain
3	88	68	49	54	48	42	90	54	20	30.03	29.92	29.84	10	9	5	18	3	25	0.00	Rain
4	87	67	47	57	49	42	98	59	22	30.06	29.98	29.85	10	9	1	9	2	-	0.00	
5	93	74	54	56	51	48	87	47	22	29.92	29.87	29.83	10	10	10	15	7	20	0.00	
6	91	76	62	64	61	57	94	64	34	29.91	29.86	29.78	10	10	7	16	8	24	0.00	
7	92	80	69	70	67	65	89	67	42	29.92	29.85	29.77	10	9	7	15	11	21	0.00	
8	74	70	67	58	49	43	60	47	35	30.26	30.17	30.09	10	10	10	15	10	25	0.00	
9	71	68	66	57	47	43	61	46	40	30.20	30.13	30.05	10	10	10	15	7	17	0.00	
10	88	78	69	68	66	64	88	68	45	30.01	29.91	29.79	10	10	7	23	12	31	0.00	
11	92	82	71	70	66	59	90	64	37	29.92	29.86	29.79	10	9	5	23	11	31	0.00	
12	89	80	71	70	67	64	89	67	46	29.90	29.84	29.79	10	9	7	24	14	37	0.00	

13	89	81	73	70	68	64	82	67	43	30.02	29.94	29.84	10	10	7	20	13	30	0.00	
14	83	74	65	70	68	63	96	84	56	30.10	30.05	29.96	10	7	1	18	7	32	1.67	Rain , Thunderstorm
15	79	71	63	66	64	59	96	81	55	30.09	30.01	29.96	10	6	4	25	8	33	0.38	Rain , Thunderstorm
16	86	74	62	68	65	61	98	78	46	30.03	29.98	29.90	10	5	2	6	1	-	0.00	
17	89	78	66	73	68	63	100	79	47	30.06	29.99	29.91	10	7	1	29	2	41	0.47	Rain , Thunderstorm
18	86	75	64	69	65	63	96	75	51	30.02	29.96	29.85	10	7	5	8	3	-	0.00	
19	88	80	71	71	69	66	95	73	47	29.88	29.81	29.71	7	5	4	17	8	22	0.00	
20	88	81	74	72	71	70	89	76	55	29.85	29.80	29.76	7	6	4	14	9	21	0.00	Rain
21	90	81	72	72	70	67	95	71	48	29.98	29.92	29.85	10	6	4	13	7	18	0.00	
22	90	82	73	72	70	68	93	73	49	29.95	29.90	29.83	7	6	4	17	9	26	0.00	
23	90	83	76	73	71	68	86	69	51	29.95	29.90	29.87	10	6	4	16	10	24	0.00	Rain
24	88	80	72	72	68	61	94	69	42	29.97	29.92	29.86	7	5	3	16	8	22	0.00	
25	89	80	71	71	67	61	93	70	39	29.97	29.93	29.87	10	6	3	12	6	18	0.00	
26	89	77	65	71	65	55	96	68	31	30.05	29.98	29.92	10	7	4	7	1	-	0.00	
27	91	78	66	70	66	60	94	67	35	30.03	29.97	29.90	10	6	4	7	1	-	0.00	
28	93	80	68	69	65	59	93	62	32	29.96	29.90	29.81	10	6	3	6	1	-	0.00	
29	94	81	68	70	66	60	92	64	32	29.84	29.80	29.72	10	7	4	6	1	-	0.00	
30	93	82	70	72	67	63	91	65	38	29.85	29.81	29.77	10	9	5	12	2	-	0.00	Thunderstorm
31	92	81	70	71	67	62	94	65	36	29.98	29.92	29.88	10	9	4	8	3	-	0.00	

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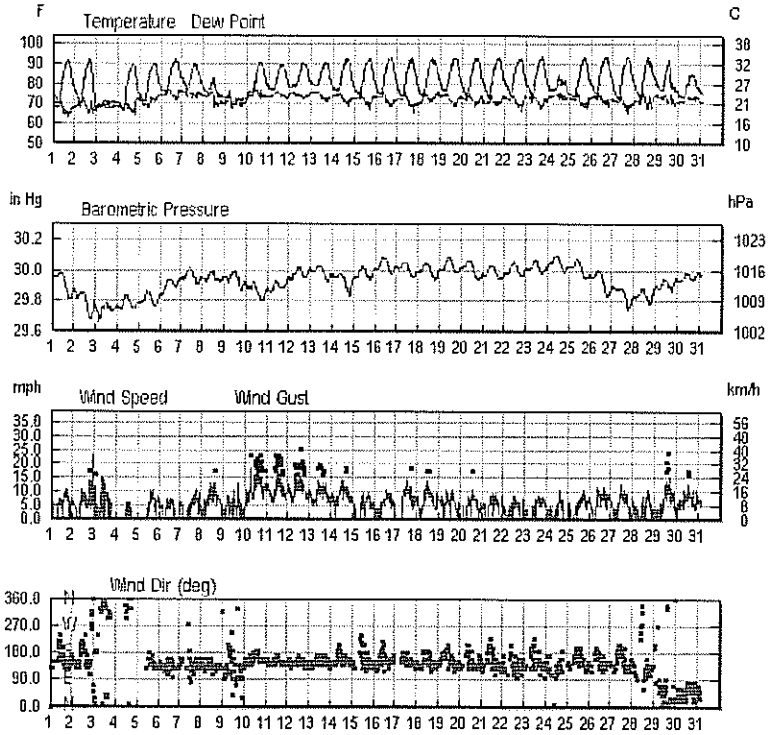
History for Hearne, TX

Month of June, 2010

Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	94 °F	90 °F	71 °F	
Mean Temperature	85 °F	82 °F	70 °F	
Min Temperature	78 °F	74 °F	67 °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	20	17	4	505
Growing Degree Days (base 50)	35	32	20	959
Dew Point:				
Dew Point	77 °F	72 °F	63 °F	
Precipitation:				
Precipitation	2.90 in	0.14 in	0.00 in	4.22 in
Snowdepth	-	-	-	-
Wind:				
Wind	23 mph	5 mph	0 mph	
Gust Wind	29 mph	18 mph	12 mph	
Sea Level Pressure:				
Sea Level Pressure	30.10 in	29.93 in	29.66 in	



Monthly Calendar Overview

« Previous Month « 2009 June 2010 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4	5
		Actual: 91 | 69	Actual: 92 | 69	Actual: 71 | 68	Actual: 89 | 67	Actual: 90 | 71
		Precip: 0.00	Precip: 0.47	Precip: 0.80	Precip: 0.00	Precip: 0.00
		Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -

			Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
6	7	8	9	10	11	12
Actual: 92 | 76	Actual: 90 | 76	Actual: 83 | 73	Actual: 77 | 70	Actual: 91 | 73	Actual: 90 | 77	Actual: 91 | 78
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 2.90	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
13	14	15	16	17	18	19
Actual: 91 | 78	Actual: 93 | 77	Actual: 93 | 74	Actual: 93 | 75	Actual: 93 | 74	Actual: 93 | 74	Actual: 93 | 76
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
20	21	22	23	24	25	26
Actual: 93 | 74	Actual: 93 | 73	Actual: 93 | 74	Actual: 93 | 73	Actual: 84 | 76	Actual: 94 | 74	Actual: 94 | 74
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.05	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
27	28	29	30			
Actual: 94 | 73	Actual: 93 | 72	Actual: 93 | 77	Actual: 85 | 73			
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00			
Average: - | -	Average: - | -	Average: - | -	Average: - | -			
Precip: -	Precip: -	Precip: -	Precip: -			

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear · Mostly Cloudy Partly Sunny · Partly Cloudy Mostly Sunny · Cloudy · Rain · Snow · Hail Flurries · Thunderstorms · Hazy Fog · Sleet · '?' denotes 'chance of' · Unknown

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

Data Category · Condition · High Temp. · Lo Temp. · Precip. (in inches) · Daily Avg. Temp. · Temps in °F · -60 -30 0 30 60 90 120

Print This Calendar

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
June	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	91	80	69	71	67	63	94	64	39	29.99	29.92	29.81	10	10	5	10	3	16	0.00	
2	92	81	69	73	69	65	95	69	41	29.87	29.79	29.68	10	8	2	23	5	29	0.47	Rain , Thunderstorm
3	71	70	68	70	69	67	96	94	89	29.78	29.74	29.66	10	7	2	15	5	23	0.80	Rain , Thunderstorm
4	89	78	67	71	68	64	97	74	44	29.84	29.78	29.74	10	6	0	6	0	-	0.00	Fog
5	90	80	71	73	71	68	95	74	54	29.86	29.80	29.76	10	8	4	10	2	-	0.00	
6	92	84	76	77	75	72	95	76	52	29.93	29.89	29.83	7	4	2	7	4	-	0.00	
7	90	83	76	76	75	72	92	77	57	30.02	29.96	29.90	7	4	3	10	4	-	0.00	
8	83	78	73	76	73	68	94	86	63	30.00	29.95	29.92	10	7	5	13	5	18	0.00	Rain
9	77	74	70	74	70	68	96	94	91	30.00	29.94	29.86	10	6	1	13	3	17	2.90	Rain , Thunderstorm
10	91	82	73	77	75	71	96	80	54	29.92	29.87	29.80	7	4	3	18	8	24	0.00	Rain
11	90	84	77	77	74	72	91	76	59	29.93	29.89	29.85	7	5	3	17	10	23	0.00	
12	91	84	78	76	75	73	91	75	56	30.02	29.97	29.93	10	5	4	16	10	25	0.00	Rain
13	91	84	78	76	75	71	91	73	53	30.03	30.00	29.92	7	5	3	14	9	20	0.00	
14	93	85	77	76	73	68	93	72	46	29.98	29.94	29.83	7	5	3	14	8	21	0.00	Rain
15	93	84	74	75	72	67	96	72	42	30.03	29.98	29.93	7	5	2	9	4	-	0.00	
16	93	84	75	76	73	68	95	71	44	30.09	30.03	29.98	10	7	2	10	4	-	0.00	
17	93	84	74	76	72	66	95	72	44	30.05	30.02	29.96	10	6	0	14	4	18	0.00	Fog

18	93	84	74	76	73	70	93	71	49	30.05	30.00	29.93	10	10	7	14	6	18	0.00	
19	93	84	76	75	73	69	93	71	44	30.09	30.03	29.99	10	9	7	10	6	-	0.00	
20	93	84	74	75	72	69	94	69	45	30.06	30.01	29.93	10	10	7	10	4	17	0.00	
21	93	83	73	74	71	70	92	69	47	30.04	29.99	29.94	10	10	10	9	4	-	0.00	
22	93	84	74	75	72	67	92	67	42	30.06	30.00	29.97	10	10	10	8	3	-	0.00	
23	93	83	73	74	72	68	94	69	43	30.07	30.02	29.98	10	10	7	8	3	-	0.00	
24	84	80	76	76	74	72	91	83	68	30.10	30.05	29.99	10	10	5	10	3	-	0.05	Rain
25	94	84	74	76	72	68	95	71	44	30.08	30.01	29.94	10	10	5	10	3	16	0.00	
26	94	84	74	75	73	69	95	69	46	30.01	29.94	29.83	10	10	5	12	6	17	0.00	
27	94	84	73	74	71	66	94	67	39	29.90	29.84	29.74	10	10	7	13	5	-	0.00	
28	93	82	72	76	72	68	94	70	43	29.88	29.83	29.78	10	8	5	10	4	17	0.00	
29	93	85	77	75	73	70	91	78	49	29.94	29.90	29.86	10	7	4	15	4	24	0.00	Rain , Thunderstorm
30	85	79	73	74	73	71	92	81	66	29.99	29.95	29.92	7	6	4	13	5	17	0.00	Rain

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Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: JN - BRA	
Date & Time: 28 Jun 10 1335	County Name: Robertson
Stream Name: Pin Oak	
Segment No. or nearest downstream Segment No.: 1242L	
Description of Site: 99910 Downstream from Pinoak Road	

At any point during the Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the use for the water body the investigator should stop conducting the UAA.

A. Stream Characteristics:

1. Check the following channel flow status that applies.

☐ dry ☑ no flow ☐ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:

☐ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.

☑ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.

☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.

☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.

☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. N/A cfs

4. Water Quality Data (Field Parameters)

Field parameters should be collected in accordance with the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1.

Air Temp 33.9°C 93 °F Water Temp N/A °C

5. Riparian Zone (Mark dominant categories with L (Left Bank) and R (Right Bank). Bank orientation is determined by the investigator facing downstream.)

_____ Forest	_____ Urban	_____ Rip rap
_____ Shrub dominated corridor	RL 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): 28 Jun 10

Easy - No fence - No signs. # 63 #64

8. Dominant Primary Substrate

☐Cobble ☐Sand ☐Silt ☑Mud/Clay ☐Gravel ☐Bedrock ☐Rip rap ☐ Concrete

Field Data Sheets – Basie RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

B. Primary Contact Water Recreation Evaluation:
- Primary contact recreation draft definition: Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, and whitewater kayaking, canoeing, and rafting, involving a significant risk of ingestion of water.

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?
☐ Yes ☑ No primary contact recreation activities were observed
a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).

☐ Wading-Children ☐ Tubing ☑ No primary contact activities that commonly occur were observed
☐ Wading-Adults ☐ Surfing
☐ Swimming ☐ Whitewater-kayaking, canoeing, rafting
☐ Water skiing ☐ Other: _____
☐ Diving ☐ frequent public swimming-created by publicly owned land or commercial operations

b. Check the number of individuals observed at the site: ☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Water in mouth or nose of the individual ☐ Primary touch: Individual's body (or portion) immersed in water
☐ Secondary touch: fishing, pets and related contact with water ☐ Individual is in a boat touching water
☐ Individual is on shore near water within 8 meters (25ft) of water ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☑ Not applicable

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation). Pooled water, no flow depth very low #63

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation). County road at this site # 63

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 – Basie RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

b. Check the number of individuals observed at the site.
☑ None ~~☐ 1-10~~ ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body well away from water between 8 and 30 meters (100 ft)

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
No flow - pooled shallow water #63, 64, 69

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 muddy pools # 69

6. Describe why there is limited public access (e.g. lack of roads, river or stream banks overgrown, etc.) (Attach photos, maps, etc. for documentation).

D. Noncontact Recreation Evaluation
Noncontact recreation applies to water bodies where recreation activities do not involve a significant risk of water ingestion, and where primary and secondary contact recreation uses do not occur because of unsafe conditions, such as barge traffic.

1. Provide site-specific information and documentation (including photographs) regarding unsafe conditions, recreation activities, and presence or absence of water recreation activities.

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ FDS Page 3 of 8 _____

E. Stream Channel and Substantial Pools
Please check the following which best describes the river or stream: ☑ Wadeable ☐ Non-wadeable

1. Wadeable Streams
Determine whether or not the average depth at the thalweg is greater than 0.5 meters and if there are substantial pools with a depth of 1 meter or greater. Walk an approximately 300 meter reach (total) at the site and take the following measurements within the 300 meter reach. Measurements should be taken during base flow conditions (sustained or typical dry, warm-weather flows between rainfall events, excluding unusual antecedent conditions of drought or wet weather

Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters.
Photos #s (30 meters) Upstream 65 Downstream 66 Left Bank 67 Right Bank 68
Photos #s (150 meters) Upstream 69 Downstream 70 Left Bank 71 Right Bank 72
Photos #s (300 meters) Upstream 73 Downstream 74 Left Bank 75 Right Bank 76

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	24	7	0.38
Pool 2	73	6	0.45
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	0.2
60 meters	0.15
90 meters	0.0
120 meters	0.0
150 meters	0.45
180 meters	0.43
210 meters	0.18
240 meters	.06
270 meters	0.0
300 meters	0.0
Average	0.147

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

c) Stream width - Measure (1) the width at one point which represents the typical average width of the 300 meter reach; (2) the width at the narrowest point of the stream within the 300 meter reach; and (3) the width at the widest point of the stream within the 300 meter reach.

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	No Flow
Width at narrowest point of the stream within 300 meter reach	No Flow
Width at the widest point of the stream within 300 meter reach	No Flow

d) Is there sufficient water within a 300 meter stream reach during base flow conditions to support primary contact recreation? ☐ Yes ☑ No
COMMENTS: No flow - shallow pools

2. Non-wadeable Streams
If accessible, take 10 width measurements which represent typical widths of the 300 meter reach. If the water is too deep and not accessible record the estimated average width of the water body.

Also, take photos facing upstream, downstream, left bank, and right bank at .
Photos #s (30 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (150 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

# Measurements	Width (meters)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

☐ Drinking or water in mouth
☐ Bathing
☐ Walking
☐ Jogging/running
☐ Bicycling
☐ Standing
☐ Sitting
☐ Lying down/sleeping
☐ Playing on shoreline
☐ Picnicking
☐ Motorcycle/ATV
☐ Hunting/Trapping
☐ Wildlife watching
☑ None
☐ Other: _____

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☑ Yes ☐ No (If yes, please provide supporting documentation and photos.)
Comments: Bridge at County Road #63

3. Check any channel obstructions that apply (Attach photos).

☐ Culverts ☑ Fences ☐ Log jams ☐ Rip rap ☐ Water control structure
☐ Barbed wire ☐ Dams ☐ Thick vegetation ☐ Low bridges ☐ None
☐ Utility pipe ☐ Other (specify): #64

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
28 June 10

Comments: _____

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).

☑ Private Property
☐ No trespass sign
☐ Wildlife
☐ Steep slopes
☐ No public access
☐ No roads
☑ Fence
☐ Barge/ship traffic
☐ Industrial
☐ None of the Above
☐ Other: _____

Comments: #64

6. Check any indications of human use (Attach photos).

☐ Roads
☐ Rope swings
☐ Dock/platform
☐ Foot paths/prints
☐ Other: _____
☐ RV/ATV Tracks
☐ Camping Sites
☐ Fire pit/ring
☐ Fishing Tackle
☐ NPDES Discharge
☐ Gates on corridor
☐ Children's toys
☐ Remnant's of Kid's play
☐ Organized event
☑ No Human Presence

Comments: _____

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

7. Check all water characteristics that apply (Attach photos). #64, 65, 66

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: Bike, cans, bottles
_____
_____

12. Is the site located in a wildlife preserve with large wildlife (i.e waterfowl) population? ☐ Yes ☑ No

13. Please document any other relevant information regarding recreational activities and the water body in general (for example, area outside of the stream reach evaluated).
No flow, shallow pools
_____
_____
_____
_____

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream:_____ Date:_____

Site:_____ Site Description:_____

Time Begin:_____ Time End:_____ Meter Type:_____

Observers:_____ Stream Width*:_____ Section Width (W):_____

Observations:_____

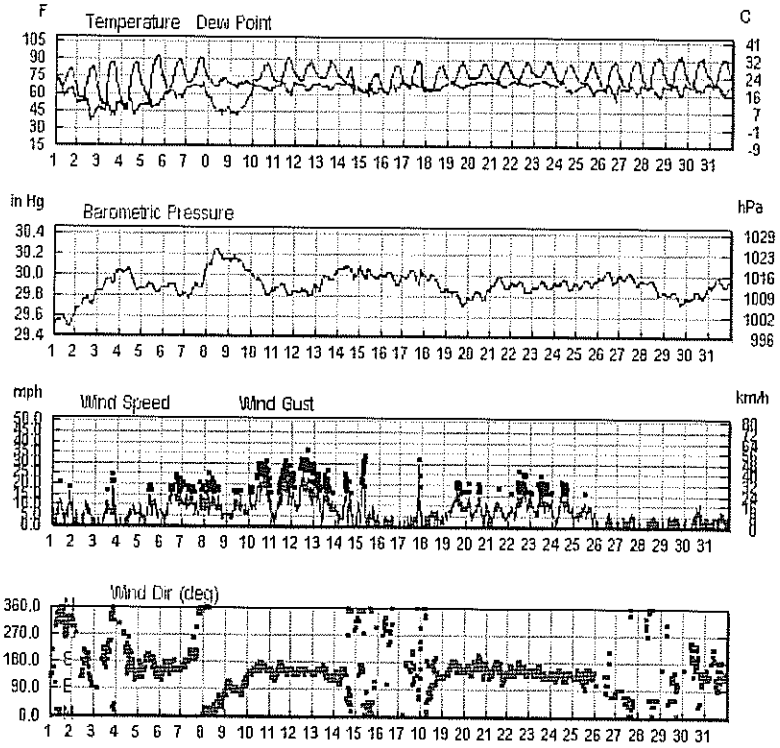
Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V)		Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
			At Point (ft/s)(m/s)	Average (ft/s)(m/s)	

History for Hearne, TX

Month of May, 2010

Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	94 °F	88 °F	71 °F	
Mean Temperature	83 °F	77 °F	67 °F	
Min Temperature	76 °F	66 °F	47 °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	18	12	2	374
Growing Degree Days (base 50)	33	27	17	835
Dew Point:				
Dew Point	73 °F	63 °F	38 °F	
Precipitation:				
Precipitation	1.67 in	0.08 in	0.00 in	2.52 in
Snowdepth	-	-	-	-
Wind:				
Wind	29 mph	6 mph	0 mph	
Gust Wind	41 mph	20 mph	10 mph	
Sea Level Pressure:				
Sea Level Pressure	30.26 in	29.91 in	29.48 in	



Monthly Calendar Overview

« Previous Month « 2009 **May 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1 Actual: 82 | 67 Precip: 0.00

Average: - | -
Precip: -

2	3	4	5	6	7	8
Actual: 83 | 55	Actual: 88 | 49	Actual: 87 | 47	Actual: 93 | 54	Actual: 91 | 62	Actual: 92 | 69	Actual: 74 | 67
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
9	10	11	12	13	14	15
Actual: 71 | 66	Actual: 86 | 69	Actual: 92 | 71	Actual: 89 | 71	Actual: 89 | 73	Actual: 83 | 65	Actual: 79 | 63
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 1.67	Precip: 0.38
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
16	17	18	19	20	21	22
Actual: 86 | 62	Actual: 89 | 66	Actual: 86 | 64	Actual: 88 | 71	Actual: 86 | 74	Actual: 90 | 72	Actual: 90 | 73
Precip: 0.00	Precip: 0.47	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
23	24	25	26	27	28	29
Actual: 90 | 76	Actual: 88 | 72	Actual: 89 | 71	Actual: 89 | 65	Actual: 91 | 66	Actual: 93 | 68	Actual: 94 | 68
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
30	31					
Actual: 93 | 70	Actual: 92 | 70					
Precip: 0.00	Precip: 0.00					
Average: - | -	Average: - | -					
Precip: -	Precip: -					

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear, Mostly Cloudy Partly Sunny, Partly Cloudy Mostly Sunny, Cloudy, Rain, Snow, Hail Flurries, Thunderstorms, Hazy Fog, Sleet, '?' denotes 'chance of', Unknown

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

Data Category, Condition, High Temp., Lo Temp., Precip. (in inches), Daily Avg. Temp., Temps in °F
-60 -30 0 30 60 90 120

Print This Calendar

Daily Observations

	2010 Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
May	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	82	74	67	72	65	56	96	73	54	29.60	29.55	29.48	10	8	2	16	6	21	0.00	
2	83	69	55	56	49	38	92	57	20	29.78	29.72	29.64	10	10	10	12	3	16	0.00	Rain
3	88	68	49	54	48	42	90	54	20	30.03	29.92	29.84	10	9	5	18	3	25	0.00	Rain
4	87	67	47	57	49	42	98	59	22	30.06	29.98	29.85	10	9	1	9	2	-	0.00	
5	93	74	54	56	51	48	87	47	22	29.92	29.87	29.83	10	10	10	15	7	20	0.00	
6	91	76	62	64	61	57	94	64	34	29.91	29.86	29.78	10	10	7	16	8	24	0.00	
7	92	80	69	70	67	65	89	67	42	29.92	29.85	29.77	10	9	7	15	11	21	0.00	
8	74	70	67	58	49	43	60	47	35	30.26	30.17	30.09	10	10	10	15	10	25	0.00	
9	71	68	66	57	47	43	61	46	40	30.20	30.13	30.05	10	10	10	15	7	17	0.00	
10	88	78	69	68	66	64	88	68	45	30.01	29.91	29.79	10	10	7	23	12	31	0.00	
11	92	82	71	70	66	59	90	64	37	29.92	29.86	29.79	10	9	5	23	11	31	0.00	
12	89	80	71	70	67	64	89	67	46	29.90	29.84	29.79	10	9	7	24	14	37	0.00	

13	89	81	73	70	68	64	82	67	43	30.02	29.94	29.84	10	10	7	20	13	30	0.00	
14	83	74	65	70	68	63	96	84	56	30.10	30.05	29.96	10	7	1	18	7	32	1.67	Rain , Thunderstorm
15	79	71	63	66	64	59	96	81	55	30.09	30.01	29.96	10	6	4	25	8	33	0.38	Rain , Thunderstorm
16	86	74	62	68	65	61	98	78	46	30.03	29.98	29.90	10	5	2	6	1	-	0.00	
17	89	78	66	73	68	63	100	79	47	30.06	29.99	29.91	10	7	1	29	2	41	0.47	Rain , Thunderstorm
18	86	75	64	69	65	63	96	75	51	30.02	29.96	29.85	10	7	5	8	3	-	0.00	
19	88	80	71	71	69	66	95	73	47	29.88	29.81	29.71	7	5	4	17	8	22	0.00	
20	88	81	74	72	71	70	89	76	55	29.85	29.80	29.76	7	6	4	14	9	21	0.00	Rain
21	90	81	72	72	70	67	95	71	48	29.98	29.92	29.85	10	6	4	13	7	18	0.00	
22	90	82	73	72	70	68	93	73	49	29.95	29.90	29.83	7	6	4	17	9	26	0.00	
23	90	83	76	73	71	68	86	69	51	29.95	29.90	29.87	10	6	4	16	10	24	0.00	Rain
24	88	80	72	72	68	61	94	69	42	29.97	29.92	29.86	7	5	3	16	8	22	0.00	
25	89	80	71	71	67	61	93	70	39	29.97	29.93	29.87	10	6	3	12	6	18	0.00	
26	89	77	65	71	65	55	96	68	31	30.05	29.98	29.92	10	7	4	7	1	-	0.00	
27	91	78	66	70	66	60	94	67	35	30.03	29.97	29.90	10	6	4	7	1	-	0.00	
28	93	80	68	69	65	59	93	62	32	29.96	29.90	29.81	10	6	3	6	1	-	0.00	
29	94	81	68	70	66	60	92	64	32	29.84	29.80	29.72	10	7	4	6	1	-	0.00	
30	93	82	70	72	67	63	91	65	38	29.85	29.81	29.77	10	9	5	12	2	-	0.00	Thunderstorm
31	92	81	70	71	67	62	94	65	36	29.98	29.92	29.88	10	9	4	8	3	-	0.00	

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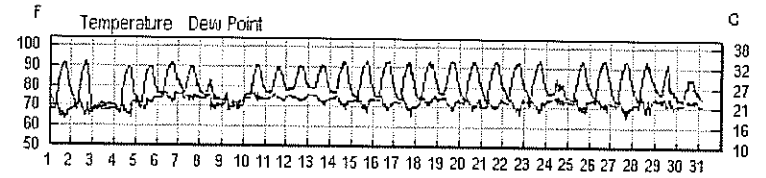
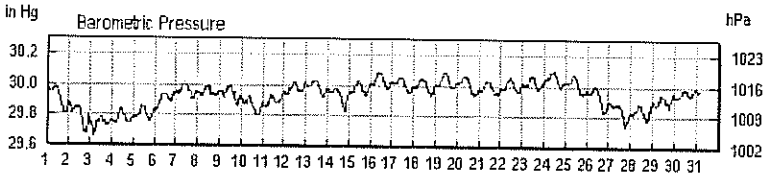
History for Hearne, TX

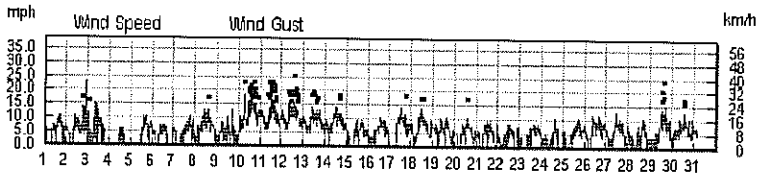
Month of June, 2010

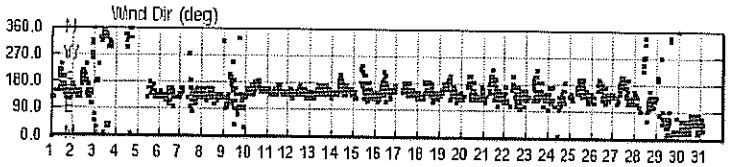
Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	94 °F	90 °F	71 °F	
Mean Temperature	85 °F	82 °F	70 °F	
Min Temperature	78 °F	74 °F	67 °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	20	17	4	505
Growing Degree Days (base 50)	35	32	20	959
Dew Point:				
Dew Point	77 °F	72 °F	63 °F	
Precipitation:				
Precipitation	2.90 in	0.14 in	0.00 in	4.22 in
Snowdepth	-	-	-	-
Wind:				
Wind	23 mph	5 mph	0 mph	
Gust Wind	29 mph	18 mph	12 mph	
Sea Level Pressure:				
Sea Level Pressure	30.10 in	29.93 in	29.66 in	









Monthly Calendar Overview

« Previous Month « 2009 **June 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4	5
		Actual: 91 | 69	Actual: 92 | 69	Actual: 71 | 68	Actual: 89 | 67	Actual: 90 | 71
		Precip: 0.00	Precip: 0.47	Precip: 0.80	Precip: 0.00	Precip: 0.00
		Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -

		Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
6	7	8	9	10	11	12
Actual: 92 | 76	Actual: 90 | 76	Actual: 83 | 73	Actual: 77 | 70	Actual: 91 | 73	Actual: 90 | 77	Actual: 91 | 78
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 2.90	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
13	14	15	16	17	18	19
Actual: 91 | 78	Actual: 93 | 77	Actual: 93 | 74	Actual: 93 | 75	Actual: 93 | 74	Actual: 93 | 74	Actual: 93 | 76
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
20	21	22	23	24	25	26
Actual: 93 | 74	Actual: 93 | 73	Actual: 93 | 74	Actual: 93 | 73	Actual: 84 | 76	Actual: 94 | 74	Actual: 94 | 74
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.05	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
27	28	29	30			
Actual: 94 | 73	Actual: 93 | 72	Actual: 93 | 77	Actual: 85 | 73			
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00			
Average: - | -	Average: - | -	Average: - | -	Average: - | -			
Precip: -	Precip: -	Precip: -	Precip: -			

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear, Mostly Cloudy Partly Sunny, Partly Cloudy Mostly Sunny, Cloudy, Rain, Snow, Hail Flurries, Thunderstorms, Hazy Fog, Sleet, '?' denotes 'chance of', Unknown

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

Data Category, Condition, High Temp., Lo Temp., Precip. (in inches), Daily Avg. Temp., Temps in °F

-80 -30 0 30 60 90 120

Print This Calendar

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
June	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	91	80	69	71	67	63	94	64	39	29.99	29.92	29.81	10	10	5	10	3	16	0.00	
2	92	81	69	73	69	65	95	69	41	29.87	29.79	29.68	10	8	2	23	5	29	0.47	Rain , Thunderstorm
3	71	70	68	70	69	67	96	94	89	29.78	29.74	29.66	10	7	2	15	5	23	0.80	Rain , Thunderstorm
4	89	78	67	71	68	64	97	74	44	29.84	29.78	29.74	10	6	0	6	0	-	0.00	Fog
5	90	80	71	73	71	68	95	74	54	29.86	29.80	29.76	10	8	4	10	2	-	0.00	
6	92	84	76	77	75	72	95	76	52	29.93	29.89	29.83	7	4	2	7	4	-	0.00	
7	90	83	76	76	75	72	92	77	57	30.02	29.96	29.90	7	4	3	10	4	-	0.00	
8	83	78	73	76	73	68	94	86	63	30.00	29.95	29.92	10	7	5	13	5	18	0.00	Rain
9	77	74	70	74	70	68	96	94	91	30.00	29.94	29.86	10	6	1	13	3	17	2.90	Rain , Thunderstorm
10	91	82	73	77	75	71	96	80	54	29.92	29.87	29.80	7	4	3	18	8	24	0.00	Rain
11	90	84	77	77	74	72	91	76	59	29.93	29.89	29.85	7	5	3	17	10	23	0.00	
12	91	84	78	76	75	73	91	75	56	30.02	29.97	29.93	10	5	4	16	10	25	0.00	Rain
13	91	84	78	76	75	71	91	73	53	30.03	30.00	29.92	7	5	3	14	9	20	0.00	
14	93	85	77	76	73	68	93	72	46	29.98	29.94	29.83	7	5	3	14	8	21	0.00	Rain
15	93	84	74	75	72	67	96	72	42	30.03	29.98	29.93	7	5	2	9	4	-	0.00	
16	93	84	75	76	73	68	95	71	44	30.09	30.03	29.98	10	7	2	10	4	-	0.00	
17	93	84	74	76	72	66	95	72	44	30.05	30.02	29.96	10	6	0	14	4	18	0.00	Fog

18	93	84	74	76	73	70	93	71	49	30.05	30.00	29.93	10	10	7	14	6	18	0.00	
19	93	84	76	75	73	69	93	71	44	30.09	30.03	29.99	10	9	7	10	6	-	0.00	
20	93	84	74	75	72	69	94	69	45	30.06	30.01	29.93	10	10	7	10	4	17	0.00	
21	93	83	73	74	71	70	92	69	47	30.04	29.99	29.94	10	10	10	9	4	-	0.00	
22	93	84	74	75	72	67	92	67	42	30.06	30.00	29.97	10	10	10	8	3	-	0.00	
23	93	83	73	74	72	68	94	69	43	30.07	30.02	29.98	10	10	7	8	3	-	0.00	
24	84	80	76	76	74	72	91	83	68	30.10	30.05	29.99	10	10	5	10	3	-	0.05	Rain
25	94	84	74	76	72	68	95	71	44	30.08	30.01	29.94	10	10	5	10	3	16	0.00	
26	94	84	74	75	73	69	95	69	46	30.01	29.94	29.83	10	10	5	12	6	17	0.00	
27	94	84	73	74	71	66	94	67	39	29.90	29.84	29.74	10	10	7	13	5	-	0.00	
28	93	82	72	76	72	68	94	70	43	29.88	29.83	29.78	10	8	5	10	4	17	0.00	
29	93	85	77	75	73	70	91	78	49	29.94	29.90	29.86	10	7	4	15	4	24	0.00	Rain , Thunderstorm
30	85	79	73	74	73	71	92	81	66	29.99	29.95	29.92	7	6	4	13	5	17	0.00	Rain

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Pic # 44-62

Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: MB JN - BRA	
Date & Time: 28 Jun 10 1045	County Name: Robertson
Stream Name: Pin Oak	
Segment No. or nearest downstream Segment No.: 1242 L	
Description of Site: 99911 Downstream from Pin Oak Road	

At any point during the Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the use for the water body the investigator should stop conducting the UAA.

A. Stream Characteristics:

1. Check the following channel flow status that applies.

☐ dry ☐ no flow ☑ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:

☐ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.

☑ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.

☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.

☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.

☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. .02 cfs

4. Water Quality Data (Field Parameters)

Field parameters should be collected in accordance with the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1.

Air Temp 29.4 °C 85 °F Water Temp 85 29.4 °C

5. Riparian Zone (Mark dominant categories with L (Left Bank) and R (Right Bank). Bank orientation is determined by the investigator facing downstream.)

RL Forest	____ Urban	____ Rip rap
____ Shrub dominated corridor	____ Pasture	____ Concrete
____ Herbaceous marsh	____ Row crops	Other (specify): ____
____ Mowed/maintained corridor	____ Denuded/Eroded bank	

6. Ease of bank access to the water body: ☑ Easy ☐ Moderately easy ☐ Moderately difficult ☐ Difficult

7. Please describe access opportunities or explain why the site is not easily accessible (Attach photos for documentation):

Easy access from road. No fence. Stream comes thru culvert under road. #44

8. Dominant Primary Substrate

☐Cobble ☐Sand ☐Silt ☐Mud/Clay ☑Gravel ☐Bedrock ☐Rip rap ☐ Concrete

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

B. Primary Contact Water Recreation Evaluation:
- Primary contact recreation draft definition: Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, and whitewater kayaking, canoeing, and rafting, involving a significant risk of ingestion of water.

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?
☐ Yes ☑ No primary contact recreation activities were observed
a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).

☐ Wading-Children	☐ Tubing	☑ No primary contact activities that commonly occur were observed
☐ Wading-Adults	☐ Surfing	
☐ Swimming	☐ Whitewater-kayaking, canoeing, rafting	
☐ Water skiing	☐ Other: _____	
☐ Diving	☐ frequent public swimming-created by publicly owned land or commercial operations	

b. Check the number of individuals observed at the site: ☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Water in mouth or nose of the individual ☐ Primary touch: Individual's body (or portion) immersed in water
☐ Secondary touch: fishing, pets and related contact with water ☐ Individual is in a boat touching water
☐ Individual is on shore near water within 8 meters (25ft) of water ☐ Individual is well away from water between 8 and 30 meters (100 ft). ☑ Not applicable

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
Shallow and low flow. Stream is dammed on opposite side of the road. #45

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
Road #44, C2

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_____ Site: _____
Date: _____ Time: _____

b. Check the number of individuals observed at the site.
☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body well away from water between 8 and 30 meters (100 ft)

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
Low flow, shallow water

3. If secondary contact recreation activities are observed, how often do water recreational activities occur that do not involve a significant risk of water ingestion? ☐ frequently ☐ infrequently
Please describe how often the activities occur? ☐ Unknown ☐ Never ☐ Daily ☐ Monthly ☐ Yearly

4. If infrequently, what is the reason? ☐ physical characteristics of the water body ☐ limited public access ☐ other
If other, list reasons: _____

5. Describe the physical characteristics of the water body that hinders the frequency of secondary contact recreation (depth, etc.) (Attach photos or depth measurements, etc. for documentation).
Low flow, shallow water #44, stream is dammed #45

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).
Thick Brush on each side of creek, "posted" sign #46
Creek crosses multiple pastures/fences #56

D. Noncontact Recreation Evaluation

Noncontact recreation applies to water bodies where recreation activities do not involve a significant risk of water ingestion, and where primary and secondary contact recreation uses do not occur because of unsafe conditions, such as barge traffic.

1. Provide site-specific information and documentation (including photographs) regarding unsafe conditions, recreation activities, and presence or absence of water recreation activities.
N/A

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ FDS Page 3 of 8 _____

E. Stream Channel and Substantial Pool:
Please check the following which best describes the river or stream: ☑ Wadeable ☐ Non-wadeable

1. Wadeable Streams
Determine whether or not the average depth at the thalweg is greater than 0.5 meters and if there are substantial pools with a depth of 1 meter or greater. Walk an approximately 300 meter reach (total) at the site and take the following measurements within the 300 meter reach. Measurements should be taken during base flow conditions (sustained or typical dry, warm-weather flows between rainfall events, excluding unusual antecedent conditions of drought or wet weather

Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters.
Photos #s (30 meters) Upstream 47 Downstream 48 Left Bank 49 Right Bank 50
Photos #s (150 meters) Upstream 52 Downstream 53 Left Bank 54 Right Bank 55
Photos #s (300 meters) Upstream 57 Downstream 58 Left Bank 59 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	58 m	14	0.35
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	0.1
60 meters	0.04
90 meters	0.03
120 meters	0.1
150 meters	.05
180 meters	0.04
210 meters	0.2
240 meters	0.2
270 meters	0.35
300 meters	0.0
Average	0.11

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

c) Stream width - Measure (1) the width at one point which represents the typical average width of the 300 meter reach; (2) the width at the narrowest point of the stream within the 300 meter reach; and (3) the width at the widest point of the stream within the 300 meter reach.

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	0.5
Width at narrowest point of the stream within 300 meter reach	0.3
Width at the widest point of the stream within 300 meter reach	14

d) Is there sufficient water within a 300 meter stream reach during base flow conditions to support primary contact recreation? ☐ Yes ☑ No

COMMENTS: Too shallow. Stream ran dry at 270 m mark.

2. Non-wadeable Streams

If accessible, take 10 width measurements which represent typical widths of the 300 meter reach. If the water is too deep and not accessible record the estimated average width of the water body.

Also, take photos facing upstream, downstream, left bank, and right bank at .
Photos #s (30 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (150 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

# Measurements	Width (meters)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

☐ Drinking or water in mouth
☐ Bathing
☐ Walking
☐ Jogging/running
☐ Bicycling
☐ Standing
☐ Sitting
☐ Lying down/sleeping
☐ Playing on shoreline
☐ Picnicking
☐ Motorcycle/ATV
☐ Hunting/Trapping
☐ Wildlife watching
☑ None
☐ Other: _____

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☑ Yes ☐ No (If yes, please provide supporting documentation and photos.)
Comments: Stream is dammed on upstream side of County Road, #45

3. Check any channel obstructions that apply (Attach photos). #51: fence # = culvert vegetation = #61

#62 ☑ Culverts ☑ Fences # ☐ Log jams ☐ Rip rap ~~☑ Water control structure #45~~
☐ Barbed wire ☑ Dams #45 ☑ Thick vegetation ☐ Low bridges ☐ None
☐ Utility pipe ☐ Other (specify):_____

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest).

☐ Campgrounds
☐ Playgrounds
☐ Rural area
☐ Residential
☐ National forests
☐ Urban/suburban location
☐ Golf Course
☐ Sports Field
☐ Stairs/walkway
☐ Boating access (ramps)
☐ Beach
☐ Bridge crossing
☐ Commercial boating
☐ Trails/paths (hiking/biking)
☐ Paved parking lot
☐ Unimproved parking lot
☑ Roads (paved/unpaved)
☐ Populated area
☐ Docks or rafts
☐ Commercial outfitter
☐ Nearby school
☐ Power Line Corridor
☐ Parks (national/city/county/state)
☐ Public Property
☐ Other:_____
☐ None of the Above

Comments: County Road #44, 62

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).

☑ Private Property
☑ No trespass sign
☐ Wildlife
☐ Steep slopes
☑ No public access
☐ No roads
☑ Fence
☐ Barge/ship traffic
☐ Industrial
☐ None of the Above
☐ Other:_____

Comments: Private property low flow #44

6. Check any indications of human use (Attach photos).

☐ Roads
☐ Rope swings
☐ Dock/platform
☐ Foot paths/prints
☐ Other: _____
☐ RV/ATV Tracks
☐ Camping Sites
☐ Fire pit/ring
☐ Fishing Tackle
☐ NPDES Discharge
☐ Gates on corridor
☐ Children's toys
☐ Remnant's of Kid's play
☐ Organized event
☑ No Human Presence

Comments:_____

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

7. Check all water characteristics that apply (Attach photos).
Aquatic Vegetation: ☐ absent ☐ rare ☑ common ☐ abundant #61
Algae Cover: ☐ absent ☑ rare ☐ common ☐ abundant
Odor: ☑ none ☐ rare ☐ common ☐ abundant
Color: ☑ clear ☐ green ☐ red ☐ brown ☐ black
Bottom Deposit: ☐ sludge ☑ solids ☐ fine sediments ☐ none ☐ other
Water Surface: ☑ clear ☐ scum ☐ foam ☐ debris ☐ oil
Other:

_____
_____

8. Vertebrates Observed within 300 meter reach

Snakes	☑ None	☐ slight presence	☐ moderate presence	☐ large presence
Water Dependent Birds	☑ None	☐ slight presence	☐ moderate presence	☐ large presence
Alligators	☑ None	☐ slight presence	☐ moderate presence	☐ large presence

Comments: _____

9. Mammals Observed within 300 meter reach

Wild	☑ None	☑ slight presence	☐ moderate presence	☐ large presence
Domesticated Pets	☑ None	☑ slight presence	☐ moderate presence	☐ large presence
Livestock	☐ None	☑ slight presence	☐ moderate presence	☐ large presence
Feral Hogs	☑ None	☐ slight presence	☐ moderate presence	☐ large presence

Comments: _____

10. Evidence of wild animals or evidence of birds, cattle, hogs, etc.
☑ Tracks ☐ Fecal droppings ☐ Bird nests

11. Garbage Observed

Large garbage in the channel	☑ None	☐ Rare	☐ Common	☐ Abundant
Small garbage in the channel	☑ None	☐ Rare	☐ Common	☐ Abundant
Bank Garbage	☑ None	☐ Rare	☐ Common	☐ Abundant

Briefly describe the kinds of garbage observed: _____
_____
_____

12. Is the site located in a wildlife preserve with large wildlife (i.e waterfowl) population? ☐ Yes ☑ No

13. Please document any other relevant information regarding recreational activities and the water body in general (for example, area outside of the stream reach evaluated).
_____
_____
_____
_____
_____

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream:_____ Date:_____

Site:_____ Site

Description:_____

Time Begin:_____ Time End:_____ Meter Type:_____

Observers:_____ Stream Width*:_____ Section Width (W):_____

Observations:_____

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V)		Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
			At Point (ft/s)(m/s)	Average (ft/s)(m/s)	

: Thu Jul 1 2010

99911-28JUN10.WAD
2010/06/28 09:59:17

JN

FlowTracker	**(English Units)**
P872	ft
3.7	ft/s
2.30	ft^2
0.0%	cfs

Accuracy	1.0%	1.0%
Depth	0.7%	5.1%
Velocity	4.5%	11.5%
Width	0.2%	0.2%
Method	3.6%	-
# Stations	6.6%	-
Overall	**8.9%**	**12.6%**

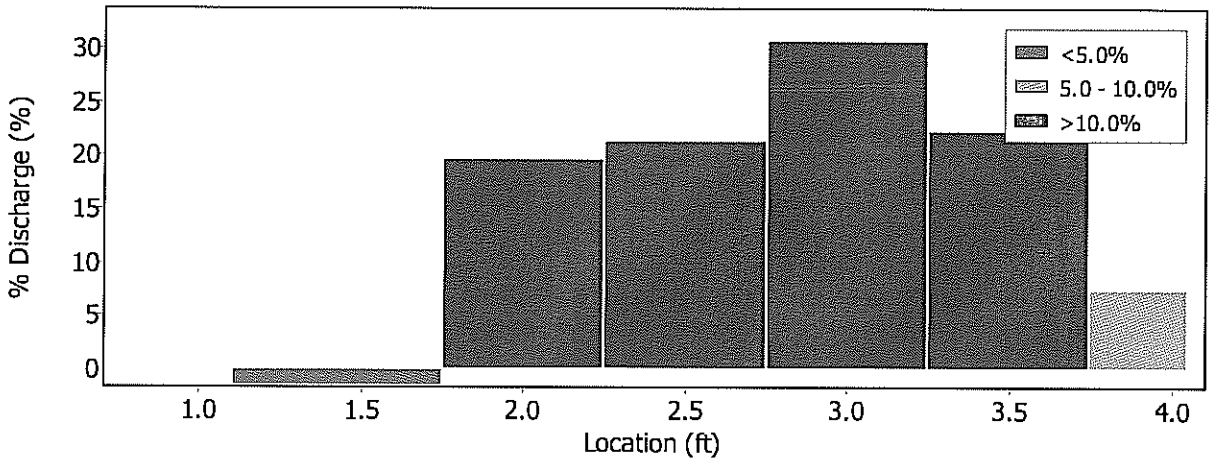
20	8
REW	3.400
41.2 dB	0.877
84.98 °F	0.258
Mid-Section	0.0186
	0.0163

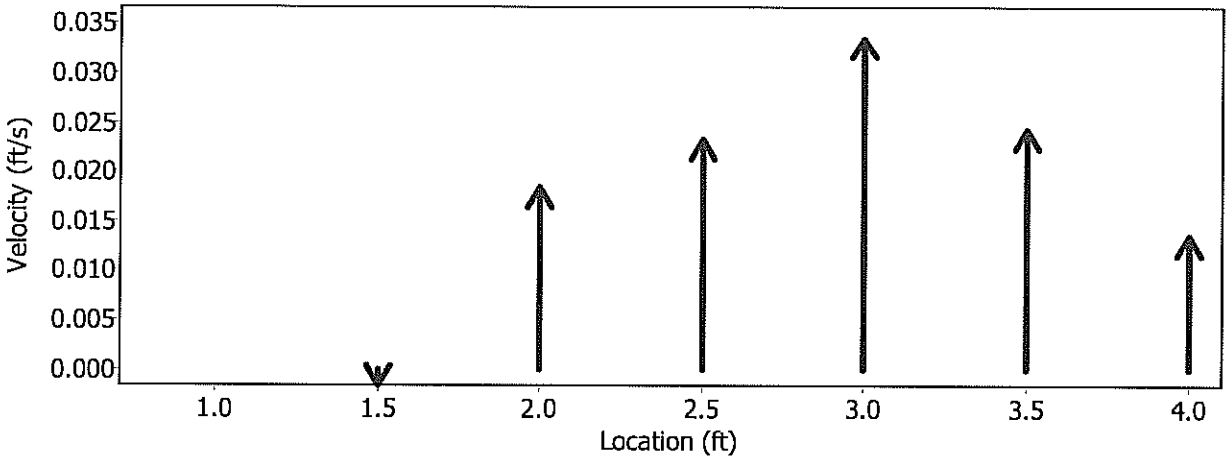
				Depth								
0	09:59	0.70	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
1	*09:59*	*1.50*	*0.6*	*0.250*	*0.6*	*0.100*	*-0.0016*	*1.00*	*-0.0016*	*0.162*	*-0.0003*	*-1.6*
2	10:00	2.00	0.6	0.350	0.6	0.140	0.0184	1.00	0.0184	0.175	0.0032	19.7
3	*10:00*	*2.50*	*0.6*	*0.300*	*0.6*	*0.120*	*0.0233*	*1.00*	*0.0233*	*0.150*	*0.0035*	*21.4*
4	*10:01*	*3.00*	*0.6*	*0.300*	*0.6*	*0.120*	*0.0335*	*1.00*	*0.0335*	*0.150*	*0.0050*	*30.8*
5	*10:02*	*3.50*	*0.6*	*0.300*	*0.6*	*0.120*	*0.0243*	*1.00*	*0.0243*	*0.150*	*0.0036*	*22.3*
6	*10:03*	*4.00*	*0.6*	*0.300*	*0.6*	*0.120*	*0.0135*	*1.00*	*0.0135*	*0.090*	*0.0012*	*7.4*
7	10:03	4.10	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0

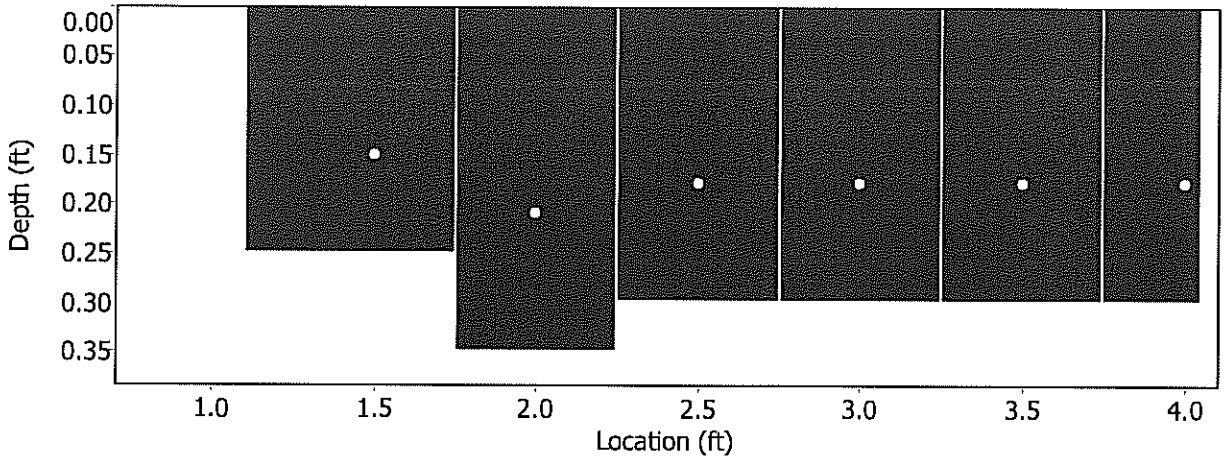
: Thu Jul 1 2010

99911-28JUN10.WAD
2010/06/28 09:59:17

JN







: Thu Jul 1 2010

99911-28JUN10.WAD
2010/06/28 09:59:17

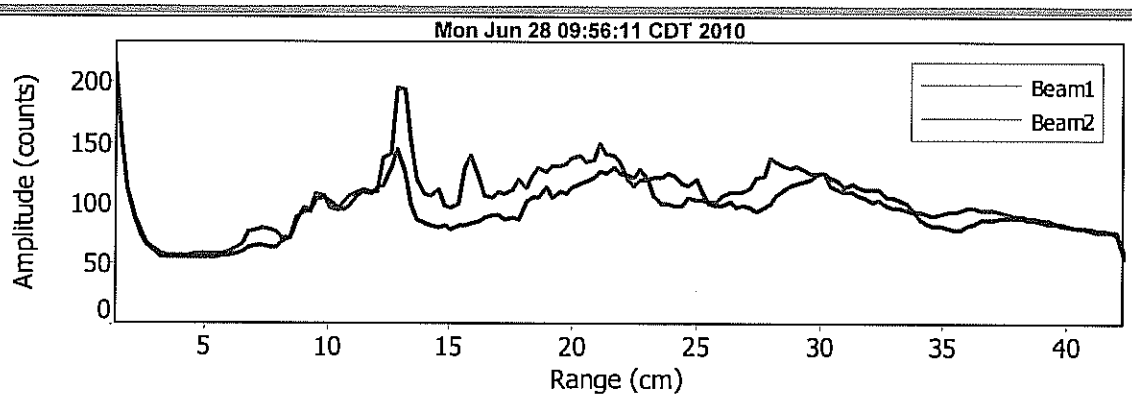
JN

1	1.50	0.6 0.6	SNR (67.3) is different from typical SNR (41.2) High SNR variation during measurement: 7.3,9.5
3	2.50	0.6	High angle: 28
4	3.00	0.6	SNR (26.6) is different from typical SNR (41.2)
5	3.50	0.6	SNR (29.0) is different from typical SNR (41.2)
6	4.00	0.6	High SNR variation during measurement: 6.9,7.3

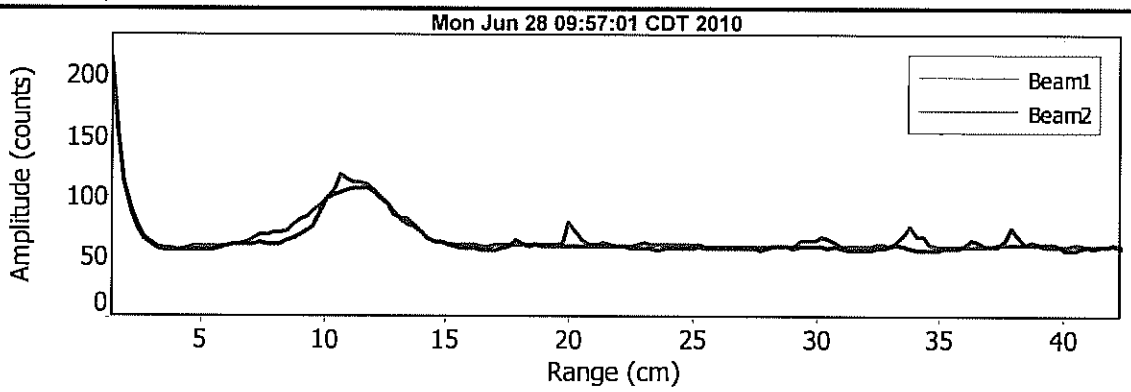
: Thu Jul 1 2010

99911-28JUN10.WAD
2010/06/28 09:59:17

JN



- Noise level check - Pass
- SNR check - Pass
- Peak location check - Fail
- Peak shape check - Fail



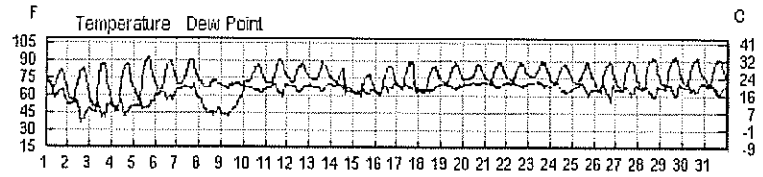
- Noise level check - Pass
- SNR check - Pass
- Peak location check - Pass
- Peak shape check - Pass

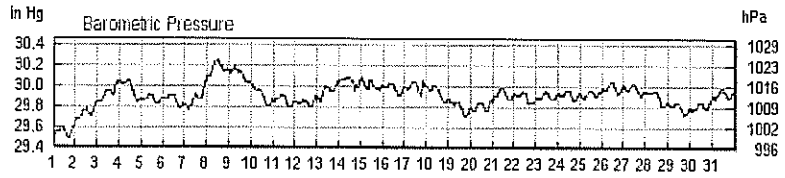
History for Hearne, TX

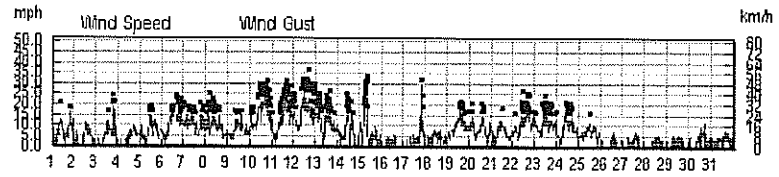
Month of May, 2010

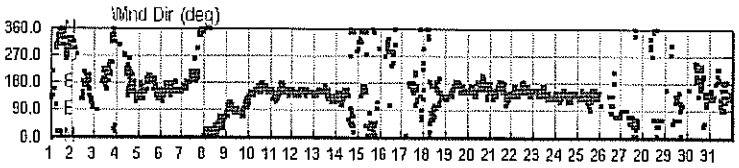
Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	94 °F	88 °F	71 °F	
Mean Temperature	83 °F	77 °F	67 °F	
Min Temperature	76 °F	66 °F	47 °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	18	12	2	374
Growing Degree Days (base 50)	33	27	17	835
Dew Point:				
Dew Point	73 °F	63 °F	38 °F	
Precipitation:				
Precipitation	1.67 in	0.08 in	0.00 in	2.52 in
Snowdepth	-	-	-	-
Wind:				
Wind	29 mph	6 mph	0 mph	
Gust Wind	41 mph	20 mph	10 mph	
Sea Level Pressure:				
Sea Level Pressure	30.26 in	29.91 in	29.48 in	









Monthly Calendar Overview

« Previous Month « 2009 **May 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1

Actual: 82 | 67
Precip: 0.00

Average: - | -
Precip: -

2	3	4	5	6	7	8
Actual: 83 | 55	Actual: 88 | 49	Actual: 87 | 47	Actual: 93 | 54	Actual: 91 | 62	Actual: 92 | 69	Actual: 74 | 67
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
9	10	11	12	13	14	15
Actual: 71 | 66	Actual: 88 | 69	Actual: 92 | 71	Actual: 89 | 71	Actual: 89 | 73	Actual: 83 | 65	Actual: 79 | 63
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 1.67	Precip: 0.38
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
16	17	18	19	20	21	22
Actual: 86 | 62	Actual: 89 | 66	Actual: 86 | 64	Actual: 88 | 71	Actual: 88 | 74	Actual: 90 | 72	Actual: 90 | 73
Precip: 0.00	Precip: 0.47	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
23	24	25	26	27	28	29
Actual: 90 | 76	Actual: 88 | 72	Actual: 89 | 71	Actual: 89 | 65	Actual: 91 | 66	Actual: 93 | 68	Actual: 94 | 68
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
30	31					
Actual: 93 | 70	Actual: 92 | 70					
Precip: 0.00	Precip: 0.00					
Average: - | -	Average: - | -					
Precip: -	Precip: -					

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear · Mostly Cloudy Partly Sunny · Partly Cloudy Mostly Sunny · Cloudy · Rain · Snow · Hail Flurries · Thunderstorms · Hazy Fog · Sleet · '?' denotes 'chance of' · Unknown

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

Data Category · Condition · High Temp. · Lo Temp. · Precip. (in inches) · Daily Avg. Temp. · Temps in °F · -60 -30 0 30 60 90 120

Print This Calendar

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
May	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	82	74	67	72	65	56	96	73	54	29.60	29.55	29.48	10	8	2	16	6	21	0.00	
2	83	69	55	56	49	38	92	57	20	29.78	29.72	29.64	10	10	10	12	3	16	0.00	Rain
3	88	68	49	54	48	42	90	54	20	30.03	29.92	29.84	10	9	5	18	3	25	0.00	Rain
4	87	67	47	57	49	42	98	59	22	30.06	29.98	29.85	10	9	1	9	2	-	0.00	
5	93	74	54	56	51	48	87	47	22	29.92	29.87	29.83	10	10	10	15	7	20	0.00	
6	91	76	62	64	61	57	94	64	34	29.91	29.86	29.78	10	10	7	16	8	24	0.00	
7	92	80	69	70	67	65	89	67	42	29.92	29.85	29.77	10	9	7	15	11	21	0.00	
8	74	70	67	58	49	43	60	47	35	30.26	30.17	30.09	10	10	10	15	10	25	0.00	
9	71	68	66	57	47	43	61	46	40	30.20	30.13	30.05	10	10	10	15	7	17	0.00	
10	88	78	69	68	66	64	88	68	45	30.01	29.91	29.79	10	10	7	23	12	31	0.00	
11	92	82	71	70	66	59	90	64	37	29.92	29.86	29.79	10	9	5	23	11	31	0.00	
12	89	80	71	70	67	64	89	67	46	29.90	29.84	29.79	10	9	7	24	14	37	0.00	

13	89	81	73	70	68	64	82	67	43	30.02	29.94	29.84	10	10	7	20	13	30	0.00	
14	83	74	65	70	68	63	96	84	56	30.10	30.05	29.96	10	7	1	18	7	32	1.67	Rain , Thunderstorm
15	79	71	63	66	64	59	96	81	55	30.09	30.01	29.96	10	6	4	25	8	33	0.38	Rain , Thunderstorm
16	86	74	62	68	65	61	98	78	46	30.03	29.98	29.90	10	5	2	6	1	-	0.00	
17	89	78	66	73	68	63	100	79	47	30.06	29.99	29.91	10	7	1	29	2	41	0.47	Rain , Thunderstorm
18	86	75	64	69	65	63	96	75	51	30.02	29.96	29.85	10	7	5	8	3	-	0.00	
19	88	80	71	71	69	66	95	73	47	29.88	29.81	29.71	7	5	4	17	8	22	0.00	
20	88	81	74	72	71	70	89	76	55	29.85	29.80	29.76	7	6	4	14	9	21	0.00	Rain
21	90	81	72	72	70	67	95	71	48	29.98	29.92	29.85	10	6	4	13	7	18	0.00	
22	90	82	73	72	70	68	93	73	49	29.95	29.90	29.83	7	6	4	17	9	26	0.00	
23	90	83	76	73	71	68	86	69	51	29.95	29.90	29.87	10	6	4	16	10	24	0.00	Rain
24	88	80	72	72	68	61	94	69	42	29.97	29.92	29.86	7	5	3	16	8	22	0.00	
25	89	80	71	71	67	61	93	70	39	29.97	29.93	29.87	10	6	3	12	6	18	0.00	
26	89	77	65	71	65	55	96	68	31	30.05	29.98	29.92	10	7	4	7	1	-	0.00	
27	91	78	66	70	66	60	94	67	35	30.03	29.97	29.90	10	6	4	7	1	-	0.00	
28	93	80	68	69	65	59	93	62	32	29.96	29.90	29.81	10	6	3	6	1	-	0.00	
29	94	81	68	70	66	60	92	64	32	29.84	29.80	29.72	10	7	4	6	1	-	0.00	
30	93	82	70	72	67	63	91	65	38	29.85	29.81	29.77	10	9	5	12	2	-	0.00	Thunderstorm
31	92	81	70	71	67	62	94	65	36	29.98	29.92	29.88	10	9	4	8	3	-	0.00	

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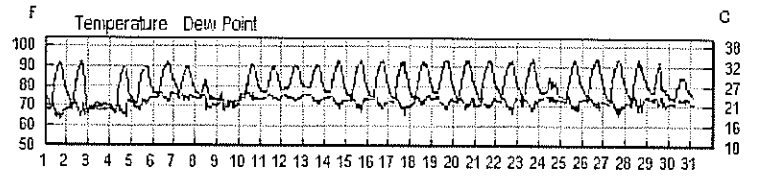
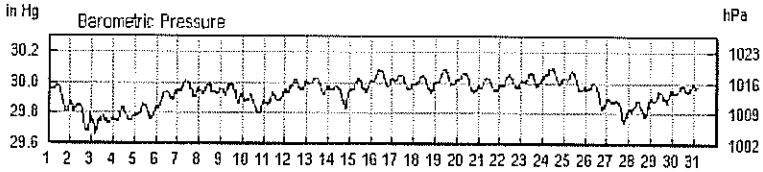
History for Hearne, TX

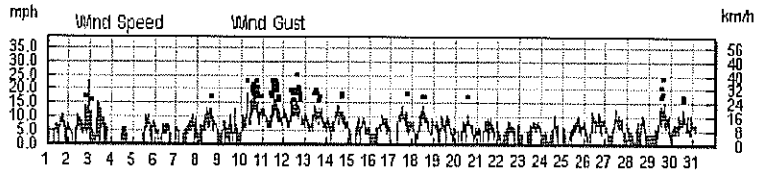
Month of June, 2010

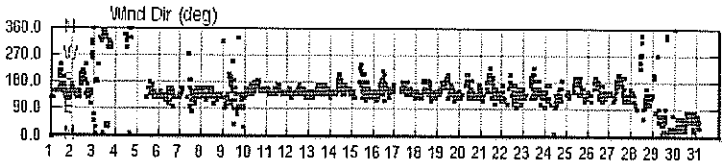
Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	94 °F	90 °F	71 °F	
Mean Temperature	85 °F	82 °F	70 °F	
Min Temperature	78 °F	74 °F	67 °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	20	17	4	505
Growing Degree Days (base 50)	35	32	20	959
Dew Point:				
Dew Point	77 °F	72 °F	63 °F	
Precipitation:				
Precipitation	2.90 in	0.14 in	0.00 in	4.22 in
Snowdepth	-	-	-	-
Wind:				
Wind	23 mph	5 mph	0 mph	
Gust Wind	29 mph	18 mph	12 mph	
Sea Level Pressure:				
Sea Level Pressure	30.10 in	29.93 in	29.66 in	









Monthly Calendar Overview

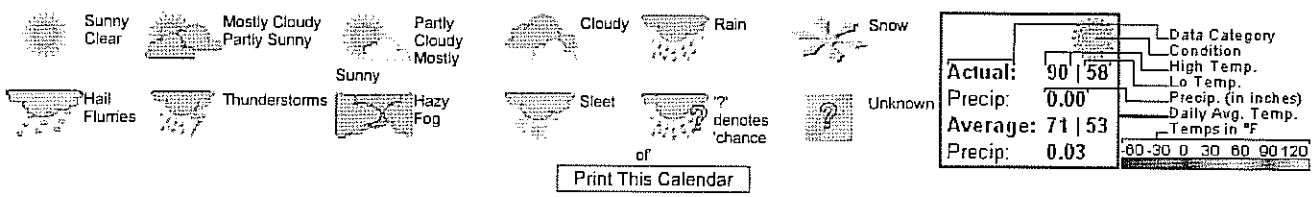
« Previous Month « 2009 **June 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4	5
		Actual: 91 | 69	Actual: 92 | 69	Actual: 71 | 68	Actual: 89 | 67	Actual: 90 | 71
		Precip: 0.00	Precip: 0.47	Precip: 0.80	Precip: 0.00	Precip: 0.00
		Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -

							Precip:	-			Precip:	-			Precip:	-			Precip:	-			Precip:	-
6			7				8				9				10				11				12	
Actual:	92 | 76		Actual:	90 | 76			Actual:	83 | 73			Actual:	77 | 70			Actual:	91 | 73			Actual:	90 | 77			Actual:	91 | 78
Precip:	0.00		Precip:	0.00			Precip:	0.00			Precip:	2.90			Precip:	0.00			Precip:	0.00			Precip:	0.00
Average:	- | -		Average:	- | -			Average:	- | -			Average:	- | -			Average:	- | -			Average:	- | -			Average:	- | -
Precip:	-		Precip:	-			Precip:	-			Precip:	-			Precip:	-			Precip:	-			Precip:	-
13			14				15				16				17				18				19	
Actual:	91 | 78		Actual:	93 | 77			Actual:	93 | 74			Actual:	93 | 75			Actual:	93 | 74			Actual:	93 | 74			Actual:	93 | 76
Precip:	0.00		Precip:	0.00			Precip:	0.00			Precip:	0.00			Precip:	0.00			Precip:	0.00			Precip:	0.00
Average:	- | -		Average:	- | -			Average:	- | -			Average:	- | -			Average:	- | -			Average:	- | -			Average:	- | -
Precip:	-		Precip:	-			Precip:	-			Precip:	-			Precip:	-			Precip:	-			Precip:	-
20			21				22				23				24				25				26	
Actual:	93 | 74		Actual:	93 | 73			Actual:	93 | 74			Actual:	93 | 73			Actual:	84 | 76			Actual:	94 | 74			Actual:	94 | 74
Precip:	0.00		Precip:	0.00			Precip:	0.00			Precip:	0.00			Precip:	0.05			Precip:	0.00			Precip:	0.00
Average:	- | -		Average:	- | -			Average:	- | -			Average:	- | -			Average:	- | -			Average:	- | -			Average:	- | -
Precip:	-		Precip:	-			Precip:	-			Precip:	-			Precip:	-			Precip:	-			Precip:	-
27			28				29				30													
Actual:	94 | 73		Actual:	93 | 72			Actual:	93 | 77			Actual:	85 | 73												
Precip:	0.00		Precip:	0.00			Precip:	0.00			Precip:	0.00												
Average:	- | -		Average:	- | -			Average:	- | -			Average:	- | -												
Precip:	-		Precip:	-			Precip:	-			Precip:	-												

« Previous Month « 2009 2011 » Next Month »

Calendar Key:



Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
June	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	91	80	69	71	67	63	94	64	39	29.99	29.92	29.81	10	10	5	10	3	16	0.00	
2	92	81	69	73	69	65	95	69	41	29.87	29.79	29.68	10	8	2	23	5	29	0.47	Rain , Thunderstorm
3	71	70	68	70	69	67	96	94	89	29.78	29.74	29.66	10	7	2	15	5	23	0.80	Rain , Thunderstorm
4	89	78	67	71	68	64	97	74	44	29.84	29.78	29.74	10	6	0	6	0	-	0.00	Fog
5	90	80	71	73	71	68	95	74	54	29.86	29.80	29.76	10	8	4	10	2	-	0.00	
6	92	84	76	77	75	72	95	76	52	29.93	29.89	29.83	7	4	2	7	4	-	0.00	
7	90	83	76	76	75	72	92	77	57	30.02	29.96	29.90	7	4	3	10	4	-	0.00	
8	83	78	73	76	73	68	94	86	63	30.00	29.95	29.92	10	7	5	13	5	18	0.00	Rain
9	77	74	70	74	70	68	96	94	91	30.00	29.94	29.86	10	6	1	13	3	17	2.90	Rain , Thunderstorm
10	91	82	73	77	75	71	96	80	54	29.92	29.87	29.80	7	4	3	18	8	24	0.00	Rain
11	90	84	77	77	74	72	91	76	59	29.93	29.89	29.85	7	5	3	17	10	23	0.00	
12	91	84	78	76	75	73	91	75	56	30.02	29.97	29.93	10	5	4	16	10	25	0.00	Rain
13	91	84	78	76	75	71	91	73	53	30.03	30.00	29.92	7	5	3	14	9	20	0.00	
14	93	85	77	76	73	68	93	72	46	29.98	29.94	29.83	7	5	3	14	8	21	0.00	Rain
15	93	84	74	75	72	67	96	72	42	30.03	29.98	29.93	7	5	2	9	4	-	0.00	
16	93	84	75	76	73	68	95	71	44	30.09	30.03	29.98	10	7	2	10	4	-	0.00	
17	93	84	74	76	72	66	95	72	44	30.05	30.02	29.96	10	6	0	14	4	18	0.00	Fog

18	93	84	74	76	73	70	93	71	49	30.05	30.00	29.93	10	10	7	14	6	18	0.00	
19	93	84	76	75	73	69	93	71	44	30.09	30.03	29.99	10	9	7	10	6	-	0.00	
20	93	84	74	75	72	69	94	69	45	30.06	30.01	29.93	10	10	7	10	4	17	0.00	
21	93	83	73	74	71	70	92	69	47	30.04	29.99	29.94	10	10	10	9	4	-	0.00	
22	93	84	74	75	72	67	92	67	42	30.06	30.00	29.97	10	10	10	8	3	-	0.00	
23	93	83	73	74	72	68	94	69	43	30.07	30.02	29.98	10	10	7	8	3	-	0.00	
24	84	80	76	76	74	72	91	83	68	30.10	30.05	29.99	10	10	5	10	3	-	0.05	Rain
25	94	84	74	76	72	68	95	71	44	30.08	30.01	29.94	10	10	5	10	3	16	0.00	
26	94	84	74	75	73	69	95	69	46	30.01	29.94	29.83	10	10	5	12	6	17	0.00	
27	94	84	73	74	71	66	94	67	39	29.90	29.84	29.74	10	10	7	13	5	-	0.00	
28	93	82	72	76	72	68	94	70	43	29.88	29.83	29.76	10	8	5	10	4	17	0.00	
29	93	85	77	75	73	70	91	78	49	29.94	29.90	29.86	10	7	4	15	4	24	0.00	Rain , Thunderstorm
30	85	79	73	74	73	71	92	81	66	29.99	29.95	29.92	7	6	4	13	5	17	0.00	Rain

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Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: MB/JN/ - BRA	
Date & Time: 23 Aug 10 1100	County Name: Robertson
Stream Name: Pin Oak Creek	
Segment No. or nearest downstream Segment No.: 1242L	
Description of Site: 16401 On private property downstream from SH6	

At any point during the Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the use for the water body the investigator should stop conducting the UAA.

A. Stream Characteristics:

1. Check the following channel flow status that applies.

☐ dry ☑ no flow ☐ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:

☐ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.

MB 23 Aug 10 ☑ 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. NA 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 31.7 °C 89°F Water Temp MB 23 Aug 10 NA °C 27.2 81°F

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	RL 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):

Access to SH6 ROW. Fence at private property with locked gate. Pic #1192

8. Dominant Primary Substrate

☐Cobble ☐Sand ☐Silt ☑Mud/Clay ☐Gravel ☐Bedrock ☐Rip rap ☐ Concrete

Stream Name_____ Site: _____
Date: _____ Time: _____

B. Primary Contact Water Recreation Evaluation:

- Primary contact recreation draft definition: Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, and whitewater kayaking, canoeing, and rafting, involving a significant risk of ingestion of water.

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?
☐ Yes ☑ No primary contact recreation activities were observed

a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).

☐ Wading-Children ☐ Tubing ☑ No primary contact activities that commonly occur were observed
☐ Wading-Adults ☐ Surfing
☐ Swimming ☐ Whitewater-kayaking, canoeing, rafting
☐ Water skiing ☐ Other: _____
☐ Diving ☐ frequent public swimming-created by publicly owned land or commercial operations

b. Check the number of individuals observed at the site: ☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Water in mouth or nose of the individual ☐ Primary touch: Individual's body (or portion) immersed in water
☐ Secondary touch: fishing, pets and related contact with water ☐ Individual is in a boat touching water
☐ Individual is on shore near water within 8 meters (25ft) of water ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☐ Not applicable

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
Long, wide stagnant pool >1 m deep. # 1193, 1194

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
SH6 Row Pic # 1192. Fence at 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: _____

Date: _____ Time: _____

b. Check the number of individuals observed at the site.
☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body well away from water between 8 and 30 meters (100 ft)

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
Bog with stagnant pool. # 1193, 1194, 1201

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).
Deep pool, Stagnant water # 1194

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 with fence. # 1192.

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.
Private property with fence # 1192

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 1193 Downstream 1194 Left Bank 1195 Right Bank 1196
Photos #s (150 meters) Upstream 1197 Downstream 1198 Left Bank 1199 Right Bank 1200
Photos #s (300 meters) Upstream 1201 Downstream 1202 Left Bank 1203 Right Bank 1204

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	60	18	>1.2 N/W
Pool 2	21	6	>1.2 N/W
Pool 3	71	7	>1.2 N/W
Pool 4	12	5	0.82
Pool 5	38	5	0.9
Pool 6			
Pool 7			
Pool 8			
Pool 9			
Pool 10			

b)Average depth at the thalweg –Take depth measurements approximately every 30 meters to calculate an average depth at the thalweg (at least 10 measurements needed). If depth and/or width measurements were not attainable, explain why.

Distance	Depth (meters)
30 meters	>1.2 N/W
60 meters	0.7
90 meters	0.35
120 meters	0.75
150 meters	0.70
180 meters	>1.2
210 meters	0.15
240 meters	0.57
270 meters	0.65
300 meters	0.70
Average	0.67

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

c) Stream width - Measure (1) the width at one point which represents the typical average width of the 300 meter reach; (2) the width at the narrowest point of the stream within the 300 meter reach; and (3) the width at the widest point of the stream within the 300 meter reach.

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	5
Width at narrowest point of the stream within 300 meter reach	0.60
Width at the widest point of the stream within 300 meter reach	18

d) Is there sufficient water within a 300 meter stream reach during base flow conditions to support primary contact recreation? ☒ Yes ☐ No
COMMENTS:
Some deep pools, but no flow at this time.

2. Non-wadeable Streams
If accessible, take 10 width measurements which represent typical widths of the 300 meter reach. If the water is too deep and not accessible record the estimated average width of the water body.

Also, take photos facing upstream, downstream, left bank, and right bank at .
Photos #s (30 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (150 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

# Measurements	Width (meters)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Stream Name_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

- ☐ Drinking or water in mouth
- ☐ Bathing
- ☐ Walking
- ☐ Jogging/running
- ☐ Bicycling
- ☐ Standing
- ☐ Sitting
- ☐ Lying down/sleeping
- ☐ Playing on shoreline
- ☐ Picnicking
- ☐ Motorcycle/ATV
- ☐ Hunting/Trapping
- ☐ Wildlife watching
- ☑ None
- ☐ Other: _____

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☐ Yes ☑ No (If yes, please provide supporting documentation and photos.)
Comments: _____

3. Check any channel obstructions that apply (Attach photos).

- ☐ Culverts
- ☐ Barbed wire
- ☐ Utility pipe
- ☐ Fences
- ☐ Dams
- ☐ Other (specify): _____
- ☐ Log jams
- ☐ Thick vegetation
- ☐ Rip rap
- ☐ Low bridges
- ☐ Water control structure
- ☑ None

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest).

- ☐ Campgrounds
- ☐ Playgrounds
- ☑ Rural area
- ☐ Residential
- ☐ National forests
- ☐ Urban/suburban location
- ☐ Golf Course
- ☐ Sports Field
- ☐ Stairs/walkway
- ☐ Boating access (ramps)
- ☐ Beach
- ☑ Bridge crossing
- ☐ Commercial boating
- ☐ Trails/paths (hiking/biking)
- ☐ Paved parking lot
- ☐ Unimproved parking lot
- ☑ Roads (paved/unpaved)
- ☐ Populated area
- ☐ Docks or rafts
- ☐ Commercial outfitter
- ☐ Nearby school
- ☐ Power Line Corridor
- ☐ Parks (national/city/county/state)
- ☐ Public Property
- ☐ Other: _____
- ☐ None of the Above

Comments: Private Property #1192

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).

- ☑ Private Property
- ☑ No trespass sign
- ☐ Wildlife
- ☐ Steep slopes
- ☐ No public access
- ☐ No roads
- ☑ Fence
- ☐ Barge/ship traffic
- ☐ Industrial
- ☐ None of the Above
- ☐ Other: _____

Comments: # #1192

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: _____

Stream Name _____ Site: _____
Date: _____ Time: _____

7. Check all water characteristics that apply (Attach photos).
Aquatic Vegetation: ☐ absent ☐ rare ☐ common ☑ abundant
Algae Cover: ☐ absent ☐ rare ☑ common ☐ abundant
Odor: ☐ none ☑ rare ☐ common ☐ abundant
Color: ☐ clear ☐ green ☐ red ☑ brown ☐ black
Bottom Deposit: ☑ sludge ☐ solids ☐ fine sediments ☐ none ☐ other
Water Surface: ☑ clear ☑ scum ☐ foam ☐ debris ☐ oil
Other: #1193-1204

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: Cows in creek

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
8/27/08

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).
Pools are deep, ~~fast flow~~, stagnant water, scum covered. Private property with fence, Land owner has stated previously that his grandkids fish in this creek

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream:_____ Date:_____

Site:_____ Site

Description:_____

Time Begin:_____ Time End:_____ Meter Type:_____

Observers:_____ Stream Width*:_____ Section Width (W):_____

Observations:_____

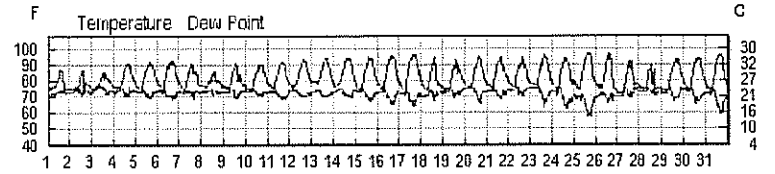
Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V)		Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
			At Point (ft/s)(m/s)	Average (ft/s)(m/s)	

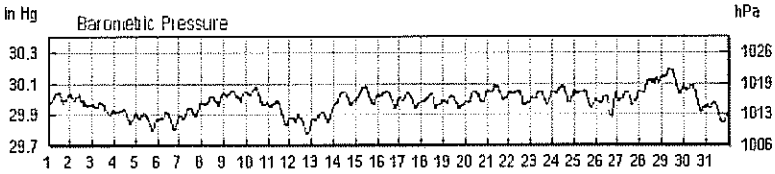
History for Hearne, TX

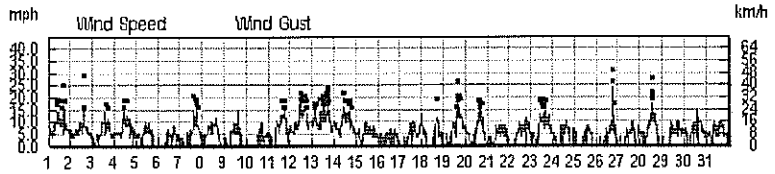
Month of July, 2010

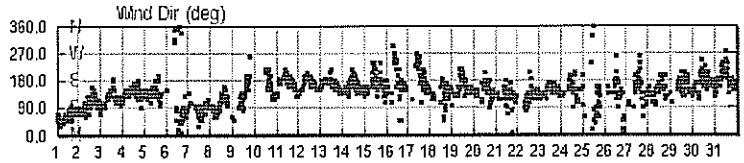
Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	97 °F	93 °F	85 °F	
Mean Temperature	86 °F	84 °F	80 °F	
Min Temperature	78 °F	75 °F	72 °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	21	19	15	579
Growing Degree Days (base 50)	36	34	30	1047
Dew Point:				
Dew Point	77 °F	72 °F	58 °F	
Precipitation:				
Precipitation	0.46 in	0.02 in	0.00 in	0.65 in
Snowdepth	-	-	-	-
Wind:				
Wind	24 mph	4 mph	0 mph	
Gust Wind	34 mph	18 mph	9 mph	
Sea Level Pressure:				
Sea Level Pressure	30.20 in	29.98 in	29.78 in	









Monthly Calendar Overview

« Previous Month « 2009 July 2010 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1 Actual: 87 | 75 Precip: 0.07	2 Actual: 87 | 75 Precip: 0.46	3 Actual: 85 | 75 Precip: 0.00

				Average: - | -	Average: - | -	Average: - | -
				Precip: -	Precip: -	Precip: -
4	5	6	7	8	9	10
Actual: 91 | 76	Actual: 92 | 74	Actual: 93 | 75	Actual: 91 | 74	Actual: 86 | 76	Actual: 91 | 75	Actual: 90 | 74
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
11	12	13	14	15	16	17
Actual: 92 | 75	Actual: 93 | 76	Actual: 94 | 78	Actual: 94 | 76	Actual: 95 | 75	Actual: 95 | 75	Actual: 96 | 73
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
18	19	20	21	22	23	24
Actual: 95 | 74	Actual: 93 | 74	Actual: 95 | 76	Actual: 95 | 75	Actual: 95 | 76	Actual: 95 | 77	Actual: 94 | 73
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
25	26	27	28	29	30	31
Actual: 97 | 74	Actual: 97 | 75	Actual: 92 | 72	Actual: 90 | 74	Actual: 93 | 74	Actual: 94 | 74	Actual: 96 | 73
Precip: 0.00	Precip: 0.00	Precip: 0.01	Precip: 0.11	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear, Mostly Cloudy Partly Sunny, Partly Cloudy Mostly Sunny, Cloudy, Rain, Snow, Hail Flurries, Thunderstorms, Hazy Fog, Sleet, '?' denotes chance of, Unknown

Data Category
Condition
High Temp.
Lo Temp.
Precip. (in inches)
Daily Avg. Temp.
Temps in °F

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

-60 -30 0 30 60 90 120

Print This Calendar

Daily Observations

	2010 Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
July	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	87	81	75	75	73	71	94	80	64	30.04	30.00	29.97	10	6	4	16	8	25	0.07	Rain
2	87	81	75	76	74	72	94	88	63	30.03	29.99	29.95	10	7	4	16	6	29	0.46	Rain
3	85	80	75	77	75	72	95	85	68	29.98	29.94	29.90	10	5	3	14	4	20	0.00	Rain
4	91	84	76	77	74	71	94	75	51	29.94	29.90	29.84	7	5	3	14	7	18	0.00	Rain
5	92	83	74	76	73	70	95	74	48	29.91	29.87	29.80	7	5	3	10	5	9	0.00	
6	93	84	75	75	72	69	94	69	44	29.92	29.87	29.80	7	5	3	8	2	-	0.00	
7	91	82	74	75	73	69	94	75	53	29.94	29.91	29.87	7	5	4	15	3	25	0.00	
8	86	81	76	75	74	72	90	81	63	30.02	29.98	29.95	10	6	3	12	5	16	0.00	Rain
9	91	83	75	76	73	70	94	79	51	30.06	30.02	29.98	7	5	3	15	2	18	0.00	Rain
10	90	82	74	75	73	71	96	77	53	30.08	30.02	29.96	7	4	3	9	1	-	0.00	
11	92	84	75	75	72	69	94	72	46	29.99	29.94	29.83	7	5	4	15	5	20	0.00	
12	93	84	76	75	73	70	92	70	47	29.90	29.86	29.78	7	5	4	21	9	22	0.00	
13	94	86	78	75	73	71	86	68	46	29.92	29.88	29.85	7	4	3	18	11	24	0.00	
14	94	85	76	76	73	70	91	69	46	30.05	30.00	29.95	7	5	3	16	9	22	0.00	
15	95	85	75	76	72	68	95	69	41	30.09	30.02	29.96	7	5	2	10	5	16	0.00	
16	95	85	75	75	71	66	94	67	38	30.06	30.02	29.94	10	6	3	7	2	-	0.00	Rain
17	96	84	73	74	71	65	94	63	35	30.05	30.00	29.94	10	9	3	10	2	16	0.00	

18	95	84	74	75	72	68	90	73	42	30.03	29.99	29.94	10	10	7	12	5	20	0.00	Thunderstorm
19	93	84	74	76	73	70	96	76	48	30.02	29.98	29.94	10	8	0	18	4	26	0.00	Fog
20	95	86	76	76	73	65	95	73	39	30.05	30.01	29.97	10	9	5	15	6	18	0.00	
21	95	85	75	75	73	69	95	71	42	30.09	30.05	29.99	10	9	5	8	2	16	0.00	Rain
22	95	86	76	76	74	70	94	75	45	30.06	30.01	29.96	10	9	7	12	3	20	0.00	
23	95	86	77	77	73	64	94	70	35	30.05	30.01	29.96	10	9	5	14	4	20	0.00	
24	94	84	73	76	71	63	96	69	37	30.09	30.04	29.98	10	9	4	10	3	-	0.00	
25	97	86	74	72	67	58	88	58	26	30.06	30.02	29.94	10	10	7	8	2	-	0.00	Rain
26	97	86	75	73	70	67	87	67	38	30.02	29.97	29.88	10	7	4	24	2	34	0.00	Rain , Thunderstorm
27	92	82	72	76	72	69	95	79	46	30.05	30.00	29.96	10	6	4	10	2	-	0.01	Rain , Thunderstorm
28	90	82	74	76	74	71	95	83	56	30.14	30.09	30.03	10	9	3	17	6	31	0.11	Rain , Thunderstorm
29	93	84	74	77	72	68	96	74	45	30.20	30.14	30.03	10	9	5	10	3	-	0.00	
30	94	84	74	76	72	66	95	71	41	30.09	30.04	29.91	10	9	2	14	5	18	0.00	
31	96	84	73	74	69	59	94	66	29	29.98	29.93	29.85	10	9	5	10	4	-	0.00	

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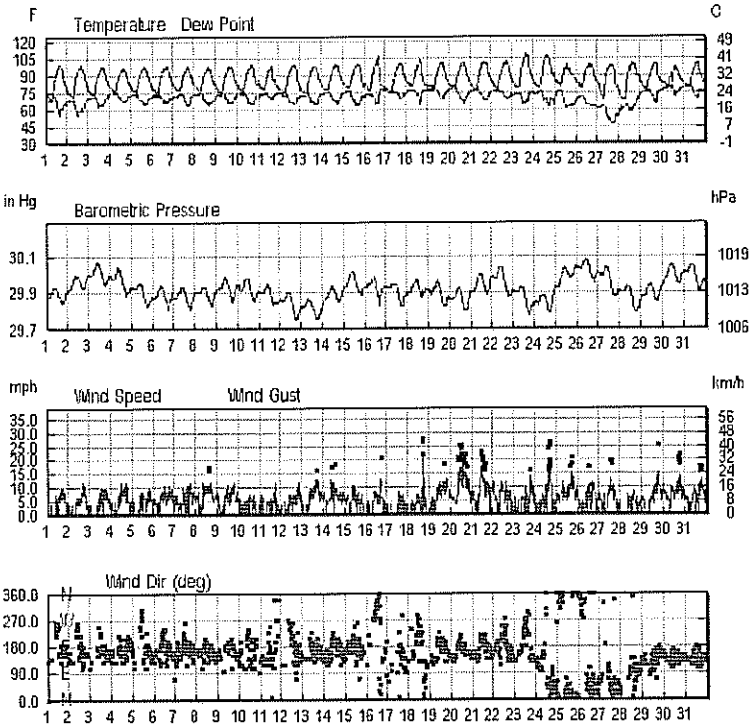
History for Hearne, TX

Month of August, 2010

Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	109 °F	101 °F	97 °F	
Mean Temperature	94 °F	88 °F	84 °F	
Min Temperature	81 °F	76 °F	68 °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	29	24	19	730
Growing Degree Days (base 50)	44	38	34	1189
Dew Point:				
Dew Point	81 °F	71 °F	48 °F	
Precipitation:				
Precipitation	0.00 in	0.00 in	0.00 in	0.00 in
Snowdepth	-	-	-	-
Wind:				
Wind	21 mph	4 mph	0 mph	
Gust Wind	29 mph	18 mph	9 mph	
Sea Level Pressure:				
Sea Level Pressure	30.09 in	29.92 in	29.75 in	



Monthly Calendar Overview

« Previous Month « 2009 **August 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
Actual: 100 | 69	**Actual:** 99 | 71	**Actual:** 98 | 73	**Actual:** 97 | 76	**Actual:** 98 | 75	**Actual:** 98 | 75	**Actual:** 98 | 78
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -

8	Actual:	98 | 77	Precip:	0.00	Average:	- | -	Precip:	-	9	Actual:	98 | 74	Precip:	0.00	Average:	- | -	Precip:	-	10	Actual:	100 | 75	Precip:	0.00	Average:	- | -
Precip:	-	11	Actual:	99 | 78	Precip:	0.00	Average:	- | -	Precip:	-	12	Actual:	99 | 75	Precip:	0.00	Average:	- | -	Precip:	-	13	Actual:	99 | 75	Precip:	0.00
Average:	- | -	Precip:	-	14	Actual:	100 | 77	Precip:	0.00	Average:	- | -	Precip:	-	15	Actual:	100 | 79	Precip:	0.00	Average:	- | -	Precip:	-	16	Actual:	109 | 76
Precip:	0.00	Average:	- | -	Precip:	-	17	Actual:	101 | 76	Precip:	0.00	Average:	- | -	Precip:	-	18	Actual:	104 | 81	Precip:	0.00	Average:	- | -	Precip:	-	19
Actual:	101 | 79	Precip:	0.00	Average:	- | -	Precip:	-	20	Actual:	101 | 80	Precip:	0.00	Average:	- | -	Precip:	-	21	Actual:	102 | 77	Precip:	0.00	Average:	- | -	Precip:
-	22	Actual:	103 | 77	Precip:	0.00	Average:	- | -	Precip:	-	23	Actual:	109 | 79	Precip:	0.00	Average:	- | -	Precip:	-	24	Actual:	108 | 79	Precip:	0.00	Average:
- | -	Precip:	-	25	Actual:	100 | 80	Precip:	0.00	Average:	- | -	Precip:	-	26	Actual:	100 | 79	Precip:	0.00	Average:	- | -	Precip:	-	27	Actual:	99 | 69	Precip:
0.00	Average:	- | -	Precip:	-	28	Actual:	101 | 68	Precip:	0.00	Average:	- | -	Precip:	-	29	Actual:	100 | 77	Precip:	0.00	Average:	- | -	Precip:	-	30	Actual:
99 | 61	Precip:	0.00	Average:	- | -	Precip:	-	31	Actual:	101 | 80	Precip:	0.00	Average:	- | -	Precip:	-									

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear · Mostly Cloudy Partly Sunny · Partly Cloudy Mostly Sunny · Cloudy · Rain · Snow · Hail Flurries · Thunderstorms · Hazy Fog · Sleet · '?' denotes 'chance of' · Unknown

Actual: 90 | 58 — Data Category, Condition, High Temp., Lo Temp.
Precip: 0.00 — Precip. (in inches)
Average: 71 | 53 — Daily Avg. Temp.
Precip: 0.03 — Temps in °F
-60 -30 0 30 60 90 120

Print This Calendar

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
August	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	100	84	69	74	67	55	95	60	22	29.93	29.89	29.84	10	9	7	9	2	-	0.00	
2	99	85	71	70	64	55	90	55	25	30.00	29.96	29.91	10	9	4	12	2	16	0.00	
3	98	86	73	73	69	64	94	60	32	30.08	30.01	29.95	10	8	4	9	2	16	0.00	
4	97	86	76	77	73	68	94	66	38	30.05	29.98	29.89	7	6	3	12	4	17	0.00	Rain
5	98	86	75	74	71	65	92	62	34	29.96	29.91	29.83	7	5	3	8	3	-	0.00	
6	98	86	75	74	71	67	92	63	36	29.95	29.89	29.81	10	8	4	10	5	-	0.00	
7	98	88	78	75	71	64	86	60	33	29.94	29.88	29.81	10	10	10	12	5	16	0.00	
8	98	88	77	76	71	65	92	63	34	29.94	29.90	29.83	10	10	10	12	6	20	0.00	
9	98	86	74	76	71	66	95	63	34	29.99	29.93	29.85	10	10	7	12	5	16	0.00	
10	100	88	75	77	72	65	94	64	33	29.98	29.93	29.85	10	10	3	7	2	9	0.00	
11	99	88	78	76	73	68	89	64	36	29.96	29.90	29.83	10	10	10	12	3	24	0.00	Rain , Thunderstorm
12	99	87	75	76	71	65	92	63	33	29.90	29.85	29.75	10	10	7	9	2	-	0.00	
13	99	87	75	75	70	65	91	62	33	29.87	29.82	29.76	10	10	10	13	4	17	0.00	
14	100	88	77	76	72	66	92	62	33	29.94	29.88	29.83	10	10	7	13	6	18	0.00	
15	100	90	79	77	72	63	90	62	30	30.02	29.96	29.89	10	10	10	10	5	-	0.00	
16	109	92	76	79	72	65	90	64	26	29.99	29.93	29.83	10	10	10	13	3	23	0.00	
17	101	88	76	78	75	70	96	69	36	29.95	29.91	29.83	10	9	5	8	1	-	0.00	
18	104	92	81	78	75	65	88	65	28	29.97	29.92	29.87	10	10	10	21	3	29	0.00	Thunderstorm
19	101	90	79	79	75	69	94	67	35	29.97	29.90	29.83	10	10	10	13	4	21	0.00	
20	101	90	80	80	74	66	95	62	33	29.93	29.86	29.80	10	10	7	17	8	25	0.00	
21	102	90	77	79	74	68	96	64	33	30.01	29.94	29.89	10	10	10	17	7	23	0.00	

22	103	90	77	78	74	69	94	62	34	30.04	29.97	29.88	10	10	7	12	6	-	0.00
23	109	94	79	74	71	65	85	54	26	29.93	29.88	29.77	10	10	10	14	2	22	0.00
24	108	94	79	77	71	63	88	53	24	29.90	29.85	29.78	10	10	10	17	4	26	0.00
25	100	90	80	77	69	62	86	54	30	30.04	29.99	29.93	10	10	10	15	7	21	0.00
26	100	90	79	72	67	62	76	50	29	30.09	30.04	29.96	10	10	10	12	5	18	0.00
27	99	84	69	64	57	48	83	42	17	30.04	29.98	29.88	10	10	10	13	5	21	0.00
28	101	84	68	65	61	54	82	49	25	29.94	29.89	29.79	10	10	10	8	1	-	0.00
29	100	88	77	77	74	66	92	65	33	29.95	29.89	29.85	10	10	10	15	5	29	0.00
30	99	90	81	81	77	72	93	73	42	30.06	30.00	29.94	10	10	10	14	7	22	0.00
31	101	90	80	80	76	68	96	70	33	30.05	30.00	29.91	10	10	7	12	5	17	0.00

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Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: MD/JN	
Date & Time: 23 Aug 10 1155	County Name: Robertson
Stream Name: Pin Oak Creek	
Segment No. or nearest downstream Segment No.: 1242L	
Description of Site: 20385 Downstream from FM 2549	

At any point during the Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the use for the water body the investigator should stop conducting the UAA.

A. Stream Characteristics:

1. Check the following channel flow status that applies.

☐ dry ☐ no flow ☑ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:

☐ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.

☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.

☑ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.

☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.

☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. 0.055 cfs

4. Water Quality Data (Field Parameters)

Field parameters should be collected in accordance with the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1.

Air Temp 35.0 °C 95°F Water Temp 28.4 °C 83.1°F

23 Aug 10 5. Riparian Zone (Mark dominant categories with L (Left Bank) and R (Right Bank). Bank orientation is determined by the investigator facing downstream.)

MD R Forest	____ Urban	____ Rip rap
R Shrub dominated corridor	L 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):

FM 2549 crosses creek. No fence across creek.
II 1205-1207

8. Dominant Primary Substrate

☐Cobble ☐Sand ☑Silt ☐Mud/Clay ☐Gravel ☐Bedrock ☐Rip rap ☐ Concrete

Stream Name_____ Site: _____
Date: _____ Time: _____

B. Primary Contact Water Recreation Evaluation:

- Primary contact recreation draft definition: Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, and whitewater kayaking, canoeing, and rafting, involving a significant risk of ingestion of water.

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?
☐ Yes ☑ No primary contact recreation activities were observed

a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).

☐ Wading-Children ☐ Tubing ☑ No primary contact activities that commonly occur were observed
☐ Wading-Adults ☐ Surfing
☐ Swimming ☐ Whitewater-kayaking, canoeing, rafting
☐ Water skiing ☐ Other: _____
☐ Diving ☐ frequent public swimming-created by publicly owned land or commercial operations

b. Check the number of individuals observed at the site: ☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Water in mouth or nose of the individual ☐ Primary touch: Individual's body (or portion) immersed in water
☐ Secondary touch: fishing, pets and related contact with water ☐ Individual is in a boat touching water
☐ Individual is on shore near water within 8 meters (25ft) of water ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☑ Not applicable

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
Low flow, narrow stream, private property

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
FM2549 crosses creek, Rural area, # 12051207

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: _____

Date: _____ Time: _____

b. Check the number of individuals observed at the site.
☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body well away from water between 8 and 30 meters (100 ft)

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
Low flow, narrow channel #1208

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).
Low flow, narrow channel, depth 0.2 ft. at bridge #1208

6. Describe why there is limited public access (e.g. lack of roads, river or stream banks overgrown, etc.) (Attach photos, maps, etc. for documentation).
N/A except for FM2549, Tall weeds, 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.
Low flow, shallow 0.2 ft deep down from bridge. #1208

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____

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 1210 Downstream 1211 Left Bank 1212 Right Bank 1213

Photos #s (150 meters) Upstream 1214 Downstream 1215 Left Bank 1216 Right Bank 1217

Photos #s (300 meters) Upstream 1218 Downstream 1219 Left Bank 1220 Right Bank 1221

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	10	4	0.64
Pool 2	17	3	0.72
Pool 3	26	4.5	0.85
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	0.17
60 meters	~~0.64~~ 0.47
90 meters	~~0.47~~ 0.10
120 meters	0.29
150 meters	0.72
180 meters	0.55
210 meters	0.09
240 meters	0.11
270 meters	0.14
300 meters	0.18
Average	0.28

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

c) Stream width - Measure (1) the width at one point which represents the typical average width of the 300 meter reach; (2) the width at the narrowest point of the stream within the 300 meter reach; and (3) the width at the widest point of the stream within the 300 meter reach.

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	3
Width at narrowest point of the stream within 300 meter reach	0.4
Width at the widest point of the stream within 300 meter reach	4.5

d) Is there sufficient water within a 300 meter stream reach during base flow conditions to support primary contact recreation? ☐ Yes ☑ No

COMMENTS: Very low flow, Scum on water #1222

2. Non-wadeable Streams

If accessible, take 10 width measurements which represent typical widths of the 300 meter reach. If the water is too deep and not accessible record the estimated average width of the water body.

Also, take photos facing upstream, downstream, left bank, and right bank at .
Photos #s (30 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (150 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

# Measurements	Width (meters)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

☐ Drinking or water in mouth
☐ Bathing
☐ Walking
☐ Jogging/running
☐ Bicycling
☐ Standing
☐ Sitting
☐ Lying down/sleeping
☐ Playing on shoreline
☐ Picnicking
☐ Motorcycle/ATV
☐ Hunting/Trapping
☐ Wildlife watching
☑ None
☐ Other: _____

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☐ Yes ☑ No (If yes, please provide supporting documentation and photos.)
Comments: _____

3. Check any channel obstructions that apply (Attach photos).

☐ Culverts ☐ Fences ☑ Log jams ☐ Rip rap ☐ Water control structure
☐ Barbed wire ☐ Dams ☐ Thick vegetation ☐ Low bridges ☐ None
☐ Utility pipe ☐ Other (specify): #1219

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: FM2549 crosses creek. Private property on each side

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).

☑ Private Property
☐ No trespass sign
☐ Wildlife
☐ Steep slopes
☐ No public access
☐ No roads
☐ Fence
☐ Barge/ship traffic
☐ Industrial
☐ None of the Above
☐ Other: _____

Comments: FM2549 crosses creek. Private property on each side
Scum on water surface, loss of brush in creek. #1222,

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: _____

Stream Name_____ Site: _____
Date: _____ Time: _____

7. Check all water characteristics that apply (Attach photos).
Aquatic Vegetation: ☐ absent ☐ rare ☑ common ☐ abundant - 1208, 1211
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: Low flow, scum on water. #1222, 1210, 1211

8. Vertebrates Observed within 300 meter reach

Snakes	☑ None	☐ slight presence	☐ moderate presence	☐ large presence
Water Dependent Birds	☑ None	☐ slight presence	☐ moderate presence	☐ large presence
Alligators	☑ None	☐ slight presence	☐ moderate presence	☐ large presence

Comments: _____

9. Mammals Observed within 300 meter reach

Wild	☑ None	☐ slight presence	☐ moderate presence	☐ large presence
Domesticated Pets	☑ None	☐ slight presence	☐ moderate presence	☐ large presence
Livestock	☑ None	☐ slight presence	☐ moderate presence	☐ large presence
Feral Hogs	☑ None	☐ slight presence	☐ moderate presence	☐ large presence

Comments: _____

10. Evidence of wild animals or evidence of birds, cattle, hogs, etc.
☑ Tracks ☐ Fecal droppings ☐ Bird nests

11. Garbage Observed

Large garbage in the channel	☑ None	☐ Rare	☐ Common	☐ Abundant
Small garbage in the channel	☐ None	☑ Rare	☐ Common	☐ Abundant
Bank Garbage	☐ None	☑ Rare	☐ Common	☐ Abundant

Briefly describe the kinds of garbage observed: Cans, bottles, Tires,

12. Is the site located in a wildlife preserve with large wildlife (i.e waterfowl) population? ☐ Yes ☑ No

13. Please document any other relevant information regarding recreational activities and the water body in general (for example, area outside of the stream reach evaluated).
Low flow, narrow stream, lots of brush in stream

Field Data Sheet - Basic RUAA Survey
Stream Flow (Discharge) Measurement

Stream:_____ Date:_____
Site:_____ Site
Description:_____
Time Begin:_____ Time End:_____ Meter Type:_____
Observers:_____ Stream Width*:_____ Section Width (W):_____
Observations:_____

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V)		Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
			At Point (ft/s)(m/s)	Average (ft/s)(m/s)	

: Tue Sep 28 2010

20385-23AUG10.WAD
2010/08/23 10:54:13

JN

FlowTracker	(English Units)
P872	ft
3.7	ft/s
2.30	ft^2
0.0%	cfs

Accuracy	1.0%	1.0%
Depth	1.1%	0.0%
Velocity	6.8%	0.0%
Width	0.4%	0.4%
Method	5.7%	-
# Stations	12.2%	-
Overall	**15.1%**	**1.0%**

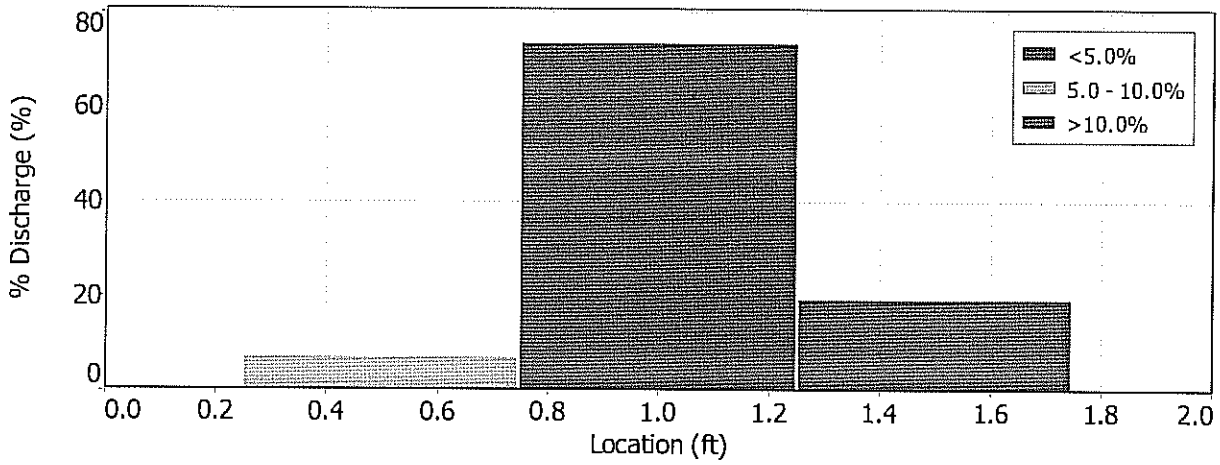
40	5
LEW	2.000
35.4 dB	0.300
83.11 °F	0.150
Mid-Section	0.1843
	0.0553

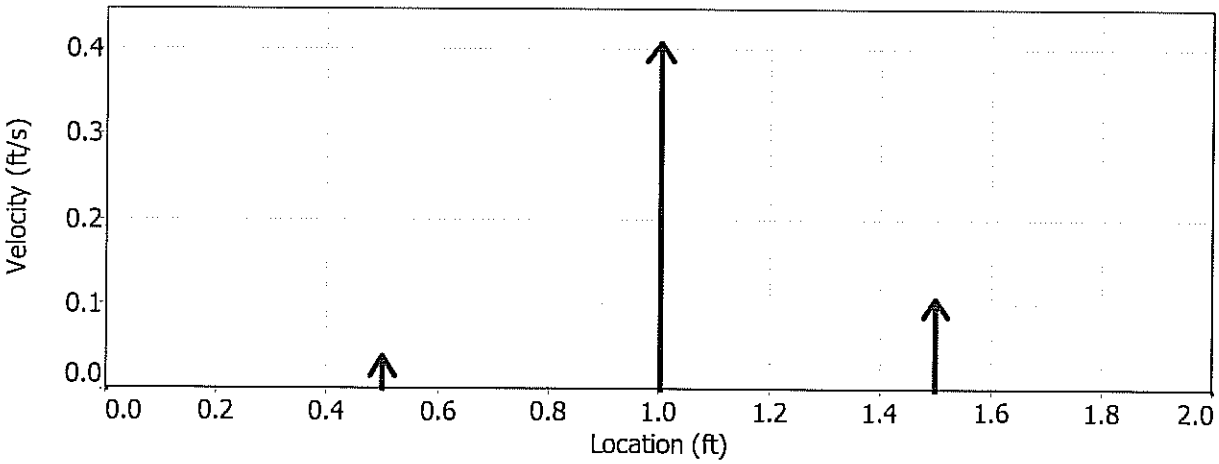
				Depth								
0	10:54	0.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
1	*10:54*	*0.50*	*0.6*	*0.200*	*0.6*	*0.080*	*0.0387*	*1.00*	*0.0387*	*0.100*	*0.0039*	*7.0*
2	10:55	1.00	0.6	0.200	0.6	0.080	0.4065	1.00	0.4065	0.100	0.0407	73.5
3	*10:56*	*1.50*	*0.6*	*0.200*	*0.6*	*0.080*	*0.1076*	*1.00*	*0.1076*	*0.100*	*0.0108*	*19.5*
4	10:56	2.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0

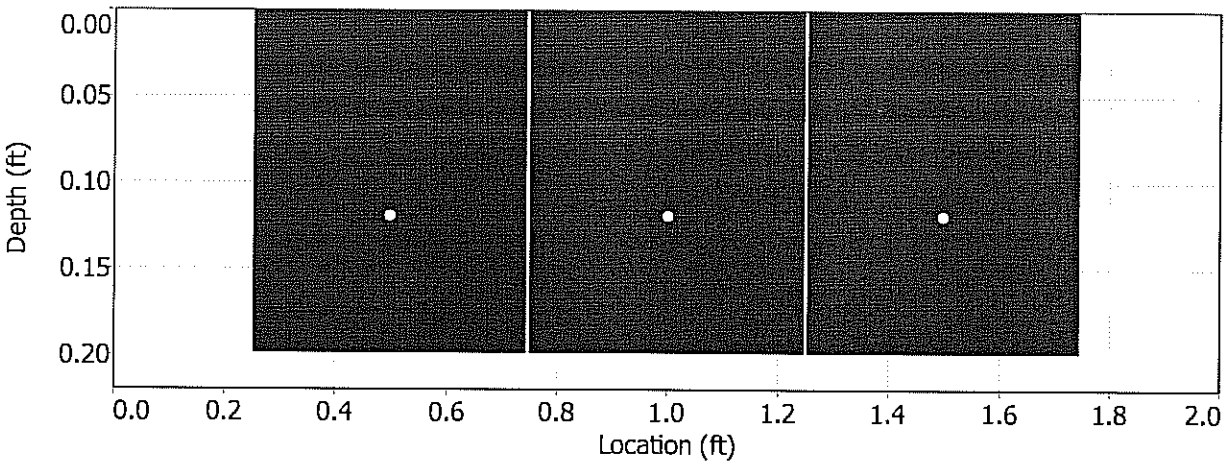
: Tue Sep 28 2010

20385-23AUG10.WAD
2010/08/23 10:54:13

JN







: Tue Sep 28 2010

20385-23AUG10.WAD
2010/08/23 10:54:13

JN

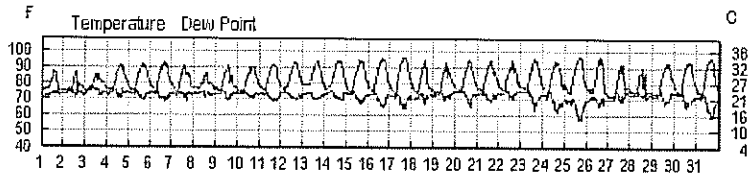
1	0.50	0.6	High angle: 20
		0.6	High SNR variation during measurement: 4.7,6.5
3	1.50	0.6	High angle: 29
		0.6	High SNR variation during measurement: 10.8,8.2
		0.6	Boundary QC is Good; possible boundary interference

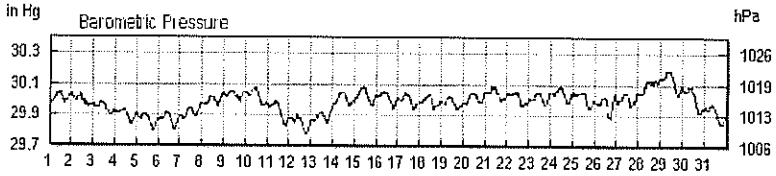
History for Hearne, TX

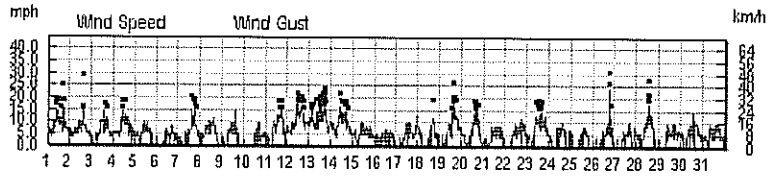
Month of July, 2010

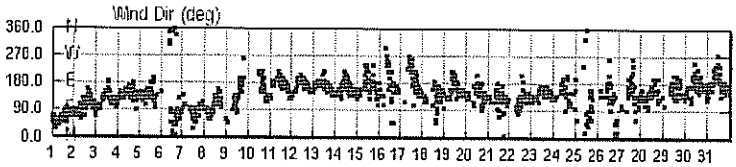
Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	97 °F	93 °F	85 °F	
Mean Temperature	86 °F	84 °F	80 °F	
Min Temperature	78 °F	75 °F	72 °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	21	19	15	579
Growing Degree Days (base 50)	36	34	30	1047
Dew Point:				
Dew Point	77 °F	72 °F	58 °F	
Precipitation:				
Precipitation	0.46 in	0.02 in	0.00 in	0.65 in
Snowdepth	-	-	-	-
Wind:				
Wind	24 mph	4 mph	0 mph	
Gust Wind	34 mph	18 mph	9 mph	
Sea Level Pressure:				
Sea Level Pressure	30.20 in	29.98 in	29.78 in	









Monthly Calendar Overview

« Previous Month « 2009 **July 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
				Actual: 87 | 75	Actual: 87 | 75	Actual: 85 | 75
				Precip: 0.07	Precip: 0.46	Precip: 0.00

																		Average:	- | -	Average:	- | -	Average:	- | -
																		Precip:	-	Precip:	-	Precip:	-
4		5		6		7		8		9		10		11		12		13		14		15	
Actual:	91 | 76	Actual:	92 | 74	Actual:	93 | 75	Actual:	91 | 74	Actual:	86 | 76	Actual:	91 | 75	Actual:	90 | 74	Actual:	92 | 75	Actual:	93 | 76	Actual:	94 | 78	Actual:	94 | 76	Actual:	95 | 75
Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00
Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -
Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-
16		17		18		19		20		21		22		23		24		25		26		27	
Actual:	95 | 75	Actual:	96 | 73	Actual:	95 | 74	Actual:	93 | 74	Actual:	95 | 76	Actual:	95 | 75	Actual:	95 | 76	Actual:	95 | 77	Actual:	94 | 73	Actual:	97 | 74	Actual:	97 | 75	Actual:	92 | 72
Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.00	Precip:	0.01
Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -
Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-	Precip:	-
28		29		30		31																	
Actual:	90 | 74	Actual:	93 | 74	Actual:	94 | 74	Actual:	96 | 73																
Precip:	0.11	Precip:	0.00	Precip:	0.00	Precip:	0.00																
Average:	- | -	Average:	- | -	Average:	- | -	Average:	- | -																
Precip:	-	Precip:	-	Precip:	-	Precip:	-																

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear; Mostly Cloudy Partly Sunny; Partly Cloudy Mostly Sunny; Cloudy; Rain; Snow; Hail Flurries; Thunderstorms; Hazy Fog; Sleet; '?' denotes 'chance of'; Unknown

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

Data Category; Condition; High Temp.; Lo Temp.; Precip. (in inches); Daily Avg. Temp.; Temps in °F; -60 -30 0 30 60 90 120

Print This Calendar

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
July	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	87	81	75	75	73	71	94	80	64	30.04	30.00	29.97	10	6	4	16	8	25	0.07	Rain
2	87	81	75	76	74	72	94	88	63	30.03	29.99	29.95	10	7	4	16	6	29	0.46	Rain
3	85	80	75	77	75	72	95	85	68	29.98	29.94	29.90	10	5	3	14	4	20	0.00	Rain
4	91	84	76	77	74	71	94	75	51	29.94	29.90	29.84	7	5	3	14	7	18	0.00	Rain
5	92	83	74	76	73	70	95	74	48	29.91	29.87	29.80	7	5	3	10	5	9	0.00	
6	93	84	75	75	72	69	94	69	44	29.92	29.87	29.80	7	5	3	8	2	-	0.00	
7	91	82	74	75	73	69	94	75	53	29.94	29.91	29.87	7	5	4	15	3	25	0.00	
8	86	81	76	75	74	72	90	81	63	30.02	29.98	29.95	10	6	3	12	5	16	0.00	Rain
9	91	83	75	76	73	70	94	79	51	30.06	30.02	29.98	7	5	3	15	2	18	0.00	Rain
10	90	82	74	75	73	71	96	77	53	30.08	30.02	29.96	7	4	3	9	1	-	0.00	
11	92	84	75	75	72	69	94	72	46	29.99	29.94	29.83	7	5	4	15	5	20	0.00	
12	93	84	76	75	73	70	92	70	47	29.90	29.86	29.78	7	5	4	21	9	22	0.00	
13	94	86	78	75	73	71	86	68	46	29.92	29.88	29.85	7	4	3	18	11	24	0.00	
14	94	85	76	76	73	70	91	69	46	30.05	30.00	29.95	7	5	3	16	9	22	0.00	
15	95	85	75	76	72	68	95	69	41	30.09	30.02	29.96	7	5	2	10	5	16	0.00	
16	95	85	75	75	71	66	94	67	38	30.06	30.02	29.94	10	6	3	7	2	-	0.00	Rain
17	96	84	73	74	71	65	94	63	35	30.05	30.00	29.94	10	9	3	10	2	16	0.00	

18	95	84	74	75	72	68	90	73	42	30.03	29.99	29.94	10	10	7	12	5	20	0.00	Thunderstorm
19	93	84	74	76	73	70	96	76	48	30.02	29.98	29.94	10	8	0	18	4	26	0.00	Fog
20	95	86	76	76	73	65	95	73	39	30.05	30.01	29.97	10	9	5	15	6	18	0.00	
21	95	85	75	75	73	69	95	71	42	30.09	30.05	29.99	10	9	5	8	2	16	0.00	Rain
22	95	86	76	76	74	70	94	75	45	30.06	30.01	29.96	10	9	7	12	3	20	0.00	
23	95	86	77	77	73	64	94	70	35	30.05	30.01	29.96	10	9	5	14	4	20	0.00	
24	94	84	73	76	71	63	96	69	37	30.09	30.04	29.98	10	9	4	10	3	-	0.00	
25	97	86	74	72	67	58	88	58	26	30.06	30.02	29.94	10	10	7	8	2	-	0.00	Rain
26	97	86	75	73	70	67	87	67	38	30.02	29.97	29.88	10	7	4	24	2	34	0.00	Rain , Thunderstorm
27	92	82	72	76	72	69	95	79	46	30.05	30.00	29.96	10	6	4	10	2	-	0.01	Rain , Thunderstorm
28	90	82	74	76	74	71	95	83	56	30.14	30.09	30.03	10	9	3	17	6	31	0.11	Rain , Thunderstorm
29	93	84	74	77	72	68	96	74	45	30.20	30.14	30.03	10	9	5	10	3	-	0.00	
30	94	84	74	76	72	66	95	71	41	30.09	30.04	29.91	10	9	2	14	5	18	0.00	
31	96	84	73	74	69	59	94	66	29	29.98	29.93	29.85	10	9	5	10	4	-	0.00	

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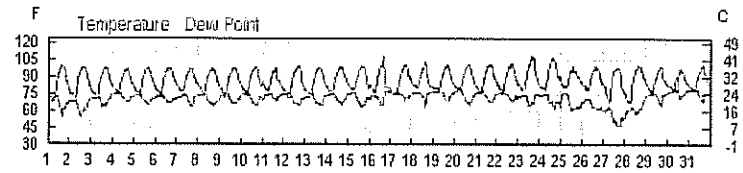
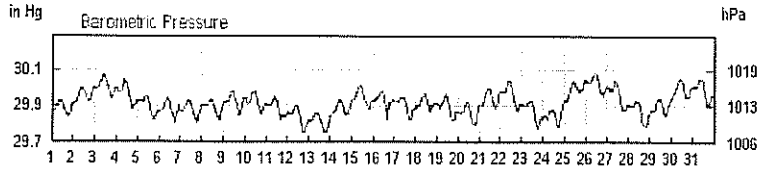
History for Hearne, TX

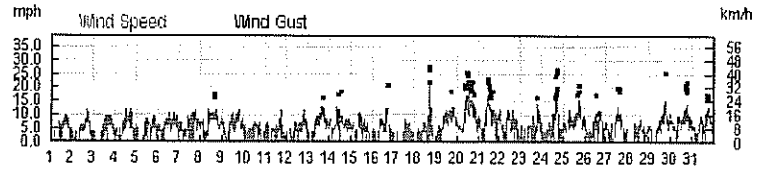
Month of August, 2010

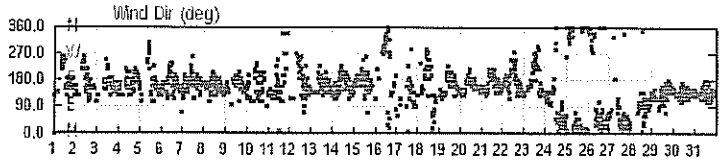
Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	**109** °F	**101** °F	**97** °F	
Mean Temperature	**94** °F	**88** °F	**84** °F	
Min Temperature	**81** °F	**76** °F	**68** °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	29	24	19	730
Growing Degree Days (base 50)	44	38	34	1189
Dew Point:				
Dew Point	**81** °F	**71** °F	**48** °F	
Precipitation:				
Precipitation	**0.00** in	**0.00** in	**0.00** in	**0.00** in
Snowdepth	-	-	-	-
Wind:				
Wind	**21** mph	**4** mph	**0** mph	
Gust Wind	**29** mph	**18** mph	**9** mph	
Sea Level Pressure:				
Sea Level Pressure	**30.09** in	**29.92** in	**29.75** in	









Monthly Calendar Overview

« Previous Month « 2009 **August 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
Actual: 100 | 69	**Actual:** 99 | 71	**Actual:** 98 | 73	**Actual:** 97 | 76	**Actual:** 98 | 75	**Actual:** 98 | 75	**Actual:** 98 | 78
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -

8	9	10	11	12	13	14
Actual: 98 | 77	**Actual:** 98 | 74	**Actual:** 100 | 75	**Actual:** 99 | 78	**Actual:** 99 | 75	**Actual:** 99 | 75	**Actual:** 100 | 77
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
15	16	17	18	19	20	21
Actual: 100 | 79	**Actual:** 109 | 76	**Actual:** 101 | 76	**Actual:** 104 | 81	**Actual:** 101 | 79	**Actual:** 101 | 80	**Actual:** 102 | 77
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
22	23	24	25	26	27	28
Actual: 103 | 77	**Actual:** 109 | 79	**Actual:** 108 | 79	**Actual:** 100 | 80	**Actual:** 100 | 79	**Actual:** 99 | 69	**Actual:** 101 | 68
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
29	30	31				
Actual: 100 | 77	**Actual:** 99 | 81	**Actual:** 101 | 80				
Precip: 0.00	Precip: 0.00	Precip: 0.00				
Average: - | -	**Average:** - | -	**Average:** - | -				
Precip: -	Precip: -	Precip: -				

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear · Mostly Cloudy Partly Sunny · Partly Cloudy Mostly Sunny · Cloudy · Rain · Snow · Hail Flurries · Thunderstorms · Hazy Fog · Sleet · '?' denotes 'chance of' · Unknown

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

Data Category · Condition · High Temp. · Lo Temp. · Precip. (in inches) · Daily Avg. Temp. · Temps in °F · -30 0 30 60 90 120

Print This Calendar

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
August	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	100	84	69	74	67	55	95	60	22	29.93	29.89	29.84	10	9	7	9	2	-	0.00	
2	99	85	71	70	64	55	90	55	25	30.00	29.96	29.91	10	9	4	12	2	16	0.00	
3	98	86	73	73	69	64	94	60	32	30.08	30.01	29.95	10	8	4	9	2	16	0.00	
4	97	86	76	77	73	68	94	66	38	30.05	29.98	29.89	7	6	3	12	4	17	0.00	Rain
5	98	86	75	74	71	65	92	62	34	29.96	29.91	29.83	7	5	3	8	3	-	0.00	
6	98	86	75	74	71	67	92	63	36	29.95	29.89	29.81	10	8	4	10	5	-	0.00	
7	98	88	78	75	71	64	86	60	33	29.94	29.88	29.81	10	10	10	12	5	16	0.00	
8	98	88	77	76	71	65	92	63	34	29.94	29.90	29.83	10	10	10	12	6	20	0.00	
9	98	86	74	76	71	66	95	63	34	29.99	29.93	29.85	10	10	7	12	5	16	0.00	
10	100	88	75	77	72	65	94	64	33	29.98	29.93	29.85	10	10	3	7	2	9	0.00	
11	99	88	78	76	73	68	89	64	36	29.96	29.90	29.83	10	10	10	12	3	24	0.00	Rain , Thunderstorm
12	99	87	75	76	71	65	92	63	33	29.90	29.85	29.75	10	10	7	9	2	-	0.00	
13	99	87	75	75	70	65	91	62	33	29.87	29.82	29.76	10	10	10	13	4	17	0.00	
14	100	88	77	76	72	66	92	62	33	29.94	29.88	29.83	10	10	7	13	6	18	0.00	
15	100	90	79	77	72	63	90	62	30	30.02	29.96	29.89	10	10	10	10	5	-	0.00	
16	109	92	76	79	72	65	90	64	26	29.99	29.93	29.83	10	10	10	13	3	23	0.00	
17	101	88	76	78	75	70	96	69	36	29.95	29.91	29.83	10	9	5	8	1	-	0.00	
18	104	92	81	78	75	65	88	65	28	29.97	29.92	29.87	10	10	10	21	3	29	0.00	Thunderstorm
19	101	90	79	79	75	69	94	67	35	29.97	29.90	29.83	10	10	10	13	4	21	0.00	
20	101	90	80	80	74	66	95	62	33	29.93	29.86	29.80	10	10	7	17	8	25	0.00	
21	102	90	77	79	74	68	96	64	33	30.01	29.94	29.89	10	10	10	17	7	23	0.00	

22	103	90	77	78	74	69	94	62	34	30.04	29.97	29.88	10	10	7	12	6	-	0.00
23	109	94	79	74	71	65	85	54	26	29.93	29.86	29.77	10	10	10	14	2	22	0.00
24	108	94	79	77	71	63	88	53	24	29.90	29.85	29.78	10	10	10	17	4	26	0.00
25	100	90	80	77	69	62	86	54	30	30.04	29.99	29.93	10	10	10	15	7	21	0.00
26	100	90	79	72	67	62	76	50	29	30.09	30.04	29.96	10	10	10	12	5	18	0.00
27	99	84	69	64	57	48	83	42	17	30.04	29.98	29.88	10	10	10	13	5	21	0.00
28	101	84	68	65	61	54	82	49	25	29.94	29.89	29.79	10	10	10	8	1	-	0.00
29	100	88	77	77	74	66	92	65	33	29.95	29.89	29.85	10	10	10	15	5	29	0.00
30	99	90	81	81	77	72	93	73	42	30.06	30.00	29.94	10	10	10	14	7	22	0.00
31	101	90	80	80	76	68	96	70	33	30.05	30.00	29.91	10	10	7	12	5	17	0.00

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Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: RHB/MC – BRA	
Date & Time: 20 Aug 10 1245	County Name: Robertson
Stream Name: Pin Oak Creek	
Segment No. or nearest downstream Segment No.: 1242L	
Description of Site: 20563 Downstream from FM391	

At any point during the Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the use for the water body the investigator should stop conducting the UAA.

A. Stream Characteristics:

1. Check the following channel flow status that applies.

☐ dry ☐ no flow ☑ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:

☐ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.

☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.

☑ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.

☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.

☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. ~~0.790~~ cfs ~~[illegible]~~ 20 Aug 10

0.078

4. Water Quality Data (Field Parameters)

Field parameters should be collected in accordance with the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1.

Air Temp 34.4 °C 94°C Water Temp 26.5 °C 79.8 °F

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
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):

FM391 crosses creek. No fence on downstream side, but has steep bank with Rip Rap. 1154, 1155 1156

8. Dominant Primary Substrate

☐Cobble ☐Sand ☐Silt ☑Mud/Clay ☐Gravel ☐Bedrock ☐Rip rap ☐ Concrete

Stream Name_____ Site: _____
Date: _____ Time: _____

B. Primary Contact Water Recreation Evaluation:
- Primary contact recreation draft definition: Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, and whitewater kayaking, canoeing, and rafting, involving a significant risk of ingestion of water.

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?
☐ Yes ☑ No primary contact recreation activities were observed
a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).

☐ Wading-Children	☐ Tubing	☑ No primary contact activities that commonly occur were observed
☐ Wading-Adults	☐ Surfing	
☐ Swimming	☐ Whitewater-kayaking, canoeing, rafting	
☐ Water skiing	☐ Other: _____	
☐ Diving	☐ frequent public swimming-created by publicly owned land or commercial operations	

b. Check the number of individuals observed at the site: ☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Water in mouth or nose of the individual ☐ Primary touch: Individual's body (or portion) immersed in water
☐ Secondary touch: fishing, pets and related contact with water ☐ Individual is in a boat touching water
☐ Individual is on shore near water within 8 meters (25ft) of water ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☑ Not applicable

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
Shallow stream, Low flow #1151

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
FM 391 crosses creek #1164-1167

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: _____

Date: _____ Time: _____

b. Check the number of individuals observed at the site.
☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body well away from water between 8 and 30 meters (100 ft)

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
low flow, shallow #1157 & Transect pics

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).
low flow, shallow #1157. Steep banks along stream, #1159-1170

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).
#1154-1156. Moderately difficult to reach streambed, 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.
Steep bank with Riprap. 1154-1157

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 1159 Downstream 1160 Left Bank 1161 Right Bank 1162
Photos #s (150 meters) Upstream 1163 Downstream 1164 Left Bank 1165 Right Bank 1166
Photos #s (300 meters) Upstream 1167 Downstream 1168 Left Bank 1169 Right Bank 1170

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	14	3	0.72
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	0.58
60 meters	0.22
90 meters	0.14
120 meters	0.27
150 meters	0.02
180 meters	0.16
210 meters	0.23
240 meters	0.52
270 meters	0.21
300 meters	0.26
Average	0.26

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

c) Stream width - Measure (1) the width at one point which represents the typical average width of the 300 meter reach; (2) the width at the narrowest point of the stream within the 300 meter reach; and (3) the width at the widest point of the stream within the 300 meter reach.

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	2.5
Width at narrowest point of the stream within 300 meter reach	0.74
Width at the widest point of the stream within 300 meter reach	4.5

d) Is there sufficient water within a 300 meter stream reach during base flow conditions to support primary contact recreation? ☐ Yes ☑ No

COMMENTS: shallow, low flow 1 pool > 10m long 0.72 deep.

2. Non-wadeable Streams

If accessible, take 10 width measurements which represent typical widths of the 300 meter reach. If the water is too deep and not accessible record the estimated average width of the water body.

Also, take photos facing upstream, downstream, left bank, and right bank at .
Photos #s (30 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (150 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

# Measurements	Width (meters)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

☐ Drinking or water in mouth
☐ Bathing
☐ Walking
☐ Jogging/running
☐ Bicycling
☐ Standing
☐ Sitting
☐ Lying down/sleeping
☐ Playing on shoreline
☐ Picnicking
☐ Motorcycle/ATV
☐ Hunting/Trapping
☐ Wildlife watching
☑ None
☐ Other: _____

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☐ Yes ☑ No (If yes, please provide supporting documentation and photos.)
Comments: _____

3. Check any channel obstructions that apply (Attach photos).

☐ Culverts ☐ Fences ☐ Log jams ☐ Rip rap ☐ Water control structure
☐ Barbed wire ☐ Dams ☐ Thick vegetation ☐ Low bridges ☑ None
☐ Utility pipe ☐ Other (specify): _____

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest).

☐ Campgrounds
☐ Playgrounds
☑ Rural area
☐ Residential
☐ National forests
☐ Urban/suburban location
☐ Golf Course
☐ Sports Field
☐ Stairs/walkway
☐ Boating access (ramps)
☐ Beach
☑ Bridge crossing
☐ Commercial boating
☐ Trails/paths (hiking/biking)
☐ Paved parking lot
☐ Unimproved parking lot
☑ Roads (paved/unpaved)
☐ Populated area
☐ Docks or rafts
☐ Commercial outfitter
☐ Nearby school
☐ Power Line Corridor
☐ Parks (national/city/county/state)
☐ Public Property
☐ Other: _____
☐ None of the Above

Comments: #1154-1156

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).

☑ Private Property
☐ No trespass sign
☐ Wildlife
☐ Steep slopes
☐ No public access
☐ No roads
☐ Fence
☐ Barge/ship traffic
☐ Industrial
☐ None of the Above
☐ Other: _____

Comments: _____

6. Check any indications of human use (Attach photos).

☐ Roads
☐ Rope swings
☐ Dock/platform
☐ Foot paths/prints
☐ Other: _____
☐ RV/ATV Tracks
☐ Camping Sites
☐ Fire pit/ring
☐ Fishing Tackle
☐ NPDES Discharge
☐ Gates on corridor
☐ Children's toys
☐ Remnant's of Kid's play
☐ Organized event
☑ No Human Presence

Comments: _____

Stream Name_____ Site: _____
Date: _____ Time: _____

7. Check all water characteristics that apply (Attach photos).
Aquatic Vegetation: ☐ absent ☐ rare ☑ common ☐ abundant
Algae Cover: ☐ absent ☐ rare ☑ common ☐ abundant
Odor: ☑ none ☐ rare ☐ common ☐ abundant
Color: ☑ clear ☐ green ☐ red ☐ brown ☐ black
Bottom Deposit: ☐ sludge ☐ solids ☑ fine sediments ☐ none ☐ other
Water Surface: ☑ clear ☐ scum ☐ foam ☐ debris ☐ oil
Other:

8. Vertebrates Observed within 300 meter reach

Snakes	☑ None	☐ slight presence	☐ moderate presence	☐ large presence
Water Dependent Birds	☑ None	☐ slight presence	☐ moderate presence	☐ large presence
Alligators	☑ None	☐ slight presence	☐ moderate presence	☐ large presence

Comments: _____

9. Mammals Observed within 300 meter reach

Wild	☑ None	☐ slight presence	☐ moderate presence	☑ large presence
Domesticated Pets	☑ None	☐ slight presence	☐ moderate presence	☐ large presence
Livestock	☑ None	☐ slight presence	☐ moderate presence	☐ large presence
Feral Hogs	☐ None	☐ slight presence	☑ moderate presence	☑ large presence

Comments: Hog tracks, Hog wallow # 1158 Tracks everywhere.

10. Evidence of wild animals or evidence of birds, cattle, hogs, etc.
☑ Tracks ☐ Fecal droppings ☐ Bird nests

11. Garbage Observed

Large garbage in the channel	☑ None	☐ Rare	☐ Common	☐ Abundant
Small garbage in the channel	☐ None	☑ Rare	☐ Common	☐ Abundant
Bank Garbage	☐ None	☑ Rare	☐ Common	☐ Abundant

Briefly describe the kinds of garbage observed: Bottles & trash at bridge

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).
low flow, shallow stream,

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream:_____ Date:_____

Site:_____ Site

Description:_____

Time Begin:_____ Time End:_____ Meter Type:_____

Observers:_____ Stream Width*:_____ Section Width (W):_____

Observations:_____

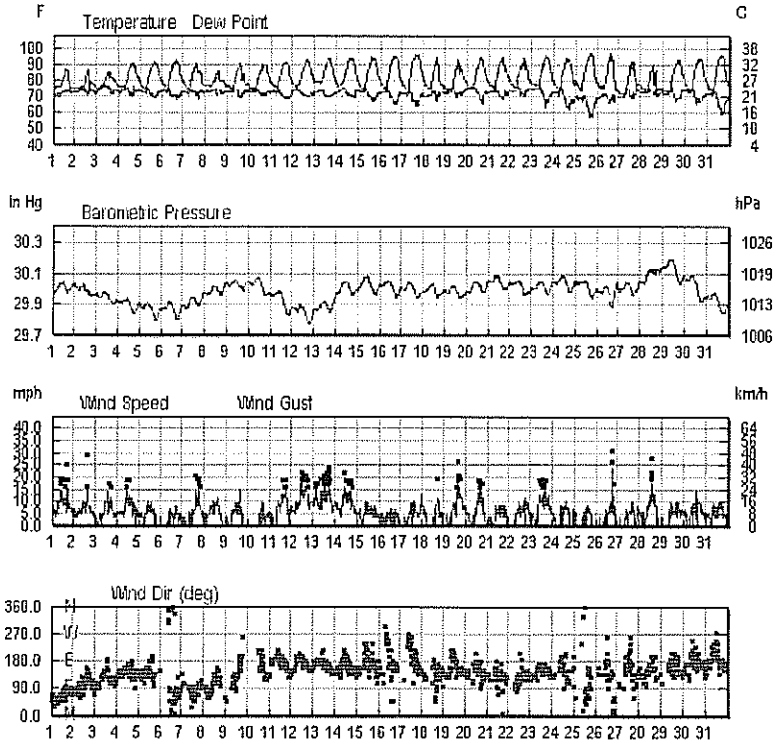
Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V)		Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
			At Point (ft/s)(m/s)	Average (ft/s)(m/s)	

History for Hearne, TX

Month of July, 2010

Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	97 °F	93 °F	85 °F	
Mean Temperature	86 °F	84 °F	80 °F	
Min Temperature	78 °F	75 °F	72 °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	21	19	15	579
Growing Degree Days (base 50)	36	34	30	1047
Dew Point:				
Dew Point	77 °F	72 °F	58 °F	
Precipitation:				
Precipitation	0.46 in	0.02 in	0.00 in	0.65 in
Snowdepth	-	-	-	-
Wind:				
Wind	24 mph	4 mph	0 mph	
Gust Wind	34 mph	18 mph	9 mph	
Sea Level Pressure:				
Sea Level Pressure	30.20 in	29.98 in	29.78 in	



Monthly Calendar Overview

« Previous Month « 2009 **July 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
				Actual: 87 | 75	Actual: 87 | 75	Actual: 85 | 75
				Precip: 0.07	Precip: 0.46	Precip: 0.00

				Average: - | - Precip: -	Average: - | - Precip: -	Average: - | - Precip: -
4 Actual: 91 | 76 Precip: 0.00 Average: - | - Precip: -	5 Actual: 92 | 74 Precip: 0.00 Average: - | - Precip: -	6 Actual: 93 | 75 Precip: 0.00 Average: - | - Precip: -	7 Actual: 91 | 74 Precip: 0.00 Average: - | - Precip: -	8 Actual: 86 | 76 Precip: 0.00 Average: - | - Precip: -	9 Actual: 91 | 75 Precip: 0.00 Average: - | - Precip: -	10 Actual: 90 | 74 Precip: 0.00 Average: - | - Precip: -
11 Actual: 92 | 75 Precip: 0.00 Average: - | - Precip: -	12 Actual: 93 | 76 Precip: 0.00 Average: - | - Precip: -	13 Actual: 94 | 78 Precip: 0.00 Average: - | - Precip: -	14 Actual: 94 | 76 Precip: 0.00 Average: - | - Precip: -	15 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	16 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	17 Actual: 96 | 73 Precip: 0.00 Average: - | - Precip: -
18 Actual: 95 | 74 Precip: 0.00 Average: - | - Precip: -	19 Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	20 Actual: 95 | 76 Precip: 0.00 Average: - | - Precip: -	21 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	22 Actual: 95 | 76 Precip: 0.00 Average: - | - Precip: -	23 Actual: 95 | 77 Precip: 0.00 Average: - | - Precip: -	24 Actual: 94 | 73 Precip: 0.00 Average: - | - Precip: -
25 Actual: 97 | 74 Precip: 0.00 Average: - | - Precip: -	26 Actual: 97 | 75 Precip: 0.00 Average: - | - Precip: -	27 Actual: 92 | 72 Precip: 0.01 Average: - | - Precip: -	28 Actual: 90 | 74 Precip: 0.11 Average: - | - Precip: -	29 Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	30 Actual: 94 | 74 Precip: 0.00 Average: - | - Precip: -	31 Actual: 96 | 73 Precip: 0.00 Average: - | - Precip: -

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear, Mostly Cloudy Partly Sunny, Partly Cloudy Mostly Sunny, Cloudy, Rain, Snow, Hail Flurries, Thunderstorms, Hazy Fog, Sleet, '?' denotes 'chance of', Unknown

Data Category
Condition
High Temp.
Lo Temp.
Precip. (in inches)
Daily Avg. Temp.
Temps in °F

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

-60 -30 0 30 60 90 120

Print This Calendar

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
July	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	87	81	75	75	73	71	94	80	64	30.04	30.00	29.97	10	6	4	16	8	25	0.07	Rain
2	87	81	75	76	74	72	94	88	63	30.03	29.99	29.95	10	7	4	16	6	29	0.46	Rain
3	85	80	75	77	75	72	95	85	68	29.98	29.94	29.90	10	5	3	14	4	20	0.00	Rain
4	91	84	76	77	74	71	94	75	51	29.94	29.90	29.84	7	5	3	14	7	18	0.00	Rain
5	92	83	74	76	73	70	95	74	48	29.91	29.87	29.80	7	5	3	10	5	9	0.00	
6	93	84	75	75	72	69	94	69	44	29.92	29.87	29.80	7	5	3	8	2	-	0.00	
7	91	82	74	75	73	69	94	75	53	29.94	29.91	29.87	7	5	4	15	3	25	0.00	
8	86	81	76	75	74	72	90	81	63	30.02	29.98	29.95	10	6	3	12	5	16	0.00	Rain
9	91	83	75	76	73	70	94	79	51	30.06	30.02	29.98	7	5	3	15	2	18	0.00	Rain
10	90	82	74	75	73	71	96	77	53	30.08	30.02	29.96	7	4	3	9	1	-	0.00	
11	92	84	75	75	72	69	94	72	46	29.99	29.94	29.83	7	5	4	15	5	20	0.00	
12	93	84	76	75	73	70	92	70	47	29.90	29.86	29.78	7	5	4	21	9	22	0.00	
13	94	86	78	75	73	71	86	68	46	29.92	29.88	29.85	7	4	3	18	11	24	0.00	
14	94	85	76	76	73	70	91	69	46	30.05	30.00	29.95	7	5	3	16	9	22	0.00	
15	95	85	75	76	72	68	95	69	41	30.09	30.02	29.96	7	5	2	10	5	16	0.00	
16	95	85	75	75	71	66	94	67	38	30.06	30.02	29.94	10	6	3	7	2	-	0.00	Rain
17	96	84	73	74	71	65	94	63	35	30.05	30.00	29.94	10	9	3	10	2	16	0.00	

18	95	84	74	75	72	68	90	73	42	30.03	29.99	29.94	10	10	7	12	5	20	0.00	Thunderstorm
19	93	84	74	76	73	70	96	76	48	30.02	29.98	29.94	10	8	0	18	4	26	0.00	Fog
20	95	86	76	76	73	65	95	73	39	30.05	30.01	29.97	10	9	5	15	6	18	0.00	
21	95	85	75	75	73	69	95	71	42	30.09	30.05	29.99	10	9	5	8	2	16	0.00	Rain
22	95	86	76	76	74	70	94	75	45	30.06	30.01	29.96	10	9	7	12	3	20	0.00	
23	95	86	77	77	73	64	94	70	35	30.05	30.01	29.96	10	9	5	14	4	20	0.00	
24	94	84	73	76	71	63	96	69	37	30.09	30.04	29.98	10	9	4	10	3	-	0.00	
25	97	86	74	72	67	58	88	58	26	30.06	30.02	29.94	10	10	7	8	2	-	0.00	Rain
26	97	86	75	73	70	67	87	67	38	30.02	29.97	29.88	10	7	4	24	2	34	0.00	Rain , Thunderstorm
27	92	82	72	76	72	69	95	79	46	30.05	30.00	29.96	10	6	4	10	2	-	0.01	Rain , Thunderstorm
28	90	82	74	76	74	71	95	83	56	30.14	30.09	30.03	10	9	3	17	6	31	0.11	Rain , Thunderstorm
29	93	84	74	77	72	68	96	74	45	30.20	30.14	30.03	10	9	5	10	3	-	0.00	
30	94	84	74	76	72	66	95	71	41	30.09	30.04	29.91	10	9	2	14	5	18	0.00	
31	96	84	73	74	69	59	94	66	29	29.98	29.93	29.85	10	9	5	10	4	-	0.00	

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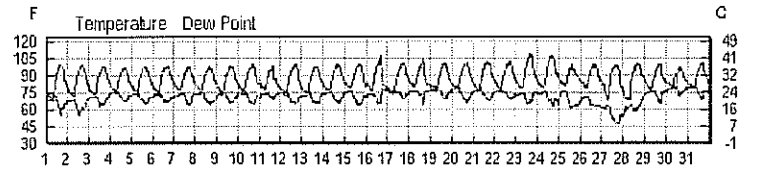
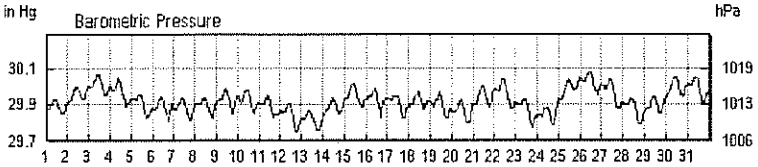
History for Hearne, TX

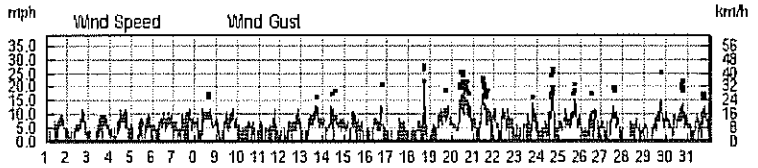
Month of August, 2010

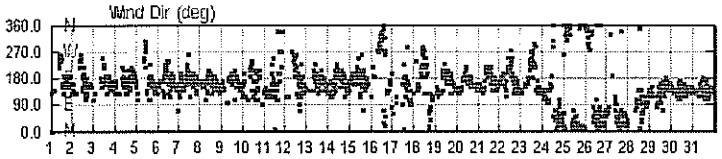
Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	109 °F	101 °F	97 °F	
Mean Temperature	94 °F	88 °F	84 °F	
Min Temperature	81 °F	76 °F	68 °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	29	24	19	730
Growing Degree Days (base 50)	44	38	34	1189
Dew Point:				
Dew Point	81 °F	71 °F	48 °F	
Precipitation:				
Precipitation	0.00 in	0.00 in	0.00 in	0.00 in
Snowdepth	-	-	-	-
Wind:				
Wind	21 mph	4 mph	0 mph	
Gust Wind	29 mph	18 mph	9 mph	
Sea Level Pressure:				
Sea Level Pressure	30.09 in	29.92 in	29.75 in	









Monthly Calendar Overview

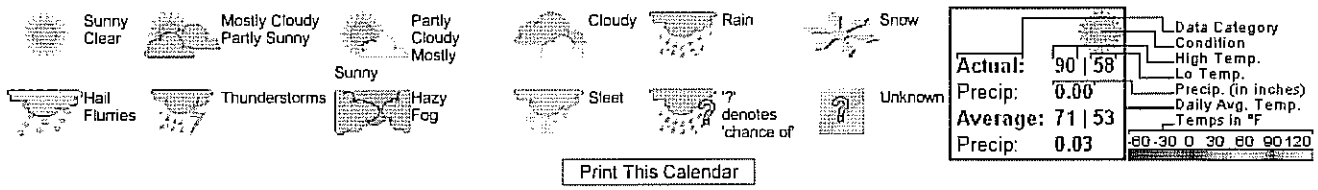
« Previous Month « 2009 **August 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
Actual: 100 | 69	**Actual:** 99 | 71	**Actual:** 98 | 73	**Actual:** 97 | 76	**Actual:** 98 | 75	**Actual:** 98 | 75	**Actual:** 98 | 78
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -

8	9	10	11	12	13	14
Actual: 98 | 77	Actual: 98 | 74	Actual: 100 | 75	Actual: 99 | 78	Actual: 99 | 75	Actual: 99 | 75	Actual: 100 | 77
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
15	16	17	18	19	20	21
Actual: 100 | 79	Actual: 109 | 76	Actual: 101 | 76	Actual: 104 | 81	Actual: 101 | 79	Actual: 101 | 80	Actual: 102 | 77
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
22	23	24	25	26	27	28
Actual: 103 | 77	Actual: 109 | 79	Actual: 108 | 79	Actual: 100 | 80	Actual: 100 | 79	Actual: 99 | 69	Actual: 101 | 68
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
29	30	31				
Actual: 100 | 77	Actual: 99 | 81	Actual: 101 | 80				
Precip: 0.00	Precip: 0.00	Precip: 0.00				
Average: - | -	Average: - | -	Average: - | -				
Precip: -	Precip: -	Precip: -				

« Previous Month « 2009 2011 » Next Month »

Calendar Key:



Print This Calendar

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
August	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	100	84	69	74	67	55	95	60	22	29.93	29.89	29.84	10	9	7	9	2	-	0.00	
2	99	85	71	70	64	55	90	55	25	30.00	29.96	29.91	10	9	4	12	2	16	0.00	
3	98	86	73	73	69	64	94	60	32	30.08	30.01	29.95	10	8	4	9	2	16	0.00	
4	97	86	76	77	73	68	94	66	38	30.05	29.98	29.89	7	6	3	12	4	17	0.00	Rain
5	98	86	75	74	71	65	92	62	34	29.96	29.91	29.83	7	5	3	8	3	-	0.00	
6	98	86	75	74	71	67	92	63	36	29.95	29.89	29.81	10	8	4	10	5	-	0.00	
7	98	88	78	75	71	64	86	60	33	29.94	29.88	29.81	10	10	10	12	5	16	0.00	
8	98	88	77	76	71	65	92	63	34	29.94	29.90	29.83	10	10	10	12	6	20	0.00	
9	98	86	74	76	71	66	95	63	34	29.99	29.93	29.85	10	10	7	12	5	16	0.00	
10	100	88	75	77	72	65	94	64	33	29.98	29.93	29.85	10	10	3	7	2	9	0.00	
11	99	88	78	76	73	68	89	64	36	29.96	29.90	29.83	10	10	10	12	3	24	0.00	Rain , Thunderstorm
12	99	87	75	76	71	65	92	63	33	29.90	29.85	29.75	10	10	7	9	2	-	0.00	
13	99	87	75	75	70	65	91	62	33	29.87	29.82	29.76	10	10	10	13	4	17	0.00	
14	100	88	77	76	72	66	92	62	33	29.94	29.88	29.83	10	10	7	13	6	18	0.00	
15	100	90	79	77	72	63	90	62	30	30.02	29.96	29.89	10	10	10	10	5	-	0.00	
16	109	92	76	79	72	65	90	64	26	29.99	29.93	29.83	10	10	10	13	3	23	0.00	
17	101	88	76	78	75	70	96	69	36	29.95	29.91	29.83	10	9	5	8	1	-	0.00	
18	104	92	81	78	75	65	88	65	28	29.97	29.92	29.87	10	10	10	21	3	29	0.00	Thunderstorm
19	101	90	79	79	75	69	94	67	35	29.97	29.90	29.83	10	10	10	13	4	21	0.00	
20	101	90	80	80	74	66	95	62	33	29.93	29.86	29.80	10	10	7	17	8	25	0.00	
21	102	90	77	79	74	68	96	64	33	30.01	29.94	29.89	10	10	10	17	7	23	0.00	

22	103	90	77	78	74	69	94	62	34	30.04	29.97	29.88	10	10	7	12	6	-	0.00	
23	109	94	79	74	71	65	85	54	26	29.93	29.88	29.77	10	10	10	14	2	22	0.00	
24	108	94	79	77	71	63	88	53	24	29.90	29.85	29.78	10	10	10	17	4	26	0.00	
25	100	90	80	77	69	62	86	54	30	30.04	29.99	29.93	10	10	10	15	7	21	0.00	
26	100	90	79	72	67	62	76	50	29	30.09	30.04	29.96	10	10	10	12	5	18	0.00	
27	99	84	69	64	57	48	83	42	17	30.04	29.98	29.88	10	10	10	13	5	21	0.00	
28	101	84	68	65	61	54	82	49	25	29.94	29.89	29.79	10	10	10	8	1	-	0.00	
29	100	88	77	77	74	66	92	65	33	29.95	29.89	29.85	10	10	10	15	5	29	0.00	
30	99	90	81	81	77	72	93	73	42	30.06	30.00	29.94	10	10	10	14	7	22	0.00	
31	101	90	80	80	76	68	96	70	33	30.05	30.00	29.91	10	10	7	12	5	17	0.00	

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: Tue Sep 28 2010

20563-20AUG10.WAD
2010/08/20 11:51:27

NC

FlowTracker
P872
3.7
2.30
0.0%

(English Units)
ft
ft/s
ft^2
cfs

Accuracy	1.0%	1.0%
Depth	0.7%	2.8%
Velocity	3.5%	14.2%
Width	0.2%	0.2%
Method	3.5%	-
# Stations	5.1%	-
Overall	**7.2%**	**14.5%**

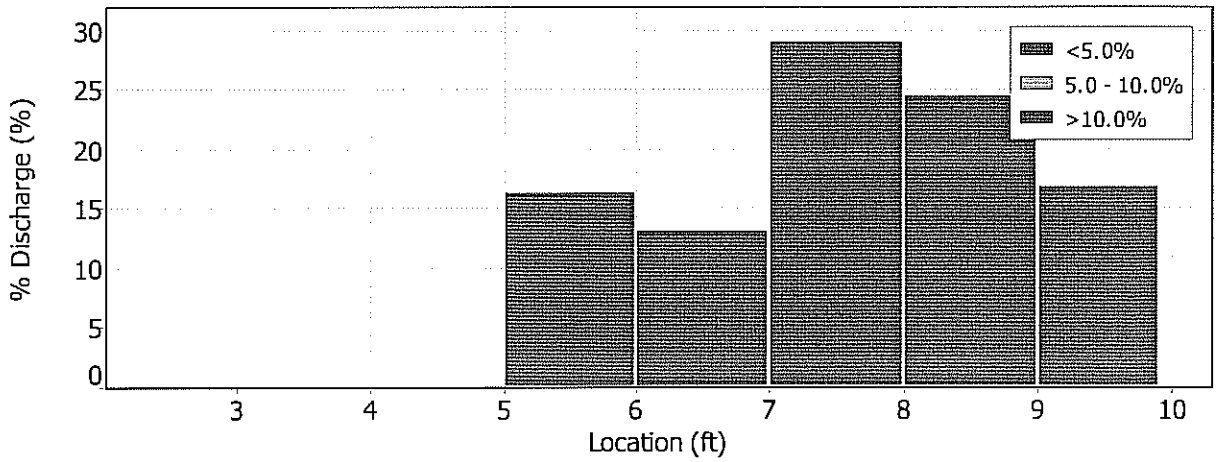
40	10
LEW	8.300
42.9 dB	3.072
83.15 °F	0.370
Mid-Section	0.0253
	0.0777

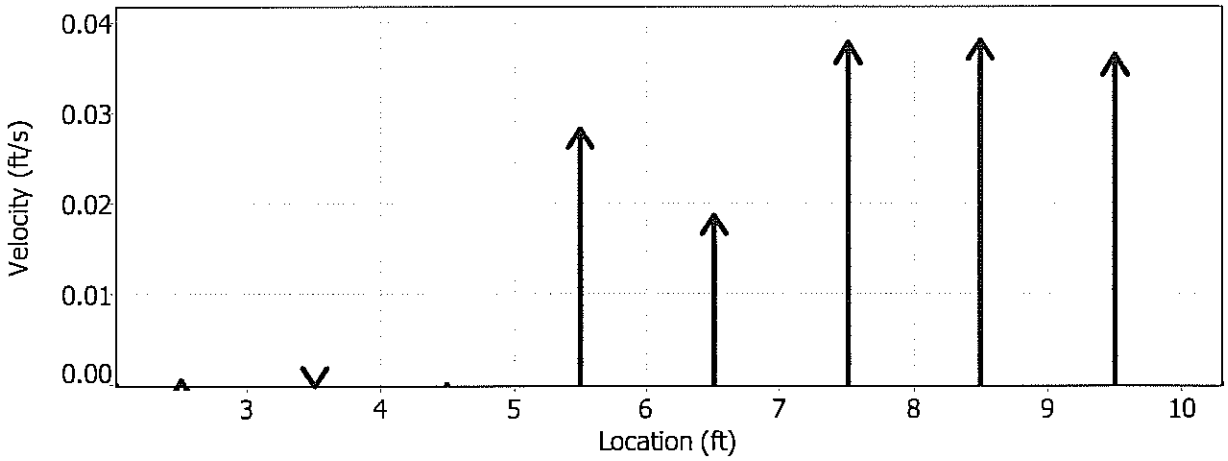
				Depth								
0	11:51	2.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
1	*11:53*	*2.50*	*0.6*	*0.150*	*0.6*	*0.060*	*0.0003*	*1.00*	*0.0003*	*0.112*	*0.0000*	*0.0*
2	*11:55*	*3.50*	*0.6*	*0.200*	*0.6*	*0.080*	*-0.0003*	*1.00*	*-0.0003*	*0.200*	*-0.0001*	*-0.1*
3	*11:56*	*4.50*	*0.6*	*0.300*	*0.6*	*0.120*	*0.0000*	*1.00*	*0.0000*	*0.300*	*0.0000*	*0.0*
4	*11:57*	*5.50*	*0.6*	*0.450*	*0.6*	*0.180*	*0.0282*	*1.00*	*0.0282*	*0.450*	*0.0127*	*16.3*
5	11:58	6.50	0.6	0.550	0.6	0.220	0.0187	1.00	0.0187	0.550	0.0103	13.2
6	11:59	7.50	0.6	0.600	0.6	0.240	0.0377	1.00	0.0377	0.600	0.0226	29.1
7	*12:00*	*8.50*	*0.6*	*0.500*	*0.6*	*0.200*	*0.0381*	*1.00*	*0.0381*	*0.500*	*0.0190*	*24.5*
8	*12:01*	*9.50*	*0.6*	*0.400*	*0.6*	*0.160*	*0.0364*	*1.00*	*0.0364*	*0.360*	*0.0131*	*16.9*
9	12:01	10.30	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0

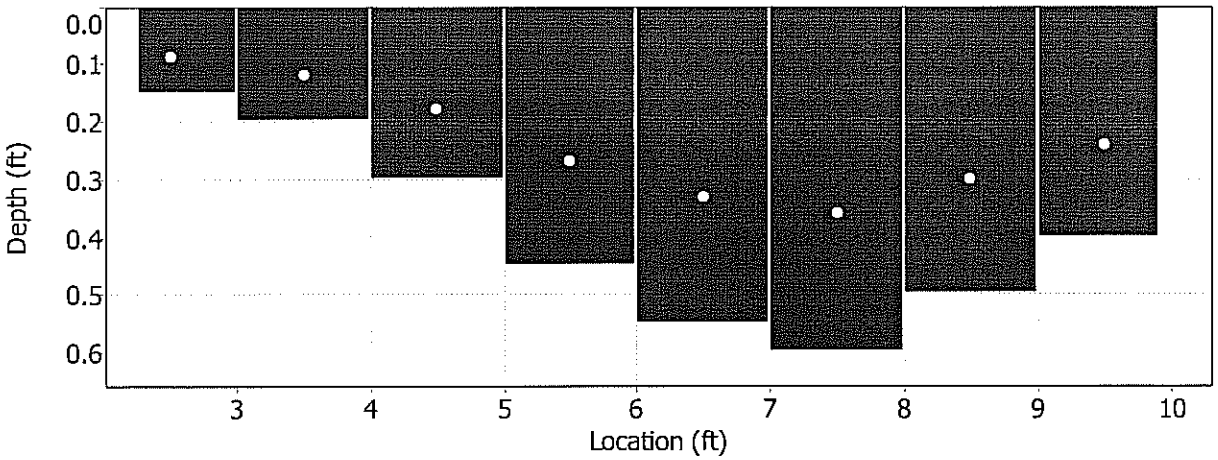
: Tue Sep 28 2010

20563-20AUG10.WAD
2010/08/20 11:51:27

NC







: Tue Sep 28 2010

20563-20AUG10.WAD
2010/08/20 11:51:27

NC

1	2.50	0.6	High number of spikes: 10
		0.6	High differences in beam SNR: 44.7,28.3
		0.6	High SNR variation during measurement: 6.5,2.1
2	3.50	0.6	High number of spikes: 9
		0.6	High SNR variation during measurement: 5.6,5.2
3	4.50	0.6	High number of spikes: 5
		0.6	SNR (58.9) is different from typical SNR (42.9)
		0.6	High standard error: 0.000
4	5.50	0.6	High SNR variation during measurement: 4.7,5.2
7	8.50	0.6	High angle: 24
8	9.50	0.6	High angle: -21

Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: MD/NC - BRA	
Date & Time: 20Aug10 1145	County Name: Robertson
Stream Name: Pin Oak Creek	
Segment No. or nearest downstream Segment No.: 1242 L	
Description of Site: 99910 Downstream from Pin Oak Road	

At any point during the Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the use for the water body the investigator should stop conducting the UAA.

A. Stream Characteristics:

1. Check the following channel flow status that applies.

☑ dry ☑ no flow ☐ low ☐ normal ☐ high ☐ flooded

MD 20Aug10

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.

0

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. N/A cfs

4. Water Quality Data (Field Parameters)

Field parameters should be collected in accordance with the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1.

Air Temp 33.9 °C (93°F) Water Temp N/A °C

5. Riparian Zone (Mark dominant categories with L (Left Bank) and R (Right Bank). Bank orientation is determined by the investigator facing downstream.)

____ Forest	____ Urban	____ Rip rap
____ Shrub dominated corridor	Rh 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

MD 20Aug10

7. Please describe access opportunities or explain why the site is not easily accessible (Attach photos for documentation):

County road crosses creek. Private pasture on all sides. Fences along pastures & road. Brush on fences, #1137-1139, 1142

8. Dominant Primary Substrate

☐Cobble ☐Sand ☐Silt ☑Mud/Clay ☐Gravel ☐Bedrock ☐Rip rap ☐ Concrete

Stream Name_____ Site: _____
Date: _____ Time: _____

B. Primary Contact Water Recreation Evaluation:
- Primary contact recreation draft definition: Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, and whitewater kayaking, canoeing, and rafting, involving a significant risk of ingestion of water.

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?
☐ Yes ☑ No primary contact recreation activities were observed
a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).

☐ Wading-Children	☐ Tubing	☑ No primary contact activities that commonly occur were observed
☐ Wading-Adults	☐ Surfing	
☐ Swimming	☐ Whitewater-kayaking, canoeing, rafting	
☐ Water skiing	☐ Other: _____	
☐ Diving	☐ frequent public swimming-created by publicly owned land or commercial operations	

b. Check the number of individuals observed at the site: ☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Water in mouth or nose of the individual ☐ Primary touch: Individual's body (or portion) immersed in water
☐ Secondary touch: fishing, pets and related contact with water ☐ Individual is in a boat touching water
☐ Individual is on shore near water within 8 meters (25ft) of water ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☑ Not applicable

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
No flow, lots of vegetation in creek at bridge. # 1140, 1141

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
County road crosses creek # 1137-1139, 1142

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: _____

Date: _____ Time: _____

b. Check the number of individuals observed at the site.
☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body well away from water between 8 and 30 meters (100 ft)

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
There are a few muddy pools in reach, shallow & stagnant.
see transect pics # 1142-1153

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).
Dry, no flow # 1140, 1141, 1142-1153

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).
Fence # 1137-1139, 1142

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.
Dry # 1140, 1141, 1142

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 1142 Downstream 1143 Left Bank 1144 Right Bank 1145
Photos #s (150 meters) Upstream 1146 Downstream 1147 Left Bank 1148 Right Bank 1149
Photos #s (300 meters) Upstream 1150 Downstream 1151 Left Bank 1152 Right Bank 1153

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			

Dry - No pools

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	0.0
60 meters	0.0
90 meters	0.0
120 meters	0.0
150 meters	0.0
180 meters	0.10
210 meters	0.0
240 meters	0.0
270 meters	0.0
300 meters	0.0
Average	N/A

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

c) Stream width - Measure (1) the width at one point which represents the typical average width of the 300 meter reach; (2) the width at the narrowest point of the stream within the 300 meter reach; and (3) the width at the widest point of the stream within the 300 meter reach.

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	Dry
Width at narrowest point of the stream within 300 meter reach	Dry
Width at the widest point of the stream within 300 meter reach	Dry

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 _____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

☐ Drinking or water in mouth
☐ Bathing
☐ Walking
☐ Jogging/running
☐ Bicycling
☐ Standing
☐ Sitting
☐ Lying down/sleeping
☐ Playing on shoreline
☐ Picnicking
☐ Motorcycle/ATV
☐ Hunting/Trapping
☐ Wildlife watching
☑ None
☐ Other: _____

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☐ Yes ☑ No (If yes, please provide supporting documentation and photos.)
Comments: _____

3. Check any channel obstructions that apply (Attach photos).

☐ Culverts ☐ Fences ☐ Log jams ☐ Rip rap ☐ Water control structure
☐ Barbed wire ☐ Dams ☐ Thick vegetation ☐ Low bridges ☑ None
☐ Utility pipe ☐ Other (specify): _____

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest).

☐ Campgrounds ☐ Stairs/walkway ☑ Roads (paved/unpaved) ☐ Other: _____
☐ Playgrounds ☐ Boating access (ramps) ☐ Populated area ☐ None of the Above
☑ Rural area ☐ Beach ☐ Docks or rafts
☐ Residential ☐ Bridge crossing ☐ Commercial outfitter
☐ National forests ☐ Commercial boating ☐ Nearby school
☐ Urban/suburban location ☐ Trails/paths (hiking/biking) ☐ Power Line Corridor
☐ Golf Course ☐ Paved parking lot ☐ Parks (national/city/county/state)
☐ Sports Field ☐ Unimproved parking lot ☐ Public Property
Comments: #1137 - 1139

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).

☑ Private Property ☑ Fence
☐ No trespass sign ☐ Barge/ship traffic
☐ Wildlife ☐ Industrial
☐ Steep slopes ☐ None of the Above
☐ No public access ☐ Other: _____
☐ No roads
Comments: 1137 - 1139, 1142, 1150, Dry Creek,

6. Check any indications of human use (Attach photos).

☐ Roads ☐ RV/ATV Tracks ☐ NPDES Discharge ☐ Organized event
☐ Rope swings ☐ Camping Sites ☐ Gates on corridor ☑ No Human Presence
☐ Dock/platform ☐ Fire pit/ring ☐ Children's toys
☐ Foot paths/prints ☐ Fishing Tackle ☐ Remnant's of Kid's play
☐ Other: _____
Comments: _____

Stream Name_____ Site: _____
Date: _____ Time: _____

7. Check all water characteristics that apply (Attach photos).
Aquatic Vegetation: ☐ absent ☐ rare ☐common ☑abundant
Algae Cover: ☑absent ☐ rare ☐common ☐abundant
Odor: ☐ none ☐ rare ☐common ☑abundant
Color: N/A ☐ clear ☐ green ☐red ☐ brown ☐ black
Bottom Deposit: ☑sludge ☐ solids ☐ fine sediments ☐none ☐other
Water Surface: N/A ☐ clear ☐ scum ☐ foam ☐ debris ☐ oil
Other:
#1142, 1140, 1141, 1143, 1144, 1146

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: Cows in creek bed.

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:
Household garbage at bridge

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 Creek

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream:_____ Date:_____

Site:_____ Site

Description:_____

Time Begin:_____ Time End:_____ Meter Type:_____

Observers:_____ Stream Width*:_____ Section Width (W):_____

Observations:_____

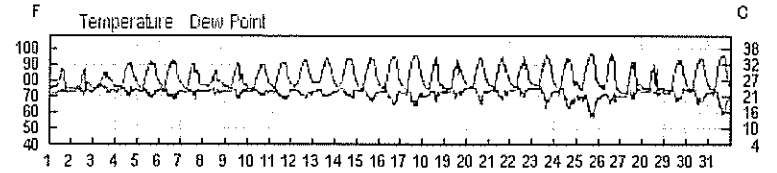
Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V)		Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
			At Point (ft/s)(m/s)	Average (ft/s)(m/s)	

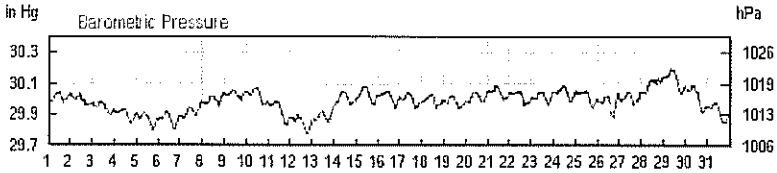
History for Hearne, TX

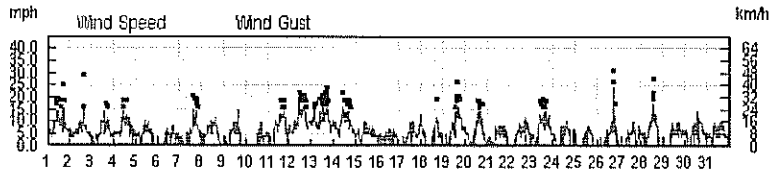
Month of July, 2010

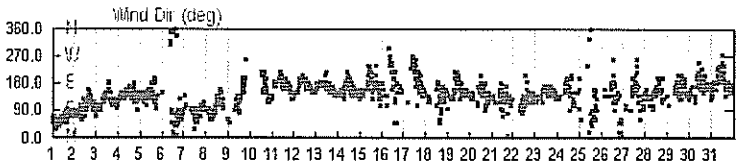
Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	**97** °F	**93** °F	**85** °F	
Mean Temperature	**86** °F	**84** °F	**80** °F	
Min Temperature	**78** °F	**75** °F	**72** °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	21	19	15	579
Growing Degree Days (base 50)	36	34	30	1047
Dew Point:				
Dew Point	**77** °F	**72** °F	**58** °F	
Precipitation:				
Precipitation	**0.46** in	**0.02** in	**0.00** in	**0.65** in
Snowdepth	-	-	-	-
Wind:				
Wind	**24** mph	**4** mph	**0** mph	
Gust Wind	**34** mph	**18** mph	**9** mph	
Sea Level Pressure:				
Sea Level Pressure	**30.20** in	**29.98** in	**29.78** in	









Monthly Calendar Overview

« Previous Month | « 2009 | **July 2010** | 2011 » | Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1 **Actual:** 87 | 75 Precip: 0.07	2 **Actual:** 87 | 75 Precip: 0.46	3 **Actual:** 85 | 75 Precip: 0.00

				Average: - | - Precip: -	Average: - | - Precip: -	Average: - | - Precip: -
4 Actual: 91 | 76 Precip: 0.00 Average: - | - Precip: -	5 Actual: 92 | 74 Precip: 0.00 Average: - | - Precip: -	6 Actual: 93 | 75 Precip: 0.00 Average: - | - Precip: -	7 Actual: 91 | 74 Precip: 0.00 Average: - | - Precip: -	8 Actual: 86 | 76 Precip: 0.00 Average: - | - Precip: -	9 Actual: 91 | 75 Precip: 0.00 Average: - | - Precip: -	10 Actual: 90 | 74 Precip: 0.00 Average: - | - Precip: -
11 Actual: 92 | 75 Precip: 0.00 Average: - | - Precip: -	12 Actual: 93 | 76 Precip: 0.00 Average: - | - Precip: -	13 Actual: 94 | 78 Precip: 0.00 Average: - | - Precip: -	14 Actual: 94 | 76 Precip: 0.00 Average: - | - Precip: -	15 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	16 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	17 Actual: 96 | 73 Precip: 0.00 Average: - | - Precip: -
18 Actual: 95 | 74 Precip: 0.00 Average: - | - Precip: -	19 Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	20 Actual: 95 | 76 Precip: 0.00 Average: - | - Precip: -	21 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	22 Actual: 95 | 76 Precip: 0.00 Average: - | - Precip: -	23 Actual: 95 | 77 Precip: 0.00 Average: - | - Precip: -	24 Actual: 94 | 73 Precip: 0.00 Average: - | - Precip: -
25 Actual: 97 | 74 Precip: 0.00 Average: - | - Precip: -	26 Actual: 97 | 75 Precip: 0.00 Average: - | - Precip: -	27 Actual: 92 | 72 Precip: 0.01 Average: - | - Precip: -	28 Actual: 90 | 74 Precip: 0.11 Average: - | - Precip: -	29 Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	30 Actual: 94 | 74 Precip: 0.00 Average: - | - Precip: -	31 Actual: 96 | 73 Precip: 0.00 Average: - | - Precip: -

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear, Mostly Cloudy Partly Sunny, Partly Cloudy Mostly Sunny, Cloudy, Rain, Snow, Hail Flurries, Thunderstorms, Hazy Fog, Sleet, '?' denotes 'chance of', Unknown

Data Category: Condition; Actual: High Temp. | Lo Temp.; Precip: Precip. (in inches); Average: Daily Avg. Temp.; Precip: Temps in °F

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

-90 -30 0 30 60 90 120

Print This Calendar

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
July	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	87	81	75	75	73	71	94	80	64	30.04	30.00	29.97	10	6	4	16	8	25	0.07	Rain
2	87	81	75	76	74	72	94	86	63	30.03	29.99	29.95	10	7	4	16	6	29	0.46	Rain
3	85	80	75	77	75	72	95	85	68	29.98	29.94	29.90	10	5	3	14	4	20	0.00	Rain
4	91	84	76	77	74	71	94	75	51	29.94	29.90	29.84	7	5	3	14	7	18	0.00	Rain
5	92	83	74	76	73	70	95	74	48	29.91	29.87	29.80	7	5	3	10	5	9	0.00	
6	93	84	75	75	72	69	94	69	44	29.92	29.87	29.80	7	5	3	8	2	-	0.00	
7	91	82	74	75	73	69	94	75	53	29.94	29.91	29.87	7	5	4	15	3	25	0.00	
8	86	81	76	75	74	72	90	81	63	30.02	29.98	29.95	10	6	3	12	5	16	0.00	Rain
9	91	83	75	76	73	70	94	79	51	30.06	30.02	29.98	7	5	3	15	2	18	0.00	Rain
10	90	82	74	75	73	71	96	77	53	30.08	30.02	29.96	7	4	3	9	1	-	0.00	
11	92	84	75	75	72	69	94	72	46	29.99	29.94	29.83	7	5	4	15	5	20	0.00	
12	93	84	76	75	73	70	92	70	47	29.90	29.86	29.78	7	5	4	21	9	22	0.00	
13	94	86	78	75	73	71	86	68	46	29.92	29.88	29.85	7	4	3	18	11	24	0.00	
14	94	85	76	76	73	70	91	69	46	30.05	30.00	29.95	7	5	3	16	9	22	0.00	
15	95	85	75	76	72	68	95	69	41	30.09	30.02	29.96	7	5	2	10	5	16	0.00	
16	95	85	75	75	71	66	94	67	38	30.06	30.02	29.94	10	6	3	7	2	-	0.00	Rain
17	96	84	73	74	71	65	94	63	35	30.05	30.00	29.94	10	9	3	10	2	16	0.00	

18	95	84	74	75	72	68	90	73	42	30.03	29.99	29.94	10	10	7	12	5	20	0.00	Thunderstorm
19	93	84	74	76	73	70	96	76	48	30.02	29.98	29.94	10	8	0	18	4	26	0.00	Fog
20	95	86	76	76	73	65	95	73	39	30.05	30.01	29.97	10	9	5	15	6	18	0.00	
21	95	85	75	75	73	69	95	71	42	30.09	30.05	29.99	10	9	5	8	2	16	0.00	Rain
22	95	86	76	76	74	70	94	75	45	30.06	30.01	29.96	10	9	7	12	3	20	0.00	
23	95	86	77	77	73	64	94	70	35	30.05	30.01	29.96	10	9	5	14	4	20	0.00	
24	94	84	73	76	71	63	96	69	37	30.09	30.04	29.98	10	9	4	10	3	-	0.00	
25	97	86	74	72	67	58	88	58	26	30.06	30.02	29.94	10	10	7	8	2	-	0.00	Rain
26	97	86	75	73	70	67	87	67	38	30.02	29.97	29.88	10	7	4	24	2	34	0.00	Rain , Thunderstorm
27	92	82	72	76	72	69	95	79	46	30.05	30.00	29.96	10	6	4	10	2	-	0.01	Rain , Thunderstorm
28	90	82	74	76	74	71	95	83	56	30.14	30.09	30.03	10	9	3	17	6	31	0.11	Rain , Thunderstorm
29	93	84	74	77	72	68	96	74	45	30.20	30.14	30.03	10	9	5	10	3	-	0.00	
30	94	84	74	76	72	66	95	71	41	30.09	30.04	29.91	10	9	2	14	5	18	0.00	
31	96	84	73	74	69	59	94	66	29	29.98	29.93	29.85	10	9	5	10	4	-	0.00	

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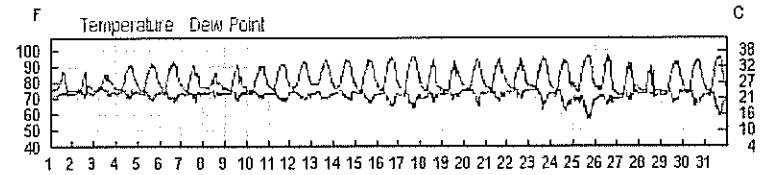
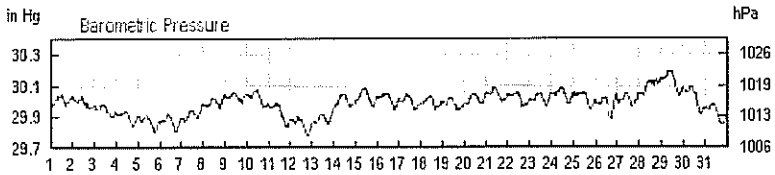
History for Hearne, TX

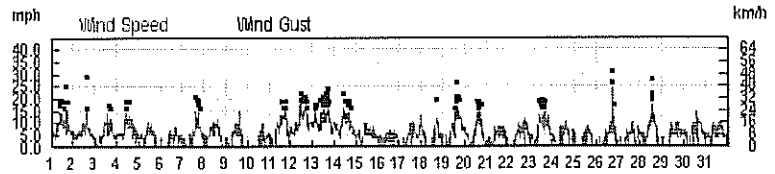
Month of July, 2010

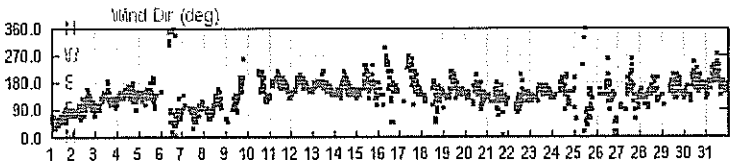
Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	**97** °F	**93** °F	**85** °F	
Mean Temperature	**86** °F	**84** °F	**80** °F	
Min Temperature	**78** °F	**75** °F	**72** °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	21	19	15	579
Growing Degree Days (base 50)	36	34	30	1047
Dew Point:				
Dew Point	**77** °F	**72** °F	**58** °F	
Precipitation:				
Precipitation	**0.46** in	**0.02** in	**0.00** in	**0.65** in
Snowdepth	-	-	-	-
Wind:				
Wind	**24** mph	**4** mph	**0** mph	
Gust Wind	**34** mph	**18** mph	**9** mph	
Sea Level Pressure:				
Sea Level Pressure	**30.20** in	**29.98** in	**29.78** in	









Monthly Calendar Overview

« Previous Month « 2009 **July 2010** 2011 » Next Month »

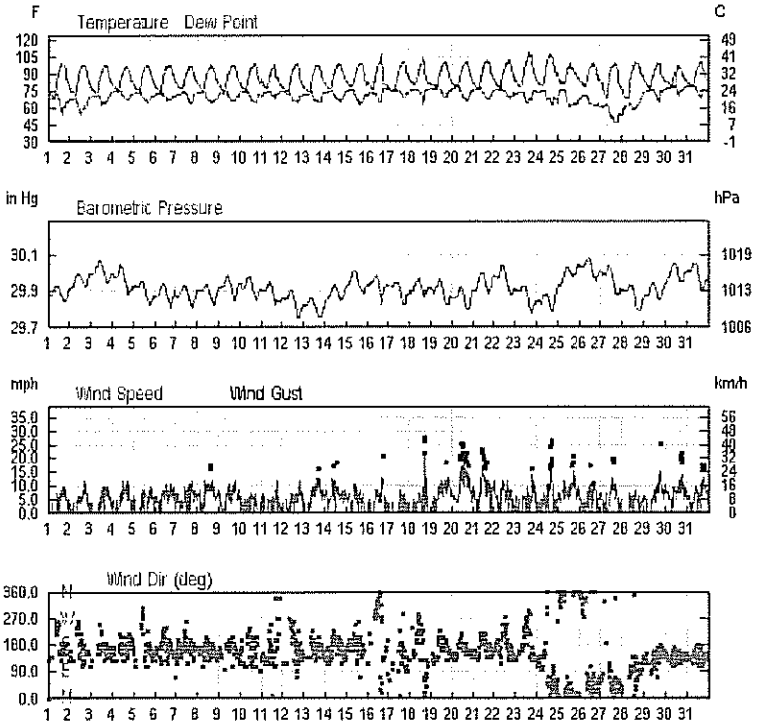
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
				Actual: 87 | 75	**Actual:** 87 | 75	**Actual:** 85 | 75
				Precip: 0.07	Precip: 0.46	Precip: 0.00

History for Hearne, TX

Month of August, 2010

Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	**109** °F	**101** °F	**97** °F	
Mean Temperature	**94** °F	**88** °F	**84** °F	
Min Temperature	**81** °F	**76** °F	**68** °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	29	24	19	730
Growing Degree Days (base 50)	44	38	34	1189
Dew Point:				
Dew Point	**81** °F	**71** °F	**48** °F	
Precipitation:				
Precipitation	**0.00** in	**0.00** in	**0.00** in	**0.00** in
Snowdepth	-	-	-	-
Wind:				
Wind	**21** mph	**4** mph	**0** mph	
Gust Wind	**29** mph	**18** mph	**9** mph	
Sea Level Pressure:				
Sea Level Pressure	**30.09** in	**29.92** in	**29.75** in	



Monthly Calendar Overview

« Previous Month « 2009 **August 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
Actual: 100 | 69	**Actual:** 99 | 71	**Actual:** 98 | 73	**Actual:** 97 | 76	**Actual:** 98 | 75	**Actual:** 98 | 75	**Actual:** 98 | 78
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -

8	9	10	11	12	13	14
Actual: 98 | 77	**Actual:** 98 | 74	**Actual:** 100 | 75	**Actual:** 99 | 78	**Actual:** 99 | 75	**Actual:** 99 | 75	**Actual:** 100 | 77
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
15	16	17	18	19	20	21
Actual: 100 | 79	**Actual:** 109 | 76	**Actual:** 101 | 76	**Actual:** 104 | 81	**Actual:** 101 | 79	**Actual:** 101 | 80	**Actual:** 102 | 77
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
22	23	24	25	26	27	28
Actual: 103 | 77	**Actual:** 109 | 79	**Actual:** 108 | 79	**Actual:** 100 | 80	**Actual:** 100 | 79	**Actual:** 99 | 69	**Actual:** 101 | 68
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
29	30	31				
Actual: 100 | 77	**Actual:** 99 | 81	**Actual:** 101 | 80				
Precip: 0.00	Precip: 0.00	Precip: 0.00				
Average: - | -	**Average:** - | -	**Average:** - | -				
Precip: -	Precip: -	Precip: -				

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear · Mostly Cloudy Partly Sunny · Partly Cloudy Mostly Sunny · Cloudy · Rain · Snow · Hail Flurries · Thunderstorms · Hazy Fog · Sleet · '?' denotes 'chance of' · Unknown

Print This Calendar

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

Data Category · Condition · High Temp. · Lo Temp. · Precip. (in inches) · Daily Avg. Temp. · Temps in °F · -60 -30 0 30 60 90 120

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
August	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	100	84	69	74	67	55	95	60	22	29.93	29.89	29.84	10	9	7	9	2	-	0.00	
2	99	85	71	70	64	55	90	55	25	30.00	29.96	29.91	10	9	4	12	2	16	0.00	
3	98	86	73	73	69	64	94	60	32	30.08	30.01	29.95	10	8	4	9	2	16	0.00	
4	97	86	76	77	73	68	94	66	38	30.05	29.98	29.89	7	6	3	12	4	17	0.00	Rain
5	98	86	75	74	71	65	92	62	34	29.96	29.91	29.83	7	5	3	8	3	-	0.00	
6	98	86	75	74	71	67	92	63	36	29.95	29.89	29.81	10	8	4	10	5	-	0.00	
7	98	88	78	75	71	64	86	60	33	29.94	29.88	29.81	10	10	10	12	5	16	0.00	
8	98	88	77	76	71	65	92	63	34	29.94	29.90	29.83	10	10	10	12	6	20	0.00	
9	98	86	74	76	71	66	95	63	34	29.99	29.93	29.85	10	10	7	12	5	16	0.00	
10	100	88	75	77	72	65	94	64	33	29.98	29.93	29.85	10	10	3	7	2	9	0.00	
11	99	88	78	76	73	68	89	64	36	29.96	29.90	29.83	10	10	10	12	3	24	0.00	Rain , Thunderstorm
12	99	87	75	76	71	65	92	63	33	29.90	29.85	29.75	10	10	7	9	2	-	0.00	
13	99	87	75	75	70	65	91	62	33	29.87	29.82	29.76	10	10	10	13	4	17	0.00	
14	100	88	77	76	72	66	92	62	33	29.94	29.88	29.83	10	10	7	13	6	18	0.00	
15	100	90	79	77	72	63	90	62	30	30.02	29.96	29.89	10	10	10	10	5	-	0.00	
16	109	92	76	79	72	65	90	64	26	29.99	29.93	29.83	10	10	10	13	3	23	0.00	
17	101	88	76	78	75	70	96	69	36	29.95	29.91	29.83	10	9	5	8	1	-	0.00	
18	104	92	81	78	75	65	88	65	28	29.97	29.92	29.87	10	10	10	21	3	29	0.00	Thunderstorm
19	101	90	79	79	75	69	94	67	35	29.97	29.90	29.83	10	10	10	13	4	21	0.00	
20	101	90	80	80	74	66	95	62	33	29.93	29.86	29.80	10	10	7	17	8	25	0.00	
21	102	90	77	79	74	68	96	64	33	30.01	29.94	29.89	10	10	10	17	7	23	0.00	

22	103	90	77	78	74	69	94	62	34	30.04	29.97	29.88	10	10	7	12	6	-	0.00
23	109	94	79	74	71	65	85	54	26	29.93	29.88	29.77	10	10	10	14	2	22	0.00
24	108	94	79	77	71	63	88	53	24	29.90	29.85	29.78	10	10	10	17	4	26	0.00
25	100	90	80	77	69	62	86	54	30	30.04	29.99	29.93	10	10	10	15	7	21	0.00
26	100	90	79	72	67	62	76	50	29	30.09	30.04	29.96	10	10	10	12	5	18	0.00
27	99	84	69	64	57	48	83	42	17	30.04	29.98	29.88	10	10	10	13	5	21	0.00
28	101	84	68	65	61	54	82	49	25	29.94	29.89	29.79	10	10	10	8	1	-	0.00
29	100	88	77	77	74	66	92	65	33	29.95	29.89	29.85	10	10	10	15	5	29	0.00
30	99	90	81	81	77	72	93	73	42	30.06	30.00	29.94	10	10	10	14	7	22	0.00
31	101	90	80	80	76	68	96	70	33	30.05	30.00	29.91	10	10	7	12	5	17	0.00

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Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: AB/NC – BRA	
Date & Time: 29 Aug 10 1045	County Name: Robertson
Stream Name: Pin Oak	
Segment No. or nearest downstream Segment No.: 1242L	
Description of Site: 99911 downstream from Pin Oak Road.	

At any point during the Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the use for the water body the investigator should stop conducting the UAA.

A. Stream Characteristics:

1. Check the following channel flow status that applies.

☐ dry ☑ no flow ☐ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:

☐ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.

☑ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.

☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.

☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.

☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. N/A 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 31.1 °C (88°F) Water Temp N/A °C

5. Riparian Zone (Mark dominant categories with L (Left Bank) and R (Right Bank). Bank orientation is determined by the investigator facing downstream.)

____ Forest	____ Urban	____ Rip rap
RL 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):

County Road crosses creek, private property on both sides of road, fenced upstream, not fenced downstream #1115-1118

8. Dominant Primary Substrate

☐Cobble ☑Sand ☐Silt ☐Mud/Clay ☐Gravel ☐Bedrock ☐Rip rap ☐ Concrete

Stream Name_____ Site: _____
Date: _____ Time: _____

B. Primary Contact Water Recreation Evaluation:
- Primary contact recreation draft definition: Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, and whitewater kayaking, canoeing, and rafting, involving a significant risk of ingestion of water.

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?
☐ Yes ☑ No primary contact recreation activities were observed
a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).

☐ Wading-Children	☐ Tubing	☑ No primary contact activities that commonly occur were observed
☐ Wading-Adults	☐ Surfing	
☐ Swimming	☐ Whitewater-kayaking, canoeing, rafting	
☐ Water skiing	☐ Other: _____	
☐ Diving	☐ frequent public swimming-created by publicly owned land or commercial operations	

b. Check the number of individuals observed at the site: ☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Water in mouth or nose of the individual ☐ Primary touch: Individual's body (or portion) immersed in water
☐ Secondary touch: fishing, pets and related contact with water ☐ Individual is in a boat touching water
☐ Individual is on shore near water within 8 meters (25ft) of water ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☑ Not applicable

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
No flow small pools # 1115, 1116

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
County road crosses creek. No fence on downstream side, fence at 90 m downstream from road, # 1122

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: _____

Date: _____ Time: _____

b. Check the number of individuals observed at the site.
☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body well away from water between 8 and 30 meters (100 ft)

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
No flow, small pools #1115, 1116 at culvert. #1116 is above Transect between pond and road crossing.

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, small pools. #1115, 1116.

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).
thick bush along creek #1119, 1120

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.
No flow, small pools. Creek is dammed immediately upstream. Creek flows through culvert under county road after leaving pond. #1121

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 1132 Downstream 1133 Left Bank 1134 Right Bank 1135

Photos #s (150 meters) Upstream 1123 Downstream 1124 Left Bank 1125 Right Bank 1126

Photos #s (300 meters) Upstream 1128 Downstream 1129 Left Bank 1130 Right Bank 1131

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			

No Pools - Dry

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	0.0
60 meters	0.0
90 meters	0.0
120 meters	0.0
150 meters	0.0
180 meters	0.0
210 meters	0.0
240 meters	0.0
270 meters	0.0
300 meters	0.0
Average	0.0

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

c) Stream width - Measure (1) the width at one point which represents the typical average width of the 300 meter reach; (2) the width at the narrowest point of the stream within the 300 meter reach; and (3) the width at the widest point of the stream within the 300 meter reach.

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	0.0 Dry
Width at narrowest point of the stream within 300 meter reach	0.0 Dry
Width at the widest point of the stream within 300 meter reach	0.0 Dry

d) Is there sufficient water within a 300 meter stream reach during base flow conditions to support primary contact recreation? ☐ Yes ☑ No

COMMENTS: Completely Dry except small shallow pool at culvert & road.

2. Non-wadeable Streams

If accessible, take 10 width measurements which represent typical widths of the 300 meter reach. If the water is too deep and not accessible record the estimated average width of the water body.

Also, take photos facing upstream, downstream, left bank, and right bank at .
Photos #s (30 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (150 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

# Measurements	Width (meters)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

☐ Drinking or water in mouth
☐ Bathing
☐ Walking
☐ Jogging/running
☐ Bicycling
☐ Standing
☐ Sitting
☐ Lying down/sleeping
☐ Playing on shoreline
☐ Picnicking
☐ Motorcycle/ATV
☐ Hunting/Trapping
☐ Wildlife watching
☑ None
☐ Other: _____

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☑ Yes ☐ No (If yes, please provide supporting documentation and photos.)
Comments: Creek is damed upstream from County Road.

3. Check any channel obstructions that apply (Attach photos).

☑ Culverts #1121 ☐ Fences ☐ Log jams ☐ Rip rap ☐ Water control structure
☐ Barbed wire ☑ Dams ☐ Thick vegetation ☐ Low bridges ☐ None
☐ Utility pipe ☐ Other (specify): Pond dam #1136

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: Transect Pics # 1115-1131. Creek is damed #1136
14 20 Aug 10

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).

☑ Private Property
☐ No trespass sign
☐ Wildlife
☐ Steep slopes
☐ No public access
☐ No roads
☑ Fence
☐ Barge/ship traffic
☐ Industrial
☐ None of the Above
☐ Other: _____

Comments: Pics # 1115-1131

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: _____

Stream Name_____ Site: _____
Date: _____ Time: _____

7. Check all water characteristics that apply (Attach photos).

Aquatic Vegetation: ☑ absent ☐ rare ☐ common ☐ abundant
Algae Cover: ☑ absent ☐ rare ☐ common ☐ abundant
Odor: ☑ none ☐ rare ☐ common ☐ abundant
Color: ☐ clear ☐ green ☐ red ☐ brown ☐ black
Bottom Deposit: ☐ sludge ☐ solids ☑ fine sediments ☐ none ☐ other
Water Surface: ☐ clear ☐ scum ☐ foam ☐ debris ☐ oil
Other: Completely dry except pool at Culvert, Small & shallow
See Transect pics #1123-1135

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: Evidence of livestock & hogs

10. Evidence of wild animals or evidence of birds, cattle, hogs, etc.
☑ Tracks ☐ Fecal droppings ☐ Bird nests

MS 20 Aug 10

11. Garbage Observed

Large garbage in the channel	☑ None	☐ Rare	☐ Common	☐ Abundant
Small garbage in the channel	☐ None	☑ Rare	☐ Common	☐ Abundant
Bank Garbage	☐ None	☑ Rare	☐ Common	☐ Abundant

Briefly describe the kinds of garbage observed: beer cans at road, some have washed downstream

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).
Pond upstream from County road, and pond to the ~~so~~ North of creek near end of reach.

Field Data Sheet - Basic RUAA Survey
Stream Flow (Discharge) Measurement

Stream:_____ Date:_____
Site:_____ Site
Description:_____
Time Begin:_____ Time End:_____ Meter Type:_____
Observers:_____ Stream Width*:_____ Section Width (W):_____
Observations:_____

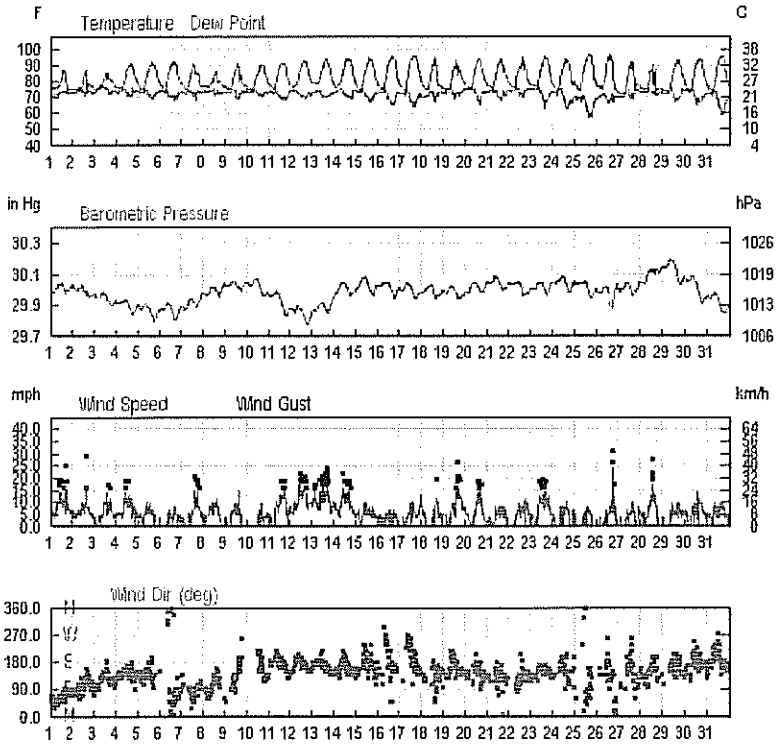
Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V)		Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
			At Point (ft/s)(m/s)	Average (ft/s)(m/s)	

History for Hearne, TX

Month of July, 2010

Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	**97** °F	**93** °F	**85** °F	
Mean Temperature	**86** °F	**84** °F	**80** °F	
Min Temperature	**78** °F	**75** °F	**72** °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	21	19	15	579
Growing Degree Days (base 50)	36	34	30	1047
Dew Point:				
Dew Point	**77** °F	**72** °F	**58** °F	
Precipitation:				
Precipitation	**0.46** in	**0.02** in	**0.00** in	**0.65** in
Snowdepth	-	-	-	-
Wind:				
Wind	**24** mph	**4** mph	**0** mph	
Gust Wind	**34** mph	**18** mph	**9** mph	
Sea Level Pressure:				
Sea Level Pressure	**30.20** in	**29.98** in	**29.78** in	



Monthly Calendar Overview

« Previous Month « 2009 **July 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1 **Actual:** 87 | 75 Precip: 0.07	2 **Actual:** 87 | 75 Precip: 0.46	3 **Actual:** 85 | 75 Precip: 0.00

				Average: - | - Precip: -	Average: - | - Precip: -	Average: - | - Precip: -
4 Actual: 91 | 76 Precip: 0.00 Average: - | - Precip: -	5 Actual: 92 | 74 Precip: 0.00 Average: - | - Precip: -	6 Actual: 93 | 75 Precip: 0.00 Average: - | - Precip: -	7 Actual: 91 | 74 Precip: 0.00 Average: - | - Precip: -	8 Actual: 86 | 76 Precip: 0.00 Average: - | - Precip: -	9 Actual: 91 | 75 Precip: 0.00 Average: - | - Precip: -	10 Actual: 90 | 74 Precip: 0.00 Average: - | - Precip: -
11 Actual: 92 | 75 Precip: 0.00 Average: - | - Precip: -	12 Actual: 93 | 76 Precip: 0.00 Average: - | - Precip: -	13 Actual: 94 | 78 Precip: 0.00 Average: - | - Precip: -	14 Actual: 94 | 76 Precip: 0.00 Average: - | - Precip: -	15 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	16 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	17 Actual: 96 | 73 Precip: 0.00 Average: - | - Precip: -
18 Actual: 95 | 74 Precip: 0.00 Average: - | - Precip: -	19 Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	20 Actual: 95 | 76 Precip: 0.00 Average: - | - Precip: -	21 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	22 Actual: 95 | 76 Precip: 0.00 Average: - | - Precip: -	23 Actual: 95 | 77 Precip: 0.00 Average: - | - Precip: -	24 Actual: 94 | 73 Precip: 0.00 Average: - | - Precip: -
25 Actual: 97 | 74 Precip: 0.00 Average: - | - Precip: -	26 Actual: 97 | 75 Precip: 0.00 Average: - | - Precip: -	27 Actual: 92 | 72 Precip: 0.01 Average: - | - Precip: -	28 Actual: 90 | 74 Precip: 0.11 Average: - | - Precip: -	29 Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	30 Actual: 94 | 74 Precip: 0.00 Average: - | - Precip: -	31 Actual: 96 | 73 Precip: 0.00 Average: - | - Precip: -

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear · Mostly Cloudy Partly Sunny · Partly Cloudy Mostly Sunny · Cloudy · Rain · Snow · Hail Flurries · Thunderstorms · Hazy Fog · Sleet · '?' denotes 'chance of' · Unknown

Data Category
Condition
High Temp.
Lo Temp.
Precip. (in inches)
Daily Avg. Temp.
Temps in °F

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

-60 -30 0 30 60 90 120

Print This Calendar

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
July	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	87	81	75	75	73	71	94	80	64	30.04	30.00	29.97	10	6	4	16	8	25	0.07	Rain
2	87	81	75	76	74	72	94	88	63	30.03	29.99	29.95	10	7	4	16	6	29	0.46	Rain
3	85	80	75	77	75	72	95	85	68	29.98	29.94	29.90	10	5	3	14	4	20	0.00	Rain
4	91	84	76	77	74	71	94	75	51	29.94	29.90	29.84	7	5	3	14	7	18	0.00	Rain
5	92	83	74	76	73	70	95	74	48	29.91	29.87	29.80	7	5	3	10	5	9	0.00	
6	93	84	75	75	72	69	94	69	44	29.92	29.87	29.80	7	5	3	8	2	-	0.00	
7	91	82	74	75	73	69	94	75	53	29.94	29.91	29.87	7	5	4	15	3	25	0.00	
8	86	81	76	75	74	72	90	81	63	30.02	29.98	29.95	10	6	3	12	5	16	0.00	Rain
9	91	83	75	76	73	70	94	79	51	30.06	30.02	29.98	7	5	3	15	2	18	0.00	Rain
10	90	82	74	75	73	71	96	77	53	30.08	30.02	29.96	7	4	3	9	1	-	0.00	
11	92	84	75	75	72	69	94	72	46	29.99	29.94	29.83	7	5	4	15	5	20	0.00	
12	93	84	76	75	73	70	92	70	47	29.90	29.86	29.78	7	5	4	21	9	22	0.00	
13	94	86	78	75	73	71	86	68	46	29.92	29.88	29.85	7	4	3	18	11	24	0.00	
14	94	85	76	76	73	70	91	69	46	30.05	30.00	29.95	7	5	3	16	9	22	0.00	
15	95	85	75	76	72	68	95	69	41	30.09	30.02	29.96	7	5	2	10	5	16	0.00	
16	95	85	75	75	71	66	94	67	38	30.06	30.02	29.94	10	6	3	7	2	-	0.00	Rain
17	96	84	73	74	71	65	94	63	35	30.05	30.00	29.94	10	9	3	10	2	16	0.00	

18	95	84	74	75	72	68	90	73	42	30.03	29.99	29.94	10	10	7	12	5	20	0.00	Thunderstorm
19	93	84	74	76	73	70	96	76	48	30.02	29.98	29.94	10	8	0	16	4	26	0.00	Fog
20	95	86	76	76	73	65	95	73	39	30.05	30.01	29.97	10	9	5	15	6	18	0.00	
21	95	85	75	75	73	69	95	71	42	30.09	30.05	29.99	10	9	5	8	2	16	0.00	Rain
22	95	86	76	76	74	70	94	75	45	30.06	30.01	29.96	10	9	7	12	3	20	0.00	
23	95	86	77	77	73	64	94	70	35	30.05	30.01	29.96	10	9	5	14	4	20	0.00	
24	94	84	73	76	71	63	96	69	37	30.09	30.04	29.98	10	9	4	10	3	-	0.00	
25	97	86	74	72	67	58	88	58	26	30.06	30.02	29.94	10	10	7	8	2	-	0.00	Rain
26	97	86	75	73	70	67	87	67	38	30.02	29.97	29.88	10	7	4	24	2	34	0.00	Rain , Thunderstorm
27	92	82	72	76	72	69	95	79	46	30.05	30.00	29.96	10	6	4	10	2	-	0.01	Rain , Thunderstorm
28	90	82	74	76	74	71	95	83	56	30.14	30.09	30.03	10	9	3	17	6	31	0.11	Rain , Thunderstorm
29	93	84	74	77	72	68	96	74	45	30.20	30.14	30.03	10	9	5	10	3	-	0.00	
30	94	84	74	76	72	66	95	71	41	30.09	30.04	29.91	10	9	2	14	5	18	0.00	
31	96	84	73	74	69	59	94	66	29	29.98	29.93	29.85	10	9	5	10	4	-	0.00	

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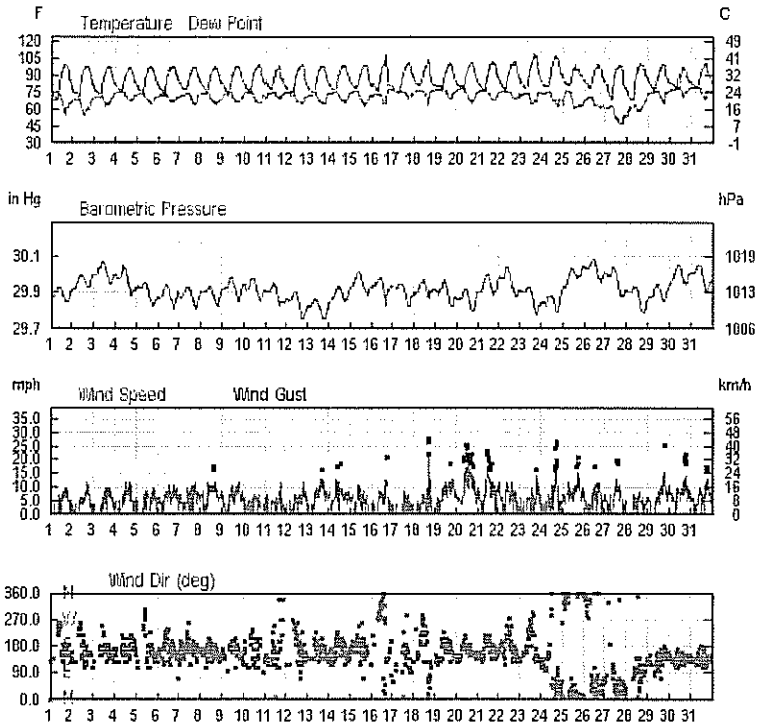
History for Hearne, TX

Month of August, 2010

Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	**109** °F	**101** °F	**97** °F	
Mean Temperature	**94** °F	**88** °F	**84** °F	
Min Temperature	**81** °F	**76** °F	**68** °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	29	24	19	730
Growing Degree Days (base 50)	44	38	34	1189
Dew Point:				
Dew Point	**81** °F	**71** °F	**48** °F	
Precipitation:				
Precipitation	**0.00** in	**0.00** in	**0.00** in	**0.00** in
Snowdepth	-	-	-	-
Wind:				
Wind	**21** mph	**4** mph	**0** mph	
Gust Wind	**29** mph	**18** mph	**9** mph	
Sea Level Pressure:				
Sea Level Pressure	**30.09** in	**29.92** in	**29.75** in	



Monthly Calendar Overview

« Previous Month « 2009 **August 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
Actual: 100 | 69	**Actual:** 99 | 71	**Actual:** 98 | 73	**Actual:** 97 | 76	**Actual:** 98 | 75	**Actual:** 98 | 75	**Actual:** 98 | 78
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -

8	9	10	11	12	13	14
Actual: 98 | 77	**Actual:** 98 | 74	**Actual:** 100 | 75	**Actual:** 99 | 78	**Actual:** 99 | 75	**Actual:** 99 | 75	**Actual:** 100 | 77
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
15	16	17	18	19	20	21
Actual: 100 | 79	**Actual:** 109 | 76	**Actual:** 101 | 76	**Actual:** 104 | 81	**Actual:** 101 | 79	**Actual:** 101 | 80	**Actual:** 102 | 77
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
22	23	24	25	26	27	28
Actual: 103 | 77	**Actual:** 109 | 79	**Actual:** 108 | 79	**Actual:** 100 | 80	**Actual:** 100 | 79	**Actual:** 99 | 69	**Actual:** 101 | 68
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
29	30	31				
Actual: 100 | 77	**Actual:** 99 | 81	**Actual:** 101 | 80				
Precip: 0.00	Precip: 0.00	Precip: 0.00				
Average: - | -	**Average:** - | -	**Average:** - | -				
Precip: -	Precip: -	Precip: -				

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear · Mostly Cloudy Partly Sunny · Partly Cloudy Mostly Sunny · Cloudy · Rain · Snow · Hail Flurries · Thunderstorms · Hazy Fog · Sleet · '?' denotes 'chance of' · Unknown

Print This Calendar

Actual: 90 | 58 — Data Category, Condition, High Temp., Lo Temp.
Precip: 0.00 — Precip. (in inches)
Average: 71 | 53 — Daily Avg. Temp.
Precip: 0.03 — Temps in °F
-60 -30 0 30 60 90 120

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
August	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	100	84	69	74	67	55	95	60	22	29.93	29.89	29.84	10	9	7	9	2	-	0.00	
2	99	85	71	70	64	55	90	55	25	30.00	29.96	29.91	10	9	4	12	2	16	0.00	
3	98	86	73	73	69	64	94	60	32	30.08	30.01	29.95	10	8	4	9	2	16	0.00	
4	97	86	76	77	73	68	94	66	38	30.05	29.98	29.89	7	6	3	12	4	17	0.00	Rain
5	98	86	75	74	71	65	92	62	34	29.96	29.91	29.83	7	5	3	8	3	-	0.00	
6	98	86	75	74	71	67	92	63	36	29.95	29.89	29.81	10	8	4	10	5	-	0.00	
7	98	88	78	75	71	64	86	60	33	29.94	29.88	29.81	10	10	10	12	5	16	0.00	
8	98	88	77	76	71	65	92	63	34	29.94	29.90	29.83	10	10	10	12	6	20	0.00	
9	98	86	74	76	71	66	95	63	34	29.99	29.93	29.85	10	10	7	12	5	16	0.00	
10	100	88	75	77	72	65	94	64	33	29.98	29.93	29.85	10	10	3	7	2	9	0.00	
11	99	88	78	76	73	68	89	64	36	29.96	29.90	29.83	10	10	10	12	3	24	0.00	Rain , Thunderstorm
12	99	87	75	76	71	65	92	63	33	29.90	29.85	29.75	10	10	7	9	2	-	0.00	
13	99	87	75	75	70	65	91	62	33	29.87	29.82	29.76	10	10	10	13	4	17	0.00	
14	100	88	77	76	72	66	92	62	33	29.94	29.88	29.83	10	10	7	13	6	18	0.00	
15	100	90	79	77	72	63	90	62	30	30.02	29.96	29.89	10	10	10	10	5	-	0.00	
16	109	92	76	79	72	65	90	64	26	29.99	29.93	29.83	10	10	10	13	3	23	0.00	
17	101	88	76	78	75	70	96	69	36	29.95	29.91	29.83	10	9	5	8	1	-	0.00	
18	104	92	81	78	75	65	88	65	28	29.97	29.92	29.87	10	10	10	21	3	29	0.00	Thunderstorm
19	101	90	79	79	75	69	94	67	35	29.97	29.90	29.83	10	10	10	13	4	21	0.00	
20	101	90	80	80	74	66	95	62	33	29.93	29.86	29.80	10	10	7	17	8	25	0.00	
21	102	90	77	79	74	68	96	64	33	30.01	29.94	29.89	10	10	10	17	7	23	0.00	

22	103	90	77	76	74	69	94	62	34	30.04	29.97	29.88	10	10	7	12	6	-	0.00
23	109	94	79	74	71	65	85	54	26	29.93	29.88	29.77	10	10	10	14	2	22	0.00
24	108	94	79	77	71	63	88	53	24	29.90	29.85	29.78	10	10	10	17	4	26	0.00
25	100	90	80	77	69	62	86	54	30	30.04	29.99	29.93	10	10	10	15	7	21	0.00
26	100	90	79	72	67	62	76	50	29	30.09	30.04	29.96	10	10	10	12	5	18	0.00
27	99	84	69	64	57	48	83	42	17	30.04	29.98	29.88	10	10	10	13	5	21	0.00
28	101	84	68	65	61	54	82	49	25	29.94	29.89	29.79	10	10	10	8	1	-	0.00
29	100	88	77	77	74	66	92	65	33	29.95	29.89	29.85	10	10	10	15	5	29	0.00
30	99	90	81	81	77	72	93	73	42	30.06	30.00	29.94	10	10	10	14	7	22	0.00
31	101	90	80	80	76	68	96	70	33	30.05	30.00	29.91	10	10	7	12	5	17	0.00

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Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: JN/JG	
Date & Time: 25 Jun 10	County Name: ROBERTSON
Stream Name: MUD 16402	
Segment No. or nearest downstream Segment No.: 1242K	
Description of Site: MUD CREEK @ HWY 6	

At any point during the Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the use for the water body the investigator should stop conducting the UAA.

A. Stream Characteristics:

1. Check the following channel flow status that applies.

☐ dry ☐ no flow ☐ low ☒ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:

☐ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.

☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.

☒ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.

☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.

☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. 0.3 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 32.3 °C Water Temp 25.6 °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	LR 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):

OOB? Steep bank & very muddy

8. Dominant Primary Substrate

☐Cobble ☐Sand ☐Silt ☒Mud/Clay ☐Gravel ☐Bedrock ☐Rip rap ☐ Concrete

22-41

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

B. Primary Contact Water Recreation Evaluation:
- Primary contact recreation draft definition: Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, and whitewater kayaking, canoeing, and rafting, involving a significant risk of ingestion of water.

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?
☐ Yes ☒ No primary contact recreation activities were observed
a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).

☐ Wading-Children	☐ Tubing	☒ No primary contact activities that commonly occur were observed
☐ Wading-Adults	☐ Surfing	
☐ Swimming	☐ Whitewater-kayaking, canoeing, rafting	
☐ Water skiing	☐ Other: _____	
☐ Diving	☐ frequent public swimming-created by publicly owned land or commercial operations	

b. Check the number of individuals observed at the site: ☒ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Water in mouth or nose of the individual ☐ Primary touch: Individual's body (or portion) immersed in water
☐ Secondary touch: fishing, pets and related contact with water ☐ Individual is in a boat touching water
☐ Individual is on shore near water within 8 meters (25ft) of water ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☒ Not applicable

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
Banks are thick mud, very overgrown with vegetation

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
Hwy 6 & Rail Road track corridor

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_____ Site: _____
Date: _____ Time: _____

b. Check the number of individuals observed at the site.
☒ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body well away from water between 8 and 30 meters (100 ft) n/a

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
Overgrown banks & unpleasant substrate

3. If secondary contact recreation activities are observed, how often do water recreational activities occur that do not involve a significant risk of water ingestion? ☐ frequently ☐ infrequently n/a
Please describe how often the activities occur? ☐ Unknown ☐ Never ☐ Daily ☐ Monthly ☐ Yearly n/a

4. If infrequently, what is the reason? ☐ physical characteristics of the water body ☐ limited public access ☐ other
If other, list reasons: n/a

5. Describe the physical characteristics of the water body that hinders the frequency of secondary contact recreation (depth, etc.) (Attach photos or depth measurements, etc. for documentation).
none

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).
limited parking on the side of a very busy road

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.
busy highway

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ FDS Page 3 of 8 _____

E. Stream Channel and Substantial Pools
Please check the following which best describes the river or stream: ☒ Wadeable ☐ Non-wadeable

1. Wadeable Streams
Determine whether or not the average depth at the thalweg is greater than 0.5 meters and if there are substantial pools with a depth of 1 meter or greater. Walk an approximately 300 meter reach (total) at the site and take the following measurements within the 300 meter reach. Measurements should be taken during base flow conditions (sustained or typical dry, warm-weather flows between rainfall events, excluding unusual antecedent conditions of drought or wet weather

Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters.
Photos #s (30 meters) Upstream 0024 Downstream 0025 Left Bank 0026 Right Bank 0027
Photos #s (150 meters) Upstream 0031 Downstream 0032 Left Bank 0033 Right Bank 0034
Photos #s (300 meters) Upstream 0035 Downstream 0036 Left Bank 0037 Right Bank 0038

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	15	9	1.01
Pool 2	30	9	1.50
Pool 3	20	9	>1.8
Pool 4	52	6	0.75
Pool 5	72	6	0.90
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	0.85
60 meters	0.94
90 meters	0.85
120 meters	0.24
150 meters	0.44
180 meters	0.65
210 meters	0.70
240 meters	0.85
270 meters	0.60
300 meters	0.23
Average	0.64

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

c) Stream width - Measure (1) the width at one point which represents the typical average width of the 300 meter reach; (2) the width at the narrowest point of the stream within the 300 meter reach; and (3) the width at the widest point of the stream within the 300 meter reach.

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	5.0
Width at narrowest point of the stream within 300 meter reach	4.0
Width at the widest point of the stream within 300 meter reach	9.0

d) Is there sufficient water within a 300 meter stream reach during base flow conditions to support primary contact recreation? ☑ Yes ☐ No
COMMENTS:

_____

_____

2. Non-wadeable Streams
If accessible, take 10 width measurements which represent typical widths of the 300 meter reach. If the water is too deep and not accessible record the estimated average width of the water body.

Also, take photos facing upstream, downstream, left bank, and right bank at .
Photos #s (30 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (150 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

# Measurements	Width (meters)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

☐ Drinking or water in mouth
☐ Bathing
☐ Walking
☐ Jogging/running
☐ Bicycling
☐ Standing
☐ Sitting
☐ Lying down/sleeping
☐ Playing on shoreline
☐ Picnicking
☐ Motorcycle/ATV
☐ Hunting/Trapping
☐ Wildlife watching
☒ None
☐ Other: _____

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☐ Yes ☒ No (If yes, please provide supporting documentation and photos.)
Comments: _____

3. Check any channel obstructions that apply (Attach photos).

0029

☐ Culverts ☒ Fences ☐ Log jams ☐ Rip rap ☐ Water control structure
☒ Barbed wire ☐ Dams ☒ Thick vegetation ☐ Low bridges ☐ None
☐ Utility pipe ☐ Other (specify):_____

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest).

☐ Campgrounds
☐ Playgrounds
☐ Rural area
☐ Residential
☐ National forests
☐ Urban/suburban location
☐ Golf Course
☐ Sports Field
☐ Stairs/walkway
☐ Boating access (ramps)
☐ Beach
☒ Bridge crossing
☐ Commercial boating
☐ Trails/paths (hiking/biking)
☐ Paved parking lot
☐ Unimproved parking lot
☒ Roads (paved/unpaved)
☐ Populated area
☐ Docks or rafts
☐ Commercial outfitter
☐ Nearby school
☐ Power Line Corridor
☐ Parks (national/city/county/state)
☐ Public Property
☒ Other: Train Tracks
☐ None of the Above

0029
0028

Comments:_____

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).

☐ Private Property
☐ No trespass sign
☐ Wildlife
☐ Steep slopes
☐ No public access
☐ No roads
☒ Fence
☐ Barge/ship traffic
☐ Industrial
☐ None of the Above
☐ Other:_____

Comments:_____

6. Check any indications of human use (Attach photos).

☒ Roads
☐ Rope swings
☐ Dock/platform
☐ Foot paths/prints
☐ Other: _____
☐ RV/ATV Tracks
☐ Camping Sites
☐ Fire pit/ring
☐ Fishing Tackle
☐ NPDES Discharge
☐ Gates on corridor
☐ Children's toys
☐ Remnant's of Kid's play
☐ Organized event
☐ No Human Presence

Comments:_____

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

7. Check all water characteristics that apply (Attach photos).

Aquatic Vegetation: ☐ absent ☐ rare ☒ common ☐ abundant 0029
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 0030
Other:

8. Vertebrates Observed within 300 meter reach

0040 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
0023 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: Household waste dumped around trees

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).

0041 Old rusted out bridge 25m outside of reach

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream:_____ Date:_____

Site:_____ Site

Description:_____

Time Begin:_____ Time End:_____ Meter Type:_____

Observers:_____ Stream Width*:_____ Section Width (W):_____

Observations:_____

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V)		Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
			At Point (ft/s)(m/s)	Average (ft/s)(m/s)	

: Thu Jul 1 2010

16402-25JUN10.WAD
2010/06/25 10:41:41

JN

FlowTracker
P872
3.7
2.30
0.0%

(English Units)
ft
ft/s
ft^2
cfs

Accuracy	1.0%	1.0%
Depth	0.3%	1.4%
Velocity	0.7%	3.1%
Width	0.1%	0.1%
Method	2.0%	-
# Stations	2.5%	-
Overall	**3.5%**	**3.5%**

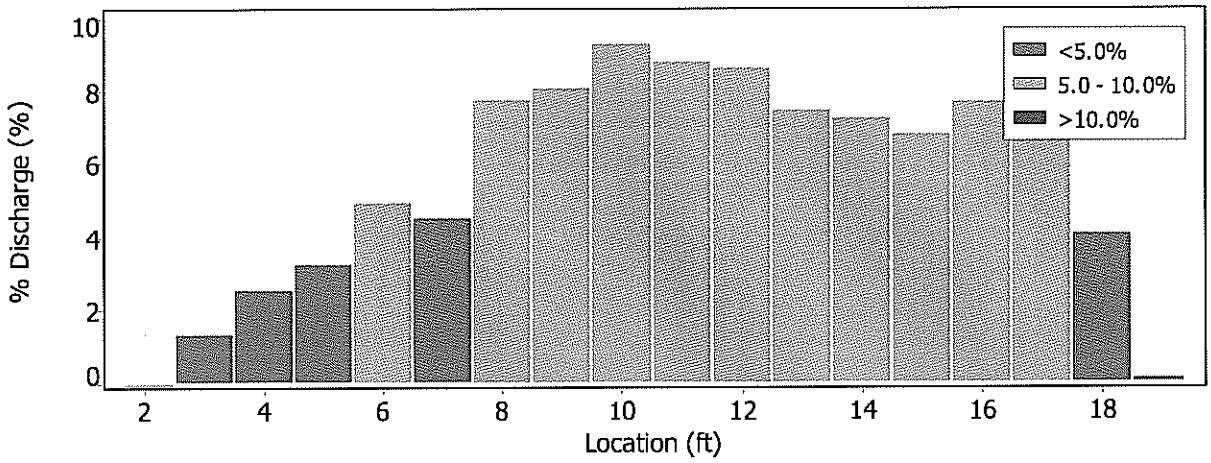
20	20
REW	18.400
36.1 dB	15.188
78.06 °F	0.825
Mid-Section	0.1496
	2.2720

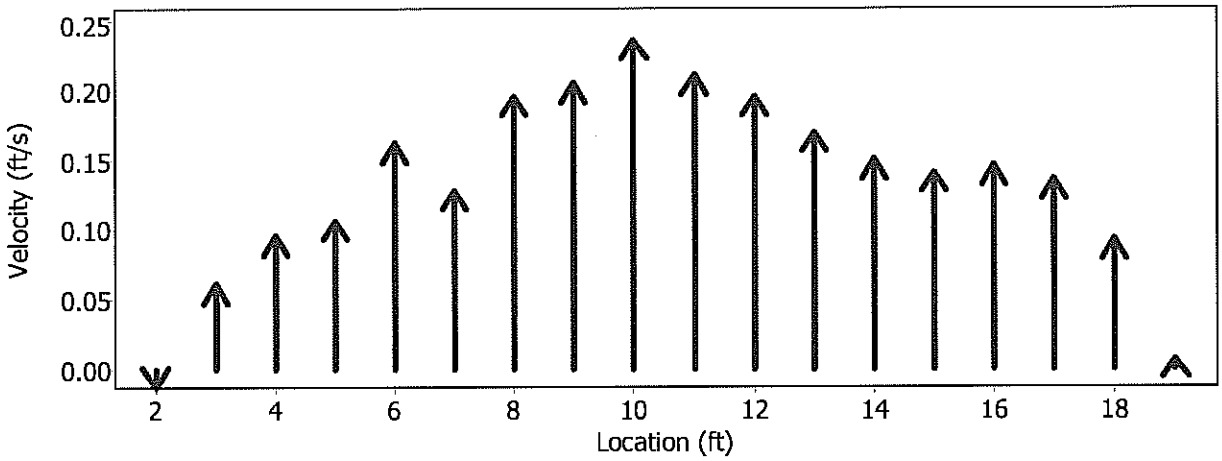
				Depth								
0	10:41	1.30	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
1	10:41	2.00	0.6	0.300	0.6	0.120	-0.0125	1.00	-0.0125	0.255	-0.0032	-0.1
2	*10:42*	*3.00*	*0.6*	*0.500*	*0.6*	*0.200*	*0.0617*	*1.00*	*0.0617*	*0.500*	*0.0308*	*1.4*
3	*10:43*	*4.00*	*0.6*	*0.600*	*0.6*	*0.240*	*0.0961*	*1.00*	*0.0961*	*0.600*	*0.0577*	*2.5*
4	*10:44*	*5.00*	*0.6*	*0.700*	*0.6*	*0.280*	*0.1066*	*1.00*	*0.1066*	*0.700*	*0.0747*	*3.3*
5	*10:44*	*6.00*	*0.6*	*0.700*	*0.6*	*0.280*	*0.1624*	*1.00*	*0.1624*	*0.700*	*0.1137*	*5.0*
6	*10:45*	*7.00*	*0.6*	*0.800*	*0.6*	*0.320*	*0.1283*	*1.00*	*0.1283*	*0.800*	*0.1026*	*4.5*
7	10:46	8.00	0.6	0.900	0.6	0.360	0.1962	1.00	0.1962	0.900	0.1766	7.8
8	10:46	9.00	0.6	0.900	0.6	0.360	0.2054	1.00	0.2054	0.900	0.1848	8.1
9	10:47	10.00	0.6	0.900	0.6	0.360	0.2359	1.00	0.2359	0.900	0.2123	9.3
10	10:48	11.00	0.6	0.950	0.6	0.380	0.2110	1.00	0.2110	0.950	0.2004	8.8
11	10:48	12.00	0.6	1.000	0.6	0.400	0.1962	1.00	0.1962	1.000	0.1962	8.6
12	10:49	13.00	0.6	1.000	0.6	0.400	0.1703	1.00	0.1703	1.000	0.1703	7.5
13	10:49	14.00	0.6	1.100	0.6	0.440	0.1503	1.00	0.1503	1.100	0.1653	7.3
14	10:50	15.00	0.6	1.100	0.6	0.440	0.1414	1.00	0.1414	1.100	0.1556	6.8
15	10:51	16.00	0.6	1.200	0.6	0.480	0.1463	1.00	0.1463	1.200	0.1756	7.7
16	10:51	17.00	0.6	1.200	0.6	0.480	0.1358	1.00	0.1358	1.200	0.1630	7.2
17	10:52	18.00	0.6	1.000	0.6	0.400	0.0928	1.00	0.0928	1.000	0.0928	4.1
18	*10:53*	*19.00*	*0.6*	*0.450*	*0.6*	*0.180*	*0.0072*	*1.00*	*0.0072*	*0.383*	*0.0028*	*0.1*
19	10:53	19.70	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0

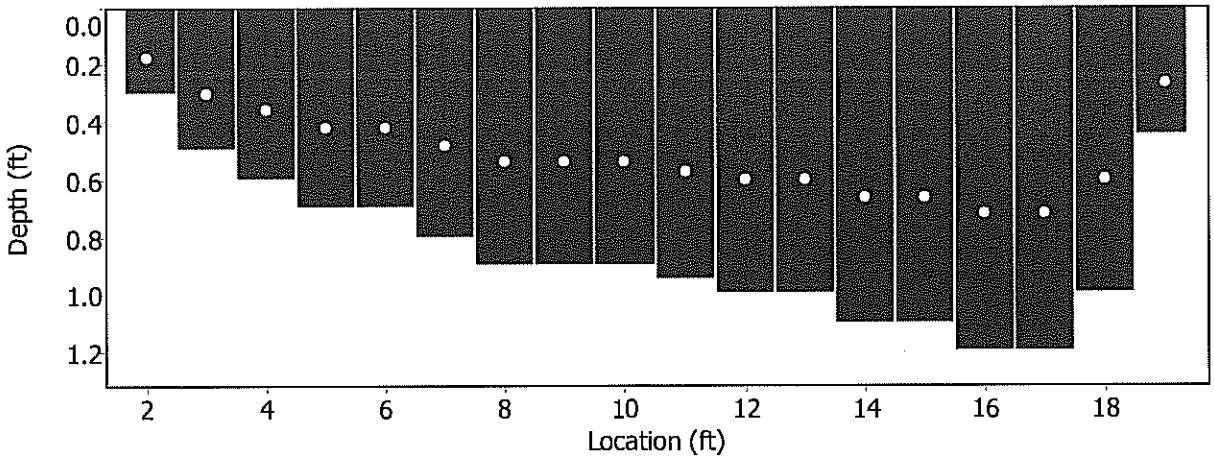
: Thu Jul 1 2010

16402-25JUN10.WAD
2010/06/25 10:41:41

JN







: Thu Jul 1 2010

16402-25JUN10.WAD
2010/06/25 10:41:41

JN

2	3.00	0.6	High angle: -33
		0.6	High SNR variation during measurement: 4.7,5.2
3	4.00	0.6	High angle: -35
4	5.00	0.6	High angle: -36
5	6.00	0.6	High angle: -24
6	7.00	0.6	High angle: -26
18	19.00	0.6	SNR (53.9) is different from typical SNR (36.1)
		0.6	Boundary QC is Good; possible boundary interference

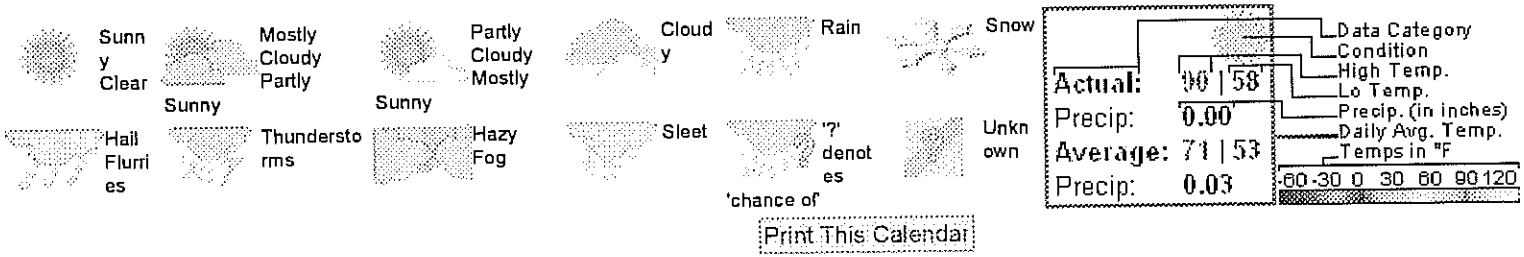
« Previous Month « 2009 June 2010 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1 **Actual:** 91 | 69 Precip: 0.00 **Average:** - | - Precip: -	2 **Actual:** 92 | 69 Precip: 0.47 **Average:** - | - Precip: -	3 **Actual:** 71 | 68 Precip: 0.80 **Average:** - | - Precip: -	4 **Actual:** 89 | 67 Precip: 0.00 **Average:** - | - Precip: -	5 **Actual:** 90 | 71 Precip: 0.00 **Average:** - | - Precip: -
6 **Actual:** 92 | 76 Precip: 0.00 **Average:** - | - Precip: -	7 **Actual:** 90 | 76 Precip: 0.00 **Average:** - | - Precip: -	8 **Actual:** 83 | 73 Precip: 0.00 **Average:** - | - Precip: -	9 **Actual:** 77 | 70 Precip: 2.90 **Average:** - | - Precip: -	10 **Actual:** 91 | 73 Precip: 0.00 **Average:** - | - Precip: -	11 **Actual:** 90 | 77 Precip: 0.00 **Average:** - | - Precip: -	12 **Actual:** 91 | 78 Precip: 0.00 **Average:** - | - Precip: -
13 **Actual:** 91 | 78 Precip: 0.00 **Average:** - | - Precip: -	14 **Actual:** 93 | 77 Precip: 0.00 **Average:** - | - Precip: -	15 **Actual:** 93 | 74 Precip: 0.00 **Average:** - | - Precip: -	16 **Actual:** 93 | 75 Precip: 0.00 **Average:** - | - Precip: -	17 **Actual:** 93 | 74 Precip: 0.00 **Average:** - | - Precip: -	18 **Actual:** 93 | 74 Precip: 0.00 **Average:** - | - Precip: -	19 **Actual:** 93 | 76 Precip: 0.00 **Average:** - | - Precip: -
20 **Actual:** 93 | 74 Precip: 0.00 **Average:** - | - Precip: -	21 **Actual:** 93 | 73 Precip: 0.00 **Average:** - | - Precip: -	22 **Actual:** 93 | 74 Precip: 0.00 **Average:** - | - Precip: -	23 **Actual:** 93 | 73 Precip: 0.00 **Average:** - | - Precip: -	24 **Actual:** 84 | 76 Precip: 0.05 **Average:** - | - Precip: -	25 **Actual:** 94 | 74 Precip: 0.00 **Average:** - | - Precip: -	26 **Actual:** 94 | 74 Precip: 0.00 **Average:** - | - Precip: -
27	28	29	30			

Actual: 94 | 73	**Actual:** 93 | 72	**Actual:** 93 | 77	**Actual:** 85 | 73
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -

« Previous Month « 2009 2011 » Next Month »

Calendar Key:



Print This Calendar

: Top of Page :

Daily Observations

2010 June	Temp. (°F) high	avg	low	Dew Point (°F) high	avg	low	Humidity (%) high	avg	low	Sea Level Pressure (in) high	avg	low	Visibility (mi) high	avg	low	Wind (mph) high	avg	Gust Speed (mph) high	Precip (in) sum	Events
1	91	80	69	71	67	63	94	64	39	29.99	29.92	29.81	10	10	5	10	3	16	0.00	
2	92	81	69	73	69	65	95	69	41	29.87	29.79	29.68	10	8	2	23	5	29	0.47	Rain , Thunderstorm
3	71	70	68	70	69	67	96	94	89	29.78	29.74	29.66	10	7	2	15	5	23	0.80	Rain , Thunderstorm
4	89	78	67	71	68	64	97	74	44	29.84	29.78	29.74	10	6	0	6	0	-	0.00	Fog
5	90	80	71	73	71	68	95	74	54	29.86	29.80	29.76	10	8	4	10	2	-	0.00	
6	92	84	76	77	75	72	95	76	52	29.93	29.89	29.83	7	4	2	7	4	-	0.00	
7	90	83	76	76	75	72	92	77	57	30.02	29.96	29.90	7	4	3	10	4	-	0.00	
8	83	78	73	76	73	68	94	86	63	30.00	29.95	29.92	10	7	5	13	5	18	0.00	Rain
9	77	74	70	74	70	68	96	94	91	30.00	29.94	29.86	10	6	1	13	3	17	2.90	Rain , Thunderstorm
10	91	82	73	77	75	71	96	80	54	29.92	29.87	29.80	7	4	3	18	8	24	0.00	Rain
11	90	84	77	77	74	72	91	76	59	29.93	29.89	29.85	7	5	3	17	10	23	0.00	
12	91	84	78	76	75	73	91	75	56	30.02	29.97	29.93	10	5	4	16	10	25	0.00	Rain
13	91	84	78	76	75	71	91	73	53	30.03	30.00	29.92	7	5	3	14	9	20	0.00	
14	93	85	77	76	73	68	93	72	46	29.98	29.94	29.83	7	5	3	14	8	21	0.00	Rain

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
15	93	84	74	75	72	67	96	72	42	30.03	29.98	29.93	7	5	2	9	4	-	0.00	
16	93	84	75	76	73	68	95	71	44	30.09	30.03	29.98	10	7	2	10	4	-	0.00	
17	93	84	74	76	72	66	95	72	44	30.05	30.02	29.96	10	6	0	14	4	18	0.00	Fog
18	93	84	74	76	73	70	93	71	49	30.05	30.00	29.93	10	10	7	14	6	18	0.00	
19	93	84	76	75	73	69	93	71	44	30.09	30.03	29.99	10	9	7	10	6	-	0.00	
20	93	84	74	75	72	69	94	69	45	30.06	30.01	29.93	10	10	7	10	4	17	0.00	
21	93	83	73	74	71	70	92	69	47	30.04	29.99	29.94	10	10	10	9	4	-	0.00	
22	93	84	74	75	72	67	92	67	42	30.06	30.00	29.97	10	10	10	8	3	-	0.00	
23	93	83	73	74	72	68	94	69	43	30.07	30.02	29.98	10	10	7	8	3	-	0.00	
24	84	80	76	76	74	72	91	83	68	30.10	30.05	29.99	10	10	5	10	3	-	0.05	Rain
25	94	84	74	76	72	68	95	71	44	30.08	30.01	29.94	10	10	5	10	3	16	0.00	
26	94	84	74	75	73	69	95	69	46	30.01	29.94	29.83	10	10	5	12	6	17	0.00	
27	94	84	73	74	71	66	94	67	39	29.90	29.84	29.74	10	10	7	13	5	-	0.00	
28	93	82	72	76	72	68	94	70	43	29.88	29.83	29.78	10	8	5	10	4	17	0.00	
29	93	85	77	75	73	70	91	78	49	29.94	29.90	29.86	10	7	4	15	4	24	0.00	Rain , Thunderstorm
30	85	79	73	74	73	71	92	81	66	29.99	29.95	29.92	7	6	4	13	5	17	0.00	Rain

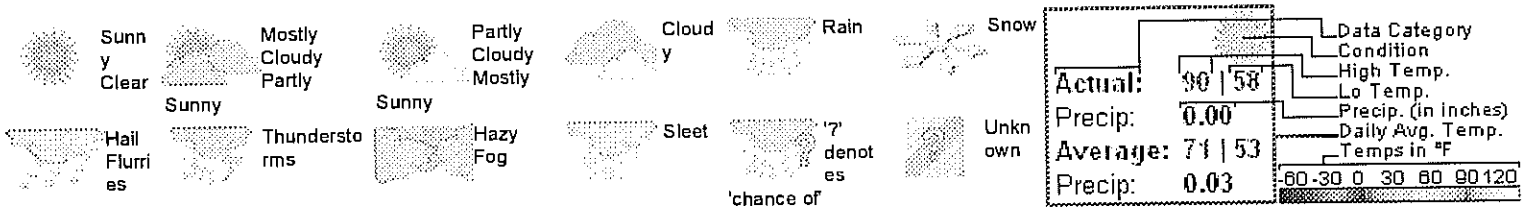
« Previous Month « 2009 May 2010 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1 **Actual:** 82 | 67 Precip: 0.00 **Average:** - | - Precip: -
2 **Actual:** 83 | 55 Precip: 0.00 **Average:** - | - Precip: -	3 **Actual:** 88 | 49 Precip: 0.00 **Average:** - | - Precip: -	4 **Actual:** 87 | 47 Precip: 0.00 **Average:** - | - Precip: -	5 **Actual:** 93 | 54 Precip: 0.00 **Average:** - | - Precip: -	6 **Actual:** 91 | 62 Precip: 0.00 **Average:** - | - Precip: -	7 **Actual:** 92 | 69 Precip: 0.00 **Average:** - | - Precip: -	8 **Actual:** 74 | 67 Precip: 0.00 **Average:** - | - Precip: -
9 **Actual:** 71 | 66 Precip: 0.00 **Average:** - | - Precip: -	10 **Actual:** 88 | 69 Precip: 0.00 **Average:** - | - Precip: -	11 **Actual:** 92 | 71 Precip: 0.00 **Average:** - | - Precip: -	12 **Actual:** 89 | 71 Precip: 0.00 **Average:** - | - Precip: -	13 **Actual:** 89 | 73 Precip: 0.00 **Average:** - | - Precip: -	14 **Actual:** 83 | 65 Precip: 1.67 **Average:** - | - Precip: -	15 **Actual:** 79 | 63 Precip: 0.38 **Average:** - | - Precip: -
16 **Actual:** 86 | 62 Precip: 0.00 **Average:** - | - Precip: -	17 **Actual:** 89 | 66 Precip: 0.47 **Average:** - | - Precip: -	18 **Actual:** 86 | 64 Precip: 0.00 **Average:** - | - Precip: -	19 **Actual:** 88 | 71 Precip: 0.00 **Average:** - | - Precip: -	20 **Actual:** 88 | 74 Precip: 0.00 **Average:** - | - Precip: -	21 **Actual:** 90 | 72 Precip: 0.00 **Average:** - | - Precip: -	22 **Actual:** 90 | 73 Precip: 0.00 **Average:** - | - Precip: -
23	24	25	26	27	28	29

Actual: 90 | 76 Precip: 0.00 **Average:** - | - Precip: -	**Actual:** 88 | 72 Precip: 0.00 **Average:** - | - Precip: -	**Actual:** 89 | 71 Precip: 0.00 **Average:** - | - Precip: -	**Actual:** 89 | 65 Precip: 0.00 **Average:** - | - Precip: -	**Actual:** 91 | 66 Precip: 0.00 **Average:** - | - Precip: -	**Actual:** 93 | 68 Precip: 0.00 **Average:** - | - Precip: -	**Actual:** 94 | 68 Precip: 0.00 **Average:** - | - Precip: -
30 **Actual:** 93 | 70 Precip: 0.00 **Average:** - | - Precip: -	31 **Actual:** 92 | 70 Precip: 0.00 **Average:** - | - Precip: -					

« Previous Month « 2009 2011 » Next Month »

Calendar Key:



Print This Calendar

: Top of Page :

Daily Observations

2010 May	Temp. (°F) high	avg	low	Dew Point (°F) high	avg	low	Humidity (%) high	avg	low	Sea Level Pressure (in) high	avg	low	Visibility (mi) high	avg	low	Wind (mph) high	avg	Gust Speed (mph) high	Precip (in) sum	Events
1	82	74	67	72	65	56	96	73	54	29.60	29.55	29.48	10	8	2	16	6	21	0.00	
2	83	69	55	56	49	38	92	57	20	29.78	29.72	29.64	10	10	10	12	3	16	0.00	Rain
3	88	68	49	54	48	42	90	54	20	30.03	29.92	29.84	10	9	5	18	3	25	0.00	Rain
4	87	67	47	57	49	42	98	59	22	30.06	29.98	29.85	10	9	1	9	2	-	0.00	
5	93	74	54	56	51	48	87	47	22	29.92	29.87	29.83	10	10	10	15	7	20	0.00	
6	91	76	62	64	61	57	94	64	34	29.91	29.86	29.78	10	10	7	16	8	24	0.00	
7	92	80	69	70	67	65	89	67	42	29.92	29.85	29.77	10	9	7	15	11	21	0.00	
8	74	70	67	58	49	43	60	47	35	30.26	30.17	30.09	10	10	10	15	10	25	0.00	
9	71	68	66	57	47	43	61	46	40	30.20	30.13	30.05	10	10	10	15	7	17	0.00	
10	88	78	69	68	66	64	88	68	45	30.01	29.91	29.79	10	10	7	23	12	31	0.00	
11	92	82	71	70	66	59	90	64	37	29.92	29.86	29.79	10	9	5	23	11	31	0.00	
12	89	80	71	70	67	64	89	67	46	29.90	29.84	29.79	10	9	7	24	14	37	0.00	
13	89	81	73	70	68	64	82	67	43	30.02	29.94	29.84	10	10	7	20	13	30	0.00	
14	83	74	65	70	68	63	96	84	56	30.10	30.05	29.96	10	7	1	18	7	32	1.67	Rain , Thunderstorm
15	79	71	63	66	64	59	96	81	55	30.09	30.01	29.96	10	6	4	25	8	33	0.38	Rain , Thunderstorm
16	86	74	62	68	65	61	98	78	46	30.03	29.98	29.90	10	5	2	6	1	-	0.00	
17	89	78	66	73	68	63	100	79	47	30.06	29.99	29.91	10	7	1	29	2	41	0.47	Rain , Thunderstorm

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
18	86	75	64	69	65	63	96	75	51	30.02	29.96	29.85	10	7	5	8	3	-	0.00	
19	88	80	71	71	69	66	95	73	47	29.88	29.81	29.71	7	5	4	17	8	22	0.00	
20	88	81	74	72	71	70	89	76	55	29.85	29.80	29.76	7	6	4	14	9	21	0.00	Rain
21	90	81	72	72	70	67	95	71	48	29.98	29.92	29.85	10	6	4	13	7	18	0.00	
22	90	82	73	72	70	68	93	73	49	29.95	29.90	29.83	7	6	4	17	9	26	0.00	
23	90	83	76	73	71	68	86	69	51	29.95	29.90	29.87	10	6	4	16	10	24	0.00	Rain
24	88	80	72	72	68	61	94	69	42	29.97	29.92	29.86	7	5	3	16	8	22	0.00	
25	89	80	71	71	67	61	93	70	39	29.97	29.93	29.87	10	6	3	12	6	18	0.00	
26	89	77	65	71	65	55	96	68	31	30.05	29.98	29.92	10	7	4	7	1	-	0.00	
27	91	78	66	70	66	60	94	67	35	30.03	29.97	29.90	10	6	4	7	1	-	0.00	
28	93	80	68	69	65	59	93	62	32	29.96	29.90	29.81	10	6	3	6	1	-	0.00	
29	94	81	68	70	66	60	92	64	32	29.84	29.80	29.72	10	7	4	6	1	-	0.00	
30	93	82	70	72	67	63	91	65	38	29.85	29.81	29.77	10	9	5	12	2	-	0.00	Thunderstorm
31	92	81	70	71	67	62	94	65	36	29.98	29.92	29.88	10	9	4	8	3	-	0.00	

Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: MB/JG	
Date & Time: 23JUN10 1100	County Name: ROBERTSON
Stream Name: MUD ~~20652~~ 20562	
Segment No. or nearest downstream Segment No.: 1242 K	
Description of Site: MUD @ Jack Brewer Road	

At any point during the Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the use for the water body the investigator should stop conducting the UAA.

A. Stream Characteristics:

1. Check the following channel flow status that applies.

☐ dry ☐ no flow ☐ low ☒ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:

☐ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.

☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.

☒ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.

☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.

☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. 1.943 cfs

4. Water Quality Data (Field Parameters)

Field parameters should be collected in accordance with the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1.

Air Temp 28.9 °C Water Temp 26.01 °C

5. Riparian Zone (Mark dominant categories with L (Left Bank) and R (Right Bank). Bank orientation is determined by the investigator facing downstream.)

LR Forest	____ Urban	____ Rip rap
____ Shrub dominated corridor	____ Pasture	____ Concrete
____ Herbaceous marsh	____ Row crops	Other (specify): ____
____ Mowed/maintained corridor	____ Denuded/Eroded bank	

6. Ease of bank access to the water body: ☐ Easy ☒ Moderately easy ☐ Moderately difficult ☐ Difficult

7. Please describe access opportunities or explain why the site is not easily accessible (Attach photos for documentation):

2727 Jack Brewer Road fenced private property

8. Dominant Primary Substrate

2729 ☐Cobble ☐Sand ☐Silt ☐Mud/Clay ☒Gravel ☐Bedrock ☐Rip rap ☐ Concrete

Stream Name_____ Site: _____
Date: _____ Time: _____

B. Primary Contact Water Recreation Evaluation:

- Primary contact recreation draft definition: Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, and whitewater kayaking, canoeing, and rafting, involving a significant risk of ingestion of water.

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?

☐ Yes ☒ No primary contact recreation activities were observed

a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).

☐ Wading-Children ☐ Tubing ☒ No primary contact activities that commonly occur were observed
☐ Wading-Adults ☐ Surfing
☐ Swimming ☐ Whitewater-kayaking, canoeing, rafting
☐ Water skiing ☐ Other: _____
☐ Diving ☐ frequent public swimming-created by publicly owned land or commercial operations

b. Check the number of individuals observed at the site: ☒ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.

☐ Water in mouth or nose of the individual ☐ Primary touch: Individual's body (or portion) immersed in water
☐ Secondary touch: fishing, pets and related contact with water ☐ Individual is in a boat touching water
☐ Individual is on shore near water within 8 meters (25ft) of water ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☒ Not applicable

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).

Water too shallow, private property

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).

Jack Brewer Road

2727 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: _____

Date: _____ Time: _____

b. Check the number of individuals observed at the site.
☒ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body well away from water between 8 and 30 meters (100 ft) n/a

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
water too shallow, 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).
Water too shallow

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 & fenced

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.
insufficient water depth for recreation

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____

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 2732 Downstream 2733 Left Bank 2734 Right Bank 2735
Photos #s (150 meters) Upstream 2736 Downstream 2737 Left Bank 2738 Right Bank 2739
Photos #s (300 meters) Upstream 2740 Downstream 2741 Left Bank 2742 Right Bank 2743

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	25	5	0.45
Pool 2	25	7	0.90
Pool 3	10	5	0.85
Pool 4	26	6	1.10
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	0.25
60 meters	0.30
90 meters	0.12
120 meters	0.2
150 meters	0.33
180 meters	0.15
210 meters	0.85
240 meters	0.25
270 meters	0.45
300 meters	0.14
Average	0.30

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

c) Stream width - Measure (1) the width at one point which represents the typical average width of the 300 meter reach; (2) the width at the narrowest point of the stream within the 300 meter reach; and (3) the width at the widest point of the stream within the 300 meter reach.

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	5
Width at narrowest point of the stream within 300 meter reach	1
Width at the widest point of the stream within 300 meter reach	7

d) Is there sufficient water within a 300 meter stream reach during base flow conditions to support primary contact recreation? ☐ Yes ☒ No
COMMENTS:

_____

_____

2. Non-wadeable Streams
If accessible, take 10 width measurements which represent typical widths of the 300 meter reach. If the water is too deep and not accessible record the estimated average width of the water body.

Also, take photos facing upstream, downstream, left bank, and right bank at .
Photos #s (30 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (150 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

# Measurements	Width (meters)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

☐ Drinking or water in mouth
☐ Bathing
☐ Walking
☐ Jogging/running
☐ Bicycling
☐ Standing
☐ Sitting
☐ Lying down/sleeping
☐ Playing on shoreline
☐ Picnicking
☐ Motorcycle/ATV
☐ Hunting/Trapping
☐ Wildlife watching
☒ None
☐ Other: _____

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☐ Yes ☒ No (If yes, please provide supporting documentation and photos.)
Comments: _____

3. Check any channel obstructions that apply (Attach photos).

2728

☐ Culverts ☒ Fences ☐ Log jams ☒ Rip rap ☐ Water control structure
☐ Barbed wire ☐ Dams ☐ Thick vegetation ☐ Low bridges ☐ None
☐ Utility pipe ☐ Other (specify):_____

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest).

2728

☐ 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).

2728

2731

☒ Private Property
☐ No trespass sign
☐ Wildlife
☒ Steep slopes
☐ No public access
☐ No roads
☒ Fence
☐ Barge/ship traffic
☐ Industrial
☐ None of the Above
☐ Other:_____

Comments:_____

6. Check any indications of human use (Attach photos).

☐ Roads
☐ Rope swings
☐ Dock/platform
☐ Foot paths/prints
☐ Other: _____
☐ RV/ATV Tracks
☐ Camping Sites
☐ Fire pit/ring
☐ Fishing Tackle
☐ NPDES Discharge
☐ Gates on corridor
☐ Children's toys
☐ Remnant's of Kid's play
☐ Organized event
☒ No Human Presence

Comments:_____

Stream Name_____ Site: _____
Date: _____ Time: _____

7. Check all water characteristics that apply (Attach photos).
Aquatic Vegetation: ☐ absent ☒ rare ☐common ☐abundant
Algae Cover: ☐ absent ☒ rare ☐common ☐abundant
Odor: ☒ none ☒ rare ☐common ☐abundant
Color: ☒ clear ☐ green ☐red ☐ brown ☐ black 2729
Bottom Deposit: ☐ sludge ☐ solids ☐ fine sediments ☒none ☐other 2729
Water Surface: ☒ clear ☐ scum ☐ foam ☐ debris ☐ oil 2729
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 2730
Feral Hogs	☐ None	☐ slight presence	☒ moderate presence	☐ large presence

Comments: _____

10. Evidence of wild animals or evidence of birds, cattle, hogs, etc. 2730
☒ Tracks ☒ Fecal droppings ☐ Bird nests

11. Garbage Observed

Large garbage in the channel	☐ None	☐ Rare	☒ Common	☐ Abundant
Small garbage in the channel	☐ None	☒ Rare	☐ Common	☐ Abundant
Bank Garbage	☐ None	☒ Rare	☐ Common	☐ Abundant

Briefly describe the kinds of garbage observed: Tires, couch

12. Is the site located in a wildlife preserve with large wildlife (i.e waterfowl) population? ☐ Yes ☒ No

13. Please document any other relevant information regarding recreational activities and the water body in general (for example, area outside of the stream reach evaluated).

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream:_____ Date:_____

Site:_____ Site

Description:_____

Time Begin:_____ Time End:_____ Meter Type:_____

Observers:_____ Stream Width*:_____ Section Width (W):_____

Observations:_____

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V)		Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
			At Point (ft/s)(m/s)	Average (ft/s)(m/s)	

: Thu Jul 1 2010

20652-23JUN10.WAD
2010/06/23 10:11:00

MB

FlowTracker
P872
3.7
2.30
0.0%

(English Units)
ft
ft/s
ft^2
cfs

Accuracy	1.0%	1.0%
Depth	0.4%	1.8%
Velocity	2.3%	6.4%
Width	0.2%	0.2%
Method	3.0%	-
# Stations	3.9%	-
Overall	**5.6%**	**6.7%**

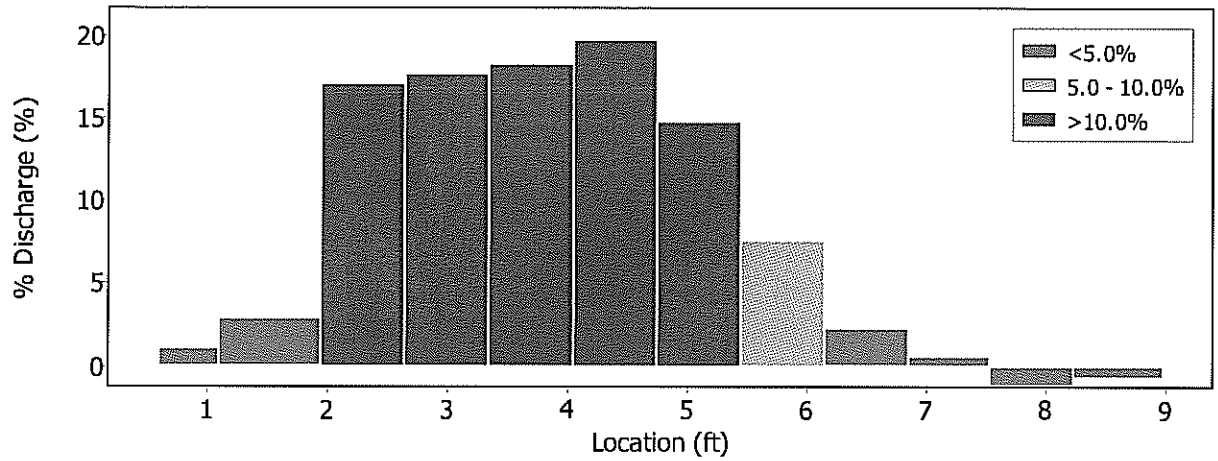
20	13
LEW	8.800
37.1 dB	6.559
78.26 °F	0.745
Mid-Section	0.2962
	1.9425

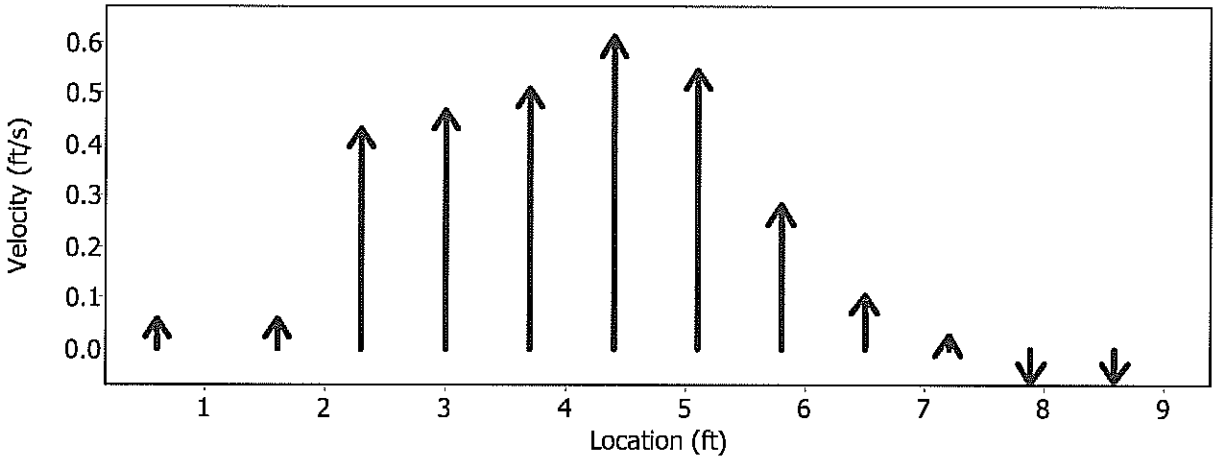
				Depth								
0	10:11	0.60	None	0.650	0.0	0.0	0.0000	1.00	0.0591	0.325	0.0192	1.0
1	*10:11*	*1.60*	*0.6*	*1.100*	*0.6*	*0.440*	*0.0591*	*1.00*	*0.0591*	*0.935*	*0.0552*	*2.8*
2	10:12	2.30	0.6	1.100	0.6	0.440	0.4311	1.00	0.4311	0.770	0.3319	17.1
3	*10:13*	*3.00*	*0.6*	*1.050*	*0.6*	*0.420*	*0.4675*	*1.00*	*0.4675*	*0.735*	*0.3435*	*17.7*
4	10:14	3.70	0.6	1.000	0.6	0.400	0.5102	1.00	0.5102	0.700	0.3570	18.4
5	10:15	4.40	0.6	0.900	0.6	0.360	0.6115	1.00	0.6115	0.630	0.3851	19.8
6	*10:17*	*5.10*	*0.6*	*0.750*	*0.6*	*0.300*	*0.5466*	*1.00*	*0.5466*	*0.525*	*0.2869*	*14.8*
7	*10:17*	*5.80*	*0.6*	*0.750*	*0.6*	*0.300*	*0.2812*	*1.00*	*0.2812*	*0.525*	*0.1476*	*7.6*
8	*10:18*	*6.50*	*0.6*	*0.600*	*0.6*	*0.240*	*0.1047*	*1.00*	*0.1047*	*0.420*	*0.0439*	*2.3*
9	*10:19*	*7.20*	*0.6*	*0.600*	*0.6*	*0.240*	*0.0253*	*1.00*	*0.0253*	*0.420*	*0.0106*	*0.5*
10	*10:19*	*7.90*	*0.6*	*0.500*	*0.6*	*0.200*	*-0.0676*	*1.00*	*-0.0676*	*0.350*	*-0.0236*	*-1.2*
11	*10:21*	*8.60*	*0.6*	*0.300*	*0.6*	*0.120*	*-0.0656*	*1.00*	*-0.0656*	*0.225*	*-0.0148*	*-0.8*
12	10:21	9.40	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0

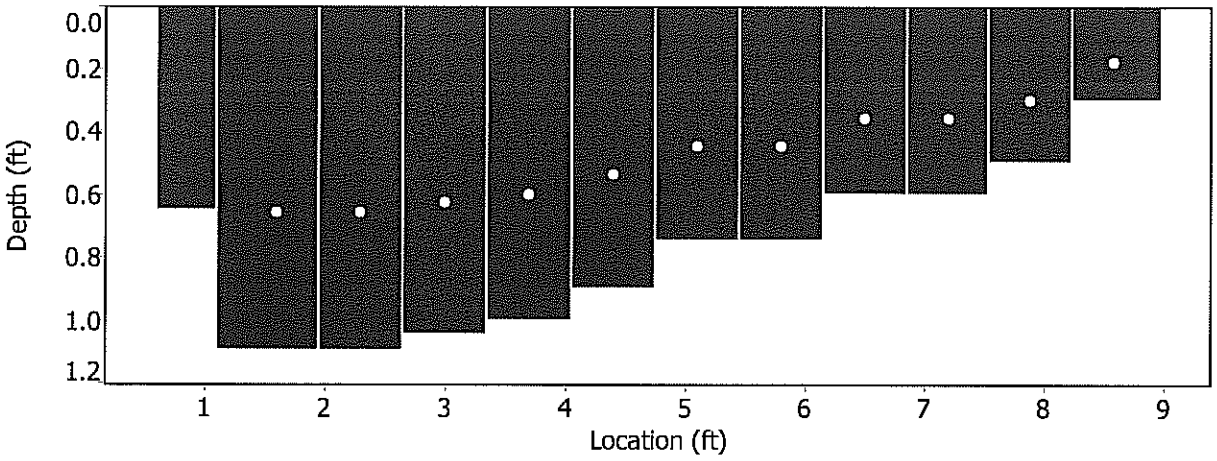
: Thu Jul 1 2010

20652-23JUN10.WAD
2010/06/23 10:11:00

MB







: Thu Jul 1 2010

20652-23JUN10.WAD
2010/06/23 10:11:00

MB

1	1.60	0.6	High angle: -44
3	3.00	0.6	High standard error: 0.031
6	5.10	0.6	High angle: -23
7	5.80	0.6	High angle: -40
8	6.50	0.6	High angle: -62
9	7.20	0.6	High angle: -74
10	7.90	0.6	High angle: -123
		0.6	High SNR variation during measurement: 8.2,8.2
11	8.60	0.6	High angle: -174

CDT	Max Temperature C	Mean Temperature C	Min Temperature C	Dew Point C	Mean Dew Point C	Min DewpointC	Max Humidity	Mean Humidity	Min Humidity	Max Sea Level Pressure hPa	Mean Sea Level Pressure hPa	Min Sea Level Pressure hPa	Max Visibility Km	Mean Visibility Km	Min Visibility Km	Max Wind Speed Km/h	Mean Wind Speed Km/h	Max Gust Speed Km/h	Precipitation Cm	Cloud Cover	Events
4/1/2010	24	20	15	14	13	11	81	66	51	1015	1012	1008	16	16	16	37	21	48	0	6	
4/2/2010	23	20	17	16	15	14	91	76	58	1011	1009	1007	16	12	5	34	19	40	0	7	
4/3/2010	27	16	6	16	5	-8	94	57	9	1016	1014	1012	16	11	0	13	2		0	2	Fog-Rain
4/4/2010	27	22	16	18	16	13	92	74	52	1016	1014	1013	16	11	2	34	13	47	0	6	
4/5/2010	26	22	19	17	16	15	83	71	52	1018	1016	1014	16	15	11	32	18	45	0	7	
4/6/2010	26	22	18	16	15	13	83	68	50	1015	1011	1007	16	15	11	42	24	53	0	6	
4/7/2010	22	19	16	16	13	0	85	69	24	1011	1010	1007	16	12	6	26	13	40	0.05	8	Rain
4/8/2010	18	11	5	3	-1	-3	71	42	23	1022	1020	1017	16	16	16	29	18	42	0	0	
4/9/2010	21	11	0	3	0	-2	92	56	21	1023	1020	1018	16	16	16	19	5	32	0	0	
4/10/2010	22	16	10	11	9	6	85	66	46	1023	1021	1020	16	16	16	24	10	39	0	2	
4/11/2010	22	17	11	14	11	8	83	70	50	1024	1022	1020	16	14	6	14	6		0	6	
4/12/2010	25	17	10	13	8	2	92	61	23	1022	1021	1018	16	13	3	21	5	29	0	0	
4/13/2010	26	18	11	13	10	8	88	62	35	1021	1019	1017	16	16	11	26	5	35	0.08	1	
4/14/2010	25	20	13	18	15	13	96	80	55	1024	1021	1020	16	14	8	19	5	27	0.03	4	
4/15/2010	25	21	17	19	17	15	94	80	58	1023	1021	1019	16	15	11	19	6	29	0.08	5	Rain
4/16/2010	23	18	15	17	16	13	93	80	60	1022	1020	1016	16	14	6	16	5	26	0	6	
4/17/2010	25	21	18	17	16	15	90	76	55	1017	1015	1012	16	13	6	21	6	32	0	7	
4/18/2010	20	17	15	16	15	13	96	86	70	1016	1014	1013	16	16	11	13	3		0.08	8	Rain-Thunderstorm
4/19/2010	18	15	11	16	12	10	97	82	62	1019	1017	1015	16	9	5	23	11	32	0.2	8	Rain
4/20/2010	22	16	11	14	12	10	94	70	48	1018	1016	1013	16	10	6	13	3		0	3	
4/21/2010	27	18	11	15	13	11	97	71	42	1014	1012	1009	16	12	6	16	5	27	0	1	Rain
4/22/2010	23	20	15	18	16	14	97	83	69	1010	1008	1005	16	12	3	29	13	40	0	6	Rain
4/23/2010	30	25	20	21	19	18	96	78	50	1005	1003	999	16	12	5	26	13	37	0.15	6	Rain-Thunderstorm
4/24/2010	27	21	13	21	10	5	94	56	25	1006	1004	1000	16	16	8	34	14	53	0.03	2	Rain
4/25/2010	27	20	12	11	8	3	88	56	22	1011	1009	1006	16	16	16	29	8	47	0	0	
4/26/2010	31	20	8	17	10	7	95	61	25	1012	1010	1006	16	16	5	24	5	32	0.13	0	Rain-Thunderstorm
4/27/2010	23	16	9	10	6	3	90	52	27	1019	1016	1014	16	16	11	26	13	34	0	3	
4/28/2010	27	17	7	10	7	4	95	57	25	1017	1015	1010	16	16	16	26	6	35	0	0	
4/29/2010	28	22	15	17	16	12	94	69	46	1012	1007	1001	16	15	8	39	19	55	0	4	
4/30/2010	28	25	22	22	20	19	86	75	60	1002	1000	998	16	10	6	34	19	52	0	7	Rain
5/1/2010	27	23	19	22	18	13	96	73	54	1002	1001	998	16	13	4	26	10	34	0	5	
5/2/2010	28	20	12	13	9	3	92	57	20	1008	1006	1004	16	16	16	19	5	26	0	2	Rain
5/3/2010	31	20	9	12	8	5	90	54	20	1017	1013	1010	16	15	8	29	5	40	0	1	Rain

5/4/2010	30	19	8	13	9	5	98	59	22	1018	1015	1011	16	15	1	14	3		0	0	
5/5/2010	33	23	12	13	10	8	87	47	22	1013	1011	1010	16	16	16	24	11	32	0	0	
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5/9/2010	21	20	18	13	8	6	61	46	40	1023	1020	1017	16	16	16	24	11	27	0	8	
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5/13/2010	31	27	22	21	20	17	82	67	43	1016	1014	1010	16	16	11	32	21	48	0	5	
5/14/2010	28	23	18	21	20	17	96	84	56	1019	1017	1014	16	12	1	29	11	52	4.24	4	Rain-Thunderstorm
5/15/2010	26	21	17	18	17	15	96	81	55	1019	1016	1014	16	10	6	40	13	53	0.97	3	Rain-Thunderstorm
5/16/2010	30	23	16	20	18	16	98	78	46	1017	1015	1012	16	8	2	10	2		0	2	
5/17/2010	31	25	18	22	20	17	100	79	47	1018	1015	1013	16	12	2	47	3	66	1.19	2	Rain-Thunderstorm
5/18/2010	30	23	17	20	18	17	96	75	51	1016	1014	1011	16	12	8	13	5		0	0	
5/19/2010	31	26	21	21	20	18	95	73	47	1012	1009	1006	11	8	6	27	13	35	0	4	
5/20/2010	31	27	23	22	21	21	89	76	55	1011	1009	1008	11	9	6	23	14	34	0	6	Rain
5/21/2010	32	27	22	22	21	19	95	71	48	1015	1013	1011	16	9	6	21	11	29	0	3	
5/22/2010	32	27	22	22	21	20	93	73	49	1014	1012	1010	11	9	6	27	14	42	0	4	
5/23/2010	32	28	24	22	21	20	86	69	51	1014	1012	1011	16	10	6	26	16	39	0	5	Rain
5/24/2010	31	26	22	22	20	16	94	69	42	1015	1013	1011	11	9	5	26	13	35	0	4	
5/25/2010	31	26	21	21	19	16	93	70	39	1015	1013	1011	16	9	5	19	10	29	0	1	
5/26/2010	31	25	18	21	18	12	96	68	31	1017	1015	1013	16	11	6	11	2		0	1	
5/27/2010	32	25	18	21	18	15	94	67	35	1017	1015	1012	16	10	6	11	2		0	0	
5/28/2010	33	26	20	20	18	15	93	62	32	1014	1012	1009	16	9	5	10	2		0	1	
5/29/2010	34	27	20	21	18	15	92	64	32	1010	1009	1006	16	11	6	10	2		0	2	
5/30/2010	33	27	21	22	19	17	91	65	38	1011	1009	1008	16	14	8	19	3		0	1	Thunderstorm
5/31/2010	33	27	21	21	19	16	94	65	36	1015	1013	1012	16	15	6	13	5		0	0	
6/1/2010	32	26	20	21	19	17	94	64	39	1015	1013	1009	16	15	8	16	5	26	0	0	
6/2/2010	33	27	20	22	20	18	95	69	41	1011	1009	1005	16	13	4	37	8	47	1.19	3	Rain-Thunderstorm
6/3/2010	21	21	20	21	20	19	96	94	89	1008	1007	1004	16	11	3	24	8	37	2.03	7	Rain-Thunderstorm
6/4/2010	31	25	19	21	20	17	97	74	44	1010	1008	1007	16	9	1	10	0		0	1	Fog
6/5/2010	32	26	21	22	21	20	95	74	54	1011	1009	1008	16	13	6	16	3		0	0	
6/6/2010	33	28	24	25	23	22	95	76	52	1013	1012	1010	11	7	3	11	6		0	4	
6/7/2010	32	28	24	24	23	22	92	77	57	1016	1014	1012	11	7	5	16	6		0	2	
6/8/2010	28	25	22	24	22	20	94	86	63	1016	1014	1013	16	12	8	21	8	29	0	3	Rain
6/9/2010	25	23	21	23	21	20	96	94	91	1016	1014	1011	16	10	2	21	5	27	7.37	6	Rain-Thunderstorm

6/10/2010	32	27	22	25	23	21	96	80	54	1013	1011	1009	11	7	5	29	13	39	0	3 Rain
6/11/2010	32	26	25	25	23	22	91	76	59	1013	1012	1011	11	7	5	27	16	37	0	4
6/12/2010	32	28	25	24	23	22	91	75	56	1016	1015	1013	16	9	6	26	16	40	0	4 Rain
6/13/2010	32	28	25	24	23	21	91	73	53	1017	1016	1013	11	7	5	23	14	32	0	5
6/14/2010	33	29	25	24	22	20	93	72	46	1015	1014	1010	11	8	5	23	13	34	0	4 Rain
6/15/2010	33	28	23	23	22	19	96	72	42	1017	1015	1013	11	8	4	14	6		0	3
6/16/2010	33	28	23	24	22	20	95	71	44	1019	1017	1015	16	11	4	16	6		0	2
6/17/2010	33	28	23	24	22	18	95	72	44	1017	1016	1014	16	10	0	23	6	29	0	3 Fog
6/18/2010	33	28	23	24	22	21	93	71	49	1017	1016	1013	16	16	11	23	10	29	0	3
6/19/2010	33	28	24	23	22	20	93	71	44	1019	1017	1015	16	15	11	16	10		0	2
6/20/2010	33	28	23	23	22	20	94	69	45	1018	1016	1013	16	16	11	16	6	27	0	2
6/21/2010	33	28	22	23	21	21	92	69	47	1017	1015	1014	16	16	16	14	6		0	1
6/22/2010	33	28	23	23	22	19	92	67	42	1018	1016	1015	16	16	16	13	5		0	1
6/23/2010	33	28	22	23	22	20	94	69	43	1018	1016	1015	16	16	11	13	5		0	1
6/24/2010	28	26	25	24	23	22	91	85	68	1019	1018	1017	16	16	16	8	3		0	3 Rain

Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: MB/JG	
Date & Time: 23JUN10 1215	County Name: Robertson County
Stream Name: MUP 99906	
Segment No. or nearest downstream Segment No.: 1242 K	
Description of Site: Mud Creek at Mud Creek Road	

At any point during the Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the use for the water body the investigator should stop conducting the UAA.

A. Stream Characteristics:

1. Check the following channel flow status that applies.

☐ dry ☐ no flow ☐ low ☒ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:

☐ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.

☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.

☒ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.

☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.

☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. 2.001 cfs

4. Water Quality Data (Field Parameters)

Field parameters should be collected in accordance with the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1.

Air Temp 29.0 °C Water Temp 26.91 °C

5. Riparian Zone (Mark dominant categories with L (Left Bank) and R (Right Bank). Bank orientation is determined by the investigator facing downstream.)

R Forest	___ Urban	___ Rip rap
___ Shrub dominated corridor	L 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): 2748

Small bridge off of dirt road with steep banks

8. Dominant Primary Substrate 2745

☐Cobble ☐Sand ☐Silt ☐Mud/Clay ☒Gravel ☐Bedrock ☐Rip rap ☐ Concrete

Stream Name_____ Site: _____
Date: _____ Time: _____

B. Primary Contact Water Recreation Evaluation:

- Primary contact recreation draft definition: Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, and whitewater kayaking, canoeing, and rafting, involving a significant risk of ingestion of water.

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?

☐ Yes ☒ No primary contact recreation activities were observed

a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).

☐ Wading-Children ☐ Tubing ☒ No primary contact activities that commonly occur were observed
☐ Wading-Adults ☐ Surfing
☐ Swimming ☐ Whitewater-kayaking, canoeing, rafting
☐ Water skiing ☐ Other: _____
☐ Diving ☐ frequent public swimming-created by publicly owned land or commercial operations

b. Check the number of individuals observed at the site: ☒ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.

☐ Water in mouth or nose of the individual ☐ Primary touch: Individual's body (or portion) immersed in water
☐ Secondary touch: fishing, pets and related contact with water ☐ Individual is in a boat touching water
☐ Individual is on shore near water within 8 meters (25ft) of water ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☒ Not applicable

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).

2747

Water not very deep

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).

Mud Creek road

4. Is an area with primary contact recreation activities or a bathing beach (e.g. state/local parks with swimming, etc.) located near (e.g. within 5 miles upstream and downstream) this site? no

C. Secondary Contact Water Recreation Evaluation:

- Secondary contact recreation 1: Water recreation activities, such as fishing, commercial and recreational boating, and limited body contact incidental to shoreline activity, not involving a significant risk of water ingestion and that commonly occur.
- Secondary contact recreation 2: Water recreation activities, such as fishing, commercial and recreational boating, and limited body contact incidental to shoreline activity, not involving a significant risk of water ingestion but that occur less frequently than for secondary contact recreation 1 due to (1) physical characteristics of the water body and/or (2) limited public access.

1. Were water recreation activities observed at the site, but the nature of the recreation does not involve a significant risk of ingestion (e.g. secondary contact recreation activities)? ☐ Yes ☒ No secondary contact recreation activities were observed

a. Check the following boxes of secondary contact recreation activities that were observed at the time of the sampling event at the site (Attach photos of activities or lack of activities).

☐ Fishing
☐ Boating-commercial, recreational
☐ Non-whitewater-kayaking, rafting, canoeing
☒ No secondary contact recreation activities were observed
☐ Other secondary contact activities: _____

Date: _____ Time: _____

b. Check the number of individuals observed at the site.
☒ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body well away from water between 8 and 30 meters (100 ft) n/a

2747 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 Water & steep overgrown banks

3. If secondary contact recreation activities are observed, how often do water recreational activities occur that do not involve a significant risk of water ingestion? ☐ frequently ☐ infrequently n/a
Please describe how often the activities occur? ☐ Unknown ☐ Never ☐ Daily ☐ Monthly ☐ Yearly n/a

4. If infrequently, what is the reason? ☐ physical characteristics of the water body ☐ limited public access ☐ other n/a
If other, list reasons: _____

2747 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 water & steep overgrown banks

2744 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).
narrow hilly & steep overgrown 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.
n/a

E. Stream Channel and Substantial Pools Measurements

Please check the following which best describes the river or stream: X Wadeable ☐ Non-wadeable

1. Wadeable Streams

Determine whether or not the average depth at the thalweg is greater than 0.5 meters and if there are substantial pools with a depth of 1 meter or greater. Walk an approximately 300 meter reach (total) at the site and take the following measurements within the 300 meter reach. Measurements should be taken during base flow conditions (sustained or typical dry, warm-weather flows between rainfall events, excluding unusual antecedent conditions of drought or wet weather

Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters.

Photos #s (30 meters) Upstream 2749 Downstream 2750 Left Bank 2751 Right Bank 2752
Photos #s (150 meters) Upstream 2754 Downstream 2755 Left Bank 2756 Right Bank 2757
Photos #s (300 meters) Upstream 2758 Downstream 2759 Left Bank 2760 Right Bank 2761

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	15	5	0.90
Pool 2	20	4	0.85
Pool 3	10	7	0.80
Pool 4	16	5	0.90
Pool 5	10	8	0.65
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	0.18
60 meters	0.90
90 meters	0.70
120 meters	0.35
150 meters	0.30
180 meters	0.45
210 meters	0.52
240 meters	0.73
270 meters	0.24
300 meters	0.28
Average	0.46

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

c) Stream width - Measure (1) the width at one point which represents the typical average width of the 300 meter reach; (2) the width at the narrowest point of the stream within the 300 meter reach; and (3) the width at the widest point of the stream within the 300 meter reach.

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	2
Width at narrowest point of the stream within 300 meter reach	1
Width at the widest point of the stream within 300 meter reach	8.5

d) Is there sufficient water within a 300 meter stream reach during base flow conditions to support primary contact recreation? ☐ Yes ☒ No
COMMENTS:
n/a

2. Non-wadeable Streams
If accessible, take 10 width measurements which represent typical widths of the 300 meter reach. If the water is too deep and not accessible record the estimated average width of the water body.

Also, take photos facing upstream, downstream, left bank, and right bank at .
Photos #s (30 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (150 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

# Measurements	Width (meters)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

☐ Drinking or water in mouth
☐ Bathing
☐ Walking
☐ Jogging/running
☐ Bicycling
☐ Standing
☐ Sitting
☐ Lying down/sleeping
☐ Playing on shoreline
☐ Picnicking
☐ Motorcycle/ATV
☐ Hunting/Trapping
☐ Wildlife watching
☒ None
☐ Other: _____

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☐ Yes ☒ No (If yes, please provide supporting documentation and photos.)
Comments: _____

3. Check any channel obstructions that apply (Attach photos).

☐ Culverts ☐ Fences ☐ Log jams ☒ Rip rap ☐ Water control structure
☐ Barbed wire ☐ Dams ☐ Thick vegetation ☐ Low bridges ☐ None
☐ Utility pipe ☐ Other (specify):_____

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest).

☐ Campgrounds ☐ Stairs/walkway ☒ Roads (paved/unpaved) ☐ Other:_____
☐ Playgrounds ☐ Boating access (ramps) ☐ Populated area ☐ None of the Above
☒ Rural area ☐ Beach ☐ Docks or rafts
☐ Residential ☒ Bridge crossing ☐ Commercial outfitter
☐ National forests ☐ Commercial boating ☐ Nearby school
☐ Urban/suburban location ☐ Trails/paths (hiking/biking) ☐ Power Line Corridor
☐ Golf Course ☐ Paved parking lot ☐ Parks (national/city/county/state)
☐ Sports Field ☐ Unimproved parking lot ☐ Public Property

2744

Comments:_____

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).

☒ Private Property ☐ Fence
☐ No trespass sign ☐ Barge/ship traffic
☐ Wildlife ☐ Industrial
☐ Steep slopes ☐ None of the Above
☐ No public access ☐ Other:_____
☐ No roads

Comments:_____

6. Check any indications of human use (Attach photos).

☒ Roads ☐ RV/ATV Tracks ☐ NPDES Discharge ☐ Organized event
☐ Rope swings ☐ Camping Sites ☐ Gates on corridor ☐ No Human Presence
☐ Dock/platform ☐ Fire pit/ring ☐ Children's toys
☐ Foot paths/prints ☐ Fishing Tackle ☐ Remnant's of Kid's play
☐ Other: _____

Comments:_____

Stream Name_____ Site: _____
Date: _____ Time: _____

7. Check all water characteristics that apply (Attach photos).

Aquatic Vegetation: ☐ absent ☒ rare ☐common ☐abundant
Algae Cover: ☐ absent ☐ rare ☒common ☐abundant 2746
Odor: ☒ none ☐ rare ☐common ☐abundant
Color: ☒ clear ☐ green ☐red ☐ brown ☐ black 2747
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

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Large garbage in the channel	☐ None	☒ Rare	☐ Common	☐ Abundant
Small garbage in the channel	☐ None	☐ Rare	☒ Common	☐ Abundant
Bank Garbage	☐ None	☒ Rare	☐ Common	☐ Abundant

Briefly describe the kinds of garbage observed: bottles cans tires

_____
_____

12. Is the site located in a wildlife preserve with large wildlife (i.e waterfowl) population? ☐ Yes ☒ No

13. Please document any other relevant information regarding recreational activities and the water body in general (for example, area outside of the stream reach evaluated).

_____
_____
_____
_____
_____

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream:_____ Date:_____

Site:_____ Site

Description:_____

Time Begin:_____ Time End:_____ Meter Type:_____

Observers:_____ Stream Width*:_____ Section Width (W):_____

Observations:_____

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V)		Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
			At Point (ft/s)(m/s)	Average (ft/s)(m/s)	

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MB

FlowTracker	**(English Units)**
P872	ft
3.7	ft/s
2.30	ft^2
0.0%	cfs

Accuracy	1.0%	1.0%
Depth	0.4%	2.0%
Velocity	1.8%	6.0%
Width	0.1%	0.1%
Method	2.0%	-
# Stations	2.5%	-
Overall	**3.9%**	**6.4%**

20	20
LEW	12.200
30.4 dB	4.916
79.85 °F	0.403
Mid-Section	0.4070
	2.0011

				Depth								
0	11:25	1.10	None	0.300	0.0	0.0	0.0000	1.00	0.1873	0.150	0.0281	1.4
1	11:25	2.10	0.6	0.300	0.6	0.120	0.1873	1.00	0.1873	0.255	0.0477	2.4
2	*11:26*	*2.80*	*0.6*	*0.300*	*0.6*	*0.120*	*0.5341*	*1.00*	*0.5341*	*0.210*	*0.1121*	*5.6*
3	11:27	3.50	0.6	0.400	0.6	0.160	0.5856	1.00	0.5856	0.280	0.1639	8.2
4	11:27	4.20	0.6	0.400	0.6	0.160	0.7372	1.00	0.7372	0.280	0.2063	10.3
5	11:28	4.90	0.6	0.450	0.6	0.180	0.7454	1.00	0.7454	0.203	0.1511	7.6
6	11:39	5.10	0.6	0.500	0.6	0.200	0.5902	1.00	0.5902	0.175	0.1033	5.2
7	11:29	5.60	0.6	0.450	0.6	0.180	0.7520	1.00	0.7520	0.270	0.2029	10.1
8	11:30	6.30	0.6	0.450	0.6	0.180	0.2986	1.00	0.2986	0.315	0.0940	4.7
9	*11:30*	*7.00*	*0.6*	*0.450*	*0.6*	*0.180*	*0.3727*	*1.00*	*0.3727*	*0.315*	*0.1174*	*5.9*
10	11:31	7.70	0.6	0.400	0.6	0.160	0.4902	1.00	0.4902	0.280	0.1372	6.9
11	*11:32*	*8.40*	*0.6*	*0.400*	*0.6*	*0.160*	*0.5804*	*1.00*	*0.5804*	*0.220*	*0.1278*	*6.4*
12	11:37	8.80	0.6	0.450	0.6	0.180	0.6414	1.00	0.6414	0.158	0.1010	5.0
13	11:32	9.10	0.6	0.500	0.6	0.200	0.7287	1.00	0.7287	0.250	0.1818	9.1
14	*11:33*	*9.80*	*0.6*	*0.500*	*0.6*	*0.200*	*0.4396*	*1.00*	*0.4396*	*0.350*	*0.1538*	*7.7*
15	*11:34*	*10.50*	*0.6*	*0.550*	*0.6*	*0.220*	*0.1273*	*1.00*	*0.1273*	*0.385*	*0.0490*	*2.4*
16	11:35	11.20	0.6	0.550	0.6	0.220	0.0610	1.00	0.0610	0.385	0.0235	1.2
17	11:35	11.90	0.6	0.350	0.6	0.140	-0.0072	1.00	-0.0072	0.245	-0.0018	-0.1
18	11:36	12.60	0.6	0.200	0.6	0.080	0.0098	1.00	0.0098	0.140	0.0014	0.1
19	11:36	13.30	None	0.150	0.0	0.0	0.0000	1.00	0.0098	0.053	0.0005	0.0

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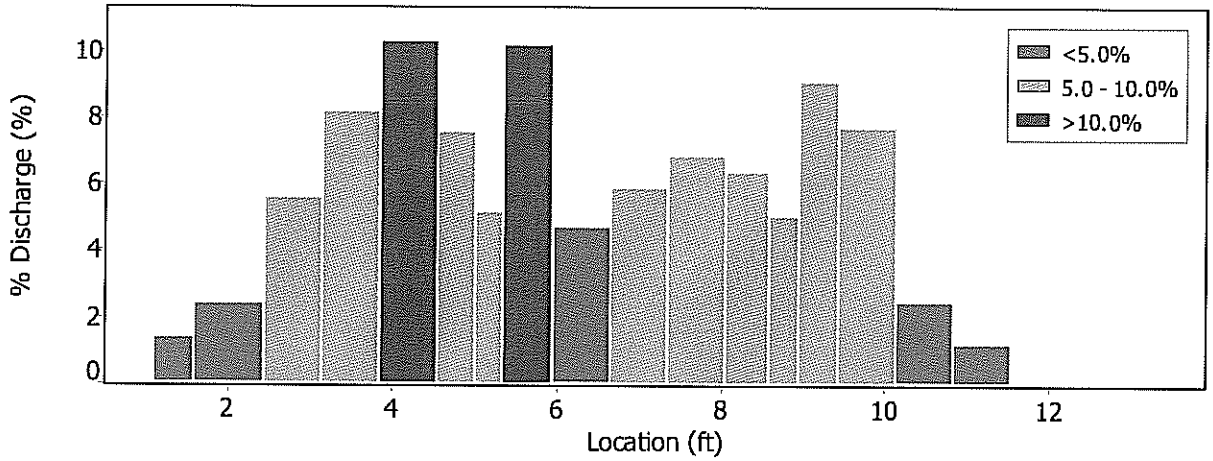

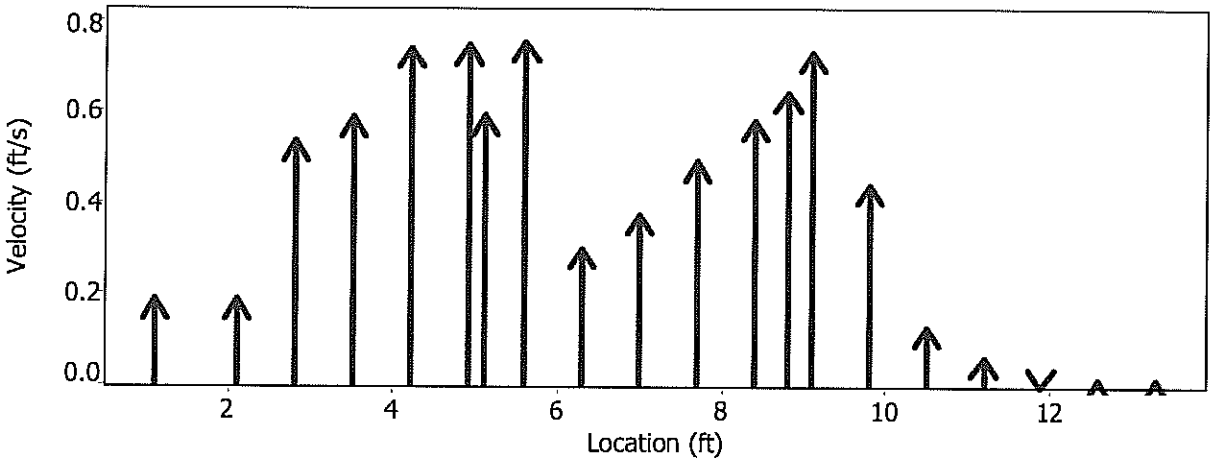

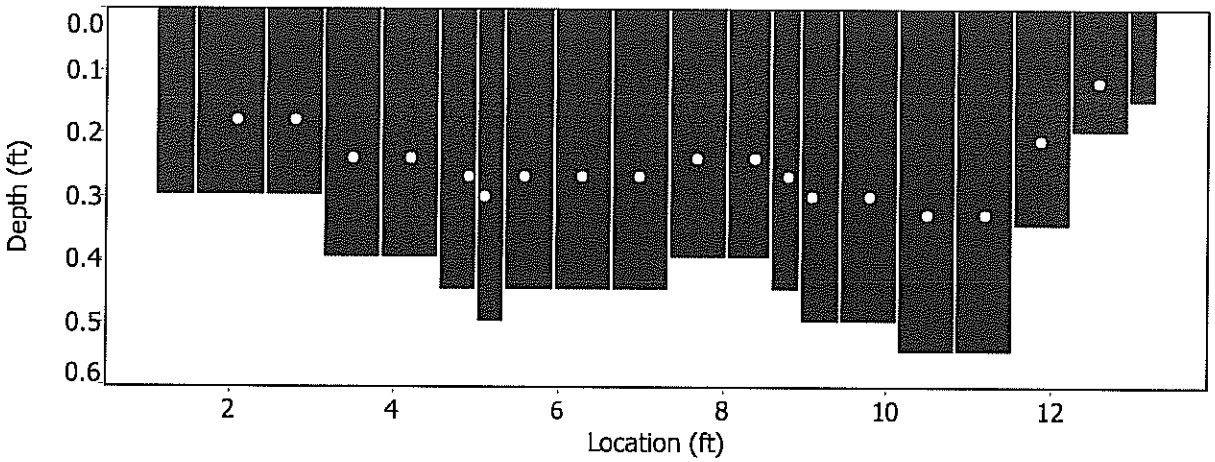

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2	2.80	0.6 0.6	High angle: 33 High standard error: 0.032
9	7.00	0.6	High standard error: 0.031
11	8.40	0.6	High standard error: 0.032
14	9.80	0.6	High standard error: 0.056
15	10.50	0.6 0.6	High angle: 32 High standard error: 0.042

CDT	Max Temperature C	Mean Temperature C	Min Temperature C	Dew Point C	Mean Dew Point C	Min Dewpoint C	Max Humidity	Mean Humidity	Min Humidity	Max Sea Level Pressure hP	Mean Sea Level Pressure hP	Min Sea Level Pressure hP	Max Visibility Km	Mean Visibility Km	Min Visibility Km	Max Wind Speed Km/h	Mean Wind Speed Km/h	Max Gust Speed Km/h	Precipitation Cm	Cloud Cover	Events
4/1/2010	24	20	15	14	13	11	81	66	51	1015	1012	1008	16	16	16	37	21	48	0	6	
4/2/2010	23	20	17	16	15	14	91	76	58	1011	1009	1007	16	12	5	34	19	40	0	7	
4/3/2010	27	16	6	16	5	-8	94	57	9	1016	1014	1012	16	11	0	13	2		0	2	Fog-Rain
4/4/2010	27	22	16	18	16	13	92	74	52	1016	1014	1013	16	11	2	34	13	47	0	6	
4/5/2010	26	22	19	17	16	15	83	71	52	1018	1016	1014	16	15	11	32	18	45	0	7	
4/6/2010	26	22	18	16	15	13	83	68	50	1015	1011	1007	16	15	11	42	24	53	0	6	
4/7/2010	22	19	16	16	13	0	85	69	24	1011	1010	1007	16	12	6	26	13	40	0.05	8	Rain
4/8/2010	18	11	5	3	-1	-3	71	42	23	1022	1020	1017	16	16	16	29	18	42	0	0	
4/9/2010	21	11	0	3	0	-2	92	56	21	1023	1020	1018	16	16	16	19	5	32	0	0	
4/10/2010	22	16	10	11	9	6	85	66	46	1023	1021	1020	16	16	16	24	10	39	0	2	
4/11/2010	22	17	11	14	11	8	83	70	50	1024	1022	1020	16	14	6	14	6		0	6	
4/12/2010	25	17	10	13	8	2	92	61	23	1022	1021	1018	16	13	3	21	5	29	0	0	
4/13/2010	26	18	11	13	10	8	88	62	35	1021	1019	1017	16	16	11	26	5	35	0.08	1	
4/14/2010	25	20	13	18	15	13	96	80	55	1024	1021	1020	16	14	8	19	5	27	0.03	4	
4/15/2010	25	21	17	19	17	15	94	80	58	1023	1021	1019	16	15	11	19	6	29	0.08	5	Rain
4/16/2010	23	18	15	17	16	13	93	80	60	1022	1020	1016	16	14	6	16	5	26	0	6	
4/17/2010	25	21	18	17	16	15	90	76	55	1017	1015	1012	16	13	6	21	6	32	0	7	
4/18/2010	20	17	15	16	15	13	96	86	70	1016	1014	1013	16	16	11	13	3		0.08	8	Rain-Thunderstorm
4/19/2010	18	15	11	16	12	10	97	82	62	1019	1017	1015	16	9	5	23	11	32	0.2	8	Rain
4/20/2010	22	16	11	14	12	10	94	70	48	1018	1016	1013	16	10	6	13	3		0	3	
4/21/2010	27	18	11	15	13	11	97	71	42	1014	1012	1009	16	12	6	16	5	27	0	1	Rain
4/22/2010	23	20	15	18	16	14	97	83	69	1010	1008	1005	16	12	3	29	13	40	0	6	Rain
4/23/2010	30	25	20	21	19	18	96	78	50	1005	1003	999	16	12	5	26	13	37	0.15	6	Rain-Thunderstorm
4/24/2010	27	21	13	21	10	5	94	56	25	1006	1004	1000	16	16	8	34	14	53	0.03	2	Rain
4/25/2010	27	20	12	11	8	3	88	56	22	1011	1009	1006	16	16	16	29	8	47	0	0	
4/26/2010	31	20	8	17	10	7	95	61	25	1012	1010	1006	16	16	5	24	5	32	0.13	0	Rain-Thunderstorm
4/27/2010	23	16	9	10	6	3	90	52	27	1019	1016	1014	16	16	11	26	13	34	0	3	
4/28/2010	27	17	7	10	7	4	95	57	25	1017	1015	1010	16	16	16	26	6	35	0	0	
4/29/2010	28	22	15	17	16	12	94	69	46	1012	1007	1001	16	15	8	39	19	55	0	4	
4/30/2010	28	25	22	22	20	19	86	75	60	1002	1000	998	16	10	6	34	19	52	0	7	Rain
5/1/2010	27	23	19	22	18	13	96	73	54	1002	1001	998	16	13	4	26	10	34	0	5	
5/2/2010	28	20	12	13	9	3	92	57	20	1008	1006	1004	16	16	16	19	5	26	0	2	Rain
5/3/2010	31	20	9	12	8	5	90	54	20	1017	1013	1010	16	15	8	29	5	40	0	1	Rain

5/4/2010	30	19	8	13	9	5	98	59	22	1018	1015	1011	16	15	1	14	3		0	0	
5/5/2010	33	23	12	13	10	8	87	47	22	1013	1011	1010	16	16	16	24	11	32	0	0	
5/6/2010	32	24	16	17	16	13	94	64	34	1013	1011	1008	16	15	11	26	13	39	0	2	
5/7/2010	33	26	20	21	19	18	89	67	42	1013	1011	1008	16	15	11	24	18	34	0	5	
5/8/2010	23	21	19	14	9	6	60	47	35	1025	1022	1019	16	16	16	24	16	40	0	8	
5/9/2010	21	20	18	13	8	6	61	46	40	1023	1020	1017	16	16	16	24	11	27	0	8	
5/10/2010	31	25	20	20	18	17	88	68	45	1016	1013	1009	16	16	11	37	19	50	0	5	
5/11/2010	33	27	21	21	18	15	90	64	37	1013	1011	1009	16	15	8	37	18	50	0	3	
5/12/2010	31	26	21	21	19	17	89	67	46	1012	1010	1009	16	15	11	39	23	60	0	3	
5/13/2010	31	27	22	21	20	17	82	67	43	1016	1014	1010	16	16	11	32	21	48	0	5	
5/14/2010	28	23	18	21	20	17	96	84	56	1019	1017	1014	16	12	1	29	11	52	4.24	4	Rain-Thunderstorm
5/15/2010	26	21	17	18	17	15	96	81	55	1019	1016	1014	16	10	6	40	13	53	0.97	3	Rain-Thunderstorm
5/16/2010	30	23	16	20	18	16	98	78	46	1017	1015	1012	16	8	2	10	2		0	2	
5/17/2010	31	25	18	22	20	17	100	79	47	1018	1015	1013	16	12	2	47	3	66	1.19	2	Rain-Thunderstorm
5/18/2010	30	23	17	20	18	17	96	75	51	1016	1014	1011	16	12	8	13	5		0	0	
5/19/2010	31	26	21	21	20	18	95	73	47	1012	1009	1006	11	8	6	27	13	35	0	4	
5/20/2010	31	27	23	22	21	21	89	76	55	1011	1009	1008	11	9	6	23	14	34	0	6	Rain
5/21/2010	32	27	22	22	21	19	95	71	48	1015	1013	1011	16	9	6	21	11	29	0	3	
5/22/2010	32	27	22	22	21	20	93	73	49	1014	1012	1010	11	9	6	27	14	42	0	4	
5/23/2010	32	28	24	22	21	20	86	69	51	1014	1012	1011	16	10	6	26	16	39	0	5	Rain
5/24/2010	31	26	22	22	20	16	94	69	42	1015	1013	1011	11	9	5	26	13	35	0	4	
5/25/2010	31	26	21	21	19	16	93	70	39	1015	1013	1011	16	9	5	19	10	29	0	1	
5/26/2010	31	25	18	21	18	12	96	68	31	1017	1015	1013	16	11	6	11	2		0	1	
5/27/2010	32	25	18	21	18	15	94	67	35	1017	1015	1012	16	10	6	11	2		0	0	
5/28/2010	33	26	20	20	18	15	93	62	32	1014	1012	1009	16	9	5	10	2		0	1	
5/29/2010	34	27	20	21	18	15	92	64	32	1010	1009	1006	16	11	6	10	2		0	2	
5/30/2010	33	27	21	22	19	17	91	65	38	1011	1009	1008	16	14	8	19	3		0	1	Thunderstorm
5/31/2010	33	27	21	21	19	16	94	65	36	1015	1013	1012	16	15	6	13	5		0	0	
6/1/2010	32	26	20	21	19	17	94	64	39	1015	1013	1009	16	15	8	16	5	26	0	0	
6/2/2010	33	27	20	22	20	18	95	69	41	1011	1009	1005	16	13	4	37	8	47	1.19	3	Rain-Thunderstorm
6/3/2010	21	21	20	21	20	19	96	94	89	1008	1007	1004	16	11	3	24	8	37	2.03	7	Rain-Thunderstorm
6/4/2010	31	25	19	21	20	17	97	74	44	1010	1008	1007	16	9	1	10	0		0	1	Fog
6/5/2010	32	26	21	22	21	20	95	74	54	1011	1009	1008	16	13	6	16	3		0	0	
6/6/2010	33	28	24	25	23	22	95	76	52	1013	1012	1010	11	7	3	11	6		0	4	
6/7/2010	32	28	24	24	23	22	92	77	57	1016	1014	1012	11	7	5	16	6		0	2	
6/8/2010	28	25	22	24	22	20	94	86	63	1016	1014	1013	16	12	8	21	8	29	0	3	Rain
6/9/2010	25	23	21	23	21	20	96	94	91	1016	1014	1011	16	10	2	21	5	27	7.37	6	Rain-Thunderstorm

6/10/2010	32	27	22	25	23	21	96	80	54	1013	1011	1009	11	7	5	29	13	39	0	3 Rain
6/11/2010	32	28	25	25	23	22	91	76	59	1013	1012	1011	11	7	5	27	16	37	0	4
6/12/2010	32	28	25	24	23	22	91	75	56	1016	1015	1013	16	9	6	26	16	40	0	4 Rain
6/13/2010	32	28	25	24	23	21	91	73	53	1017	1016	1013	11	7	5	23	14	32	0	5
6/14/2010	33	29	25	24	22	20	93	72	46	1015	1014	1010	11	8	5	23	13	34	0	4 Rain
6/15/2010	33	28	23	23	22	19	96	72	42	1017	1015	1013	11	8	4	14	6		0	3
6/16/2010	33	28	23	24	22	20	95	71	44	1019	1017	1015	16	11	4	16	6		0	2
6/17/2010	33	28	23	24	22	18	95	72	44	1017	1016	1014	16	10	0	23	6	29	0	3 Fog
6/18/2010	33	28	23	24	22	21	93	71	49	1017	1016	1013	16	16	11	23	10	29	0	3
6/19/2010	33	28	24	23	22	20	93	71	44	1019	1017	1015	16	15	11	16	10		0	2
6/20/2010	33	28	23	23	22	20	94	69	45	1018	1016	1013	16	16	11	16	6	27	0	2
6/21/2010	33	28	22	23	21	21	92	69	47	1017	1015	1014	16	16	16	14	6		0	1
6/22/2010	33	28	23	23	22	19	92	67	42	1018	1016	1015	16	16	16	13	5		0	1
6/23/2010	33	28	22	23	22	20	94	69	43	1018	1016	1015	16	16	11	13	5		0	1
6/24/2010	28	26	25	24	23	22	91	85	68	1019	1018	1017	16	16	16	8	3		0	3 Rain

Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: MB/JG	
Date & Time: 23JUN10 0930	County Name:
Stream Name: MUD CREEK 99907	
Segment No. or nearest downstream Segment No.: 1242 K	
Description of Site: MUD CREEK @ 79 Downstream of Frank wastewater plant	

At any point during the Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the use for the water body the investigator should stop conducting the UAA.

A. Stream Characteristics:

1. Check the following channel flow status that applies.

☐ dry ☐ no flow ☒ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:

☐ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.

☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.

☒ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.

☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.

☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. 0.058 cfs

4. Water Quality Data (Field Parameters)

Field parameters should be collected in accordance with the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1.

Air Temp 27.3 °C Water Temp 26.99 °C

5. Riparian Zone (Mark dominant categories with L (Left Bank) and R (Right Bank). Bank orientation is determined by the investigator facing downstream.) 2708

RL Forest	____ Urban	____ Rip rap
____ Shrub dominated corridor	____ Pasture	____ Concrete
____ Herbaceous marsh	____ Row crops	Other (specify): ____
____ Mowed/maintained corridor	____ Denuded/Eroded bank	

6. Ease of bank access to the water body: ☐ Easy ☒ Moderately easy ☐ Moderately difficult ☐ Difficult

7. Please describe access opportunities or explain why the site is not easily accessible (Attach photos for documentation):

2707 Side of hwy road with slight shoulder; behind wire fence

8. Dominant Primary Substrate

☐Cobble ☒Sand ☐Silt ☐Mud/Clay ☐Gravel ☐Bedrock ☐Rip rap ☐ Concrete

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

B. Primary Contact Water Recreation Evaluation:
- Primary contact recreation draft definition: Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, and whitewater kayaking, canoeing, and rafting, involving a significant risk of ingestion of water.

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?
☐ Yes ☒ No primary contact recreation activities were observed
a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).

☐ Wading-Children ☐ Tubing ☒ No primary contact activities that commonly occur were observed
☐ Wading-Adults ☐ Surfing
☐ Swimming ☐ Whitewater-kayaking, canoeing, rafting
☐ Water skiing ☐ Other: _____
☐ Diving ☐ frequent public swimming-created by publicly owned land or commercial operations

b. Check the number of individuals observed at the site: ☒ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Water in mouth or nose of the individual ☐ Primary touch: Individual's body (or portion) immersed in water
☐ Secondary touch: fishing, pets and related contact with water ☐ Individual is in a boat touching water
☐ Individual is on shore near water within 8 meters (25ft) of water ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☒ Not applicable

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
2708
Shallow water, fenced off area

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
Hwy 79

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_____ Site: _____
Date: _____ Time: _____

b. Check the number of individuals observed at the site.
☒ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body well away from water between 8 and 30 meters (100 ft) N/a

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
fenced off private property and water too shallow

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 sufficient pools

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.
Pools too small for game fish; private property with fence

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ FDS Page 3 of 8 _____

E. Stream Channel and Substantial Pools
Please check the following which best describes the river or stream: ☒ Wadeable ☐ Non-wadeable

1. Wadeable Streams
Determine whether or not the average depth at the thalweg is greater than 0.5 meters and if there are substantial pools with a depth of 1 meter or greater. Walk an approximately 300 meter reach (total) at the site and take the following measurements within the 300 meter reach. Measurements should be taken during base flow conditions (sustained or typical dry, warm-weather flows between rainfall events, excluding unusual antecedent conditions of drought or wet weather

Also, take photos facing upstream, downstream, left bank, and right bank at the 30 meters, 150 meters, and 300 meters.
Photos #s (30 meters) Upstream 2711 Downstream 2712 Left Bank 2713 Right Bank 2714
Photos #s (150 meters) Upstream 2716 Downstream 2717 Left Bank 2715 Right Bank 2719
Photos #s (300 meters) Upstream 2723 Downstream 2721 Left Bank 2725 Right Bank 2726

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	11	3.5	0.32
Pool 2	11	3	0.28
Pool 3	23	3	0.28
Pool 4	12	4	0.46
Pool 5	~~[illegible]~~ 12	4	~~0.75~~ 0.85 ~~[illegible]~~ 23 [illegible]
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	0.1
60 meters	0.08
90 meters	0.08
120 meters	0.28
150 meters	0.36
180 meters	0.30
210 meters	0.44
240 meters	0.57
270 meters	0.85
300 meters	0.20
Average	0.31

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

c) Stream width - Measure (1) the width at one point which represents the typical average width of the 300 meter reach; (2) the width at the narrowest point of the stream within the 300 meter reach; and (3) the width at the widest point of the stream within the 300 meter reach.

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	3
Width at narrowest point of the stream within 300 meter reach	0.5
Width at the widest point of the stream within 300 meter reach	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_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

☐ Drinking or water in mouth
☐ Bathing
☐ Walking
☐ Jogging/running
☐ Bicycling
☐ Standing
☐ Sitting
☐ Lying down/sleeping
☐ Playing on shoreline
☐ Picnicking
☐ Motorcycle/ATV
☐ Hunting/Trapping
☐ Wildlife watching
☒ None
☐ Other: _____

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☐ Yes ☒ No (If yes, please provide supporting documentation and photos.)

Comments: _____

3. Check any channel obstructions that apply (Attach photos). 2709, 2722

☐ Culverts ☐ Fences ☒ Log jams ☒ Rip rap ☐ Water control structure
☐ Barbed wire ☐ Dams ☐ Thick vegetation ☐ Low bridges ☐ None
☐ Utility pipe ☐ Other (specify):_____

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest). 2709

☐ Campgrounds ☐ Stairs/walkway ☒ Roads (paved/unpaved) ☐ Other:_____
☐ Playgrounds ☐ Boating access (ramps) ☐ Populated area ☐ None of the Above
☐ Rural area ☐ Beach ☐ Docks or rafts
☐ Residential ☒ Bridge crossing ☐ Commercial outfitter
☐ National forests ☐ Commercial boating ☐ Nearby school
☐ Urban/suburban location ☐ Trails/paths (hiking/biking) ☐ Power Line Corridor
☐ Golf Course ☐ Paved parking lot ☐ Parks (national/city/county/state)
☐ Sports Field ☐ Unimproved parking lot ☐ Public Property

Comments: HW 79 [illegible]

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).

☒ Private Property ☒ Fence
☐ No trespass sign ☐ Barge/ship traffic
☐ Wildlife ☐ Industrial
☐ Steep slopes ☐ None of the Above
☐ No public access ☐ Other:_____
☐ No roads

Comments:_____

6. Check any indications of human use (Attach photos).

☐ Roads ☐ RV/ATV Tracks ☐ NPDES Discharge ☐ Organized event
☐ Rope swings ☐ Camping Sites ☐ Gates on corridor ☒ No Human Presence
☐ Dock/platform ☐ Fire pit/ring ☐ Children's toys
☐ Foot paths/prints ☐ Fishing Tackle ☐ Remnant's of Kid's play
☐ Other: _____

Comments:_____

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

7. Check all water characteristics that apply (Attach photos).

Aquatic Vegetation: ☐ absent ☒ rare ☐ common ☐ abundant 2715
Algae Cover: ☐ absent ☐ rare ☒ common ☐ abundant
Odor: ☐ none ☒ rare ☐ common ☐ abundant
Color: ☐ clear ☒ green ☐ red ☐ brown ☐ black 2710
Bottom Deposit: ☐ sludge ☐ solids ☒ fine sediments ☐ none ☐ other 2710
Water Surface: ☒ clear ☒ scum ☐ foam ☐ debris ☐ oil 2710
Other:
Scum more present in long pool downstream 1/3 of reach 0721

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 2720
Bank Garbage ☐ None ☒ Rare ☐ Common ☐ Abundant
Briefly describe the kinds of garbage observed: foot items thrown from road upstream

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).
Industrial park D.S.R. avg for stream

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream:_____ Date:_____

Site:_____ Site

Description:_____

Time Begin:_____ Time End:_____ Meter Type:_____

Observers:_____ Stream Width*:_____ Section Width (W):_____

Observations:_____

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V)		Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
			At Point (ft/s)(m/s)	Average (ft/s)(m/s)	

: Thu Jul 1 2010

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MB

FlowTracker	**(English Units)**
P872	ft
3.7	ft/s
2.30	ft^2
0.0%	cfs

Accuracy	1.0%	1.0%
Depth	0.7%	1.8%
Velocity	1.7%	10.3%
Width	0.2%	0.2%
Method	3.3%	-
# Stations	5.1%	-
Overall	**6.4%**	**10.5%**

20	10
REW	4.900
46.3 dB	0.893
80.57 °F	0.182
Mid-Section	0.0646
	0.0577

				Depth								
0	08:38	0.40	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
1	08:38	1.40	0.6	0.200	0.6	0.080	0.0640	1.00	0.0640	0.150	0.0096	16.7
2	*08:39*	*1.90*	*0.6*	*0.200*	*0.6*	*0.080*	*0.0456*	*1.00*	*0.0456*	*0.100*	*0.0046*	*7.9*
3	08:39	2.40	0.6	0.200	0.6	0.080	0.1070	1.00	0.1070	0.100	0.0107	18.6
4	08:40	2.90	0.6	0.200	0.6	0.080	0.1453	1.00	0.1453	0.100	0.0145	25.2
5	08:40	3.40	0.6	0.200	0.6	0.080	0.1283	1.00	0.1283	0.100	0.0128	22.3
6	*08:41*	*3.90*	*0.6*	*0.200*	*0.6*	*0.080*	*0.0604*	*1.00*	*0.0604*	*0.100*	*0.0060*	*10.5*
7	08:41	4.40	0.6	0.200	0.6	0.080	0.0203	1.00	0.0203	0.100	0.0020	3.5
8	08:42	4.90	0.6	0.250	0.6	0.100	-0.0187	1.00	-0.0187	0.112	-0.0021	-3.6
9	08:42	5.30	None	0.150	0.0	0.0	0.0000	1.00	-0.0187	0.030	-0.0006	-1.0

: Thu Jul 1 2010

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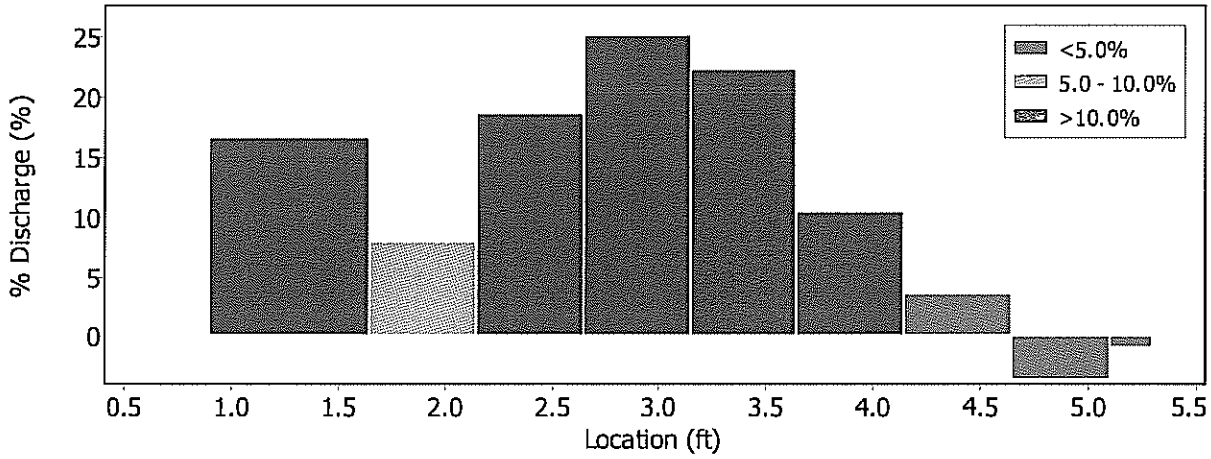

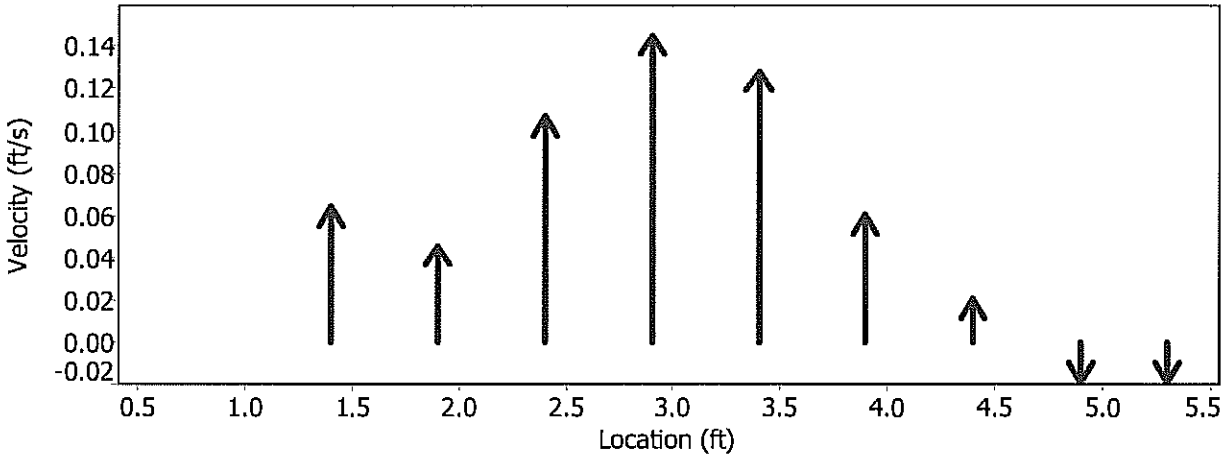

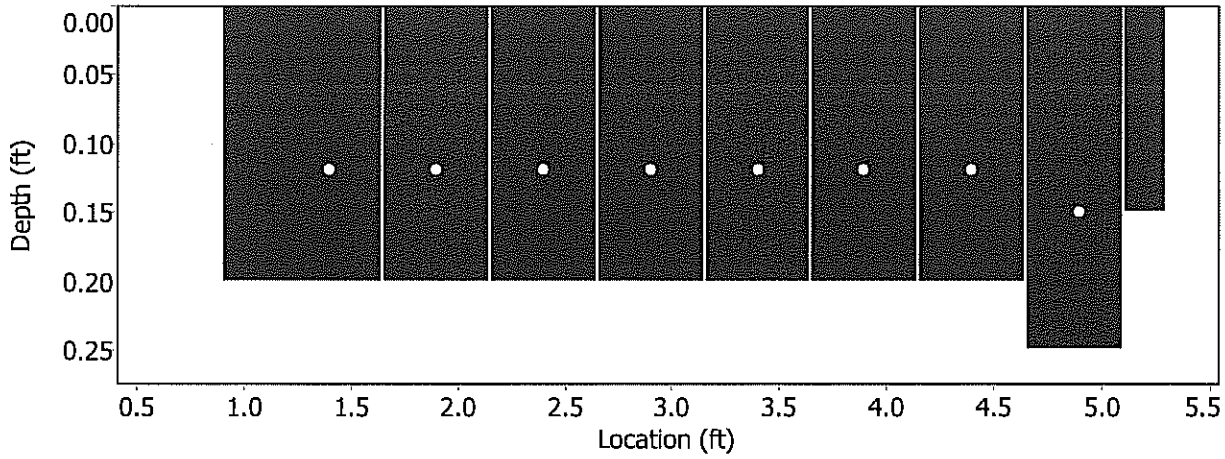

: Thu Jul 1 2010

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2	1.90	0.6	Boundary QC is Fair; possible boundary interference
6	3.90	0.6	High angle: 23

: Thu Jul 1 2010

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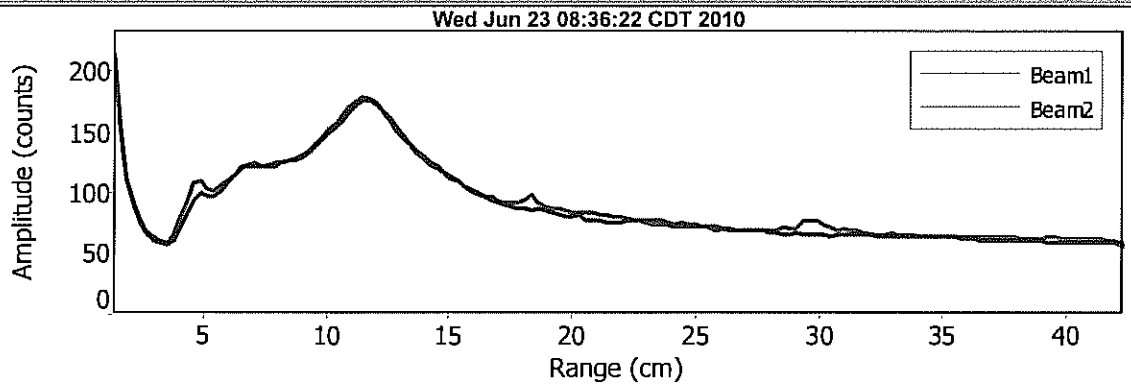

- Noise level check - Pass
- SNR check - Pass
- Peak location check - Pass
- Peak shape check - Pass

CDT	Max Temperature C	Mean Temperature C	Min Temperature C	Dew Point C	Mean Dew Point C	Min DewpointC	Max Humidity	Mean Humidity	Min Humidity	Max Sea Level Pressurehp	Mean Sea Level Pressurehp	Min Sea Level Pressurehp	Max Visibility Km	Mean Visibility Km	Min Visibility Km	Max Wind Speed Km/h	Mean Wind Speed Km/h	Max Gust Speed Km/h	Precipitation Cm	Cloud Cover	Events
4/1/2010	24	20	15	14	13	11	81	66	51	1015	1012	1008	16	16	16	37	21	48	0	6	
4/2/2010	23	20	17	16	15	14	91	76	58	1011	1009	1007	16	12	5	34	19	40	0	7	
4/3/2010	27	16	6	16	5	-8	94	57	9	1016	1014	1012	16	11	0	13	2		0	2	Fog-Rain
4/4/2010	27	22	16	18	16	13	92	74	52	1016	1014	1013	16	11	2	34	13	47	0	6	
4/5/2010	26	22	19	17	16	15	83	71	52	1018	1016	1014	16	15	11	32	18	45	0	7	
4/6/2010	26	22	18	16	15	13	83	68	50	1015	1011	1007	16	15	11	42	24	53	0	6	
4/7/2010	22	19	16	16	13	0	85	69	24	1011	1010	1007	16	12	6	26	13	40	0.05	8	Rain
4/8/2010	18	11	5	3	-1	-3	71	42	23	1022	1020	1017	16	16	16	29	18	42	0	0	
4/9/2010	21	11	0	3	0	-2	92	56	21	1023	1020	1018	16	16	16	19	5	32	0	0	
4/10/2010	22	16	10	11	9	6	85	66	46	1023	1021	1020	16	16	16	24	10	39	0	2	
4/11/2010	22	17	11	14	11	8	83	70	50	1024	1022	1020	16	14	6	14	6		0	6	
4/12/2010	25	17	10	13	8	2	92	61	23	1022	1021	1018	16	13	3	21	5	29	0	0	
4/13/2010	26	18	11	13	10	8	88	62	35	1021	1019	1017	16	16	11	26	5	35	0.08	1	
4/14/2010	25	20	13	18	15	13	96	80	55	1024	1021	1020	16	14	8	19	5	27	0.03	4	
4/15/2010	25	21	17	19	17	15	94	80	58	1023	1021	1019	16	15	11	19	6	29	0.08	5	Rain
4/16/2010	23	18	15	17	16	13	93	80	60	1022	1020	1016	16	14	6	16	5	26	0	6	
4/17/2010	25	21	18	17	16	15	90	76	55	1017	1015	1012	16	13	6	21	6	32	0	7	
4/18/2010	20	17	15	16	15	13	96	86	70	1016	1014	1013	16	16	11	13	3		0.08	8	Rain-Thunderstorm
4/19/2010	18	15	11	16	12	10	97	82	62	1019	1017	1015	16	9	5	23	11	32	0.2	8	Rain
4/20/2010	22	16	11	14	12	10	94	70	48	1018	1016	1013	16	10	6	13	3		0	3	
4/21/2010	27	18	11	15	13	11	97	71	42	1014	1012	1009	16	12	6	16	5	27	0	1	Rain
4/22/2010	23	20	15	18	16	14	97	83	69	1010	1008	1005	16	12	3	29	13	40	0	6	Rain
4/23/2010	30	25	20	21	19	18	96	78	50	1005	1003	999	16	12	5	26	13	37	0.15	6	Rain-Thunderstorm
4/24/2010	27	21	13	21	10	5	94	56	25	1006	1004	1000	16	16	8	34	14	53	0.03	2	Rain
4/25/2010	27	20	12	11	8	3	88	56	22	1011	1009	1006	16	16	16	29	8	47	0	0	
4/26/2010	31	20	8	17	10	7	95	61	25	1012	1010	1006	16	16	5	24	5	32	0.13	0	Rain-Thunderstorm
4/27/2010	23	16	9	10	6	3	90	52	27	1019	1016	1014	16	16	11	26	13	34	0	3	
4/28/2010	27	17	7	10	7	4	95	57	25	1017	1015	1010	16	16	16	26	6	35	0	0	
4/29/2010	28	22	15	17	16	12	94	69	46	1012	1007	1001	16	15	8	39	19	55	0	4	
4/30/2010	28	25	22	22	20	19	86	75	60	1002	1000	998	16	10	6	34	19	52	0	7	Rain
5/1/2010	27	23	19	22	18	13	96	73	54	1002	1001	998	16	13	4	26	10	34	0	5	
5/2/2010	28	20	12	13	9	3	92	57	20	1008	1006	1004	16	16	16	19	5	26	0	2	Rain
5/3/2010	31	20	9	12	8	5	90	54	20	1017	1013	1010	16	15	8	29	5	40	0	1	Rain

5/4/2010	30	19	8	13	9	5	98	59	22	1018	1015	1011	16	15	1	14	3		0	0	
5/5/2010	33	23	12	13	10	8	87	47	22	1013	1011	1010	16	16	16	24	11	32	0	0	
5/6/2010	32	24	16	17	16	13	94	64	34	1013	1011	1008	16	15	11	26	13	39	0	2	
5/7/2010	33	26	20	21	19	18	89	67	42	1013	1011	1008	16	15	11	24	18	34	0	5	
5/8/2010	23	21	19	14	9	6	60	47	35	1025	1022	1019	16	16	16	24	16	40	0	8	
5/9/2010	21	20	18	13	8	6	61	46	40	1023	1020	1017	16	16	16	24	11	27	0	8	
5/10/2010	31	25	20	20	18	17	88	68	45	1016	1013	1009	16	16	11	37	19	50	0	5	
5/11/2010	33	27	21	21	18	15	90	64	37	1013	1011	1009	16	15	8	37	18	50	0	3	
5/12/2010	31	26	21	21	19	17	89	67	46	1012	1010	1009	16	15	11	39	23	60	0	3	
5/13/2010	31	27	22	21	20	17	82	67	43	1016	1014	1010	16	16	11	32	21	48	0	5	
5/14/2010	28	23	18	21	20	17	96	84	56	1019	1017	1014	16	12	1	29	11	52	4.24	4	Rain-Thunderstorm
5/15/2010	26	21	17	18	17	15	96	81	55	1019	1016	1014	16	10	6	40	13	53	0.97	3	Rain-Thunderstorm
5/16/2010	30	23	16	20	18	16	98	78	46	1017	1015	1012	16	8	2	10	2		0	2	
5/17/2010	31	25	18	22	20	17	100	79	47	1018	1015	1013	16	12	2	47	3	66	1.19	2	Rain-Thunderstorm
5/18/2010	30	23	17	20	18	17	96	75	51	1016	1014	1011	16	12	8	13	5		0	0	
5/19/2010	31	26	21	21	20	18	95	73	47	1012	1009	1006	11	8	6	27	13	35	0	4	
5/20/2010	31	27	23	22	21	21	89	76	55	1011	1009	1008	11	9	6	23	14	34	0	6	Rain
5/21/2010	32	27	22	22	21	19	95	71	48	1015	1013	1011	16	9	6	21	11	29	0	3	
5/22/2010	32	27	22	22	21	20	93	73	49	1014	1012	1010	11	9	6	27	14	42	0	4	
5/23/2010	32	28	24	22	21	20	86	69	51	1014	1012	1011	16	10	6	26	16	39	0	5	Rain
5/24/2010	31	26	22	22	20	16	94	69	42	1015	1013	1011	11	9	5	26	13	35	0	4	
5/25/2010	31	26	21	21	19	16	93	70	39	1015	1013	1011	16	9	5	19	10	29	0	1	
5/26/2010	31	25	18	21	18	12	96	68	31	1017	1015	1013	16	11	6	11	2		0	1	
5/27/2010	32	25	18	21	18	15	94	67	35	1017	1015	1012	16	10	6	11	2		0	0	
5/28/2010	33	26	20	20	18	15	93	62	32	1014	1012	1009	16	9	5	10	2		0	1	
5/29/2010	34	27	20	21	18	15	92	64	32	1010	1009	1006	16	11	6	10	2		0	2	
5/30/2010	33	27	21	22	19	17	91	65	38	1011	1009	1008	16	14	8	19	3		0	1	Thunderstorm
5/31/2010	33	27	21	21	19	16	94	65	36	1015	1013	1012	16	15	6	13	5		0	0	
6/1/2010	32	26	20	21	19	17	94	64	39	1015	1013	1009	16	15	8	16	5	26	0	0	
6/2/2010	33	27	20	22	20	18	95	69	41	1011	1009	1005	16	13	4	37	8	47	1.19	3	Rain-Thunderstorm
6/3/2010	21	21	20	21	20	19	96	94	89	1008	1007	1004	16	11	3	24	8	37	2.03	7	Rain-Thunderstorm
6/4/2010	31	25	19	21	20	17	97	74	44	1010	1008	1007	16	9	1	10	0		0	1	Fog
6/5/2010	32	26	21	22	21	20	95	74	54	1011	1009	1008	16	13	6	16	3		0	0	
6/6/2010	33	28	24	25	23	22	95	76	52	1013	1012	1010	11	7	3	11	6		0	4	
6/7/2010	32	28	24	24	23	22	92	77	57	1016	1014	1012	11	7	5	16	6		0	2	
6/8/2010	28	25	22	24	22	20	94	86	63	1016	1014	1013	16	12	8	21	8	29	0	3	Rain
6/9/2010	25	23	21	23	21	20	96	94	91	1016	1014	1011	16	10	2	21	5	27	7.37	6	Rain-Thunderstorm

6/10/2010	32	27	22	25	23	21	96	80	54	1013	1011	1009	11	7	5	29	13	39	0	3 Rain
6/11/2010	32	28	25	25	23	22	91	76	59	1013	1012	1011	11	7	5	27	16	37	0	4
6/12/2010	32	28	25	24	23	22	91	75	56	1016	1015	1013	16	9	6	26	16	40	0	4 Rain
6/13/2010	32	28	25	24	23	21	91	73	53	1017	1016	1013	11	7	5	23	14	32	0	5
6/14/2010	33	29	25	24	22	20	93	72	46	1015	1014	1010	11	8	5	23	13	34	0	4 Rain
6/15/2010	33	28	23	23	22	19	96	72	42	1017	1015	1013	11	8	4	14	6		0	3
6/16/2010	33	28	23	24	22	20	95	71	44	1019	1017	1015	16	11	4	16	6		0	2
6/17/2010	33	28	23	24	22	18	95	72	44	1017	1016	1014	16	10	0	23	6	29	0	3 Fog
6/18/2010	33	28	23	24	22	21	93	71	49	1017	1016	1013	16	16	11	23	10	29	0	3
6/19/2010	33	28	24	23	22	20	93	71	44	1019	1017	1015	16	15	11	16	10		0	2
6/20/2010	33	28	23	23	22	20	94	69	45	1018	1016	1013	16	16	11	16	6	27	0	2
6/21/2010	33	28	22	23	21	21	92	69	47	1017	1015	1014	16	16	16	14	6		0	1
6/22/2010	33	28	23	23	22	19	92	67	42	1018	1016	1015	16	16	16	13	5		0	1
6/23/2010	33	28	22	23	22	20	94	69	43	1018	1016	1015	16	16	11	13	5		0	1
6/24/2010	28	26	25	24	23	22	91	85	68	1019	1018	1017	16	16	16	8	3		0	3 Rain

Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: MB/JG	
Date & Time: 23JUN10 0900	County Name: Robertson
Stream Name: MUD 99908	
Segment No. or nearest downstream Segment No.: 1242K	
Description of Site: MUD CREEK NEAR FRANKLIN	

At any point during the Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the use for the water body the investigator should stop conducting the UAA.

A. Stream Characteristics:

1. Check the following channel flow status that applies.

☒ dry ☐ no flow ☐ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:

☒ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.

~~☒ Intermittent:~~ A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.

☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.

☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.

☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. 0 cfs

4. Water Quality Data (Field Parameters)

Field parameters should be collected in accordance with the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1.

Air Temp 26.7 °C Water Temp n/a °C

5. Riparian Zone (Mark dominant categories with L (Left Bank) and R (Right Bank). Bank orientation is determined by the investigator facing downstream.)

____ Forest	____ Urban	____ Rip rap
____ Shrub dominated corridor	LR 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):

Side of road; private property w/fence; no real channel, just a depression in a field 2703+2704

8. Dominant Primary Substrate

☐Cobble ☒Sand ☐Silt ☐Mud/Clay ☐Gravel ☐Bedrock ☐Rip rap ☐ Concrete

Stream Name_____ Site: _____
Date: _____ Time: _____

B. Primary Contact Water Recreation Evaluation:

- Primary contact recreation draft definition: Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, and whitewater kayaking, canoeing, and rafting, involving a significant risk of ingestion of water.

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?

☐ Yes ☒ No primary contact recreation activities were observed

a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).

☐ Wading-Children ☐ Tubing ☐ No primary contact activities that commonly occur were observed
☐ Wading-Adults ☐ Surfing
☐ Swimming ☐ Whitewater-kayaking, canoeing, rafting
☐ Water skiing ☐ Other: _____
☐ Diving ☐ frequent public swimming-created by publicly owned land or commercial operations

b. Check the number of individuals observed at the site: ☒ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.

☐ Water in mouth or nose of the individual ☐ Primary touch: Individual's body (or portion) immersed in water
☐ Secondary touch: fishing, pets and related contact with water ☐ Individual is in a boat touching water
☐ Individual is on shore near water within 8 meters (25ft) of water ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☒ Not applicable

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).

No water no channel

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).

FM1644

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: _____

Date: _____ Time: _____

b. Check the number of individuals observed at the site.
☒ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body well away from water between 8 and 30 meters (100 ft) n/a

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
no water/no channel

3. If secondary contact recreation activities are observed, how often do water recreational activities occur that do not involve a significant risk of water ingestion? ☐ frequently ☒ infrequently
Please describe how often the activities occur? ☒ Unknown ☐ Never ☐ Daily ☐ Monthly ☐ Yearly

4. If infrequently, what is the reason? ☒ physical characteristics of the water body ☐ limited public access ☐ other
If other, list reasons: _____

5. Describe the physical characteristics of the water body that hinders the frequency of secondary contact recreation (depth, etc.) (Attach photos or depth measurements, etc. for documentation).
no water, no channel

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).
2703 & 2704 private property fenced out

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.
no water/no channel

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 na Downstream na Left Bank na Right Bank na

Photos #s (150 meters) Upstream na Downstream na Left Bank na Right Bank na

Photos #s (300 meters) Upstream na Downstream na Left Bank na Right Bank na

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			

n/a
no water/no defined

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	

na
no water/no defined

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

c) Stream width - Measure (1) the width at one point which represents the typical average width of the 300 meter reach; (2) the width at the narrowest point of the stream within the 300 meter reach; and (3) the width at the widest point of the stream within the 300 meter reach.

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	na
Width at narrowest point of the stream within 300 meter reach	no wat / no channel
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:
stream is a slight depressed area in a pasture at the site. no water and no distinguishable channel

2. Non-wadeable Streams

If accessible, take 10 width measurements which represent typical widths of the 300 meter reach. If the water is too deep and not accessible record the estimated average width of the water body.

Also, take photos facing upstream, downstream, left bank, and right bank at .
Photos #s (30 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (150 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

# Measurements	Width (meters)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

☐ Drinking or water in mouth
☐ Bathing
☐ Walking
☐ Jogging/running
☐ Bicycling
☐ Standing
☐ Sitting
☐ Lying down/sleeping
☐ Playing on shoreline
☐ Picnicking
☐ Motorcycle/ATV
☐ Hunting/Trapping
☐ Wildlife watching
☒ None
☐ Other: _____

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☐ Yes ☒ No (If yes, please provide supporting documentation and photos.)
Comments: _____

3. Check any channel obstructions that apply (Attach photos). 2703 & 2705

☒ Culverts ☒ Fences ☐ Log jams ☐ Rip rap ☐ Water control structure
☒ Barbed wire ☐ Dams ☐ Thick vegetation ☐ Low bridges ☐ None
☐ Utility pipe ☐ Other (specify):_____

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest). 2706

☐ Campgrounds ☐ Stairs/walkway ☒ Roads (paved/unpaved) ☐ Other:_____
☐ Playgrounds ☐ Boating access (ramps) ☒ Populated area ☐ None of the Above
☐ Rural area ☐ Beach ☐ Docks or rafts
☐ Residential ☐ Bridge crossing ☐ Commercial outfitter
☐ National forests ☐ Commercial boating ☒ Nearby school
☒ Urban/suburban location ☐ Trails/paths (hiking/biking) ☐ Power Line Corridor
☐ Golf Course ☐ Paved parking lot ☐ Parks (national/city/county/state)
☒ Sports Field ☐ Unimproved parking lot ☐ Public Property
Comments: just outside of franklin & down the road from franklin high school #2706

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).

☒ Private Property ☒ Fence
☐ No trespass sign ☐ Barge/ship traffic
☐ Wildlife ☐ Industrial
☐ Steep slopes ☐ None of the Above
☐ No public access ☐ Other:_____
☐ No roads
Comments: fenced out field 2703 - 2704

6. Check any indications of human use (Attach photos). 2706

☒ Roads ☐ RV/ATV Tracks ☐ NPDES Discharge ☐ Organized event
☐ Rope swings ☐ Camping Sites ☐ Gates on corridor ☐ No Human Presence
☐ Dock/platform ☐ Fire pit/ring ☐ Children's toys
☐ Foot paths/prints ☐ Fishing Tackle ☐ Remnant's of Kid's play
☐ Other: _____
Comments:_____

Stream Name_____ Site: _____
Date: _____ Time: _____

7. Check all water characteristics that apply (Attach photos).

Aquatic Vegetation: ☒ absent ☐ rare ☐common ☐abundant
Algae Cover: ☒ absent ☐ rare ☐common ☐abundant
Odor: ☒ none ☐ rare ☐common ☐abundant
Color: ☐ clear ☐ green ☐red ☐ brown ☐ black na
Bottom Deposit: ☐ sludge ☐ solids ☐ fine sediments ☒none ☐other
Water Surface: ☐ clear ☐ scum ☐ foam ☐ debris ☐ oil na
Other:
no water & no aquatic habitat

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: cattle in pasture

10. Evidence of wild animals or evidence of birds, cattle, hogs, etc.
☒ Tracks ☒ Fecal droppings ☐ Bird nests na

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, no discernible channel, in the middle of a pasture

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream:_____ Date:_____

Site:_____ Site

Description:_____

Time Begin:_____ Time End:_____ Meter Type:_____

Observers:_____ Stream Width*:_____ Section Width (W):_____

Observations:_____

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V)		Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
			At Point (ft/s)(m/s)	Average (ft/s)(m/s)	

CDT	Max Temperature C	Mean Temperature C	Min Temperature C	Dew Point C	Mean Dew Point C	Min DewpointC	Max Humidity	Mean Humidity	Min Humidity	Max Sea Level Pressure hPa	Mean Sea Level Pressure hPa	Min Sea Level Pressure hPa	Max Visibility Km	Mean Visibility Km	Min Visibility Km	Max Wind Speed Km/h	Mean Wind Speed Km/h	Max Gust Speed Km/h	Precipitation Cm	Cloud Cover	Events
4/1/2010	24	20	15	14	13	11	81	66	51	1015	1012	1008	16	16	16	37	21	48	0	6	
4/2/2010	23	20	17	16	15	14	91	76	58	1011	1009	1007	16	12	5	34	19	40	0	7	
4/3/2010	27	16	6	16	5	-8	94	57	9	1016	1014	1012	16	11	0	13	2		0	2	Fog-Rain
4/4/2010	27	22	16	18	16	13	92	74	52	1016	1014	1013	16	11	2	34	13	47	0	6	
4/5/2010	26	22	19	17	16	15	83	71	52	1018	1016	1014	16	15	11	32	18	45	0	7	
4/6/2010	26	22	18	16	15	13	83	68	50	1015	1011	1007	16	15	11	42	24	53	0	6	
4/7/2010	22	19	16	16	13	0	85	69	24	1011	1010	1007	16	12	6	26	13	40	0.05	8	Rain
4/8/2010	18	11	5	3	-1	-3	71	42	23	1022	1020	1017	16	16	16	29	18	42	0	0	
4/9/2010	21	11	0	3	0	-2	92	56	21	1023	1020	1018	16	16	16	19	5	32	0	0	
4/10/2010	22	16	10	11	9	6	85	66	46	1023	1021	1020	16	16	16	24	10	39	0	2	
4/11/2010	22	17	11	14	11	8	83	70	50	1024	1022	1020	16	14	6	14	6		0	6	
4/12/2010	25	17	10	13	8	2	92	61	23	1022	1021	1018	16	13	3	21	5	29	0	0	
4/13/2010	26	18	11	13	10	8	88	62	35	1021	1019	1017	16	16	11	26	5	35	0.08	1	
4/14/2010	25	20	13	18	15	13	96	80	55	1024	1021	1020	16	14	8	19	5	27	0.03	4	
4/15/2010	25	21	17	19	17	15	94	80	58	1023	1021	1019	16	15	11	19	6	29	0.08	5	Rain
4/16/2010	23	18	15	17	16	13	93	80	60	1022	1020	1016	16	14	6	16	5	26	0	6	
4/17/2010	25	21	18	17	16	15	90	76	55	1017	1015	1012	16	13	6	21	6	32	0	7	
4/18/2010	20	17	15	16	15	13	96	86	70	1016	1014	1013	16	16	11	13	3		0.08	8	Rain-Thunderstorm
4/19/2010	18	15	11	16	12	10	97	82	62	1019	1017	1015	16	9	5	23	11	32	0.2	8	Rain
4/20/2010	22	16	11	14	12	10	94	70	48	1018	1016	1013	16	10	6	13	3		0	3	
4/21/2010	27	18	11	15	13	11	97	71	42	1014	1012	1009	16	12	6	16	5	27	0	1	Rain
4/22/2010	23	20	15	18	16	14	97	83	69	1010	1008	1005	16	12	3	29	13	40	0	6	Rain
4/23/2010	30	25	20	21	19	18	96	78	50	1005	1003	999	16	12	5	26	13	37	0.15	6	Rain-Thunderstorm
4/24/2010	27	21	13	21	10	5	94	56	25	1006	1004	1000	16	16	8	34	14	53	0.03	2	Rain
4/25/2010	27	20	12	11	8	3	88	56	22	1011	1009	1006	16	16	16	29	8	47	0	0	
4/26/2010	31	20	8	17	10	7	95	61	25	1012	1010	1006	16	16	5	24	5	32	0.13	0	Rain-Thunderstorm
4/27/2010	23	16	9	10	6	3	90	52	27	1019	1016	1014	16	16	11	26	13	34	0	3	
4/28/2010	27	17	7	10	7	4	95	57	25	1017	1015	1010	16	16	16	26	6	35	0	0	
4/29/2010	28	22	15	17	16	12	94	69	46	1012	1007	1001	16	15	8	39	19	55	0	4	
4/30/2010	28	25	22	22	20	19	86	75	60	1002	1000	998	16	10	6	34	19	52	0	7	Rain
5/1/2010	27	23	19	22	18	13	96	73	54	1002	1001	998	16	13	4	26	10	34	0	5	
5/2/2010	28	20	12	13	9	3	92	57	20	1008	1006	1004	16	16	16	19	5	26	0	2	Rain
5/3/2010	31	20	9	12	8	5	90	54	20	1017	1013	1010	16	15	8	29	5	40	0	1	Rain

5/4/2010	30	19	8	13	9	5	98	59	22	1018	1015	1011	16	15	1	14	3		0	0	
5/5/2010	33	23	12	13	10	8	87	47	22	1013	1011	1010	16	16	16	24	11	32	0	0	
5/6/2010	32	24	16	17	16	13	94	64	34	1013	1011	1008	16	15	11	26	13	39	0	2	
5/7/2010	33	26	20	21	19	18	89	67	42	1013	1011	1008	16	15	11	24	18	34	0	5	
5/8/2010	23	21	19	14	9	6	60	47	35	1025	1022	1019	16	16	16	24	16	40	0	8	
5/9/2010	21	20	18	13	8	6	61	46	40	1023	1020	1017	16	16	16	24	11	27	0	8	
5/10/2010	31	25	20	20	18	17	88	68	45	1016	1013	1009	16	16	11	37	19	50	0	5	
5/11/2010	33	27	21	21	18	15	90	64	37	1013	1011	1009	16	15	8	37	18	50	0	3	
5/12/2010	31	26	21	21	19	17	89	67	46	1012	1010	1009	16	15	11	39	23	60	0	3	
5/13/2010	31	27	22	21	20	17	82	67	43	1016	1014	1010	16	16	11	32	21	48	0	5	
5/14/2010	28	23	18	21	20	17	96	84	56	1019	1017	1014	16	12	1	29	11	52	4.24	4	Rain-Thunderstorm
5/15/2010	26	21	17	18	17	15	96	81	55	1019	1016	1014	16	10	6	40	13	53	0.97	3	Rain-Thunderstorm
5/16/2010	30	23	16	20	18	16	98	78	46	1017	1015	1012	16	8	2	10	2		0	2	
5/17/2010	31	25	18	22	20	17	100	79	47	1018	1015	1013	16	12	2	47	3	66	1.19	2	Rain-Thunderstorm
5/18/2010	30	23	17	20	18	17	96	75	51	1016	1014	1011	16	12	8	13	5		0	0	
5/19/2010	31	26	21	21	20	18	95	73	47	1012	1009	1006	11	8	6	27	13	35	0	4	
5/20/2010	31	27	23	22	21	21	89	76	55	1011	1009	1008	11	9	6	23	14	34	0	6	Rain
5/21/2010	32	27	22	22	21	19	95	71	48	1015	1013	1011	16	9	6	21	11	29	0	3	
5/22/2010	32	27	22	22	21	20	93	73	49	1014	1012	1010	11	9	6	27	14	42	0	4	
5/23/2010	32	28	24	22	21	20	86	69	51	1014	1012	1011	16	10	6	26	16	39	0	5	Rain
5/24/2010	31	26	22	22	20	16	94	69	42	1015	1013	1011	11	9	5	26	13	35	0	4	
5/25/2010	31	26	21	21	19	16	93	70	39	1015	1013	1011	16	9	5	19	10	29	0	1	
5/26/2010	31	25	18	21	18	12	96	68	31	1017	1015	1013	16	11	6	11	2		0	1	
5/27/2010	32	25	18	21	18	15	94	67	35	1017	1015	1012	16	10	6	11	2		0	0	
5/28/2010	33	26	20	20	18	15	93	62	32	1014	1012	1009	16	9	5	10	2		0	1	
5/29/2010	34	27	20	21	18	15	92	64	32	1010	1009	1006	16	11	6	10	2		0	2	
5/30/2010	33	27	21	22	19	17	91	65	38	1011	1009	1008	16	14	8	19	3		0	1	Thunderstorm
5/31/2010	33	27	21	21	19	16	94	65	36	1015	1013	1012	16	15	6	13	5		0	0	
6/1/2010	32	26	20	21	19	17	94	64	39	1015	1013	1009	16	15	8	16	5	26	0	0	
6/2/2010	33	27	20	22	20	18	95	69	41	1011	1009	1005	16	13	4	37	8	47	1.19	3	Rain-Thunderstorm
6/3/2010	21	21	20	21	20	19	96	94	89	1008	1007	1004	16	11	3	24	8	37	2.03	7	Rain-Thunderstorm
6/4/2010	31	25	19	21	20	17	97	74	44	1010	1008	1007	16	9	1	10	0		0	1	Fog
6/5/2010	32	26	21	22	21	20	95	74	54	1011	1009	1008	16	13	6	16	3		0	0	
6/6/2010	33	28	24	25	23	22	95	76	52	1013	1012	1010	11	7	3	11	6		0	4	
6/7/2010	32	28	24	24	23	22	92	77	57	1016	1014	1012	11	7	5	16	6		0	2	
6/8/2010	28	25	22	24	22	20	94	86	63	1016	1014	1013	16	12	8	21	8	29	0	3	Rain
6/9/2010	25	23	21	23	21	20	96	94	91	1016	1014	1011	16	10	2	21	5	27	7.37	6	Rain-Thunderstorm

6/10/2010	32	27	22	25	23	21	96	80	54	1013	1011	1009	11	7	5	29	13	39	0	3	Rain
6/11/2010	32	28	25	25	23	22	91	76	59	1013	1012	1011	11	7	5	27	16	37	0	4	
6/12/2010	32	28	25	24	23	22	91	75	56	1016	1015	1013	16	9	6	26	16	40	0	4	Rain
6/13/2010	32	28	25	24	23	21	91	73	53	1017	1016	1013	11	7	5	23	14	32	0	5	
6/14/2010	33	29	25	24	22	20	93	72	46	1015	1014	1010	11	8	5	23	13	34	0	4	Rain
6/15/2010	33	28	23	23	22	19	96	72	42	1017	1015	1013	11	8	4	14	6		0	3	
6/16/2010	33	28	23	24	22	20	95	71	44	1019	1017	1015	16	11	4	16	6		0	2	
6/17/2010	33	28	23	24	22	18	95	72	44	1017	1016	1014	16	10	0	23	6	29	0	3	Fog
6/18/2010	33	28	23	24	22	21	93	71	49	1017	1016	1013	16	16	11	23	10	29	0	3	
6/19/2010	33	28	24	23	22	20	93	71	44	1019	1017	1015	16	15	11	16	10		0	2	
6/20/2010	33	28	23	23	22	20	94	69	45	1018	1016	1013	16	16	11	16	6	27	0	2	
6/21/2010	33	28	22	23	21	21	92	69	47	1017	1015	1014	16	16	16	14	6		0	1	
6/22/2010	33	28	23	23	22	19	92	67	42	1018	1016	1015	16	16	16	13	5		0	1	
6/23/2010	33	28	22	23	22	20	94	69	43	1018	1016	1015	16	16	11	13	5		0	1	
6/24/2010	28	26	25	24	23	22	91	85	68	1019	1018	1017	16	16	16	8	3		0	3	Rain

Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: MB/MC - DRA	
Date & Time: 27 Aug 10 1230	County Name: Robertson
Stream Name: Mud Creek	
Segment No. or nearest downstream Segment No.: 1242K	
Description of Site: 16.402 upstream from SH6	

At any point during the Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the use for the water body the investigator should stop conducting the UAA.

A. Stream Characteristics:

1. Check the following channel flow status that applies.

☐ dry ☐ no flow ☑ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:

☐ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.

☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.

☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.

☑ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.

☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. 0.129 cfs

4. Water Quality Data (Field Parameters)

Field parameters should be collected in accordance with the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1.

Air Temp 33.3 °C 92°F Water Temp 24.8 °C 76.9°F

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
RL 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):

Access from SH6 ROW. Concrete culvert at bridge, gentle slope to water. Tall weeds & brush #1310-1312

8. Dominant Primary Substrate

☐Cobble ☑Sand ☐Silt ☐Mud/Clay ☐Gravel ☐Bedrock ☐Rip rap ☐ Concrete

Stream Name_____ Site: _____
Date: _____ Time: _____

B. Primary Contact Water Recreation Evaluation:

- Primary contact recreation draft definition: Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, and whitewater kayaking, canoeing, and rafting, involving a significant risk of ingestion of water.

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?
☐ Yes ☑ No primary contact recreation activities were observed

a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).

☐ Wading-Children ☐ Tubing ☑ No primary contact activities that commonly occur were observed
☐ Wading-Adults ☐ Surfing
☐ Swimming ☐ Whitewater-kayaking, canoeing, rafting
☐ Water skiing ☐ Other: _____
☐ Diving ☐ frequent public swimming-created by publicly owned land or commercial operations

b. Check the number of individuals observed at the site: ☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Water in mouth or nose of the individual ☐ Primary touch: Individual's body (or portion) immersed in water
☐ Secondary touch: fishing, pets and related contact with water ☐ Individual is in a boat touching water
☐ Individual is on shore near water within 8 meters (25ft) of water ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☐ Not applicable

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
Shallow, brush covered banks, Refer to transects, muddy bottom at bridge
Water is covered with leaves & algae, #1310

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
SH 6 Row, #1307, 1308, 1310

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: _____

Date: _____ Time: _____

b. Check the number of individuals observed at the site.
☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body well away from water between 8 and 30 meters (100 ft)

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
Shallow, muddy bottom at bridge. Water is still covered with leaves and algae # 1310

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).
Shallow, Refer to transects. Debris under bridge. Water covered with leaves & algae # 1310 Steep banks 1317, 1322

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).
Mill at SH6. Private property upstream

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.
Construction of new bridge at this site. 1307-1309 Downstream from SH6

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____

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 1313 Downstream 1314 Left Bank 1315 Right Bank 1316
Photos #s (150 meters) Upstream 1317 Downstream 1318 Left Bank 1319 Right Bank 1320
Photos #s (300 meters) Upstream 1321 Downstream 1322 Left Bank 1323 Right Bank 1324

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)	27Aug10 Depth (meters)
Pool 1 27Aug10	32	6	ND ~~1.03~~ >1.2
Pool 2 ND	~~46~~ 60	6	>1.02
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	0.34
60 meters	0.84
90 meters	1.07
120 meters	0.81
150 meters	0.31
180 meters	0.34
210 meters	0.55
240 meters	0.29
270 meters	0.43
300 meters	0.46
Average	0.54

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

c) Stream width - Measure (1) the width at one point which represents the typical average width of the 300 meter reach; (2) the width at the narrowest point of the stream within the 300 meter reach; and (3) the width at the widest point of the stream within the 300 meter reach.

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	5
Width at narrowest point of the stream within 300 meter reach	4
Width at the widest point of the stream within 300 meter reach	6

d) Is there sufficient water within a 300 meter stream reach during base flow conditions to support primary contact recreation? ☑ Yes ☐ No

COMMENTS: Deep long pools in this reach (2) Enough flow at this time to keep water from stagnating.

2. Non-wadeable Streams

If accessible, take 10 width measurements which represent typical widths of the 300 meter reach. If the water is too deep and not accessible record the estimated average width of the water body.

Also, take photos facing upstream, downstream, left bank, and right bank at .
Photos #s (30 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (150 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

# Measurements	Width (meters)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

☐ Drinking or water in mouth
☐ Bathing
☐ Walking
☐ Jogging/running
☐ Bicycling
☐ Standing
☐ Sitting
☐ Lying down/sleeping
☐ Playing on shoreline
☐ Picnicking
☐ Motorcycle/ATV
☐ Hunting/Trapping
☐ Wildlife watching
☑ None
☐ Other: _____

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☑ Yes ☐ No (If yes, please provide supporting documentation and photos.)
Comments: Construction of new bridge at SH6, Moving a lot of dirt at construction site with no vegetation to hold soil and prevent erosion.

3. Check any channel obstructions that apply (Attach photos). #1322

☐ Culverts ☐ Fences ☑ Log jams ☐ Rip rap ☐ Water control structure
☐ Barbed wire ☐ Dams ☐ Thick vegetation ☐ Low bridges ☑ None
☐ Utility pipe ☐ Other (specify):_____

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest).

☐ Campgrounds
☐ Playgrounds
☑ Rural area
☐ Residential
☐ National forests
☐ Urban/suburban location
☐ Golf Course
☐ Sports Field
☐ Stairs/walkway
☐ Boating access (ramps)
☐ Beach
☑ Bridge crossing
☐ Commercial boating
☐ Trails/paths (hiking/biking)
☐ Paved parking lot
☐ Unimproved parking lot
☑ Roads (paved/unpaved)
☐ Populated area
☐ Docks or rafts
☐ Commercial outfitter
☐ Nearby school
☐ Power Line Corridor
☐ Parks (national/city/county/state)
☐ Public Property
☐ Other:_____
☐ None of the Above

Comments: SH6 crosses creek

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).

☑ Private Property
☐ No trespass sign
☐ Wildlife
☐ Steep slopes
☐ No public access
☐ No roads
☐ Fence
☐ Barge/ship traffic
☐ Industrial
☐ None of the Above
☐ Other:_____

Comments: No fences bordering creek here. Construction of new bridge at SH6 #1307-1309

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:_____

Stream Name_____ Site: _____
Date: _____ Time: _____

7. Check all water characteristics that apply (Attach photos).
Aquatic Vegetation: ☐ absent ☐ rare ☑ common ☐ abundant
Algae Cover: ☐ absent ☐ rare ☑ common ☐ abundant
Odor: ☑ none ☐ rare ☐ common ☐ abundant
Color: ☐ clear ☑ green ☐ red ☐ brown ☐ black
Bottom Deposit: ☑ sludge ☐ solids ☑ fine sediments ☐ none ☐ other
Water Surface: ☑ clear ☐ scum ☐ foam ☐ debris ☐ oil
Other: Deep sludge from SH6 bridge to 120m upstream, then sand.

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: Garbage dumped near Train trestle.

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).
Steep banks along creek over most of the reach.

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream:_____ Date:_____

Site:_____ Site

Description:_____

Time Begin:_____ Time End:_____ Meter Type:_____

Observers:_____ Stream Width*:_____ Section Width (W):_____

Observations:_____

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V)		Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
			At Point (ft/s)(m/s)	Average (ft/s)(m/s)	

: Fri Sep 24 2010

16402-27AUG10.WAD
2010/08/27 11:35:18

NC

FlowTracker	**(English Units)**
P872	ft
3.7	ft/s
2.30	ft^2
0.0%	cfs

Accuracy	1.0%	1.0%
Depth	0.7%	3.6%
Velocity	5.8%	42.6%
Width	0.3%	0.3%
Method	4.8%	-
# Stations	2.2%	-
Overall	**8.0%**	**42.8%**

40	23
LEW	19.000
34.8 dB	14.200
76.68 °F	0.747
Mid-Section	0.0091
	0.1290

				Depth								
0	11:35	2.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
1	11:35	3.00	0.6	0.000	0.6	0.000	-0.0469	1.00	0.0000	0.000	0.0000	0.0
2	11:36	4.00	0.6	0.450	0.6	0.180	-0.0440	1.00	-0.0440	0.450	-0.0198	-15.3
3	11:37	5.00	0.6	0.550	0.6	0.220	-0.0079	1.00	-0.0079	0.550	-0.0043	-3.4
4	11:38	6.00	0.6	0.650	0.6	0.260	0.0194	1.00	0.0194	0.650	0.0126	9.8
5	11:39	7.00	0.6	0.800	0.6	0.320	0.0171	1.00	0.0171	0.800	0.0136	10.6
6	11:40	8.00	0.6	0.850	0.6	0.340	0.0138	1.00	0.0138	0.850	0.0117	9.1
7	11:41	9.00	0.6	0.900	0.6	0.360	0.0207	1.00	0.0207	0.900	0.0186	14.4
8	11:42	10.00	0.6	0.950	0.6	0.380	0.0154	1.00	0.0154	0.950	0.0147	11.4
9	11:43	11.00	0.6	1.000	0.6	0.400	0.0046	1.00	0.0046	1.000	0.0046	3.6
10	11:44	12.00	0.6	0.900	0.6	0.360	-0.0200	1.00	-0.0200	0.900	-0.0180	-14.0
11	11:45	13.00	0.6	0.900	0.6	0.360	-0.0135	1.00	-0.0135	0.900	-0.0121	-9.4
12	11:46	14.00	0.6	1.000	0.6	0.400	0.0331	1.00	0.0331	0.750	0.0249	19.3
13	11:55	14.50	0.6	1.000	0.6	0.400	0.0538	1.00	0.0538	0.500	0.0269	20.9
14	11:47	15.00	0.6	1.000	0.6	0.400	0.0318	1.00	0.0318	0.750	0.0239	18.5
15	11:48	16.00	0.6	1.100	0.6	0.440	0.0220	1.00	0.0220	0.825	0.0181	14.1
16	11:56	16.50	0.6	1.100	0.6	0.440	0.0007	1.00	0.0007	0.550	0.0004	0.3
17	11:50	17.00	0.6	1.000	0.6	0.400	0.0505	1.00	0.0505	0.500	0.0253	19.6
18	11:58	17.50	0.6	1.000	0.6	0.400	0.0308	1.00	0.0308	0.500	0.0154	12.0
19	11:51	18.00	0.6	0.900	0.6	0.360	0.0315	1.00	0.0315	0.675	0.0213	16.5
20	11:52	19.00	0.6	0.700	0.6	0.280	-0.0502	1.00	-0.0502	0.700	-0.0351	-27.2
21	11:53	20.00	0.6	0.500	0.6	0.200	-0.0269	1.00	-0.0269	0.500	-0.0135	-10.4
22	11:53	21.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0

: Fri Sep 24 2010

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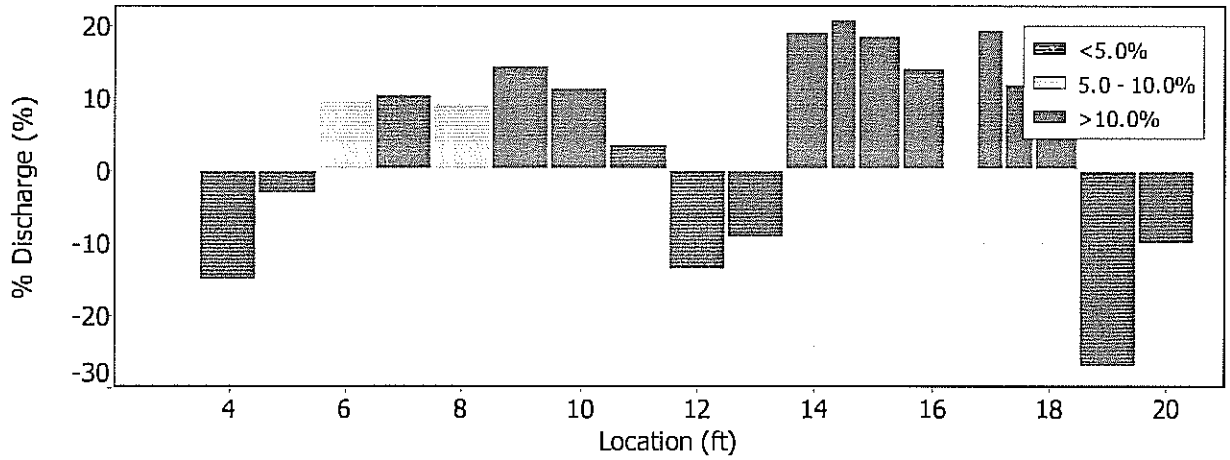
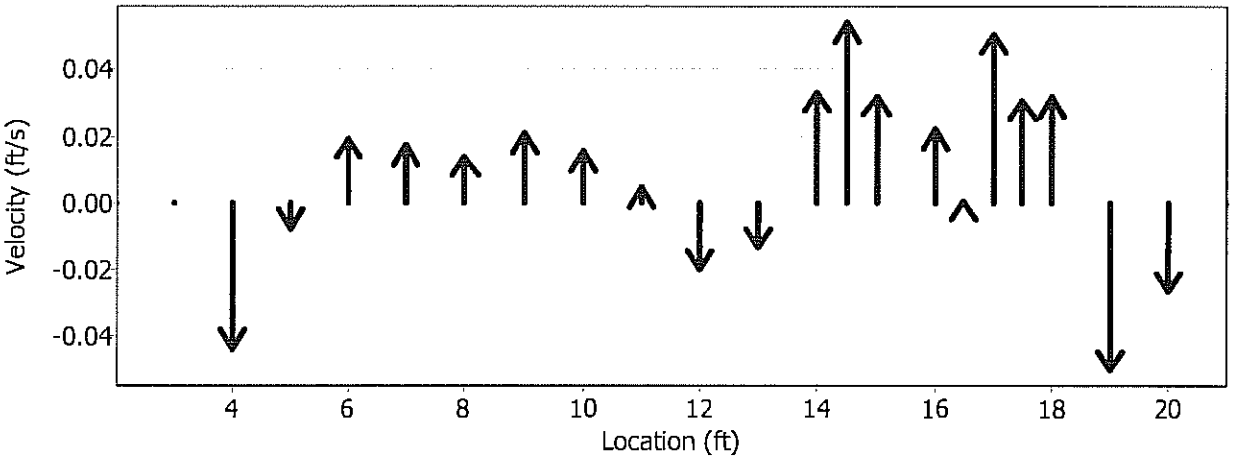
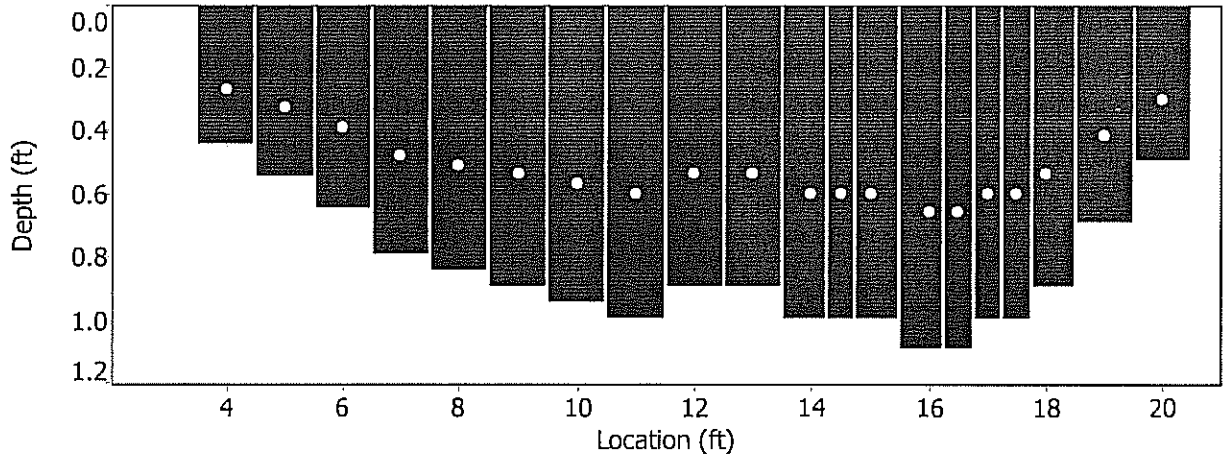
NC







: Fri Sep 24 2010

16402-27AUG10.WAD
2010/08/27 11:35:18

NC

1	3.00	0.6	High angle: 171
		0.6	SNR (47.3) is different from typical SNR (34.8)
2	4.00	0.6	High angle: 177
		0.6	SNR (52.2) is different from typical SNR (34.8)
3	5.00	0.6	SNR (52.4) is different from typical SNR (34.8)
4	6.00	0.6	High SNR variation during measurement: 6.5,6.5
8	10.00	0.6	High SNR variation during measurement: 5.2,5.2
9	11.00	0.6	High SNR variation during measurement: 8.6,8.2
10	12.00	0.6	High angle: -172
		0.6	High SNR variation during measurement: 6.0,6.0
11	13.00	0.6	High SNR variation during measurement: 9.5,9.5
12	14.00	0.6	High angle: -41
		0.6	SNR (15.9) is different from typical SNR (34.8)
13	14.50	0.6	SNR (13.5) is different from typical SNR (34.8)
14	15.00	0.6	High angle: -40
		0.6	SNR (16.5) is different from typical SNR (34.8)
15	16.00	0.6	High angle: -30
		0.6	SNR (21.1) is different from typical SNR (34.8)
		0.6	High SNR variation during measurement: 6.0,6.5
16	16.50	0.6	High SNR variation during measurement: 17.6,17.2
17	17.00	0.6	SNR (14.4) is different from typical SNR (34.8)
		0.6	High SNR variation during measurement: 5.2,4.7
18	17.50	0.6	High angle: -24
		0.6	SNR (15.5) is different from typical SNR (34.8)
19	18.00	0.6	High SNR variation during measurement: 12.9,13.3
20	19.00	0.6	High angle: 178
		0.6	SNR (54.2) is different from typical SNR (34.8)
21	20.00	0.6	High angle: 158
		0.6	SNR (51.6) is different from typical SNR (34.8)

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Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1 **Actual:** 87 | 75 Precip: 0.07 **Average:** - | - Precip: -	2 **Actual:** 87 | 75 Precip: 0.46 **Average:** - | - Precip: -	3 **Actual:** 85 | 75 Precip: 0.00 **Average:** - | - Precip: -
4 **Actual:** 91 | 76 Precip: 0.00 **Average:** - | - Precip: -	5 **Actual:** 92 | 74 Precip: 0.00 **Average:** - | - Precip: -	6 **Actual:** 93 | 75 Precip: 0.00 **Average:** - | - Precip: -	7 **Actual:** 91 | 74 Precip: 0.00 **Average:** - | - Precip: -	8 **Actual:** 86 | 76 Precip: 0.00 **Average:** - | - Precip: -	9 **Actual:** 91 | 75 Precip: 0.00 **Average:** - | - Precip: -	10 **Actual:** 90 | 74 Precip: 0.00 **Average:** - | - Precip: -
11 **Actual:** 92 | 75 Precip: 0.00 **Average:** - | - Precip: -	12 **Actual:** 93 | 76 Precip: 0.00 **Average:** - | - Precip: -	13 **Actual:** 94 | 78 Precip: 0.00 **Average:** - | - Precip: -	14 **Actual:** 94 | 76 Precip: 0.00 **Average:** - | - Precip: -	15 **Actual:** 95 | 75 Precip: 0.00 **Average:** - | - Precip: -	16 **Actual:** 95 | 75 Precip: 0.00 **Average:** - | - Precip: -	17 **Actual:** 96 | 73 Precip: 0.00 **Average:** - | - Precip: -
18 **Actual:** 95 | 74 Precip: 0.00 **Average:** - | - Precip: -	19 **Actual:** 93 | 74 Precip: 0.00 **Average:** - | - Precip: -	20 **Actual:** 95 | 76 Precip: 0.00 **Average:** - | - Precip: -	21 **Actual:** 95 | 75 Precip: 0.00 **Average:** - | - Precip: -	22 **Actual:** 95 | 76 Precip: 0.00 **Average:** - | - Precip: -	23 **Actual:** 95 | 77 Precip: 0.00 **Average:** - | - Precip: -	24 **Actual:** 94 | 73 Precip: 0.00 **Average:** - | - Precip: -

25	26	27	28	29	30	31
Actual: 97 | 74	**Actual:** 97 | 75	**Actual:** 92 | 72	**Actual:** 90 | 74	**Actual:** 93 | 74	**Actual:** 94 | 74	**Actual:** 96 | 73
Precip: 0.00	Precip: 0.00	Precip: 0.01	Precip: 0.11	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -

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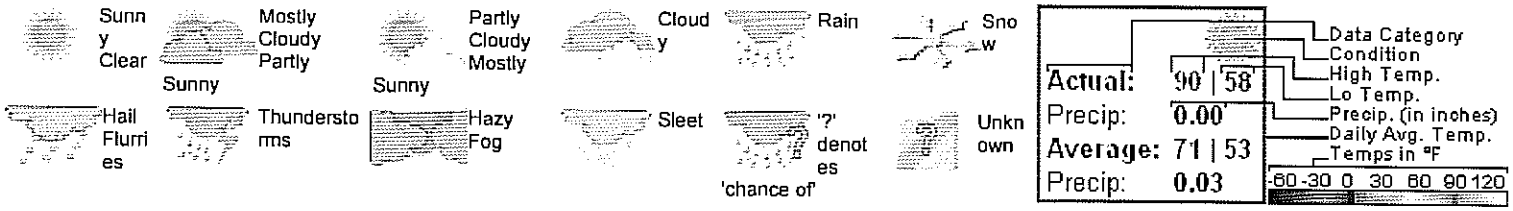
Calendar Key:



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Daily Observations

2010 July	Temp. (°F) high	avg	low	Dew Point (°F) high	avg	low	Humidity (%) high	avg	low	Sea Level Pressure (in) high	avg	low	Visibility (mi) high	avg	low	Wind (mph) high	avg	Gust Speed (mph) high	Precip (in) sum	Events
1	87	81	75	75	73	71	94	80	64	30.04	30.00	29.97	10	6	4	16	8	25	0.07	Rain
2	87	81	75	76	74	72	94	88	63	30.03	29.99	29.95	10	7	4	16	6	29	0.46	Rain
3	85	80	75	77	75	72	95	85	68	29.98	29.94	29.90	10	5	3	14	4	20	0.00	Rain
4	91	84	76	77	74	71	94	75	51	29.94	29.90	29.84	7	5	3	14	7	18	0.00	Rain
5	92	83	74	76	73	70	95	74	48	29.91	29.87	29.80	7	5	3	10	5	9	0.00	
6	93	84	75	75	72	69	94	69	44	29.92	29.87	29.80	7	5	3	8	2	-	0.00	
7	91	82	74	75	73	69	94	75	53	29.94	29.91	29.87	7	5	4	15	3	25	0.00	
8	86	81	76	75	74	72	90	81	63	30.02	29.98	29.95	10	6	3	12	5	16	0.00	Rain
9	91	83	75	76	73	70	94	79	51	30.06	30.02	29.98	7	5	3	15	2	18	0.00	Rain
10	90	82	74	75	73	71	96	77	53	30.08	30.02	29.96	7	4	3	9	1	-	0.00	
11	92	84	75	75	72	69	94	72	46	29.99	29.94	29.83	7	5	4	15	5	20	0.00	
12	93	84	76	75	73	70	92	70	47	29.90	29.86	29.78	7	5	4	21	9	22	0.00	
13	94	86	78	75	73	71	86	68	46	29.92	29.88	29.85	7	4	3	18	11	24	0.00	
14	94	85	76	76	73	70	91	69	46	30.05	30.00	29.95	7	5	3	16	9	22	0.00	
15	95	85	75	76	72	68	95	69	41	30.09	30.02	29.96	7	5	2	10	5	16	0.00	
16	95	85	75	75	71	66	94	67	38	30.06	30.02	29.94	10	6	3	7	2	-	0.00	Rain
17	96	84	73	74	71	65	94	63	35	30.05	30.00	29.94	10	9	3	10	2	16	0.00	

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
18	95	84	74	75	72	68	90	73	42	30.03	29.99	29.94	10	10	7	12	5	20	0.00	Thunderstorm
19	93	84	74	76	73	70	96	76	48	30.02	29.98	29.94	10	8	0	18	4	26	0.00	Fog
20	95	86	76	76	73	65	95	73	39	30.05	30.01	29.97	10	9	5	15	6	18	0.00	
21	95	85	75	75	73	69	95	71	42	30.09	30.05	29.99	10	9	5	8	2	16	0.00	Rain
22	95	86	76	76	74	70	94	75	45	30.06	30.01	29.96	10	9	7	12	3	20	0.00	
23	95	86	77	77	73	64	94	70	35	30.05	30.01	29.96	10	9	5	14	4	20	0.00	
24	94	84	73	76	71	63	96	69	37	30.09	30.04	29.98	10	9	4	10	3	-	0.00	
25	97	86	74	72	67	58	88	58	26	30.06	30.02	29.94	10	10	7	8	2	-	0.00	Rain
26	97	86	75	73	70	67	87	67	38	30.02	29.97	29.88	10	7	4	24	2	34	0.00	Rain , Thunderstorm
27	92	82	72	76	72	69	95	79	46	30.05	30.00	29.96	10	6	4	10	2	-	0.01	Rain , Thunderstorm
28	90	82	74	76	74	71	95	83	56	30.14	30.09	30.03	10	9	3	17	6	31	0.11	Rain , Thunderstorm
29	93	84	74	77	72	68	96	74	45	30.20	30.14	30.03	10	9	5	10	3	-	0.00	
30	94	84	74	76	72	66	95	71	41	30.09	30.04	29.91	10	9	2	14	5	18	0.00	
31	96	84	73	74	69	59	94	66	29	29.98	29.93	29.85	10	9	5	10	4	-	0.00	

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Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1 **Actual:** 100 | 69 Precip: 0.00 **Average:** - | - Precip: -	2 **Actual:** 99 | 71 Precip: 0.00 **Average:** - | - Precip: -	3 **Actual:** 98 | 73 Precip: 0.00 **Average:** - | - Precip: -	4 **Actual:** 97 | 76 Precip: 0.00 **Average:** - | - Precip: -	5 **Actual:** 98 | 75 Precip: 0.00 **Average:** - | - Precip: -	6 **Actual:** 98 | 75 Precip: 0.00 **Average:** - | - Precip: -	7 **Actual:** 98 | 78 Precip: 0.00 **Average:** - | - Precip: -
8 **Actual:** 98 | 77 Precip: 0.00 **Average:** - | - Precip: -	9 **Actual:** 98 | 74 Precip: 0.00 **Average:** - | - Precip: -	10 **Actual:** 100 | 75 Precip: 0.00 **Average:** - | - Precip: -	11 **Actual:** 99 | 78 Precip: 0.00 **Average:** - | - Precip: -	12 **Actual:** 99 | 75 Precip: 0.00 **Average:** - | - Precip: -	13 **Actual:** 99 | 75 Precip: 0.00 **Average:** - | - Precip: -	14 **Actual:** 100 | 77 Precip: 0.00 **Average:** - | - Precip: -
15 **Actual:** 100 | 79 Precip: 0.00 **Average:** - | - Precip: -	16 **Actual:** 109 | 76 Precip: 0.00 **Average:** - | - Precip: -	17 **Actual:** 101 | 76 Precip: 0.00 **Average:** - | - Precip: -	18 **Actual:** 104 | 81 Precip: 0.00 **Average:** - | - Precip: -	19 **Actual:** 101 | 79 Precip: 0.00 **Average:** - | - Precip: -	20 **Actual:** 101 | 80 Precip: 0.00 **Average:** - | - Precip: -	21 **Actual:** 102 | 77 Precip: 0.00 **Average:** - | - Precip: -
22 **Actual:** 103 | 77 Precip: 0.00 **Average:** - | - Precip: -	23 **Actual:** 109 | 79 Precip: 0.00 **Average:** - | - Precip: -	24 **Actual:** 108 | 79 Precip: 0.00 **Average:** - | - Precip: -	25 **Actual:** 100 | 80 Precip: 0.00 **Average:** - | - Precip: -	26 **Actual:** 100 | 79 Precip: 0.00 **Average:** - | - Precip: -	27 **Actual:** 99 | 69 Precip: 0.00 **Average:** - | - Precip: -	28 **Actual:** 101 | 68 Precip: 0.00 **Average:** - | - Precip: -
29 **Actual:** 100 | 77	30 **Actual:** 99 | 81	31 **Actual:** 101 | 80				

Precip: 0.00 **Average:** - | - Precip: -	Precip: 0.00 **Average:** - | - Precip: -	Precip: 0.00 **Average:** - | - Precip: -

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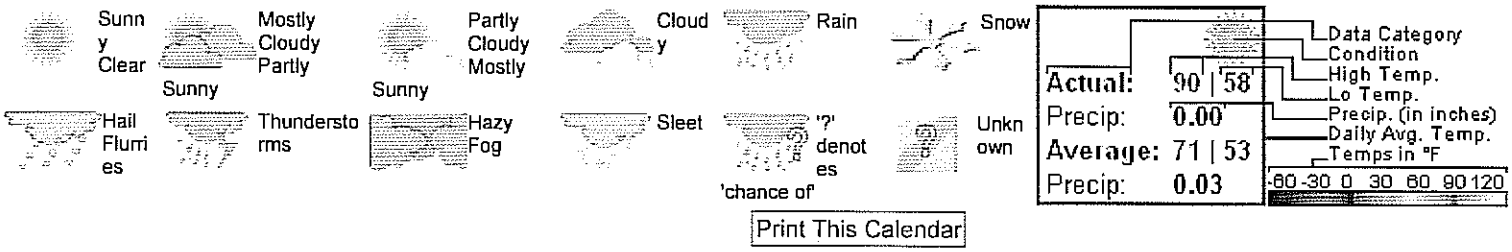
Calendar Key:



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Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
August	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	100	84	69	74	67	55	95	60	22	29.93	29.89	29.84	10	9	7	9	2	-	0.00	
2	99	85	71	70	64	55	90	55	25	30.00	29.96	29.91	10	9	4	12	2	16	0.00	
3	98	86	73	73	69	64	94	60	32	30.08	30.01	29.95	10	8	4	9	2	16	0.00	
4	97	86	76	77	73	68	94	66	38	30.05	29.98	29.89	7	6	3	12	4	17	0.00	Rain
5	98	86	75	74	71	65	92	62	34	29.96	29.91	29.83	7	5	3	8	3	-	0.00	
6	98	86	75	74	71	67	92	63	36	29.95	29.89	29.81	10	8	4	10	5	-	0.00	
7	98	88	78	75	71	64	86	60	33	29.94	29.88	29.81	10	10	10	12	5	16	0.00	
8	98	88	77	76	71	65	92	63	34	29.94	29.90	29.83	10	10	10	12	6	20	0.00	
9	98	86	74	76	71	66	95	63	34	29.99	29.93	29.85	10	10	7	12	5	16	0.00	
10	100	88	75	77	72	65	94	64	33	29.98	29.93	29.85	10	10	3	7	2	9	0.00	
11	99	88	78	76	73	68	89	64	36	29.96	29.90	29.83	10	10	10	12	3	24	0.00	Rain , Thunderstorm
12	99	87	75	76	71	65	92	63	33	29.90	29.85	29.75	10	10	7	9	2	-	0.00	
13	99	87	75	75	70	65	91	62	33	29.87	29.82	29.76	10	10	10	13	4	17	0.00	
14	100	88	77	76	72	66	92	62	33	29.94	29.88	29.83	10	10	7	13	6	18	0.00	
15	100	90	79	77	72	63	90	62	30	30.02	29.96	29.89	10	10	10	10	5	-	0.00	

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
16	109	92	76	79	72	65	90	64	26	29.99	29.93	29.83	10	10	10	13	3	23	0.00	
17	101	88	76	78	75	70	96	69	36	29.95	29.91	29.83	10	9	5	8	1	-	0.00	
18	104	92	81	78	75	65	88	65	28	29.97	29.92	29.87	10	10	10	21	3	29	0.00	Thunderstorm
19	101	90	79	79	75	69	94	67	35	29.97	29.90	29.83	10	10	10	13	4	21	0.00	
20	101	90	80	80	74	66	95	62	33	29.93	29.86	29.80	10	10	7	17	8	25	0.00	
21	102	90	77	79	74	68	96	64	33	30.01	29.94	29.89	10	10	10	17	7	23	0.00	
22	103	90	77	78	74	69	94	62	34	30.04	29.97	29.88	10	10	7	12	6	-	0.00	
23	109	94	79	74	71	65	85	54	26	29.93	29.88	29.77	10	10	10	14	2	22	0.00	
24	108	94	79	77	71	63	88	53	24	29.90	29.85	29.78	10	10	10	17	4	26	0.00	
25	100	90	80	77	69	62	86	54	30	30.04	29.99	29.93	10	10	10	15	7	21	0.00	
26	100	90	79	72	67	62	76	50	29	30.09	30.04	29.96	10	10	10	12	5	18	0.00	
27	99	84	69	64	57	48	83	42	17	30.04	29.98	29.88	10	10	10	13	5	21	0.00	
28	101	84	68	65	61	54	82	49	25	29.94	29.89	29.79	10	10	10	8	1	-	0.00	
29	100	88	77	77	74	66	92	65	33	29.95	29.89	29.85	10	10	10	15	5	29	0.00	
30	99	90	81	81	77	72	93	73	42	30.06	30.00	29.94	10	10	10	14	7	22	0.00	
31	101	90	80	80	76	68	96	70	33	30.05	30.00	29.91	10	10	7	12	5	17	0.00	

Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: MB/NC - BRA	
Date & Time: 24 May 10 1210	County Name: Robertson
Stream Name: Mud Creek	
Segment No. or nearest downstream Segment No.: 1242K	
Description of Site: 20562 Downstream from Jack Brewer Road	

At any point during the Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the use for the water body the investigator should stop conducting the UAA.

A. Stream Characteristics:

1. Check the following channel flow status that applies.

☐ dry ☐ no flow ☐ low ☑ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:

☐ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.

☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.

☑ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.

☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.

☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. 0.703 cfs

4. Water Quality Data (Field Parameters)

Field parameters should be collected in accordance with the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1.

Air Temp 37.2 °C (99°F) Water Temp 26.8 °C (80.3°F)

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
RL 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):

County road at creek. Steep banks, fences and trees, shrubs, and lines on fence. Water gap across stream. #1248-1250

8. Dominant Primary Substrate

☐Cobble ☑Sand ☐Silt ☐Mud/Clay ☐Gravel ☐Bedrock ☐Rip rap ☐ Concrete

Stream Name_____ Site: _____
Date: _____ Time: _____

B. Primary Contact Water Recreation Evaluation:

- Primary contact recreation draft definition: Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, and whitewater kayaking, canoeing, and rafting, involving a significant risk of ingestion of water.

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?
☐ Yes ☑ No primary contact recreation activities were observed

a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).

☐ Wading-Children
☐ Wading-Adults
☐ Swimming
☐ Water skiing
☐ Diving
☐ Tubing
☐ Surfing
☐ Whitewater-kayaking, canoeing, rafting
☐ Other: _____
☐ frequent public swimming-created by publicly owned land or commercial operations
☑ No primary contact activities that commonly occur were observed

b. Check the number of individuals observed at the site: ☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Water in mouth or nose of the individual ☐ Primary touch: Individual's body (or portion) immersed in water
☐ Secondary touch: fishing, pets and related contact with water ☐ Individual is in a boat touching water
☐ Individual is on shore near water within 8 meters (25ft) of water ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☑ Not applicable

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
Rural area, Private property with fences, #1248-1250

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
County road crosses creek #1248.

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: _____

Date: _____ Time: _____

b. Check the number of individuals observed at the site.
☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body well away from water between 8 and 30 meters (100 ft)

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
#1248 Private property with fence across stream. Shallow

3. If secondary contact recreation activities are observed, how often do water recreational activities occur that do not involve a significant risk of water ingestion? ☐ frequently ☐ infrequently n/a
Please describe how often the activities occur? ☐ Unknown ☐ Never ☐ Daily ☐ Monthly ☐ Yearly n/a

4. If infrequently, what is the reason? ☐ physical characteristics of the water body ☐ limited public access ☐ other
If other, list reasons: n/a

5. Describe the physical characteristics of the water body that hinders the frequency of secondary contact recreation (depth, etc.) (Attach photos or depth measurements, etc. for documentation).
Limited flow

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 with fence across stream #1248.

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.

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 1251 Downstream 1252 Left Bank 1253 Right Bank 1254
Photos #s (150 meters) Upstream 1256 Downstream 1257 Left Bank 1258 Right Bank 1259
Photos #s (300 meters) Upstream 1260 Downstream 1261 Left Bank 1262 Right Bank 1263

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	11	7	0.9
Pool 2	16	5	0.85
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	0.16
60 meters	0.19
90 meters	0.09
120 meters	0.25
150 meters	0.22
180 meters	0.18
210 meters	0.07
240 meters	~~0.55~~ 0.85
270 meters	0.09
300 meters	0.11
Average	0.22

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

c) Stream width - Measure (1) the width at one point which represents the typical average width of the 300 meter reach; (2) the width at the narrowest point of the stream within the 300 meter reach; and (3) the width at the widest point of the stream within the 300 meter reach.

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	3.5
Width at narrowest point of the stream within 300 meter reach	0.47
Width at the widest point of the stream within 300 meter reach	7

d) Is there sufficient water within a 300 meter stream reach during base flow conditions to support primary contact recreation? ☐ Yes ☒ No

COMMENTS: low flow, pools are not very deep or long

2. Non-wadeable Streams

If accessible, take 10 width measurements which represent typical widths of the 300 meter reach. If the water is too deep and not accessible record the estimated average width of the water body.

Also, take photos facing upstream, downstream, left bank, and right bank at .
Photos #s (30 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (150 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

# Measurements	Width (meters)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

☐ Drinking or water in mouth
☐ Bathing
☐ Walking
☐ Jogging/running
☐ Bicycling
☐ Standing
☐ Sitting
☐ Lying down/sleeping
☐ Playing on shoreline
☐ Picnicking
☐ Motorcycle/ATV
☐ Hunting/Trapping
☐ Wildlife watching
☑ None
☐ Other: _____

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☐ Yes ☑ No (If yes, please provide supporting documentation and photos.)
Comments: _____

3. Check any channel obstructions that apply (Attach photos).

☐ Culverts ☐ Fences ☐ Log jams ☐ Rip rap ☐ Water control structure
☐ Barbed wire ☐ Dams ☐ Thick vegetation ☐ Low bridges ☑ None
☐ Utility pipe ☐ Other (specify):_____

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest).

☐ Campgrounds
☐ Playgrounds
☑ Rural area
☐ Residential
☐ National forests
☐ Urban/suburban location
☐ Golf Course
☐ Sports Field
☐ Stairs/walkway
☐ Boating access (ramps)
☐ Beach
☐ Bridge crossing
☐ Commercial boating
☐ Trails/paths (hiking/biking)
☐ Paved parking lot
☐ Unimproved parking lot
☑ Roads (paved/unpaved)
☐ Populated area
☐ Docks or rafts
☐ Commercial outfitter
☐ Nearby school
☐ Power Line Corridor
☐ Parks (national/city/county/state)
☐ Public Property
☐ Other:_____
☐ None of the Above

Comments: #1248 Pastureland, Fenced private property.

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).

☑ Private Property
☐ No trespass sign
☐ Wildlife
☐ Steep slopes
☐ No public access
☐ No roads
☑ Fence
☐ Barge/ship traffic
☐ Industrial
☐ None of the Above
☐ Other:_____

Comments: #1248 Pastureland, Fenced private property

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:_____

Stream Name_____ Site: _____
Date: _____ Time: _____

7. Check all water characteristics that apply (Attach photos).
Aquatic Vegetation: ☑ absent ☐ rare ☐ common ☐ abundant
Algae Cover: ☐ absent ☑ rare ☐ common ☐ abundant
Odor: ☑ none ☐ rare ☐ common ☐ abundant
Color: ☑ clear ☑ green ☐ red ☐ brown ☐ black
Bottom Deposit: ☐ sludge ☐ solids ☑ fine sediments ☐ none ☐ other
Water Surface: ☑ clear ☐ scum ☐ foam ☐ debris ☐ oil
Other: All transect flat

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: #255 Cow in creek, tracks & wallows for hogs.

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: Tiv. bed, tires. Lots of tires in the creek, #252

12. Is the site located in a wildlife preserve with large wildlife (i.e waterfowl) population? ☐ Yes ☑ No

13. Please document any other relevant information regarding recreational activities and the water body in general (for example, area outside of the stream reach evaluated).

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream:_____ Date:_____

Site:_____ Site

Description:_____

Time Begin:_____ Time End:_____ Meter Type:_____

Observers:_____ Stream Width*:_____ Section Width (W):_____

Observations:_____

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V)		Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
			At Point (ft/s)(m/s)	Average (ft/s)(m/s)	

: Fri Sep 24 2010

20562-24AUG10.WAD
2010/08/24 10:59:28

NC

FlowTracker	**(English Units)**
P872	ft
3.7	ft/s
2.30	ft^2
0.0%	cfs

Accuracy	1.0%	1.0%
Depth	0.5%	0.8%
Velocity	2.2%	6.6%
Width	0.2%	0.2%
Method	2.6%	-
# Stations	3.1%	-
Overall	**4.8%**	**6.7%**

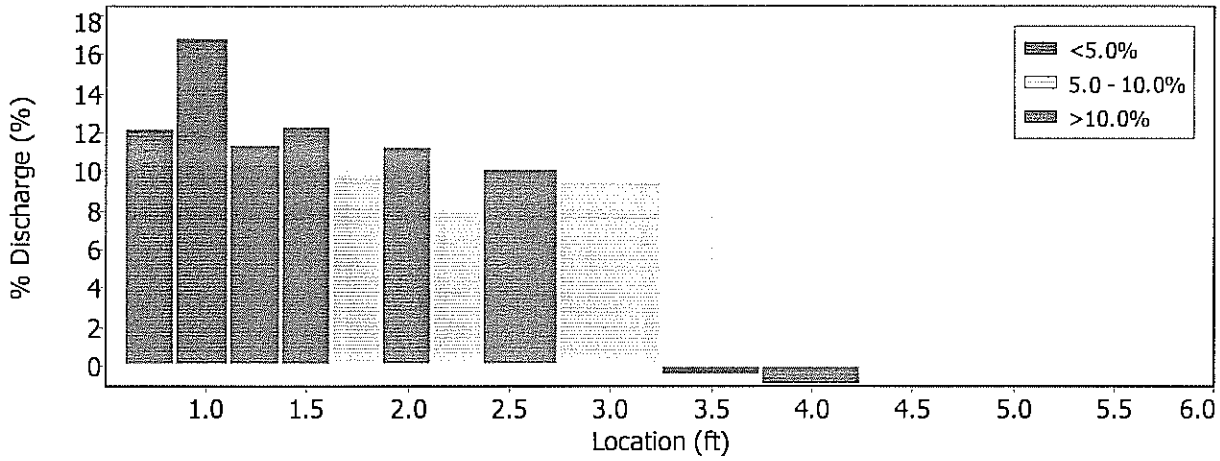
40	16
LEW	5.500
35.8 dB	2.705
80.32 °F	0.492
Mid-Section	0.2600
	0.7035

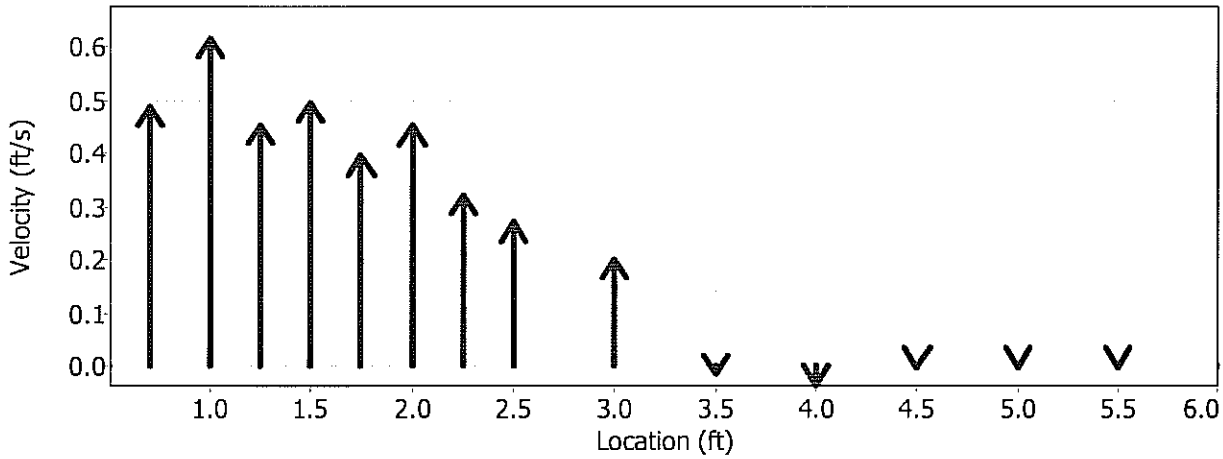
				Depth								
0	10:59	6.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
1	*10:59*	*5.50*	*0.6*	*0.200*	*0.6*	*0.080*	*-0.0020*	*1.00*	*-0.0020*	*0.100*	*-0.0002*	*0.0*
2	*11:03*	*5.00*	*0.6*	*0.300*	*0.6*	*0.120*	*-0.0020*	*1.00*	*-0.0020*	*0.150*	*-0.0003*	*0.0*
3	*11:04*	*4.50*	*0.6*	*0.350*	*0.6*	*0.140*	*-0.0007*	*1.00*	*-0.0007*	*0.175*	*-0.0001*	*0.0*
4	*11:06*	*4.00*	*0.6*	*0.400*	*0.6*	*0.160*	*-0.0344*	*1.00*	*-0.0344*	*0.200*	*-0.0069*	*-1.0*
5	11:07	3.50	0.6	0.500	0.6	0.200	-0.0141	1.00	-0.0141	0.250	-0.0035	-0.5
6	11:10	3.00	0.6	0.650	0.6	0.260	0.2031	1.00	0.2031	0.325	0.0660	9.4
7	11:11	2.50	0.6	0.700	0.6	0.280	0.2723	1.00	0.2723	0.263	0.0715	10.2
8	11:17	2.25	0.6	0.700	0.6	0.280	0.3241	1.00	0.3241	0.175	0.0567	8.1
9	11:12	2.00	0.6	0.700	0.6	0.280	0.4534	1.00	0.4534	0.175	0.0794	11.3
10	11:18	1.75	0.6	0.700	0.6	0.280	0.3967	1.00	0.3967	0.175	0.0694	9.9
11	11:13	1.50	0.6	0.700	0.6	0.280	0.4967	1.00	0.4967	0.175	0.0869	12.4
12	*11:16*	*1.25*	*0.6*	*0.700*	*0.6*	*0.280*	*0.4560*	*1.00*	*0.4560*	*0.175*	*0.0798*	*11.3*
13	11:14	1.00	0.6	0.700	0.6	0.280	0.6175	1.00	0.6175	0.192	0.1189	16.9
14	*11:21*	*0.70*	*0.6*	*0.700*	*0.6*	*0.280*	*0.4905*	*1.00*	*0.4905*	*0.175*	*0.0859*	*12.2*
15	11:21	0.50	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0

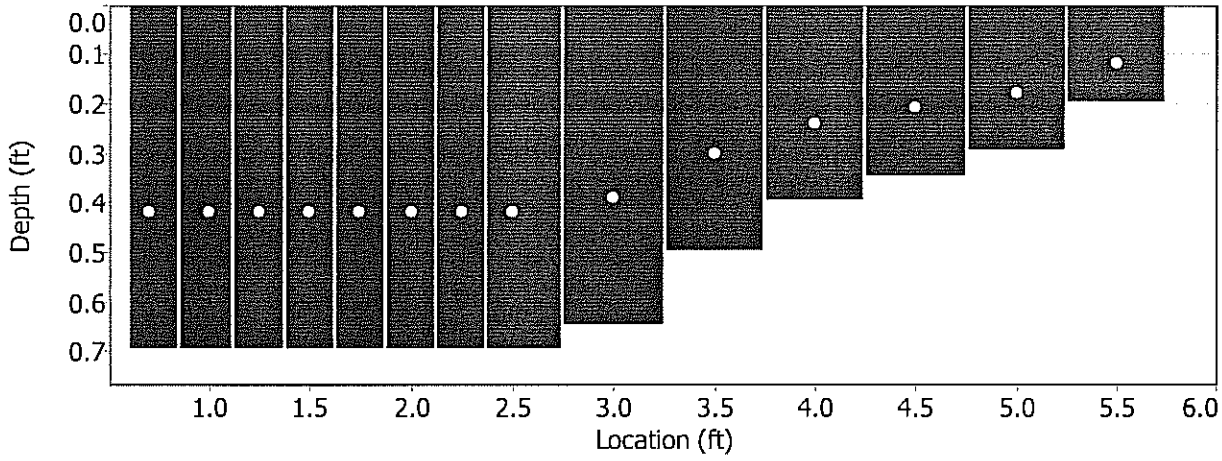
: Fri Sep 24 2010

20562-24AUG10.WAD
2010/08/24 10:59:28

NC







: Fri Sep 24 2010

20562-24AUG10.WAD
2010/08/24 10:59:28

NC

1	5.50	0.6	High differences in beam SNR: 50.3,38.7
2	5.00	0.6	SNR (63.0) is different from typical SNR (35.8)
		0.6	High SNR variation during measurement: 5.6,2.6
		0.6	Boundary QC is Good; possible boundary interference
3	4.50	0.6	SNR (71.2) is different from typical SNR (35.8)
4	4.00	0.6	High angle: 120
		0.6	Boundary QC is Good; possible boundary interference
12	1.25	0.6	SNR (25.8) is different from typical SNR (35.8)
14	0.70	0.6	SNR (25.3) is different from typical SNR (35.8)
		0.6	High standard error: 0.038

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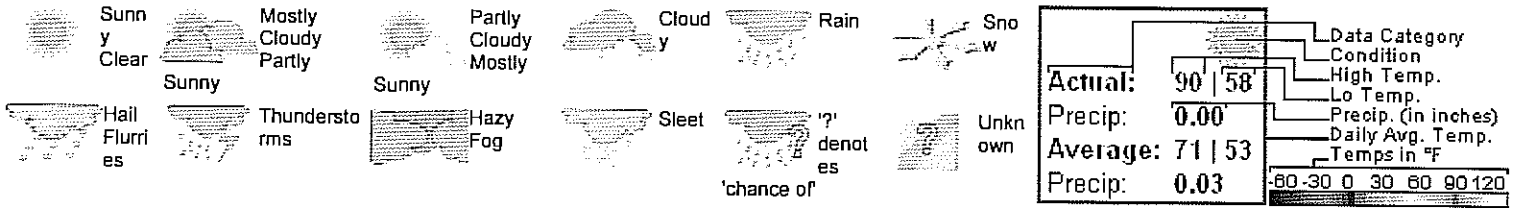
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1 Actual: 87 | 75 Precip: 0.07 Average: - | - Precip: -	2 Actual: 87 | 75 Precip: 0.46 Average: - | - Precip: -	3 Actual: 85 | 75 Precip: 0.00 Average: - | - Precip: -
4 Actual: 91 | 76 Precip: 0.00 Average: - | - Precip: -	5 Actual: 92 | 74 Precip: 0.00 Average: - | - Precip: -	6 Actual: 93 | 75 Precip: 0.00 Average: - | - Precip: -	7 Actual: 91 | 74 Precip: 0.00 Average: - | - Precip: -	8 Actual: 86 | 76 Precip: 0.00 Average: - | - Precip: -	9 Actual: 91 | 75 Precip: 0.00 Average: - | - Precip: -	10 Actual: 90 | 74 Precip: 0.00 Average: - | - Precip: -
11 Actual: 92 | 75 Precip: 0.00 Average: - | - Precip: -	12 Actual: 93 | 76 Precip: 0.00 Average: - | - Precip: -	13 Actual: 94 | 78 Precip: 0.00 Average: - | - Precip: -	14 Actual: 94 | 76 Precip: 0.00 Average: - | - Precip: -	15 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	16 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	17 Actual: 96 | 73 Precip: 0.00 Average: - | - Precip: -
18 Actual: 95 | 74 Precip: 0.00 Average: - | - Precip: -	19 Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	20 Actual: 95 | 76 Precip: 0.00 Average: - | - Precip: -	21 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	22 Actual: 95 | 76 Precip: 0.00 Average: - | - Precip: -	23 Actual: 95 | 77 Precip: 0.00 Average: - | - Precip: -	24 Actual: 94 | 73 Precip: 0.00 Average: - | - Precip: -

25	26	27	28	29	30	31
Actual: 97 | 74	**Actual:** 97 | 75	**Actual:** 92 | 72	**Actual:** 90 | 74	**Actual:** 93 | 74	**Actual:** 94 | 74	**Actual:** 96 | 73
Precip: 0.00	Precip: 0.00	Precip: 0.01	Precip: 0.11	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -

« Previous Month « 2009 2011 » Next Month »

Calendar Key:



Print This Calendar

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Daily Observations

2010 July	Temp. (°F) high	avg	low	Dew Point (°F) high	avg	low	Humidity (%) high	avg	low	Sea Level Pressure (in) high	avg	low	Visibility (mi) high	avg	low	Wind (mph) high	avg	Gust Speed (mph) high	Precip (in) sum	Events
1	87	81	75	75	73	71	94	80	64	30.04	30.00	29.97	10	6	4	16	8	25	0.07	Rain
2	87	81	75	76	74	72	94	88	63	30.03	29.99	29.95	10	7	4	16	6	29	0.46	Rain
3	85	80	75	77	75	72	95	85	68	29.98	29.94	29.90	10	5	3	14	4	20	0.00	Rain
4	91	84	76	77	74	71	94	75	51	29.94	29.90	29.84	7	5	3	14	7	18	0.00	Rain
5	92	83	74	76	73	70	95	74	48	29.91	29.87	29.80	7	5	3	10	5	9	0.00	
6	93	84	75	75	72	69	94	69	44	29.92	29.87	29.80	7	5	3	8	2	-	0.00	
7	91	82	74	75	73	69	94	75	53	29.94	29.91	29.87	7	5	4	15	3	25	0.00	
8	86	81	76	75	74	72	90	81	63	30.02	29.98	29.95	10	6	3	12	5	16	0.00	Rain
9	91	83	75	76	73	70	94	79	51	30.06	30.02	29.98	7	5	3	15	2	18	0.00	Rain
10	90	82	74	75	73	71	96	77	53	30.08	30.02	29.96	7	4	3	9	1	-	0.00	
11	92	84	75	75	72	69	94	72	46	29.99	29.94	29.83	7	5	4	15	5	20	0.00	
12	93	84	76	75	73	70	92	70	47	29.90	29.86	29.78	7	5	4	21	9	22	0.00	
13	94	86	78	75	73	71	86	68	46	29.92	29.88	29.85	7	4	3	18	11	24	0.00	
14	94	85	76	76	73	70	91	69	46	30.05	30.00	29.95	7	5	3	16	9	22	0.00	
15	95	85	75	76	72	68	95	69	41	30.09	30.02	29.96	7	5	2	10	5	16	0.00	
16	95	85	75	75	71	66	94	67	38	30.06	30.02	29.94	10	6	3	7	2	-	0.00	Rain
17	96	84	73	74	71	65	94	63	35	30.05	30.00	29.94	10	9	3	10	2	16	0.00	

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)			Gust Speed (mph)	Precip (in)	Events
18	95	84	74	75	72	68	90	73	42	30.03	29.99	29.94	10	10	7	12	5	20		0.00	Thunderstorm
19	93	84	74	76	73	70	96	76	48	30.02	29.98	29.94	10	8	0	18	4	26		0.00	Fog
20	95	86	76	76	73	65	95	73	39	30.05	30.01	29.97	10	9	5	15	6	18		0.00	
21	95	85	75	75	73	69	95	71	42	30.09	30.05	29.99	10	9	5	8	2	16		0.00	Rain
22	95	86	76	76	74	70	94	75	45	30.06	30.01	29.96	10	9	7	12	3	20		0.00	
23	95	86	77	77	73	64	94	70	35	30.05	30.01	29.96	10	9	5	14	4	20		0.00	
24	94	84	73	76	71	63	96	69	37	30.09	30.04	29.98	10	9	4	10	3	-		0.00	
25	97	86	74	72	67	58	88	58	26	30.06	30.02	29.94	10	10	7	8	2	-		0.00	Rain
26	97	86	75	73	70	67	87	67	38	30.02	29.97	29.88	10	7	4	24	2	34		0.00	Rain , Thunderstorm
27	92	82	72	76	72	69	95	79	46	30.05	30.00	29.96	10	6	4	10	2	-		0.01	Rain , Thunderstorm
28	90	82	74	76	74	71	95	83	56	30.14	30.09	30.03	10	9	3	17	6	31		0.11	Rain , Thunderstorm
29	93	84	74	77	72	68	96	74	45	30.20	30.14	30.03	10	9	5	10	3	-		0.00	
30	94	84	74	76	72	66	95	71	41	30.09	30.04	29.91	10	9	2	14	5	18		0.00	
31	96	84	73	74	69	59	94	66	29	29.98	29.93	29.85	10	9	5	10	4	-		0.00	

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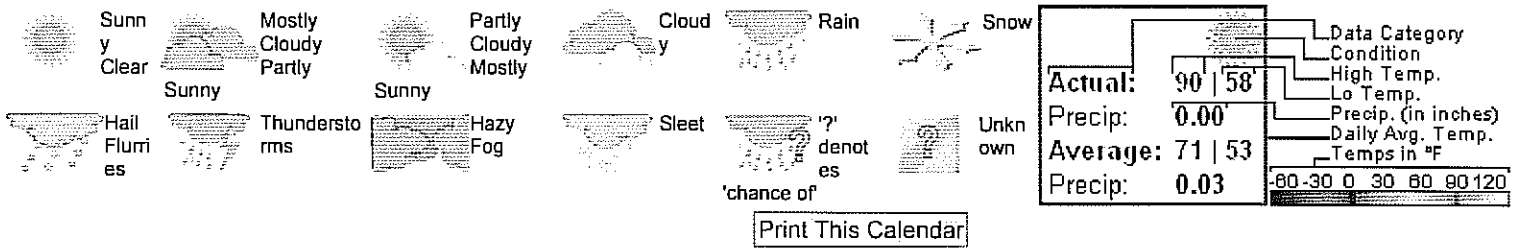
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1 **Actual:** 100 | 69 Precip: 0.00 **Average:** - | - Precip: -	2 **Actual:** 99 | 71 Precip: 0.00 **Average:** - | - Precip: -	3 **Actual:** 98 | 73 Precip: 0.00 **Average:** - | - Precip: -	4 **Actual:** 97 | 76 Precip: 0.00 **Average:** - | - Precip: -	5 **Actual:** 98 | 75 Precip: 0.00 **Average:** - | - Precip: -	6 **Actual:** 98 | 75 Precip: 0.00 **Average:** - | - Precip: -	7 **Actual:** 98 | 78 Precip: 0.00 **Average:** - | - Precip: -
8 **Actual:** 98 | 77 Precip: 0.00 **Average:** - | - Precip: -	9 **Actual:** 98 | 74 Precip: 0.00 **Average:** - | - Precip: -	10 **Actual:** 100 | 75 Precip: 0.00 **Average:** - | - Precip: -	11 **Actual:** 99 | 78 Precip: 0.00 **Average:** - | - Precip: -	12 **Actual:** 99 | 75 Precip: 0.00 **Average:** - | - Precip: -	13 **Actual:** 99 | 75 Precip: 0.00 **Average:** - | - Precip: -	14 **Actual:** 100 | 77 Precip: 0.00 **Average:** - | - Precip: -
15 **Actual:** 100 | 79 Precip: 0.00 **Average:** - | - Precip: -	16 **Actual:** 109 | 76 Precip: 0.00 **Average:** - | - Precip: -	17 **Actual:** 101 | 76 Precip: 0.00 **Average:** - | - Precip: -	18 **Actual:** 104 | 81 Precip: 0.00 **Average:** - | - Precip: -	19 **Actual:** 101 | 79 Precip: 0.00 **Average:** - | - Precip: -	20 **Actual:** 101 | 80 Precip: 0.00 **Average:** - | - Precip: -	21 **Actual:** 102 | 77 Precip: 0.00 **Average:** - | - Precip: -
22 **Actual:** 103 | 77 Precip: 0.00 **Average:** - | - Precip: -	23 **Actual:** 109 | 79 Precip: 0.00 **Average:** - | - Precip: -	24 **Actual:** 108 | 79 Precip: 0.00 **Average:** - | - Precip: -	25 **Actual:** 100 | 80 Precip: 0.00 **Average:** - | - Precip: -	26 **Actual:** 100 | 79 Precip: 0.00 **Average:** - | - Precip: -	27 **Actual:** 99 | 69 Precip: 0.00 **Average:** - | - Precip: -	28 **Actual:** 101 | 68 Precip: 0.00 **Average:** - | - Precip: -
29 **Actual:** 100 | 77	30 **Actual:** 99 | 81	31 **Actual:** 101 | 80				

Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -

« Previous Month « 2009 2011 » Next Month »

Calendar Key:



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Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
August	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	100	84	69	74	67	55	95	60	22	29.93	29.89	29.84	10	9	7	9	2	-	0.00	
2	99	85	71	70	64	55	90	55	25	30.00	29.96	29.91	10	9	4	12	2	16	0.00	
3	98	86	73	73	69	64	94	60	32	30.08	30.01	29.95	10	8	4	9	2	16	0.00	
4	97	86	76	77	73	68	94	66	38	30.05	29.98	29.89	7	6	3	12	4	17	0.00	Rain
5	98	86	75	74	71	65	92	62	34	29.96	29.91	29.83	7	5	3	8	3	-	0.00	
6	98	86	75	74	71	67	92	63	36	29.95	29.89	29.81	10	8	4	10	5	-	0.00	
7	98	88	78	75	71	64	86	60	33	29.94	29.88	29.81	10	10	10	12	5	16	0.00	
8	98	88	77	76	71	65	92	63	34	29.94	29.90	29.83	10	10	10	12	6	20	0.00	
9	98	86	74	76	71	66	95	63	34	29.99	29.93	29.85	10	10	7	12	5	16	0.00	
10	100	88	75	77	72	65	94	64	33	29.98	29.93	29.85	10	10	3	7	2	9	0.00	
11	99	88	78	76	73	68	89	64	36	29.96	29.90	29.83	10	10	10	12	3	24	0.00	Rain , Thunderstorm
12	99	87	75	76	71	65	92	63	33	29.90	29.85	29.75	10	10	7	9	2	-	0.00	
13	99	87	75	75	70	65	91	62	33	29.87	29.82	29.76	10	10	10	13	4	17	0.00	
14	100	88	77	76	72	66	92	62	33	29.94	29.88	29.83	10	10	7	13	6	18	0.00	
15	100	90	79	77	72	63	90	62	30	30.02	29.96	29.89	10	10	10	10	5	-	0.00	

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
16	109	92	76	79	72	65	90	64	26	29.99	29.93	29.83	10	10	10	13	3	23	0.00	
17	101	88	76	78	75	70	96	69	36	29.95	29.91	29.83	10	9	5	8	1	-	0.00	
18	104	92	81	78	75	65	88	65	28	29.97	29.92	29.87	10	10	10	21	3	29	0.00	Thunderstorm
19	101	90	79	79	75	69	94	67	35	29.97	29.90	29.83	10	10	10	13	4	21	0.00	
20	101	90	80	80	74	66	95	62	33	29.93	29.86	29.80	10	10	7	17	8	25	0.00	
21	102	90	77	79	74	68	96	64	33	30.01	29.94	29.89	10	10	10	17	7	23	0.00	
22	103	90	77	78	74	69	94	62	34	30.04	29.97	29.88	10	10	7	12	6	-	0.00	
23	109	94	79	74	71	65	85	54	26	29.93	29.88	29.77	10	10	10	14	2	22	0.00	
24	108	94	79	77	71	63	88	53	24	29.90	29.85	29.78	10	10	10	17	4	26	0.00	
25	100	90	80	77	69	62	86	54	30	30.04	29.99	29.93	10	10	10	15	7	21	0.00	
26	100	90	79	72	67	62	76	50	29	30.09	30.04	29.96	10	10	10	12	5	18	0.00	
27	99	84	69	64	57	48	83	42	17	30.04	29.98	29.88	10	10	10	13	5	21	0.00	
28	101	84	68	65	61	54	82	49	25	29.94	29.89	29.79	10	10	10	8	1	-	0.00	
29	100	88	77	77	74	66	92	65	33	29.95	29.89	29.85	10	10	10	15	5	29	0.00	
30	99	90	81	81	77	72	93	73	42	30.06	30.00	29.94	10	10	10	14	7	22	0.00	
31	101	90	80	80	76	68	96	70	33	30.05	30.00	29.91	10	10	7	12	5	17	0.00	

Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: MB/NC--BRA	
Date & Time: 27 Aug 10 1030	County Name: Robertson
Stream Name: Mud Creek	
Segment No. or nearest downstream Segment No.: 1242K	
Description of Site: 99906 Downstream from Mud Creek Road bridge.	

At any point during the Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the use for the water body the investigator should stop conducting the UAA.

A. Stream Characteristics:

1. Check the following channel flow status that applies.

☐ dry ☐ no flow ☐ low ☑ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:

☐ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.

☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.

☑ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.

☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.

☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. 0.341 cfs

4. Water Quality Data (Field Parameters)

Field parameters should be collected in accordance with the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1.

Air Temp 29.4 °C 85°F Water Temp 24.8 °C 76.6°F

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
R Shrub dominated corridor	L 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):

Mud Creek Road Crosses creek, deep cut, steep banks 1285-1287
Private property on all sides. No fences across creek.

8. Dominant Primary Substrate

☑ Cobble ☐ Sand ☐ Silt ☐ Mud/Clay ☑ Gravel ☐ Bedrock ☐ Rip rap ☐ Concrete

Stream Name_____ Site: _____
Date: _____ Time: _____

B. Primary Contact Water Recreation Evaluation:
- Primary contact recreation draft definition: Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, and whitewater kayaking, canoeing, and rafting, involving a significant risk of ingestion of water.

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?
☐ Yes ☑ No primary contact recreation activities were observed
a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).

☐ Wading-Children	☐ Tubing	☑ No primary contact activities that commonly occur were observed
☐ Wading-Adults	☐ Surfing	
☐ Swimming	☐ Whitewater-kayaking, canoeing, rafting	
☐ Water skiing	☐ Other: _____	
☐ Diving	☐ frequent public swimming-created by publicly owned land or commercial operations	

b. Check the number of individuals observed at the site: ☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Water in mouth or nose of the individual ☐ Primary touch: Individual's body (or portion) immersed in water
☐ Secondary touch: fishing, pets and related contact with water ☐ Individual is in a boat touching water
☐ Individual is on shore near water within 8 meters (25ft) of water ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☑ Not applicable

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
Shallow water, Lots of brush in creek #1286-1287
Large log jam with trash 1293, 1294, 1296, 1297

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
County Road crosses Creek #1285 #1288

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? ND

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: _____

Date: _____ Time: _____

b. Check the number of individuals observed at the site.
☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body well away from water between 8 and 30 meters (100 ft)

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
Shallow stream. Lots of brush in creek #1286, 1287, 1293 – 1297

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).
Shallow, 0.15 m at bridge & boat 90 m into reach. Very difficult to get around brush pile. #1294, 1293

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.
None

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 1289 Downstream 1290 Left Bank 1291 Right Bank 1292
Photos #s (150 meters) Upstream 1298 Downstream 1299 Left Bank 1300 Right Bank 1301
Photos #s (300 meters) Upstream 1302 Downstream 1303 Left Bank 1304 Right Bank 1305

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			

No Significant Pools

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	0.09
60 meters	0.63
90 meters	0.19
120 meters	0.35
150 meters	0.24
180 meters	0.68
210 meters	0.26
240 meters	0.31
270 meters	0.28
300 meters	0.14
Average	0.32

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

c) Stream width - Measure (1) the width at one point which represents the typical average width of the 300 meter reach; (2) the width at the narrowest point of the stream within the 300 meter reach; and (3) the width at the widest point of the stream within the 300 meter reach.

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	1.75
Width at narrowest point of the stream within 300 meter reach	1.2
Width at the widest point of the stream within 300 meter reach	3.0

d) Is there sufficient water within a 300 meter stream reach during base flow conditions to support primary contact recreation? ☐ Yes ☑ No

COMMENTS:
Shallow stream. Not very wide.

2. Non-wadeable Streams

If accessible, take 10 width measurements which represent typical widths of the 300 meter reach. If the water is too deep and not accessible record the estimated average width of the water body.

Also, take photos facing upstream, downstream, left bank, and right bank at .
Photos #s (30 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (150 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

# Measurements	Width (meters)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

☐ Drinking or water in mouth
☐ Bathing
☐ Walking
☐ Jogging/running
☐ Bicycling
☐ Standing
☐ Sitting
☐ Lying down/sleeping
☐ Playing on shoreline
☐ Picnicking
☐ Motorcycle/ATV
☐ Hunting/Trapping
☐ Wildlife watching
☑ None
☐ Other: _____

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☐ Yes ☑ No (If yes, please provide supporting documentation and photos.)
Comments: _____

3. Check any channel obstructions that apply (Attach photos). #1293, 1294, 1295, 1296, 1297, 1298, 1300

☐ Culverts ☐ Fences ☑ Log jams ☐ Rip rap ☐ Water control structure
☐ Barbed wire ☐ Dams ☐ Thick vegetation ☐ Low bridges ☐ None
☐ Utility pipe ☐ Other (specify):_____

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest).

☐ Campgrounds
☐ Playgrounds
☑ Rural area
☐ Residential
☐ National forests
☐ Urban/suburban location
☐ Golf Course
☐ Sports Field
☐ Stairs/walkway
☐ Boating access (ramps)
☐ Beach
☐ Bridge crossing
☐ Commercial boating
☐ Trails/paths (hiking/biking)
☐ Paved parking lot
☐ Unimproved parking lot
☑ Roads (paved/unpaved)
☐ Populated area
☐ Docks or rafts
☐ Commercial outfitter
☐ Nearby school
☐ Power Line Corridor
☐ Parks (national/city/county/state)
☐ Public Property
☐ Other:_____
☐ None of the Above

Comments: County road crosses creek

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).

☑ Private Property
☐ No trespass sign
☐ Wildlife
☐ Steep slopes
☐ No public access
☐ No roads
☐ Fence
☐ Barge/ship traffic
☐ Industrial
☐ None of the Above
☑ Other: Steep bank, Log jams.

Comments: #1286, 1293-1298, 1300, #1290 = Steel pipe sticking out of bank, old oilfield supply pipe.

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:_____

Stream Name_____ Site: _____
Date: _____ Time: _____

7. Check all water characteristics that apply (Attach photos).

Aquatic Vegetation: ☐ absent ☑ rare ☐ common ☐ abundant
Algae Cover: ☐ absent ☐ rare ☑ common ☐ abundant
Odor: ☑ none ☐ rare ☐ common ☐ abundant
Color: ☑ clear ☐ green ☐ red ☐ brown ☐ black
Bottom Deposit: ☐ sludge ☐ solids ☑ fine sediments ☐ none ☐ other
Water Surface: ☑ clear ☐ scum ☐ foam ☐ debris ☐ oil
Other: See transect pics # 1289-1292, 1298-1305

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: Cow tracks in creek bed, Deer near creek # 1306

10. Evidence of wild animals or evidence of birds, cattle, hogs, etc.
☑ Tracks ☐ Fecal droppings ☐ Bird nests

11. Garbage Observed

Large garbage in the channel	☐ None	☐ Rare	☑ Common	☐ Abundant
Small garbage in the channel	☐ None	☐ Rare	☐ Common	☑ Abundant
Bank Garbage	☐ None	☑ Rare	☐ Common	☐ Abundant

Briefly describe the kinds of garbage observed: Tires, TV, VCR, Pipe, bottles, cans, chairs, Toilet parts and pieces. A little of everything.

12. Is the site located in a wildlife preserve with large wildlife (i.e waterfowl) population? ☐ Yes ☑ No

13. Please document any other relevant information regarding recreational activities and the water body in general (for example, area outside of the stream reach evaluated).

_____

Field Data Sheet - Basic RUAA Survey
Stream Flow (Discharge) Measurement

Stream:_____ Date:_____

Site:_____ Site

Description:_____

Time Begin:_____ Time End:_____ Meter Type:_____

Observers:_____ Stream Width*:_____ Section Width (W):_____

Observations:_____

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V)		Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
			At Point (ft/s)(m/s)	Average (ft/s)(m/s)	

: Fri Sep 24 2010

99906-27AUG10.WAD
2010/08/27 09:25:14

NC

FlowTracker	**(English Units)**
P872	ft
3.7	ft/s
2.30	ft^2
0.0%	cfs

Accuracy	1.0%	1.0%
Depth	0.5%	5.3%
Velocity	2.3%	8.5%
Width	0.2%	0.2%
Method	2.4%	-
# Stations	3.3%	-
Overall	**4.8%**	**10.0%**

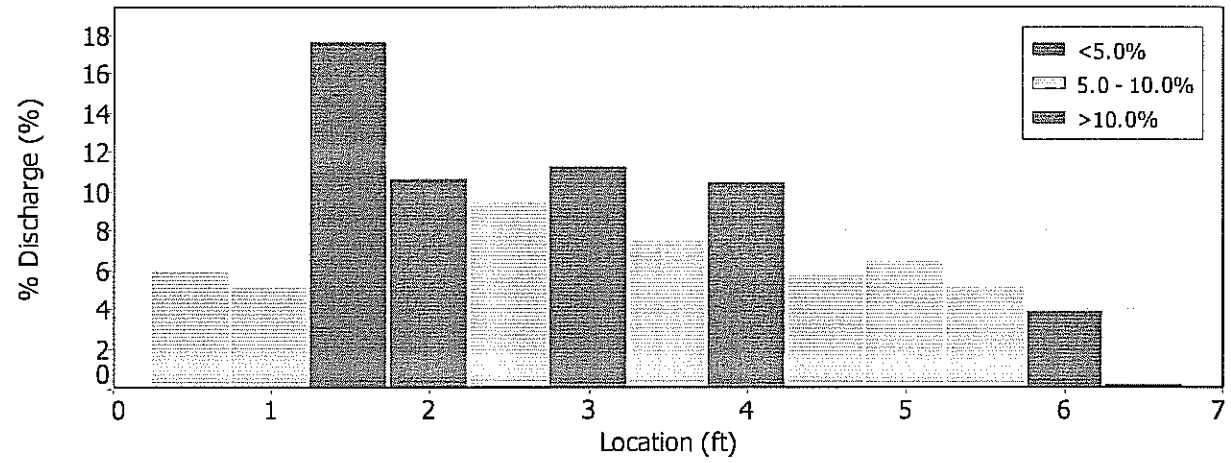
40	15
LEW	7.000
30.9 dB	1.725
76.59 °F	0.246
Mid-Section	0.1975
	0.3407

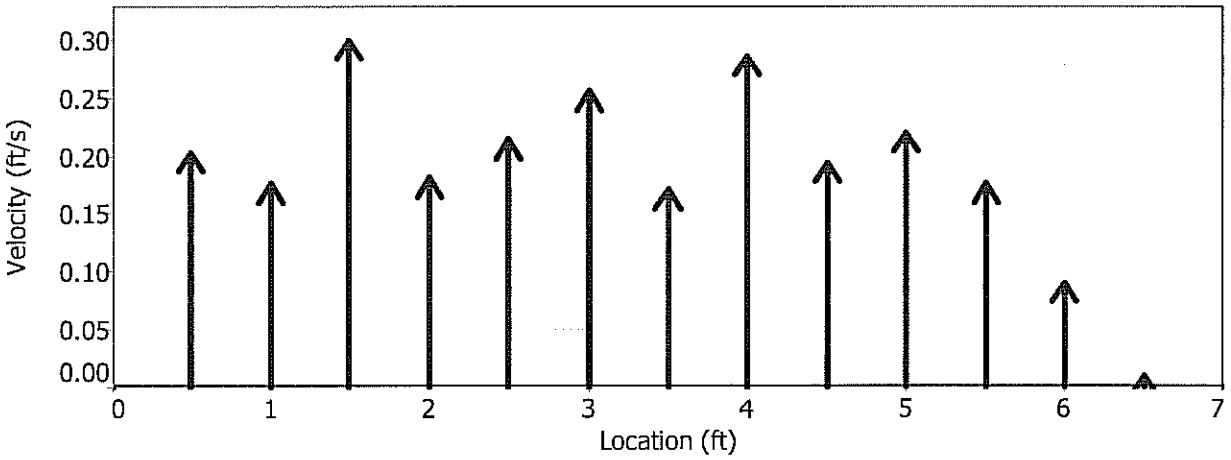
				Depth								
0	09:25	0.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
1	09:25	0.50	0.6	0.200	0.6	0.080	0.2037	1.00	0.2037	0.100	0.0204	6.0
2	09:26	1.00	0.6	0.200	0.6	0.080	0.1768	1.00	0.1768	0.100	0.0177	5.2
3	*09:27*	*1.50*	*0.6*	*0.400*	*0.6*	*0.160*	*0.3012*	*1.00*	*0.3012*	*0.200*	*0.0602*	*17.7*
4	09:28	2.00	0.6	0.400	0.6	0.160	0.1821	1.00	0.1821	0.200	0.0364	10.7
5	09:29	2.50	0.6	0.300	0.6	0.120	0.2149	1.00	0.2149	0.150	0.0322	9.5
6	09:30	3.00	0.6	0.300	0.6	0.120	0.2566	1.00	0.2566	0.150	0.0385	11.3
7	*09:32*	*3.50*	*0.6*	*0.300*	*0.6*	*0.120*	*0.1716*	*1.00*	*0.1716*	*0.150*	*0.0257*	*7.6*
8	09:33	4.00	0.6	0.250	0.6	0.100	0.2871	1.00	0.2871	0.125	0.0359	10.5
9	*09:34*	*4.50*	*0.6*	*0.200*	*0.6*	*0.080*	*0.1952*	*1.00*	*0.1952*	*0.100*	*0.0195*	*5.7*
10	09:35	5.00	0.6	0.200	0.6	0.080	0.2208	1.00	0.2208	0.100	0.0221	6.5
11	09:36	5.50	0.6	0.200	0.6	0.080	0.1762	1.00	0.1762	0.100	0.0176	5.2
12	*09:37*	*6.00*	*0.6*	*0.300*	*0.6*	*0.120*	*0.0899*	*1.00*	*0.0899*	*0.150*	*0.0135*	*4.0*
13	*09:38*	*6.50*	*0.6*	*0.200*	*0.6*	*0.080*	*0.0098*	*1.00*	*0.0098*	*0.100*	*0.0010*	*0.3*
14	09:38	7.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0

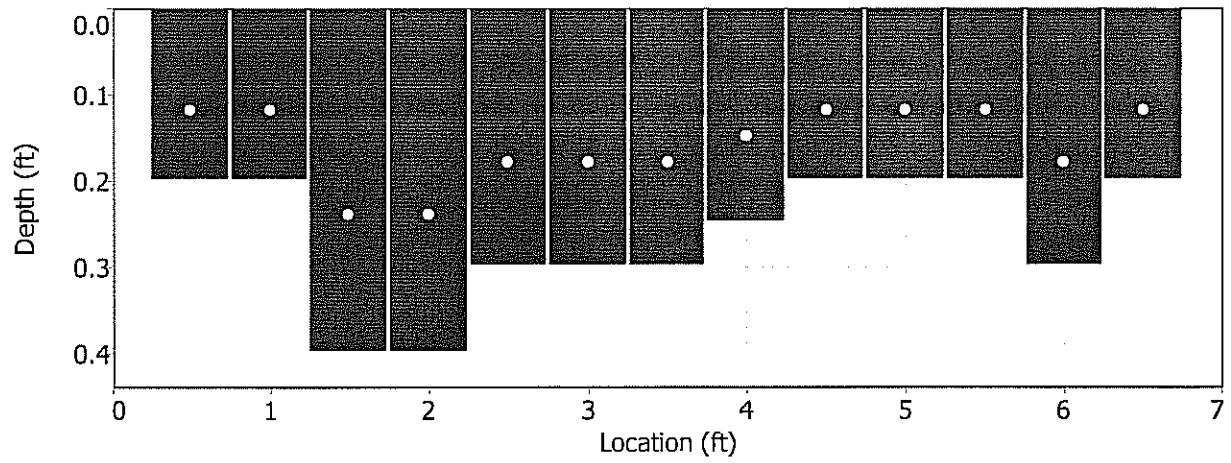
: Fri Sep 24 2010

99906-27AUG10.WAD
2010/08/27 09:25:14

NC







: Fri Sep 24 2010

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2010/08/27 09:25:14

NC

3	1.50	0.6	Boundary QC is Good; possible boundary interference
7	3.50	0.6	High standard error: 0.037
9	4.50	0.6	High angle: 24
12	6.00	0.6	High SNR variation during measurement: 3.0,5.2
13	6.50	0.6	SNR (60.4) is different from typical SNR (30.9)
		0.6	High SNR variation during measurement: 13.8,12.5
		0.6	Boundary QC is Good; possible boundary interference

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Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1 **Actual:** 87 | 75 Precip: 0.07 **Average:** - | - Precip: -	2 **Actual:** 87 | 75 Precip: 0.46 **Average:** - | - Precip: -	3 **Actual:** 85 | 75 Precip: 0.00 **Average:** - | - Precip: -
4 **Actual:** 91 | 76 Precip: 0.00 **Average:** - | - Precip: -	5 **Actual:** 92 | 74 Precip: 0.00 **Average:** - | - Precip: -	6 **Actual:** 93 | 75 Precip: 0.00 **Average:** - | - Precip: -	7 **Actual:** 91 | 74 Precip: 0.00 **Average:** - | - Precip: -	8 **Actual:** 86 | 76 Precip: 0.00 **Average:** - | - Precip: -	9 **Actual:** 91 | 75 Precip: 0.00 **Average:** - | - Precip: -	10 **Actual:** 90 | 74 Precip: 0.00 **Average:** - | - Precip: -
11 **Actual:** 92 | 75 Precip: 0.00 **Average:** - | - Precip: -	12 **Actual:** 93 | 76 Precip: 0.00 **Average:** - | - Precip: -	13 **Actual:** 94 | 78 Precip: 0.00 **Average:** - | - Precip: -	14 **Actual:** 94 | 76 Precip: 0.00 **Average:** - | - Precip: -	15 **Actual:** 95 | 75 Precip: 0.00 **Average:** - | - Precip: -	16 **Actual:** 95 | 75 Precip: 0.00 **Average:** - | - Precip: -	17 **Actual:** 96 | 73 Precip: 0.00 **Average:** - | - Precip: -
18 **Actual:** 95 | 74 Precip: 0.00 **Average:** - | - Precip: -	19 **Actual:** 93 | 74 Precip: 0.00 **Average:** - | - Precip: -	20 **Actual:** 95 | 76 Precip: 0.00 **Average:** - | - Precip: -	21 **Actual:** 95 | 75 Precip: 0.00 **Average:** - | - Precip: -	22 **Actual:** 95 | 76 Precip: 0.00 **Average:** - | - Precip: -	23 **Actual:** 95 | 77 Precip: 0.00 **Average:** - | - Precip: -	24 **Actual:** 94 | 73 Precip: 0.00 **Average:** - | - Precip: -

25	26	27	28	29	30	31
Actual: 97 | 74	**Actual:** 97 | 75	**Actual:** 92 | 72	**Actual:** 90 | 74	**Actual:** 93 | 74	**Actual:** 94 | 74	**Actual:** 96 | 73
Precip: 0.00	Precip: 0.00	Precip: 0.01	Precip: 0.11	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
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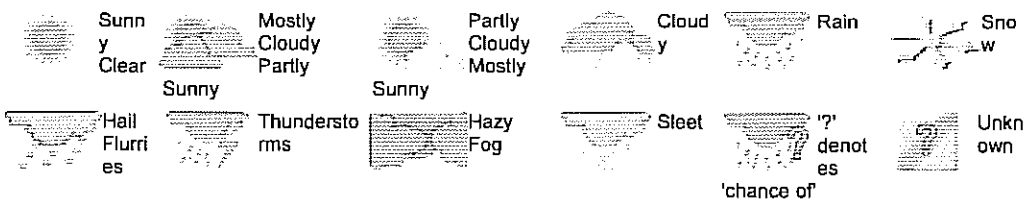
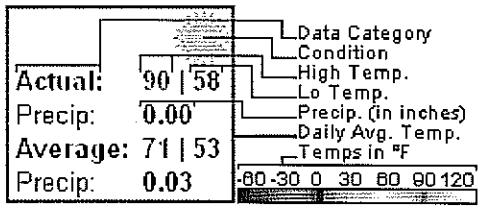
Calendar Key:





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Daily Observations

2010 July	Temp. (°F) high	avg	low	Dew Point (°F) high	avg	low	Humidity (%) high	avg	low	Sea Level Pressure (in) high	avg	low	Visibility (mi) high	avg	low	Wind (mph) high	avg	Gust Speed (mph) high	Precip (in) sum	Events
1	87	81	75	75	73	71	94	80	64	30.04	30.00	29.97	10	6	4	16	8	25	0.07	Rain
2	87	81	75	76	74	72	94	88	63	30.03	29.99	29.95	10	7	4	16	6	29	0.46	Rain
3	85	80	75	77	75	72	95	85	68	29.98	29.94	29.90	10	5	3	14	4	20	0.00	Rain
4	91	84	76	77	74	71	94	75	51	29.94	29.90	29.84	7	5	3	14	7	18	0.00	Rain
5	92	83	74	76	73	70	95	74	48	29.91	29.87	29.80	7	5	3	10	5	9	0.00	
6	93	84	75	75	72	69	94	69	44	29.92	29.87	29.80	7	5	3	8	2	-	0.00	
7	91	82	74	75	73	69	94	75	53	29.94	29.91	29.87	7	5	4	15	3	25	0.00	
8	86	81	76	75	74	72	90	81	63	30.02	29.98	29.95	10	6	3	12	5	16	0.00	Rain
9	91	83	75	76	73	70	94	79	51	30.06	30.02	29.98	7	5	3	15	2	18	0.00	Rain
10	90	82	74	75	73	71	96	77	53	30.08	30.02	29.96	7	4	3	9	1	-	0.00	
11	92	84	75	75	72	69	94	72	46	29.99	29.94	29.83	7	5	4	15	5	20	0.00	
12	93	84	76	75	73	70	92	70	47	29.90	29.86	29.78	7	5	4	21	9	22	0.00	
13	94	86	78	75	73	71	86	68	46	29.92	29.88	29.85	7	4	3	18	11	24	0.00	
14	94	85	76	76	73	70	91	69	46	30.05	30.00	29.95	7	5	3	16	9	22	0.00	
15	95	85	75	76	72	68	95	69	41	30.09	30.02	29.96	7	5	2	10	5	16	0.00	
16	95	85	75	75	71	66	94	67	38	30.06	30.02	29.94	10	6	3	7	2	-	0.00	Rain
17	96	84	73	74	71	65	94	63	35	30.05	30.00	29.94	10	9	3	10	2	16	0.00	

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
18	95	84	74	75	72	68	90	73	42	30.03	29.99	29.94	10	10	7	12	5	20	0.00	Thunderstorm
19	93	84	74	76	73	70	96	76	48	30.02	29.98	29.94	10	8	0	18	4	26	0.00	Fog
20	95	86	76	76	73	65	95	73	39	30.05	30.01	29.97	10	9	5	15	6	18	0.00	
21	95	85	75	75	73	69	95	71	42	30.09	30.05	29.99	10	9	5	8	2	16	0.00	Rain
22	95	86	76	76	74	70	94	75	45	30.06	30.01	29.96	10	9	7	12	3	20	0.00	
23	95	86	77	77	73	64	94	70	35	30.05	30.01	29.96	10	9	5	14	4	20	0.00	
24	94	84	73	76	71	63	96	69	37	30.09	30.04	29.98	10	9	4	10	3	-	0.00	
25	97	86	74	72	67	58	88	58	26	30.06	30.02	29.94	10	10	7	8	2	-	0.00	Rain
26	97	86	75	73	70	67	87	67	38	30.02	29.97	29.88	10	7	4	24	2	34	0.00	Rain , Thunderstorm
27	92	82	72	76	72	69	95	79	46	30.05	30.00	29.96	10	6	4	10	2	-	0.01	Rain , Thunderstorm
28	90	82	74	76	74	71	95	83	56	30.14	30.09	30.03	10	9	3	17	6	31	0.11	Rain , Thunderstorm
29	93	84	74	77	72	68	96	74	45	30.20	30.14	30.03	10	9	5	10	3	-	0.00	
30	94	84	74	76	72	66	95	71	41	30.09	30.04	29.91	10	9	2	14	5	18	0.00	
31	96	84	73	74	69	59	94	66	29	29.98	29.93	29.85	10	9	5	10	4	-	0.00	

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Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1 Actual: 100 | 69 Precip: 0.00 Average: - | - Precip: -	2 Actual: 99 | 71 Precip: 0.00 Average: - | - Precip: -	3 Actual: 98 | 73 Precip: 0.00 Average: - | - Precip: -	4 Actual: 97 | 76 Precip: 0.00 Average: - | - Precip: -	5 Actual: 98 | 75 Precip: 0.00 Average: - | - Precip: -	6 Actual: 98 | 75 Precip: 0.00 Average: - | - Precip: -	7 Actual: 98 | 78 Precip: 0.00 Average: - | - Precip: -
8 Actual: 98 | 77 Precip: 0.00 Average: - | - Precip: -	9 Actual: 98 | 74 Precip: 0.00 Average: - | - Precip: -	10 Actual: 100 | 75 Precip: 0.00 Average: - | - Precip: -	11 Actual: 99 | 78 Precip: 0.00 Average: - | - Precip: -	12 Actual: 99 | 75 Precip: 0.00 Average: - | - Precip: -	13 Actual: 99 | 75 Precip: 0.00 Average: - | - Precip: -	14 Actual: 100 | 77 Precip: 0.00 Average: - | - Precip: -
15 Actual: 100 | 79 Precip: 0.00 Average: - | - Precip: -	16 Actual: 109 | 76 Precip: 0.00 Average: - | - Precip: -	17 Actual: 101 | 76 Precip: 0.00 Average: - | - Precip: -	18 Actual: 104 | 81 Precip: 0.00 Average: - | - Precip: -	19 Actual: 101 | 79 Precip: 0.00 Average: - | - Precip: -	20 Actual: 101 | 80 Precip: 0.00 Average: - | - Precip: -	21 Actual: 102 | 77 Precip: 0.00 Average: - | - Precip: -
22 Actual: 103 | 77 Precip: 0.00 Average: - | - Precip: -	23 Actual: 109 | 79 Precip: 0.00 Average: - | - Precip: -	24 Actual: 108 | 79 Precip: 0.00 Average: - | - Precip: -	25 Actual: 100 | 80 Precip: 0.00 Average: - | - Precip: -	26 Actual: 100 | 79 Precip: 0.00 Average: - | - Precip: -	27 Actual: 99 | 69 Precip: 0.00 Average: - | - Precip: -	28 Actual: 101 | 68 Precip: 0.00 Average: - | - Precip: -
29 Actual: 100 | 77	30 Actual: 99 | 81	31 Actual: 101 | 80				

Precip: 0.00 **Average:** - | - Precip: -	Precip: 0.00 **Average:** - | - Precip: -	Precip: 0.00 **Average:** - | - Precip: -

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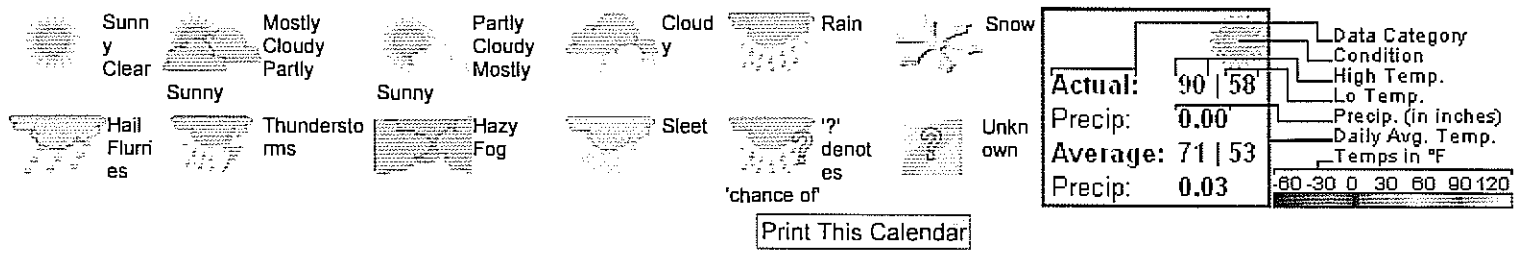
Calendar Key:



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Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
August	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	100	84	69	74	67	55	95	60	22	29.93	29.89	29.84	10	9	7	9	2	-	0.00	
2	99	85	71	70	64	55	90	55	25	30.00	29.96	29.91	10	9	4	12	2	16	0.00	
3	98	86	73	73	69	64	94	60	32	30.08	30.01	29.95	10	8	4	9	2	16	0.00	
4	97	86	76	77	73	68	94	66	38	30.05	29.98	29.89	7	6	3	12	4	17	0.00	Rain
5	98	86	75	74	71	65	92	62	34	29.96	29.91	29.83	7	5	3	8	3	-	0.00	
6	98	86	75	74	71	67	92	63	36	29.95	29.89	29.81	10	8	4	10	5	-	0.00	
7	98	88	78	75	71	64	86	60	33	29.94	29.88	29.81	10	10	10	12	5	16	0.00	
8	98	88	77	76	71	65	92	63	34	29.94	29.90	29.83	10	10	10	12	6	20	0.00	
9	98	86	74	76	71	66	95	63	34	29.99	29.93	29.85	10	10	7	12	5	16	0.00	
10	100	88	75	77	72	65	94	64	33	29.98	29.93	29.85	10	10	3	7	2	9	0.00	
11	99	88	78	76	73	68	89	64	36	29.96	29.90	29.83	10	10	10	12	3	24	0.00	Rain , Thunderstorm
12	99	87	75	76	71	65	92	63	33	29.90	29.85	29.75	10	10	7	9	2	-	0.00	
13	99	87	75	75	70	65	91	62	33	29.87	29.82	29.76	10	10	10	13	4	17	0.00	
14	100	88	77	76	72	66	92	62	33	29.94	29.88	29.83	10	10	7	13	6	18	0.00	
15	100	90	79	77	72	63	90	62	30	30.02	29.96	29.89	10	10	10	10	5	-	0.00	

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
16	109	92	76	79	72	65	90	64	26	29.99	29.93	29.83	10	10	10	13	3	23	0.00	
17	101	88	76	78	75	70	96	69	36	29.95	29.91	29.83	10	9	5	8	1	-	0.00	
18	104	92	81	78	75	65	88	65	28	29.97	29.92	29.87	10	10	10	21	3	29	0.00	Thunderstorm
19	101	90	79	79	75	69	94	67	35	29.97	29.90	29.83	10	10	10	13	4	21	0.00	
20	101	90	80	80	74	66	95	62	33	29.93	29.86	29.80	10	10	7	17	8	25	0.00	
21	102	90	77	79	74	68	96	64	33	30.01	29.94	29.89	10	10	10	17	7	23	0.00	
22	103	90	77	78	74	69	94	62	34	30.04	29.97	29.88	10	10	7	12	6	-	0.00	
23	109	94	79	74	71	65	85	54	26	29.93	29.88	29.77	10	10	10	14	2	22	0.00	
24	108	94	79	77	71	63	88	53	24	29.90	29.85	29.78	10	10	10	17	4	26	0.00	
25	100	90	80	77	69	62	86	54	30	30.04	29.99	29.93	10	10	10	15	7	21	0.00	
26	100	90	79	72	67	62	76	50	29	30.09	30.04	29.96	10	10	10	12	5	18	0.00	
27	99	84	69	64	57	48	83	42	17	30.04	29.98	29.88	10	10	10	13	5	21	0.00	
28	101	84	68	65	61	54	82	49	25	29.94	29.89	29.79	10	10	10	8	1	-	0.00	
29	100	88	77	77	74	66	92	65	33	29.95	29.89	29.85	10	10	10	15	5	29	0.00	
30	99	90	81	81	77	72	93	73	42	30.06	30.00	29.94	10	10	10	14	7	22	0.00	
31	101	90	80	80	76	68	96	70	33	30.05	30.00	29.91	10	10	7	12	5	17	0.00	

Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: MD / NC - BRH	
Date & Time: 27 Aug 10 0900	County Name: Robertson
Stream Name: Mud Creek	
Segment No. or nearest downstream Segment No.: 1242K	
Description of Site: 99907 Downstream from SH79	

At any point during the Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the use for the water body the investigator should stop conducting the UAA.

A. Stream Characteristics:

1. Check the following channel flow status that applies.

☐ dry ☐ no flow ☐ low ☑ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:

☐ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.

☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.

☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.

☑ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.

☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. <0.05 cfs

4. Water Quality Data (Field Parameters)

Field parameters should be collected in accordance with the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1.

Air Temp 27.2 °C 81°F Water Temp 23.7 °C 74.7°F

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
RL 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):

SH79 crosses creek, Mowed ROW, Water gap in fence is easy to go under #1264-1266, 1278

8. Dominant Primary Substrate

☐Cobble ☑Sand ☐Silt ☐Mud/Clay ☐Gravel ☐Bedrock ☐Rip rap ☐ Concrete

Stream Name_____ Site: _____
Date: _____ Time: _____

B. Primary Contact Water Recreation Evaluation:
- Primary contact recreation draft definition: Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, and whitewater kayaking, canoeing, and rafting, involving a significant risk of ingestion of water.

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?
☐ Yes ☑ No primary contact recreation activities were observed
a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).

☐ Wading-Children	☐ Tubing	☑ No primary contact activities that commonly occur were observed
☐ Wading-Adults	☐ Surfing	
☐ Swimming	☐ Whitewater-kayaking, canoeing, rafting	
☐ Water skiing	☐ Other: _____	
☐ Diving	☐ frequent public swimming-created by publicly owned land or commercial operations	

b. Check the number of individuals observed at the site: ☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Water in mouth or nose of the individual ☐ Primary touch: Individual's body (or portion) immersed in water
☐ Secondary touch: fishing, pets and related contact with water ☐ Individual is in a boat touching water
☐ Individual is on shore near water within 8 meters (25ft) of water ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☑ Not applicable

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
Low flow, shallow stream, thick under brush on both sides of stream, #1267-1269, private property, #1278 overgrown channel

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
SH 79 ROW #1266

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: _____

Date: _____ Time: _____

b. Check the number of individuals observed at the site.
☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body well away from water between 8 and 30 meters (100 ft)

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
Low flow, shallow, narrow stream. Thick brush on both sides of creek, Private Property #1267-1269

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).
Shallow, narrow, low flow stream. Thick vegetation on both sides of stream. # 1267-1269

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, Thick vegetation along stream. #1268, 1269

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.
Discharge from Franklin WWTP. Private Property, Thick vegetation along stream, #1268-1269, 1267
very narrow channel with thick bush & vines along creek

Field Data Sheets – Basic RUAA Survey

Stream Name _____ Site: _____
Date: _____

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 1270 Downstream 1271 Left Bank 1272 Right Bank 1273
Photos #s (150 meters) Upstream 1274 Downstream 1275 Left Bank 1276 Right Bank 1277
Photos #s (300 meters) Upstream 1279 Downstream 1280 Left Bank 1281 Right Bank 1282

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	23	2.5	0.70
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	0.26
60 meters	0.27
90 meters	0.15
120 meters	0.29
150 meters	0.11
180 meters	0.09
210 meters	0.67
240 meters	0.13
270 meters	0.45
300 meters	0.29
Average	0.27

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

c) Stream width - Measure (1) the width at one point which represents the typical average width of the 300 meter reach; (2) the width at the narrowest point of the stream within the 300 meter reach; and (3) the width at the widest point of the stream within the 300 meter reach.

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	3
Width at narrowest point of the stream within 300 meter reach	0.45
Width at the widest point of the stream within 300 meter reach	3.5

d) Is there sufficient water within a 300 meter stream reach during base flow conditions to support primary contact recreation? ☐ Yes ☑ No

COMMENTS:
Slow, shallow, Almost stagnant,

2. Non-wadeable Streams

If accessible, take 10 width measurements which represent typical widths of the 300 meter reach. If the water is too deep and not accessible record the estimated average width of the water body.

Also, take photos facing upstream, downstream, left bank, and right bank at .
Photos #s (30 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (150 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

# Measurements	Width (meters)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

☐ Drinking or water in mouth
☐ Bathing
☐ Walking
☐ Jogging/running
☐ Bicycling
☐ Standing
☐ Sitting
☐ Lying down/sleeping
☐ Playing on shoreline
☐ Picnicking
☐ Motorcycle/ATV
☐ Hunting/Trapping
☐ Wildlife watching
☑ None
☐ Other: _____

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☐ Yes ☑ No (If yes, please provide supporting documentation and photos.)
Comments: _____

3. Check any channel obstructions that apply (Attach photos). #1283, 1284

☐ Culverts ☐ Fences ☑ Log jams ☐ Rip rap ☐ Water control structure
☐ Barbed wire ☐ Dams ☐ Thick vegetation ☐ Low bridges ☐ None
☐ Utility pipe ☐ Other (specify):_____

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest).

☐ Campgrounds ☐ Stairs/walkway ☑ Roads (paved/unpaved) ☐ Other:_____
☐ Playgrounds ☐ Boating access (ramps) ☐ Populated area ☐ None of the Above
☑ Rural area ☐ Beach ☐ Docks or rafts
☑ Residential ☐ Bridge crossing ☐ Commercial outfitter
☐ National forests ☐ Commercial boating ☐ Nearby school
☑ Urban/suburban location ☐ Trails/paths (hiking/biking) ☐ Power Line Corridor
☐ Golf Course ☐ Paved parking lot ☐ Parks (national/city/county/state)
☐ Sports Field ☐ Unimproved parking lot ☐ Public Property
Comments: On the edge of town. Houses not too far away.

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).

☑ Private Property ☑ Fence
☐ No trespass sign ☐ Barge/ship traffic
☐ Wildlife ☐ Industrial
☐ Steep slopes ☐ None of the Above
☑ No public access ☐ Other:_____
☐ No roads
Comments: #1265

6. Check any indications of human use (Attach photos).

☐ Roads ☐ RV/ATV Tracks ☐ NPDES Discharge ☐ Organized event
☐ Rope swings ☐ Camping Sites ☐ Gates on corridor ☑ No Human Presence
☐ Dock/platform ☐ Fire pit/ring ☐ Children's toys
☐ Foot paths/prints ☐ Fishing Tackle ☐ Remnant's of Kid's play
☐ Other: _____
Comments:_____

Stream Name_____ Site: _____
Date: _____ Time: _____

7. Check all water characteristics that apply (Attach photos).
Aquatic Vegetation: ☐ absent ☐ rare ☐ common ☑ abundant
Algae Cover: ☐ absent ☐ rare ☐ common ☑ abundant
Odor: ☐ none ☐ rare ☐ common ☑ abundant
Color: ☐ clear ☑ green ☐ red ☐ brown ☐ black
Bottom Deposit: ☑ sludge ☐ solids ☐ fine sediments ☐ none ☐ other
Water Surface: ☑ clear ☐ scum ☐ foam ☐ debris ☐ oil
Other: See transect pics

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: Deer along creek

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).
Water is slow and almost stagnant, smells very bad, Very overgrown along banks, shallow & narrow.

Field Data Sheet - Basic RUAA Survey
Stream Flow (Discharge) Measurement

Stream:_____ Date:_____

Site:_____ Site

Description:_____

Time Begin:_____ Time End:_____ Meter Type:_____

Observers:_____ Stream Width*:_____ Section Width (W):_____

Observations:_____

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V)		Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
			At Point (ft/s)(m/s)	Average (ft/s)(m/s)	

: Fri Sep 24 2010

99907-27AUG10.WAD
2010/08/27 07:55:58

NC

FlowTracker	**(English Units)**
P872	ft
3.7	ft/s
2.30	ft^2
0.0%	cfs

Accuracy	1.0%	1.0%
Depth	0.7%	4.0%
Velocity	3.8%	27.2%
Width	0.2%	0.2%
Method	3.3%	-
# Stations	3.6%	-
Overall	**6.3%**	**27.5%**

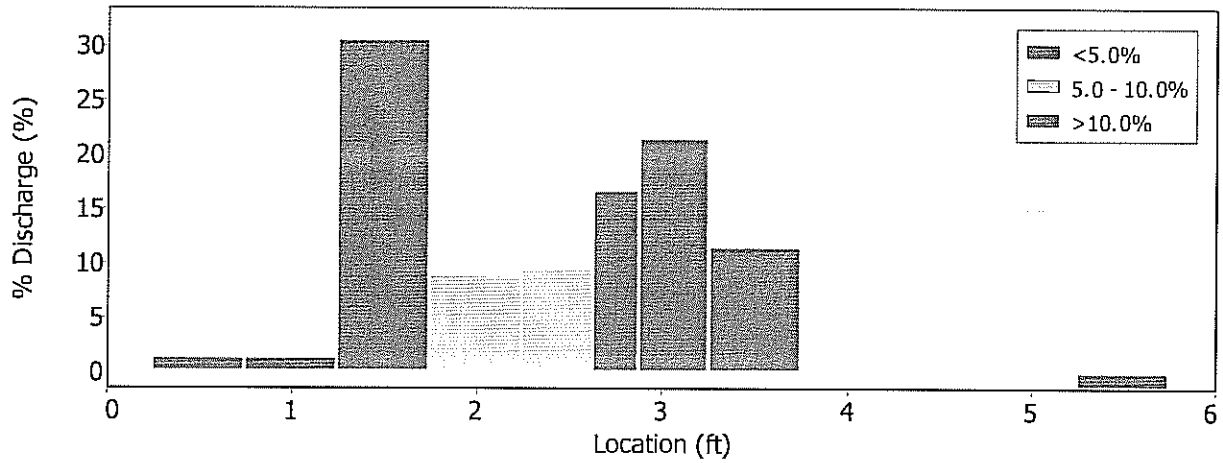
40	14
REW	6.000
50.9 dB	1.925
74.69 °F	0.321
Mid-Section	0.0204
	0.0393

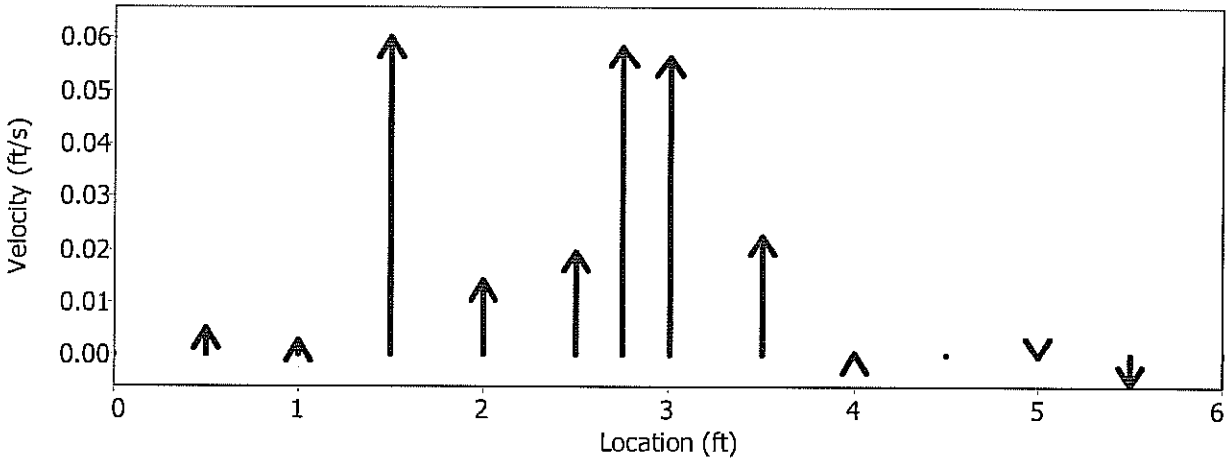
				Depth								
0	07:55	0.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
1	07:55	0.50	0.6	0.200	0.6	0.080	0.0049	1.00	0.0049	0.100	0.0005	1.3
2	07:56	1.00	0.6	0.400	0.6	0.160	0.0026	1.00	0.0026	0.200	0.0005	1.3
3	07:58	1.50	0.6	0.400	0.6	0.160	0.0600	1.00	0.0600	0.200	0.0120	30.6
4	07:59	2.00	0.6	0.500	0.6	0.200	0.0141	1.00	0.0141	0.250	0.0035	9.0
5	07:59	2.50	0.6	0.500	0.6	0.200	0.0197	1.00	0.0197	0.188	0.0037	9.4
6	*08:09*	*2.75*	*0.6*	*0.450*	*0.6*	*0.180*	*0.0584*	*1.00*	*0.0584*	*0.113*	*0.0066*	*16.7*
7	*08:00*	*3.00*	*0.6*	*0.400*	*0.6*	*0.160*	*0.0564*	*1.00*	*0.0564*	*0.150*	*0.0085*	*21.6*
8	*08:01*	*3.50*	*0.6*	*0.400*	*0.6*	*0.160*	*0.0226*	*1.00*	*0.0226*	*0.200*	*0.0045*	*11.5*
9	*08:02*	*4.00*	*0.6*	*0.350*	*0.6*	*0.140*	*0.0003*	*1.00*	*0.0003*	*0.175*	*0.0001*	*0.1*
10	*08:05*	*4.50*	*0.6*	*0.300*	*0.6*	*0.120*	*0.0000*	*1.00*	*0.0000*	*0.150*	*0.0000*	*0.0*
11	*08:06*	*5.00*	*0.6*	*0.200*	*0.6*	*0.080*	*-0.0003*	*1.00*	*-0.0003*	*0.100*	*0.0000*	*-0.1*
12	08:07	5.50	0.6	0.200	0.6	0.080	-0.0056	1.00	-0.0056	0.100	-0.0006	-1.4
13	08:07	6.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0

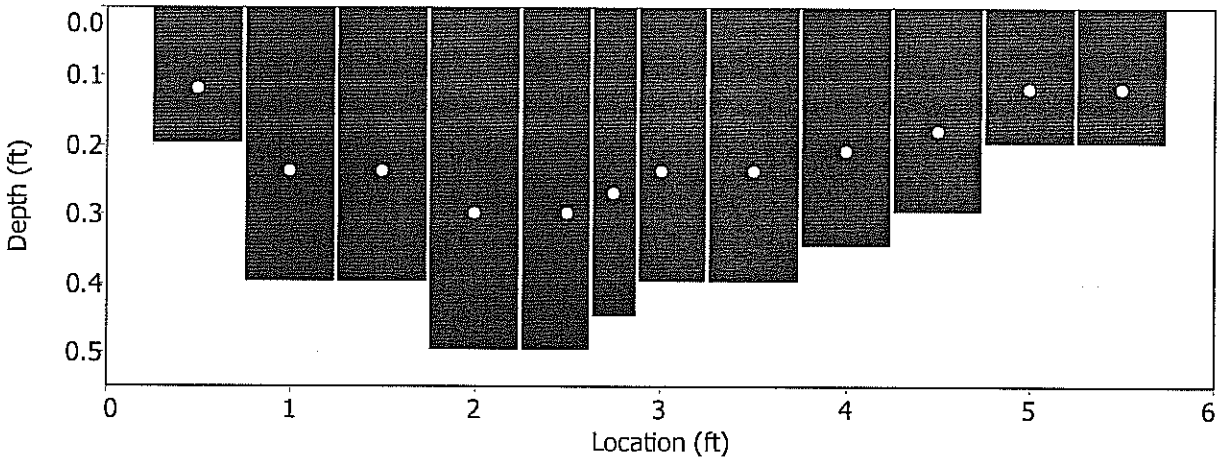
: Fri Sep 24 2010

99907-27AUG10.WAD
2010/08/27 07:55:58

NC







: Fri Sep 24 2010

99907-27AUG10.WAD 2010/08/27 07:55:58	NC

6	2.75	0.6	SNR (33.5) is different from typical SNR (50.9)
7	3.00	0.6	SNR (37.6) is different from typical SNR (50.9)
8	3.50	0.6	SNR (39.5) is different from typical SNR (50.9)
9	4.00	0.6	SNR (72.7) is different from typical SNR (50.9)
		0.6	High SNR variation during measurement: 6.0,6.5
10	4.50	0.6	SNR (73.1) is different from typical SNR (50.9)
		0.6	High standard error: 0.000
11	5.00	0.6	SNR (65.1) is different from typical SNR (50.9)

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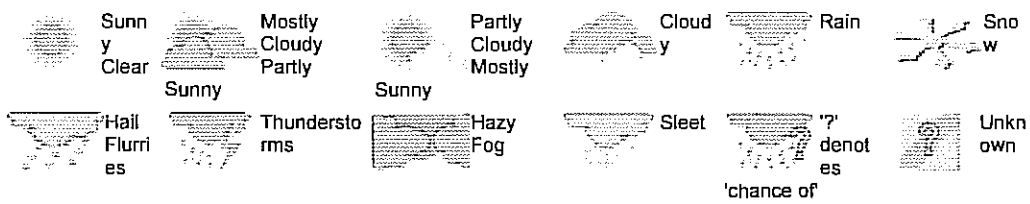
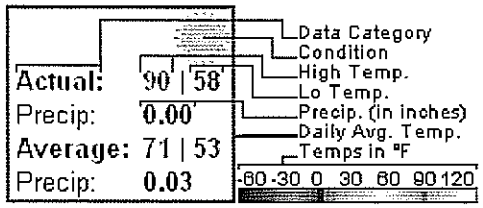
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1 **Actual:** 87 | 75 Precip: 0.07 **Average:** - | - Precip: -	2 **Actual:** 87 | 75 Precip: 0.46 **Average:** - | - Precip: -	3 **Actual:** 85 | 75 Precip: 0.00 **Average:** - | - Precip: -
4 **Actual:** 91 | 76 Precip: 0.00 **Average:** - | - Precip: -	5 **Actual:** 92 | 74 Precip: 0.00 **Average:** - | - Precip: -	6 **Actual:** 93 | 75 Precip: 0.00 **Average:** - | - Precip: -	7 **Actual:** 91 | 74 Precip: 0.00 **Average:** - | - Precip: -	8 **Actual:** 86 | 76 Precip: 0.00 **Average:** - | - Precip: -	9 **Actual:** 91 | 75 Precip: 0.00 **Average:** - | - Precip: -	10 **Actual:** 90 | 74 Precip: 0.00 **Average:** - | - Precip: -
11 **Actual:** 92 | 75 Precip: 0.00 **Average:** - | - Precip: -	12 **Actual:** 93 | 76 Precip: 0.00 **Average:** - | - Precip: -	13 **Actual:** 94 | 78 Precip: 0.00 **Average:** - | - Precip: -	14 **Actual:** 94 | 76 Precip: 0.00 **Average:** - | - Precip: -	15 **Actual:** 95 | 75 Precip: 0.00 **Average:** - | - Precip: -	16 **Actual:** 95 | 75 Precip: 0.00 **Average:** - | - Precip: -	17 **Actual:** 96 | 73 Precip: 0.00 **Average:** - | - Precip: -
18 **Actual:** 95 | 74 Precip: 0.00 **Average:** - | - Precip: -	19 **Actual:** 93 | 74 Precip: 0.00 **Average:** - | - Precip: -	20 **Actual:** 95 | 76 Precip: 0.00 **Average:** - | - Precip: -	21 **Actual:** 95 | 75 Precip: 0.00 **Average:** - | - Precip: -	22 **Actual:** 95 | 76 Precip: 0.00 **Average:** - | - Precip: -	23 **Actual:** 95 | 77 Precip: 0.00 **Average:** - | - Precip: -	24 **Actual:** 94 | 73 Precip: 0.00 **Average:** - | - Precip: -

25	26	27	28	29	30	31
Actual: 97 | 74	**Actual:** 97 | 75	**Actual:** 92 | 72	**Actual:** 90 | 74	**Actual:** 93 | 74	**Actual:** 94 | 74	**Actual:** 96 | 73
Precip: 0.00	Precip: 0.00	Precip: 0.01	Precip: 0.11	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -

« Previous Month « 2009 2011 » Next Month »

Calendar Key:





Print This Calendar

: Top of Page :

Daily Observations

2010 July	Temp. (°F) high	avg	low	Dew Point (°F) high	avg	low	Humidity (%) high	avg	low	Sea Level Pressure (in) high	avg	low	Visibility (mi) high	avg	low	Wind (mph) high	avg	Gust Speed (mph) high	Precip (in) sum	Events
1	87	81	75	75	73	71	94	80	64	30.04	30.00	29.97	10	6	4	16	8	25	0.07	Rain
2	87	81	75	76	74	72	94	88	63	30.03	29.99	29.95	10	7	4	16	6	29	0.46	Rain
3	85	80	75	77	75	72	95	85	68	29.98	29.94	29.90	10	5	3	14	4	20	0.00	Rain
4	91	84	76	77	74	71	94	75	51	29.94	29.90	29.84	7	5	3	14	7	18	0.00	Rain
5	92	83	74	76	73	70	95	74	48	29.91	29.87	29.80	7	5	3	10	5	9	0.00	
6	93	84	75	75	72	69	94	69	44	29.92	29.87	29.80	7	5	3	8	2	-	0.00	
7	91	82	74	75	73	69	94	75	53	29.94	29.91	29.87	7	5	4	15	3	25	0.00	
8	86	81	76	75	74	72	90	81	63	30.02	29.98	29.95	10	6	3	12	5	16	0.00	Rain
9	91	83	75	76	73	70	94	79	51	30.06	30.02	29.98	7	5	3	15	2	18	0.00	Rain
10	90	82	74	75	73	71	96	77	53	30.08	30.02	29.96	7	4	3	9	1	-	0.00	
11	92	84	75	75	72	69	94	72	46	29.99	29.94	29.83	7	5	4	15	5	20	0.00	
12	93	84	76	75	73	70	92	70	47	29.90	29.86	29.78	7	5	4	21	9	22	0.00	
13	94	86	78	75	73	71	86	68	46	29.92	29.88	29.85	7	4	3	18	11	24	0.00	
14	94	85	76	76	73	70	91	69	46	30.05	30.00	29.95	7	5	3	16	9	22	0.00	
15	95	85	75	76	72	68	95	69	41	30.09	30.02	29.96	7	5	2	10	5	16	0.00	
16	95	85	75	75	71	66	94	67	38	30.06	30.02	29.94	10	6	3	7	2	-	0.00	Rain
17	96	84	73	74	71	65	94	63	35	30.05	30.00	29.94	10	9	3	10	2	16	0.00	

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
18	95	84	74	75	72	68	90	73	42	30.03	29.99	29.94	10	10	7	12	5	20	0.00	Thunderstorm
19	93	84	74	76	73	70	96	76	48	30.02	29.98	29.94	10	8	0	18	4	26	0.00	Fog
20	95	86	76	76	73	65	95	73	39	30.05	30.01	29.97	10	9	5	15	6	18	0.00	
21	95	85	75	75	73	69	95	71	42	30.09	30.05	29.99	10	9	5	8	2	16	0.00	Rain
22	95	86	76	76	74	70	94	75	45	30.06	30.01	29.96	10	9	7	12	3	20	0.00	
23	95	86	77	77	73	64	94	70	35	30.05	30.01	29.96	10	9	5	14	4	20	0.00	
24	94	84	73	76	71	63	96	69	37	30.09	30.04	29.98	10	9	4	10	3	-	0.00	
25	97	86	74	72	67	58	88	58	26	30.06	30.02	29.94	10	10	7	8	2	-	0.00	Rain
26	97	86	75	73	70	67	87	67	38	30.02	29.97	29.88	10	7	4	24	2	34	0.00	Rain , Thunderstorm
27	92	82	72	76	72	69	95	79	46	30.05	30.00	29.96	10	6	4	10	2	-	0.01	Rain , Thunderstorm
28	90	82	74	76	74	71	95	83	56	30.14	30.09	30.03	10	9	3	17	6	31	0.11	Rain , Thunderstorm
29	93	84	74	77	72	68	96	74	45	30.20	30.14	30.03	10	9	5	10	3	-	0.00	
30	94	84	74	76	72	66	95	71	41	30.09	30.04	29.91	10	9	2	14	5	18	0.00	
31	96	84	73	74	69	59	94	66	29	29.98	29.93	29.85	10	9	5	10	4	-	0.00	

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Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1 **Actual:** 100 | 69 Precip: 0.00 **Average:** - | - Precip: -	2 **Actual:** 99 | 71 Precip: 0.00 **Average:** - | - Precip: -	3 **Actual:** 98 | 73 Precip: 0.00 **Average:** - | - Precip: -	4 **Actual:** 97 | 76 Precip: 0.00 **Average:** - | - Precip: -	5 **Actual:** 98 | 75 Precip: 0.00 **Average:** - | - Precip: -	6 **Actual:** 98 | 75 Precip: 0.00 **Average:** - | - Precip: -	7 **Actual:** 98 | 78 Precip: 0.00 **Average:** - | - Precip: -
8 **Actual:** 98 | 77 Precip: 0.00 **Average:** - | - Precip: -	9 **Actual:** 98 | 74 Precip: 0.00 **Average:** - | - Precip: -	10 **Actual:** 100 | 75 Precip: 0.00 **Average:** - | - Precip: -	11 **Actual:** 99 | 78 Precip: 0.00 **Average:** - | - Precip: -	12 **Actual:** 99 | 75 Precip: 0.00 **Average:** - | - Precip: -	13 **Actual:** 99 | 75 Precip: 0.00 **Average:** - | - Precip: -	14 **Actual:** 100 | 77 Precip: 0.00 **Average:** - | - Precip: -
15 **Actual:** 100 | 79 Precip: 0.00 **Average:** - | - Precip: -	16 **Actual:** 109 | 76 Precip: 0.00 **Average:** - | - Precip: -	17 **Actual:** 101 | 76 Precip: 0.00 **Average:** - | - Precip: -	18 **Actual:** 104 | 81 Precip: 0.00 **Average:** - | - Precip: -	19 **Actual:** 101 | 79 Precip: 0.00 **Average:** - | - Precip: -	20 **Actual:** 101 | 80 Precip: 0.00 **Average:** - | - Precip: -	21 **Actual:** 102 | 77 Precip: 0.00 **Average:** - | - Precip: -
22 **Actual:** 103 | 77 Precip: 0.00 **Average:** - | - Precip: -	23 **Actual:** 109 | 79 Precip: 0.00 **Average:** - | - Precip: -	24 **Actual:** 108 | 79 Precip: 0.00 **Average:** - | - Precip: -	25 **Actual:** 100 | 80 Precip: 0.00 **Average:** - | - Precip: -	26 **Actual:** 100 | 79 Precip: 0.00 **Average:** - | - Precip: -	27 **Actual:** 99 | 69 Precip: 0.00 **Average:** - | - Precip: -	28 **Actual:** 101 | 68 Precip: 0.00 **Average:** - | - Precip: -
29 **Actual:** 100 | 77	30 **Actual:** 99 | 81	31 **Actual:** 101 | 80				

Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -

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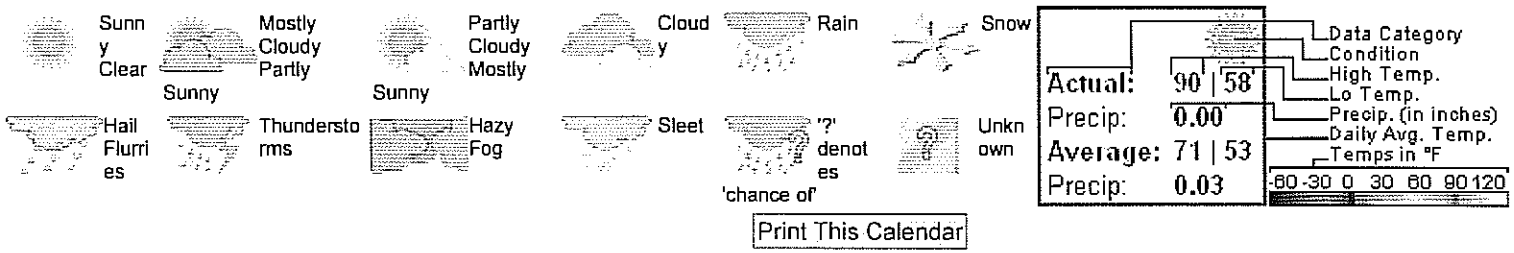
Calendar Key:



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Daily Observations

2010 August	Temp. (°F) high	avg	low	Dew Point (°F) high	avg	low	Humidity (%) high	avg	low	Sea Level Pressure (in) high	avg	low	Visibility (mi) high	avg	low	Wind (mph) high	avg	Gust Speed (mph) high	Precip (in) sum	Events
1	100	84	69	74	67	55	95	60	22	29.93	29.89	29.84	10	9	7	9	2	-	0.00	
2	99	85	71	70	64	55	90	55	25	30.00	29.96	29.91	10	9	4	12	2	16	0.00	
3	98	86	73	73	69	64	94	60	32	30.08	30.01	29.95	10	8	4	9	2	16	0.00	
4	97	86	76	77	73	68	94	66	38	30.05	29.98	29.89	7	6	3	12	4	17	0.00	Rain
5	98	86	75	74	71	65	92	62	34	29.96	29.91	29.83	7	5	3	8	3	-	0.00	
6	98	86	75	74	71	67	92	63	36	29.95	29.89	29.81	10	8	4	10	5	-	0.00	
7	98	88	78	75	71	64	86	60	33	29.94	29.88	29.81	10	10	10	12	5	16	0.00	
8	98	88	77	76	71	65	92	63	34	29.94	29.90	29.83	10	10	10	12	6	20	0.00	
9	98	86	74	76	71	66	95	63	34	29.99	29.93	29.85	10	10	7	12	5	16	0.00	
10	100	88	75	77	72	65	94	64	33	29.98	29.93	29.85	10	10	3	7	2	9	0.00	
11	99	88	78	76	73	68	89	64	36	29.96	29.90	29.83	10	10	10	12	3	24	0.00	Rain , Thunderstorm
12	99	87	75	76	71	65	92	63	33	29.90	29.85	29.75	10	10	7	9	2	-	0.00	
13	99	87	75	75	70	65	91	62	33	29.87	29.82	29.76	10	10	10	13	4	17	0.00	
14	100	88	77	76	72	66	92	62	33	29.94	29.88	29.83	10	10	7	13	6	18	0.00	
15	100	90	79	77	72	63	90	62	30	30.02	29.96	29.89	10	10	10	10	5	-	0.00	

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
16	109	92	76	79	72	65	90	64	26	29.99	29.93	29.83	10	10	10	13	3	23	0.00	
17	101	88	76	78	75	70	96	69	36	29.95	29.91	29.83	10	9	5	8	1	-	0.00	
18	104	92	81	78	75	65	88	65	28	29.97	29.92	29.87	10	10	10	21	3	29	0.00	Thunderstorm
19	101	90	79	79	75	69	94	67	35	29.97	29.90	29.83	10	10	10	13	4	21	0.00	
20	101	90	80	80	74	66	95	62	33	29.93	29.86	29.80	10	10	7	17	8	25	0.00	
21	102	90	77	79	74	68	96	64	33	30.01	29.94	29.89	10	10	10	17	7	23	0.00	
22	103	90	77	78	74	69	94	62	34	30.04	29.97	29.88	10	10	7	12	6	-	0.00	
23	109	94	79	74	71	65	85	54	26	29.93	29.88	29.77	10	10	10	14	2	22	0.00	
24	108	94	79	77	71	63	88	53	24	29.90	29.85	29.78	10	10	10	17	4	26	0.00	
25	100	90	80	77	69	62	86	54	30	30.04	29.99	29.93	10	10	10	15	7	21	0.00	
26	100	90	79	72	67	62	76	50	29	30.09	30.04	29.96	10	10	10	12	5	18	0.00	
27	99	84	69	64	57	48	83	42	17	30.04	29.98	29.88	10	10	10	13	5	21	0.00	
28	101	84	68	65	61	54	82	49	25	29.94	29.89	29.79	10	10	10	8	1	-	0.00	
29	100	88	77	77	74	66	92	65	33	29.95	29.89	29.85	10	10	10	15	5	29	0.00	
30	99	90	81	81	77	72	93	73	42	30.06	30.00	29.94	10	10	10	14	7	22	0.00	
31	101	90	80	80	76	68	96	70	33	30.05	30.00	29.91	10	10	7	12	5	17	0.00	

Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: MAS/WC – BRA	
Date & Time: 24 Aug 10 1130	County Name: Robertson
Stream Name: Mud creek	
Segment No. or nearest downstream Segment No.: 1242 K	
Description of Site: 99908 at FM 1644 downstream	

At any point during the Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the use for the water body the investigator should stop conducting the UAA.

A. Stream Characteristics:

1. Check the following channel flow status that applies.

☑ dry ☐ no flow ☐ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:

☑ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.

☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.

☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.

☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.

☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. N/A 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 36.11 °C 97°F Water Temp N/A °C

5. Riparian Zone (Mark dominant categories with L (Left Bank) and R (Right Bank). Bank orientation is determined by the investigator facing downstream.)

_____ Forest	_____ Urban	_____ Rip rap
_____ Shrub dominated corridor	RL 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):

FM 1644 crosses this area. This is the top of the watershed. Fence around pasture for livestock #1246

8. Dominant Primary Substrate

☐Cobble ☐Sand ☐Silt ☑Mud/Clay ☐Gravel ☐Bedrock ☐Rip rap ☐ Concrete

Stream Name_____ Site: _____
Date: _____ Time: _____

B. Primary Contact Water Recreation Evaluation:

- Primary contact recreation draft definition: Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, and whitewater kayaking, canoeing, and rafting, involving a significant risk of ingestion of water.

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?
☐ Yes ☑ No primary contact recreation activities were observed

a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).

☐ Wading-Children ☐ Tubing ☑ No primary contact activities that commonly occur were observed
☐ Wading-Adults ☐ Surfing
☐ Swimming ☐ Whitewater-kayaking, canoeing, rafting
☐ Water skiing ☐ Other: _____
☐ Diving ☐ frequent public swimming-created by publicly owned land or commercial operations

b. Check the number of individuals observed at the site: ☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Water in mouth or nose of the individual ☐ Primary touch: Individual's body (or portion) immersed in water
☐ Secondary touch: fishing, pets and related contact with water ☐ Individual is in a boat touching water
☐ Individual is on shore near water within 8 meters (25ft) of water ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☑ Not applicable

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
No water. This is a slight depression in pasture. Top of watershed. #1246, 1247

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
FM 1644 crosses site. This site is within the city limits of Franklin, Fence around pasture. 1246, 1247

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: _____

Date: _____ Time: _____

b. Check the number of individuals observed at the site.
☒ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body well away from water between 8 and 30 meters (100 ft)

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
No water, no channel. Slight depression in pasture.
1246, 1247

3. If secondary contact recreation activities are observed, how often do water recreational activities occur that do not involve a significant risk of water ingestion? ☐ frequently ☐ infrequently
Please describe how often the activities occur? ☐ Unknown ☐ Never ☐ Daily ☐ Monthly ☐ Yearly

4. If infrequently, what is the reason? ☐ physical characteristics of the water body ☐ limited public access ☐ other
If other, list reasons: _____

5. Describe the physical characteristics of the water body that hinders the frequency of secondary contact recreation (depth, etc.) (Attach photos or depth measurements, etc. for documentation).
No water, no channel. 1246, 1247

6. Describe why there is limited public access (e.g. lack of roads, river or stream banks overgrown, etc.) (Attach photos, maps, etc. for documentation).

D. Noncontact Recreation Evaluation
Noncontact recreation applies to water bodies where recreation activities do not involve a significant risk of water ingestion, and where primary and secondary contact recreation uses do not occur because of unsafe conditions, such as barge traffic.

1. Provide site-specific information and documentation (including photographs) regarding unsafe conditions, recreation activities, and presence or absence of water recreation activities.
No water, no channel, Fence around pasture 1246, 1247

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____

#1216, 1247

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			

DS - No channel

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	

DS - No channel

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

c) Stream width - Measure (1) the width at one point which represents the typical average width of the 300 meter reach; (2) the width at the narrowest point of the stream within the 300 meter reach; and (3) the width at the widest point of the stream within the 300 meter reach.

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	Dry
Width at narrowest point of the stream within 300 meter reach	Dry
Width at the widest point of the stream within 300 meter reach	Dry

d) Is there sufficient water within a 300 meter stream reach during base flow conditions to support primary contact recreation? ☐ Yes ☑ No

COMMENTS:
Dry, No channel

2. Non-wadeable Streams

If accessible, take 10 width measurements which represent typical widths of the 300 meter reach. If the water is too deep and not accessible record the estimated average width of the water body.

Also, take photos facing upstream, downstream, left bank, and right bank at .
Photos #s (30 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (150 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

# Measurements	Width (meters)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

☐ Drinking or water in mouth
☐ Bathing
☐ Walking
☐ Jogging/running
☐ Bicycling
☐ Standing
☐ Sitting
☐ Lying down/sleeping
☐ Playing on shoreline
☐ Picnicking
☐ Motorcycle/ATV
☐ Hunting/Trapping
☐ Wildlife watching
☑ None
☐ Other: _____

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☐ Yes ☑ No (If yes, please provide supporting documentation and photos.)
Comments: _____

3. Check any channel obstructions that apply (Attach photos).

☑ Culverts
☐ Barbed wire
☐ Utility pipe
☐ Fences
☐ Dams
☐ Other (specify):_____
☐ Log jams
☐ Thick vegetation
☐ Rip rap
☐ Low bridges
☐ Water control structure
☐ None

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest).

☐ Campgrounds
☐ Playgrounds
☐ Rural area
☑ Residential
☐ National forests
☑ Urban/suburban location
☐ Golf Course
☑ Sports Field
☐ Stairs/walkway
☐ Boating access (ramps)
☐ Beach
☐ Bridge crossing
☐ Commercial boating
☐ Trails/paths (hiking/biking)
☐ Paved parking lot
☐ Unimproved parking lot
☑ Roads (paved/unpaved)
☑ Populated area
☐ Docks or rails
☐ Commercial outfitter
☑ Nearby school
☐ Power Line Corridor
☐ Parks (national/city/county/state)
☑ Public Property
☐ Other:_____
☐ None of the Above

Comments: Highschool with sports fields nearby.

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).

☑ Private Property
☐ No trespass sign
☐ Wildlife
☐ Steep slopes
☑ No public access
☐ No roads
☑ Fence
☐ Barge/ship traffic
☐ Industrial
☐ None of the Above
☑ Other:_____

Comments: Pasture for livestock. #1246, 1247

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:_____

Stream Name_____ Site: _____
Date: _____ Time: _____

7. Check all water characteristics that apply (Attach photos).
Aquatic Vegetation: ☑ absent ☐ rare ☐ common ☐ abundant
Algae Cover: ☑ absent ☐ rare ☐ common ☐ abundant
Odor: ☑ none ☐ rare ☐ common ☐ abundant
Color: N/A ☐ clear ☐ green ☐ red ☐ brown ☐ black
Bottom Deposit: ☐ sludge ☐ solids ☐ fine sediments ☐ none ☑ other
Water Surface: N/A ☐ clear ☐ scum ☐ foam ☐ debris ☐ oil
Other:
Dry, no channel. Slight depression in pasture #1246, 1247

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: horse, cows in pasture

10. Evidence of wild animals or evidence of birds, cattle, hogs, etc.
☐ Tracks ☐ Fecal droppings ☐ Bird nests

11. Garbage Observed

Large garbage in the channel	☑ None	☐ Rare	☐ Common	☐ Abundant
Small garbage in the channel	☑ None	☐ Rare	☐ Common	☐ Abundant
Bank Garbage	☑ None	☐ Rare	☐ Common	☐ Abundant

Briefly describe the kinds of garbage observed: _____

12. Is the site located in a wildlife preserve with large wildlife (i.e waterfowl) population? ☐ Yes ☑ No

13. Please document any other relevant information regarding recreational activities and the water body in general (for example, area outside of the stream reach evaluated).

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream:_____ Date:_____

Site:_____ Site

Description:_____

Time Begin:_____ Time End:_____ Meter Type:_____

Observers:_____ Stream Width*:_____ Section Width (W):_____

Observations:_____

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V)		Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
			At Point (ft/s)(m/s)	Average (ft/s)(m/s)	

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Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1 **Actual:** 87 | 75 Precip: 0.07 **Average:** - | - Precip: -	2 **Actual:** 87 | 75 Precip: 0.46 **Average:** - | - Precip: -	3 **Actual:** 85 | 75 Precip: 0.00 **Average:** - | - Precip: -
4 **Actual:** 91 | 76 Precip: 0.00 **Average:** - | - Precip: -	5 **Actual:** 92 | 74 Precip: 0.00 **Average:** - | - Precip: -	6 **Actual:** 93 | 75 Precip: 0.00 **Average:** - | - Precip: -	7 **Actual:** 91 | 74 Precip: 0.00 **Average:** - | - Precip: -	8 **Actual:** 86 | 76 Precip: 0.00 **Average:** - | - Precip: -	9 **Actual:** 91 | 75 Precip: 0.00 **Average:** - | - Precip: -	10 **Actual:** 90 | 74 Precip: 0.00 **Average:** - | - Precip: -
11 **Actual:** 92 | 75 Precip: 0.00 **Average:** - | - Precip: -	12 **Actual:** 93 | 76 Precip: 0.00 **Average:** - | - Precip: -	13 **Actual:** 94 | 78 Precip: 0.00 **Average:** - | - Precip: -	14 **Actual:** 94 | 76 Precip: 0.00 **Average:** - | - Precip: -	15 **Actual:** 95 | 75 Precip: 0.00 **Average:** - | - Precip: -	16 **Actual:** 95 | 75 Precip: 0.00 **Average:** - | - Precip: -	17 **Actual:** 96 | 73 Precip: 0.00 **Average:** - | - Precip: -
18 **Actual:** 95 | 74 Precip: 0.00 **Average:** - | - Precip: -	19 **Actual:** 93 | 74 Precip: 0.00 **Average:** - | - Precip: -	20 **Actual:** 95 | 76 Precip: 0.00 **Average:** - | - Precip: -	21 **Actual:** 95 | 75 Precip: 0.00 **Average:** - | - Precip: -	22 **Actual:** 95 | 76 Precip: 0.00 **Average:** - | - Precip: -	23 **Actual:** 95 | 77 Precip: 0.00 **Average:** - | - Precip: -	24 **Actual:** 94 | 73 Precip: 0.00 **Average:** - | - Precip: -

25	26	27	28	29	30	31
Actual: 97 | 74	**Actual:** 97 | 75	**Actual:** 92 | 72	**Actual:** 90 | 74	**Actual:** 93 | 74	**Actual:** 94 | 74	**Actual:** 96 | 73
Precip: 0.00	Precip: 0.00	Precip: 0.01	Precip: 0.11	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -

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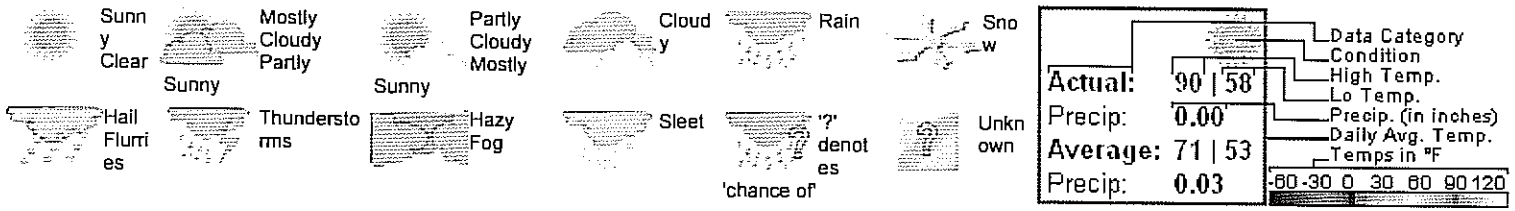
Calendar Key:



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Daily Observations

2010 July	Temp. (°F) high	avg	low	Dew Point (°F) high	avg	low	Humidity (%) high	avg	low	Sea Level Pressure (in) high	avg	low	Visibility (mi) high	avg	low	Wind (mph) high	avg	Gust Speed (mph) high	Precip (in) sum	Events
1	87	81	75	75	73	71	94	80	64	30.04	30.00	29.97	10	6	4	16	8	25	0.07	Rain
2	87	81	75	76	74	72	94	88	63	30.03	29.99	29.95	10	7	4	16	6	29	0.46	Rain
3	85	80	75	77	75	72	95	85	68	29.98	29.94	29.90	10	5	3	14	4	20	0.00	Rain
4	91	84	76	77	74	71	94	75	51	29.94	29.90	29.84	7	5	3	14	7	18	0.00	Rain
5	92	83	74	76	73	70	95	74	48	29.91	29.87	29.80	7	5	3	10	5	9	0.00	
6	93	84	75	75	72	69	94	69	44	29.92	29.87	29.80	7	5	3	8	2	-	0.00	
7	91	82	74	75	73	69	94	75	53	29.94	29.91	29.87	7	5	4	15	3	25	0.00	
8	86	81	76	75	74	72	90	81	63	30.02	29.98	29.95	10	6	3	12	5	16	0.00	Rain
9	91	83	75	76	73	70	94	79	51	30.06	30.02	29.98	7	5	3	15	2	18	0.00	Rain
10	90	82	74	75	73	71	96	77	53	30.08	30.02	29.96	7	4	3	9	1	-	0.00	
11	92	84	75	75	72	69	94	72	46	29.99	29.94	29.83	7	5	4	15	5	20	0.00	
12	93	84	76	75	73	70	92	70	47	29.90	29.86	29.78	7	5	4	21	9	22	0.00	
13	94	86	78	75	73	71	86	68	46	29.92	29.88	29.85	7	4	3	18	11	24	0.00	
14	94	85	76	76	73	70	91	69	46	30.05	30.00	29.95	7	5	3	16	9	22	0.00	
15	95	85	75	76	72	68	95	69	41	30.09	30.02	29.96	7	5	2	10	5	16	0.00	
16	95	85	75	75	71	66	94	67	38	30.06	30.02	29.94	10	6	3	7	2	-	0.00	Rain
17	96	84	73	74	71	65	94	63	35	30.05	30.00	29.94	10	9	3	10	2	16	0.00	

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
18	95	84	74	75	72	68	90	73	42	30.03	29.99	29.94	10	10	7	12	5	20	0.00	Thunderstorm
19	93	84	74	76	73	70	96	76	48	30.02	29.98	29.94	10	8	0	18	4	26	0.00	Fog
20	95	86	76	76	73	65	95	73	39	30.05	30.01	29.97	10	9	5	15	6	18	0.00	
21	95	85	75	75	73	69	95	71	42	30.09	30.05	29.99	10	9	5	8	2	16	0.00	Rain
22	95	86	76	76	74	70	94	75	45	30.06	30.01	29.96	10	9	7	12	3	20	0.00	
23	95	86	77	77	73	64	94	70	35	30.05	30.01	29.96	10	9	5	14	4	20	0.00	
24	94	84	73	76	71	63	96	69	37	30.09	30.04	29.98	10	9	4	10	3	-	0.00	
25	97	86	74	72	67	58	88	58	26	30.06	30.02	29.94	10	10	7	8	2	-	0.00	Rain
26	97	86	75	73	70	67	87	67	38	30.02	29.97	29.88	10	7	4	24	2	34	0.00	Rain , Thunderstorm
27	92	82	72	76	72	69	95	79	46	30.05	30.00	29.96	10	6	4	10	2	-	0.01	Rain , Thunderstorm
28	90	82	74	76	74	71	95	83	56	30.14	30.09	30.03	10	9	3	17	6	31	0.11	Rain , Thunderstorm
29	93	84	74	77	72	68	96	74	45	30.20	30.14	30.03	10	9	5	10	3	-	0.00	
30	94	84	74	76	72	66	95	71	41	30.09	30.04	29.91	10	9	2	14	5	18	0.00	
31	96	84	73	74	69	59	94	66	29	29.98	29.93	29.85	10	9	5	10	4	-	0.00	

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Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1 **Actual:** 100 | 69 Precip: 0.00 **Average:** - | - Precip: -	2 **Actual:** 99 | 71 Precip: 0.00 **Average:** - | - Precip: -	3 **Actual:** 98 | 73 Precip: 0.00 **Average:** - | - Precip: -	4 **Actual:** 97 | 76 Precip: 0.00 **Average:** - | - Precip: -	5 **Actual:** 98 | 75 Precip: 0.00 **Average:** - | - Precip: -	6 **Actual:** 98 | 75 Precip: 0.00 **Average:** - | - Precip: -	7 **Actual:** 98 | 78 Precip: 0.00 **Average:** - | - Precip: -
8 **Actual:** 98 | 77 Precip: 0.00 **Average:** - | - Precip: -	9 **Actual:** 98 | 74 Precip: 0.00 **Average:** - | - Precip: -	10 **Actual:** 100 | 75 Precip: 0.00 **Average:** - | - Precip: -	11 **Actual:** 99 | 78 Precip: 0.00 **Average:** - | - Precip: -	12 **Actual:** 99 | 75 Precip: 0.00 **Average:** - | - Precip: -	13 **Actual:** 99 | 75 Precip: 0.00 **Average:** - | - Precip: -	14 **Actual:** 100 | 77 Precip: 0.00 **Average:** - | - Precip: -
15 **Actual:** 100 | 79 Precip: 0.00 **Average:** - | - Precip: -	16 **Actual:** 109 | 76 Precip: 0.00 **Average:** - | - Precip: -	17 **Actual:** 101 | 76 Precip: 0.00 **Average:** - | - Precip: -	18 **Actual:** 104 | 81 Precip: 0.00 **Average:** - | - Precip: -	19 **Actual:** 101 | 79 Precip: 0.00 **Average:** - | - Precip: -	20 **Actual:** 101 | 80 Precip: 0.00 **Average:** - | - Precip: -	21 **Actual:** 102 | 77 Precip: 0.00 **Average:** - | - Precip: -
22 **Actual:** 103 | 77 Precip: 0.00 **Average:** - | - Precip: -	23 **Actual:** 109 | 79 Precip: 0.00 **Average:** - | - Precip: -	24 **Actual:** 108 | 79 Precip: 0.00 **Average:** - | - Precip: -	25 **Actual:** 100 | 80 Precip: 0.00 **Average:** - | - Precip: -	26 **Actual:** 100 | 79 Precip: 0.00 **Average:** - | - Precip: -	27 **Actual:** 99 | 69 Precip: 0.00 **Average:** - | - Precip: -	28 **Actual:** 101 | 68 Precip: 0.00 **Average:** - | - Precip: -
29 **Actual:** 100 | 77	30 **Actual:** 99 | 81	31 **Actual:** 101 | 80				

Precip: 0.00 **Average:** - | - Precip: -	Precip: 0.00 **Average:** - | - Precip: -	Precip: 0.00 **Average:** - | - Precip: -

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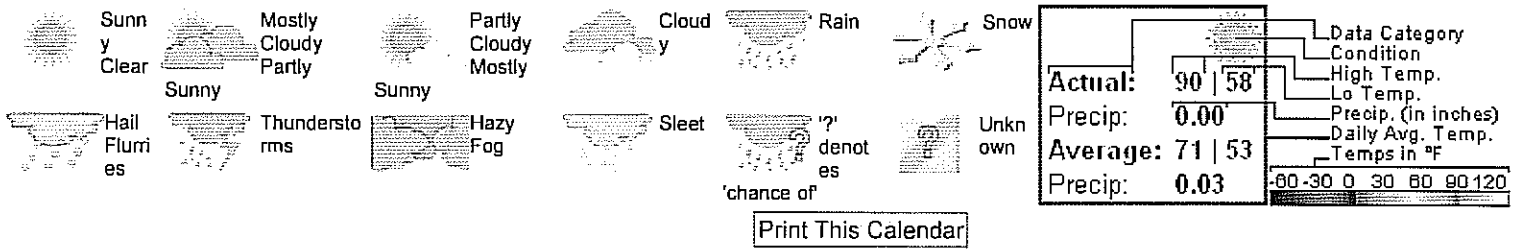
Calendar Key:



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Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
August	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	100	84	69	74	67	55	95	60	22	29.93	29.89	29.84	10	9	7	9	2	-	0.00	
2	99	85	71	70	64	55	90	55	25	30.00	29.96	29.91	10	9	4	12	2	16	0.00	
3	98	86	73	73	69	64	94	60	32	30.08	30.01	29.95	10	8	4	9	2	16	0.00	
4	97	86	76	77	73	68	94	66	38	30.05	29.98	29.89	7	6	3	12	4	17	0.00	Rain
5	98	86	75	74	71	65	92	62	34	29.96	29.91	29.83	7	5	3	8	3	-	0.00	
6	98	86	75	74	71	67	92	63	36	29.95	29.89	29.81	10	8	4	10	5	-	0.00	
7	98	88	78	75	71	64	86	60	33	29.94	29.88	29.81	10	10	10	12	5	16	0.00	
8	98	88	77	76	71	65	92	63	34	29.94	29.90	29.83	10	10	10	12	6	20	0.00	
9	98	86	74	76	71	66	95	63	34	29.99	29.93	29.85	10	10	7	12	5	16	0.00	
10	100	88	75	77	72	65	94	64	33	29.98	29.93	29.85	10	10	3	7	2	9	0.00	
11	99	88	78	76	73	68	89	64	36	29.96	29.90	29.83	10	10	10	12	3	24	0.00	Rain , Thunderstorm
12	99	87	75	76	71	65	92	63	33	29.90	29.85	29.75	10	10	7	9	2	-	0.00	
13	99	87	75	75	70	65	91	62	33	29.87	29.82	29.76	10	10	10	13	4	17	0.00	
14	100	88	77	76	72	66	92	62	33	29.94	29.88	29.83	10	10	7	13	6	18	0.00	
15	100	90	79	77	72	63	90	62	30	30.02	29.96	29.89	10	10	10	10	5	-	0.00	

2010	Temp. (°F)				Dew Point (°F)				Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
16	109	92	76	79	72	65	90	64	26	29.99	29.93	29.83	10	10	10	13	3	23		0.00		
17	101	88	76	78	75	70	96	69	36	29.95	29.91	29.83	10	9	5	8	1	-		0.00		
18	104	92	81	78	75	65	88	65	28	29.97	29.92	29.87	10	10	10	21	3	29		0.00		Thunderstorm
19	101	90	79	79	75	69	94	67	35	29.97	29.90	29.83	10	10	10	13	4	21		0.00		
20	101	90	80	80	74	66	95	62	33	29.93	29.86	29.80	10	10	7	17	8	25		0.00		
21	102	90	77	79	74	68	96	64	33	30.01	29.94	29.89	10	10	10	17	7	23		0.00		
22	103	90	77	78	74	69	94	62	34	30.04	29.97	29.88	10	10	7	12	6	-		0.00		
23	109	94	79	74	71	65	85	54	26	29.93	29.88	29.77	10	10	10	14	2	22		0.00		
24	108	94	79	77	71	63	88	53	24	29.90	29.85	29.78	10	10	10	17	4	26		0.00		
25	100	90	80	77	69	62	86	54	30	30.04	29.99	29.93	10	10	10	15	7	21		0.00		
26	100	90	79	72	67	62	76	50	29	30.09	30.04	29.96	10	10	10	12	5	18		0.00		
27	99	84	69	64	57	48	83	42	17	30.04	29.98	29.88	10	10	10	13	5	21		0.00		
28	101	84	68	65	61	54	82	49	25	29.94	29.89	29.79	10	10	10	8	1	-		0.00		
29	100	88	77	77	74	66	92	65	33	29.95	29.89	29.85	10	10	10	15	5	29		0.00		
30	99	90	81	81	77	72	93	73	42	30.06	30.00	29.94	10	10	10	14	7	22		0.00		
31	101	90	80	80	76	68	96	70	33	30.05	30.00	29.91	10	10	7	12	5	17		0.00		

Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: MATT BARCK; JUSTIN GRIMM	
Date & Time: 9APR10 1215	County Name: Robertson
Stream Name: CAMPBELL'S 16395	
Segment No. or nearest downstream Segment No.: 1242T	
Description of Site: 16395 Campbells Creek @ OLD HEARNE Road upstream	

At any point during the Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the use for the water body the investigator should stop conducting the UAA.

A. Stream Characteristics:

1. Check the following channel flow status that applies.

☐ dry ☐ no flow ☐ low ☒ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:

☐ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.

☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.

☒ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.

☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.

☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. 0.872 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 18.1 °C Water Temp 15.3 °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	R,L 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):

Old Hearne road crossing flanked by private property & fenced out until steep bank 659

8. Dominant Primary Substrate

☐Cobble ☐Sand ☐Silt ☒Mud/Clay ☐Gravel ☐Bedrock ☐Rip rap ☐ Concrete 660

Stream Name_____ Site: _____
Date: _____ Time: _____

B. Primary Contact Water Recreation Evaluation:

- Primary contact recreation draft definition: Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, and whitewater kayaking, canoeing, and rafting, involving a significant risk of ingestion of water.

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?

☐ Yes ☒ No primary contact recreation activities were observed

a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).

☐ Wading-Children ☐ Tubing ☒ No primary contact activities that commonly occur were observed
☐ Wading-Adults ☐ Surfing
☐ Swimming ☐ Whitewater-kayaking, canoeing, rafting
☐ Water skiing ☐ Other: _____
☐ Diving ☐ frequent public swimming-created by publicly owned land or commercial operations

b. Check the number of individuals observed at the site: ☐ None ☒ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.

☐ Water in mouth or nose of the individual ☐ Primary touch: Individual's body (or portion) immersed in water
☐ Secondary touch: fishing, pets and related contact with water ☐ Individual is in a boat touching water
☐ Individual is on shore near water within 8 meters (25ft) of water ☒ Individual is well away from water between 8 and 30 meters (100 ft) ☐ Not applicable

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).

Water shallow 662

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).

~~Hybrid~~ Highway 6 + Old Heaven road 601

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: _____

Date: _____ Time: _____

b. Check the number of individuals observed at the site.
☐ None ☒ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☒ Body well away from water between 8 and 30 meters (100 ft)

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
near bridge highway & construction zone

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: n/a

5. Describe the physical characteristics of the water body that hinders the frequency of secondary contact recreation (depth, etc.) (Attach photos or depth measurements, etc. for documentation).
Depth & construction 672
location

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).
ramps & construction 672
private property posted

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.
none

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 663 Downstream 664 Left Bank 665 Right Bank 666

Photos #s (150 meters) Upstream 668 Downstream 669 Left Bank 670 Right Bank 671

Photos #s (300 meters) Upstream 673 Downstream 674 Left Bank 675 Right Bank 676

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)~~ feet
Pool 1	66	6	3.3
Pool 2	54	5	1.6
Pool 3	46	6	2.1
Pool 4	110	6	2.4
Pool 5			
Pool 6			
Pool 7			
Pool 8			
Pool 9			
Pool 10			

← extends out of measured reach

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)~~ feet / meters
30 meters	0.95 / 0.29
60 meters	2.4 / 0.73
90 meters	0.8 / 0.25
120 meters	0.7 / 0.21
150 meters	0.6 / 0.18
180 meters	1.6 / 0.49
210 meters	0.3 / 0.09
240 meters	0.7 / 0.21
270 meters	0.5 / 0.15
300 meters	2.9 / 0.88
Average	0.35

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

c) Stream width - Measure (1) the width at one point which represents the typical average width of the 300 meter reach; (2) the width at the narrowest point of the stream within the 300 meter reach; and (3) the width at the widest point of the stream within the 300 meter reach.

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	4.0
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	6.0

d) Is there sufficient water within a 300 meter stream reach during base flow conditions to support primary contact recreation? ☐ Yes ☒ No
COMMENTS:

_____

_____

2. Non-wadeable Streams
If accessible, take 10 width measurements which represent typical widths of the 300 meter reach. If the water is too deep and not accessible record the estimated average width of the water body.

N/A

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	

N/A

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

☐ Drinking or water in mouth
☐ Bathing
☐ Walking
☐ Jogging/running
☐ Bicycling
☐ Standing
☐ Sitting
☐ Lying down/sleeping
☐ Playing on shoreline
☐ Picnicking
☐ Motorcycle/ATV
☐ Hunting/Trapping
☐ Wildlife watching
☐ None
☒ Other: Construction

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).

667

☒ Culverts ☐ Fences ☐ Log jams ☒ Rip rap ☐ Water control structure
☐ Barbed wire ☐ Dams ☐ Thick vegetation ☐ Low bridges ☐ None
☐ Utility pipe ☒ Other (specify): Temporary construction road

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest).

☐ Campgrounds ☐ Stairs/walkway ☒ Roads (paved/unpaved) ☐ Other:_____
☐ Playgrounds ☐ Boating access (ramps) ☐ Populated area ☐ None of the Above
☐ Rural area ☐ Beach ☐ Docks or rafts
☐ Residential ☒ Bridge crossing ☐ Commercial outfitter
☐ National forests ☐ Commercial boating ☐ Nearby school
☐ Urban/suburban location ☐ Trails/paths (hiking/biking) ☐ Power Line Corridor
☐ Golf Course ☐ Paved parking lot ☐ Parks (national/city/county/state)
☐ Sports Field ☒ Unimproved parking lot ☐ Public Property
Comments: parking for construction workers

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).

☒ Private Property ☒ Fence
☐ No trespass sign ☐ Barge/ship traffic
☐ Wildlife ☐ Industrial
☒ Steep slopes ☐ None of the Above
☒ No public access ☐ Other:_____
☐ No roads
Comments:_____

6. Check any indications of human use (Attach photos).

☐ Roads ☐ RV/ATV Tracks ☐ NPDES Discharge ☐ Organized event
☐ Rope swings ☐ Camping Sites ☐ Gates on corridor ☐ No Human Presence
☐ Dock/platform ☐ Fire pit/ring ☐ Children's toys
579 ☒ Foot paths/prints ☐ Fishing Tackle ☐ Remnant's of Kid's play
☒ Other: construction
Comments:_____

Stream Name_____ Site: _____
Date: _____ Time: _____

7. Check all water characteristics that apply (Attach photos).

Aquatic Vegetation: ☐ absent ☒ rare ☐ common ☐ abundant 678
Algae Cover: ☒ absent ☐ rare ☐ common ☐ abundant
Odor: ☐ none ☒ rare ☐ common ☐ abundant
Color: ☐ clear ☐ green ☐ red ☒ brown ☐ black 677
Bottom Deposit: ☐ sludge ☐ solids ☒ fine sediments ☐ none ☐ other 660
Water Surface: ☒ clear ☐ scum ☐ foam ☐ debris ☐ oil 675
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: Swallows under bridge.

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	680
Small garbage in the channel	☐ None	☒ Rare	☐ Common	☐ Abundant	
Bank Garbage	☐ None	☒ Rare	☐ Common	☐ Abundant	

Briefly describe the kinds of garbage observed: tires, bottles, fast food wrappers

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).
Construction being performed on Highway 6 bridge

Field Data Sheet - Basic RUAA Survey
Stream Flow (Discharge) Measurement

Stream:_____ Date:_____
Site:_____ Site
Description:_____
Time Begin:_____ Time End:_____ Meter Type:_____
Observers:_____ Stream Width*:_____ Section Width (W):_____
Observations:_____

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V)		Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
			At Point (ft/s)(m/s)	Average (ft/s)(m/s)	

: Wed Apr 14 2010

16395-9APR10.WAD
2010/04/09 13:07:01

MB

FlowTracker	**(English Units)**
P879	ft
3.7	ft/s
2.30	ft^2
0.0%	cfs

Accuracy	1.0%	1.0%
Depth	0.7%	3.2%
Velocity	1.6%	10.8%
Width	0.2%	0.2%
Method	3.4%	-
# Stations	5.8%	-
Overall	**7.0%**	**11.3%**

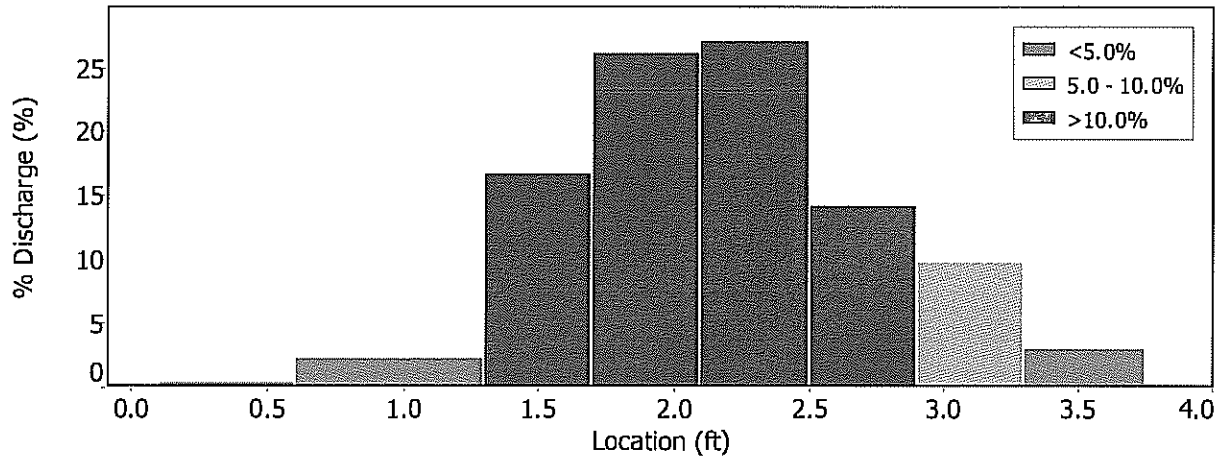
20	9
LEW	3.900
20.8 dB	1.100
14.00 °F	0.282
Mid-Section	0.7932
	0.8724

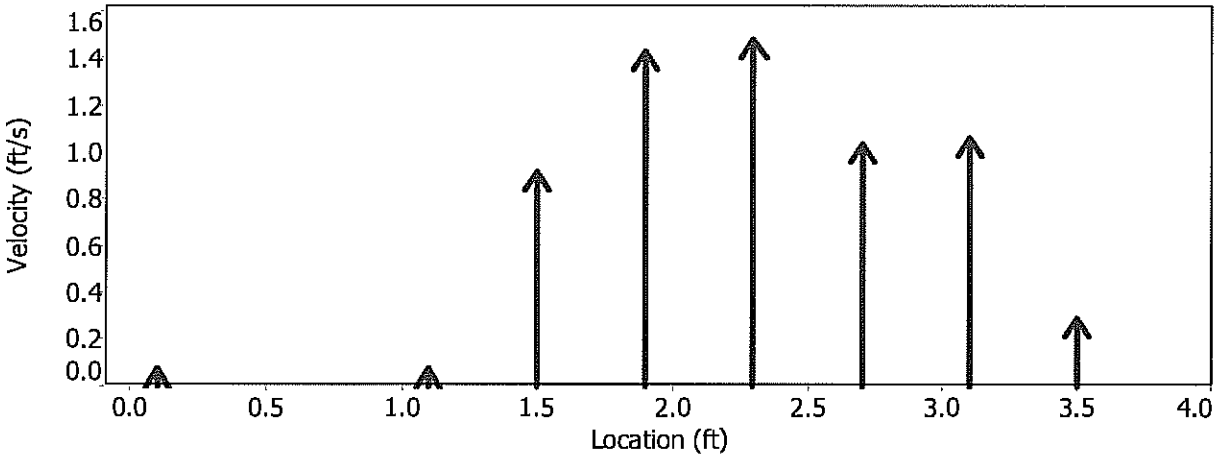
				Depth								
0	13:07	0.10	None	0.100	0.0	0.0	0.0000	1.00	0.0719	0.050	0.0036	0.4
1	13:07	1.10	0.6	0.400	0.6	0.160	0.0719	1.00	0.0719	0.280	0.0201	2.3
2	13:07	1.50	0.6	0.400	0.6	0.160	0.9183	1.00	0.9183	0.160	0.1469	16.8
3	13:08	1.90	0.6	0.400	0.6	0.160	1.4304	1.00	1.4304	0.160	0.2288	26.2
4	13:08	2.30	0.6	0.400	0.6	0.160	1.4829	1.00	1.4829	0.160	0.2372	27.2
5	13:09	2.70	0.6	0.300	0.6	0.120	1.0374	1.00	1.0374	0.120	0.1244	14.3
6	13:10	3.10	0.6	0.200	0.6	0.080	1.0643	1.00	1.0643	0.080	0.0852	9.8
7	*13:11*	*3.50*	*0.6*	*0.200*	*0.6*	*0.080*	*0.2910*	*1.00*	*0.2910*	*0.090*	*0.0262*	*3.0*
8	13:11	4.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0

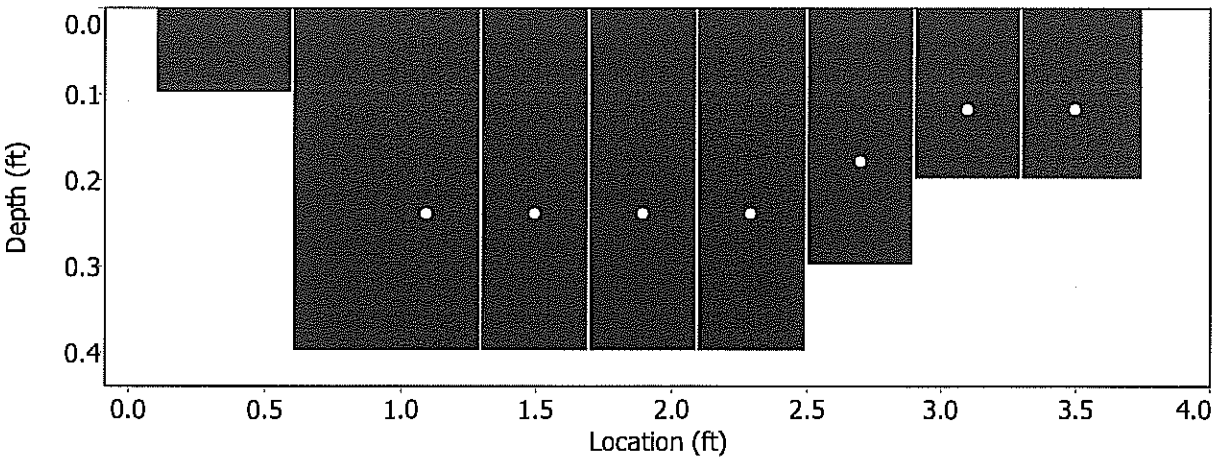
: Wed Apr 14 2010

16395-9APR10.WAD
2010/04/09 13:07:01

MB







: Wed Apr 14 2010

16395-9APR10.WAD 2010/04/09 13:07:01	MB

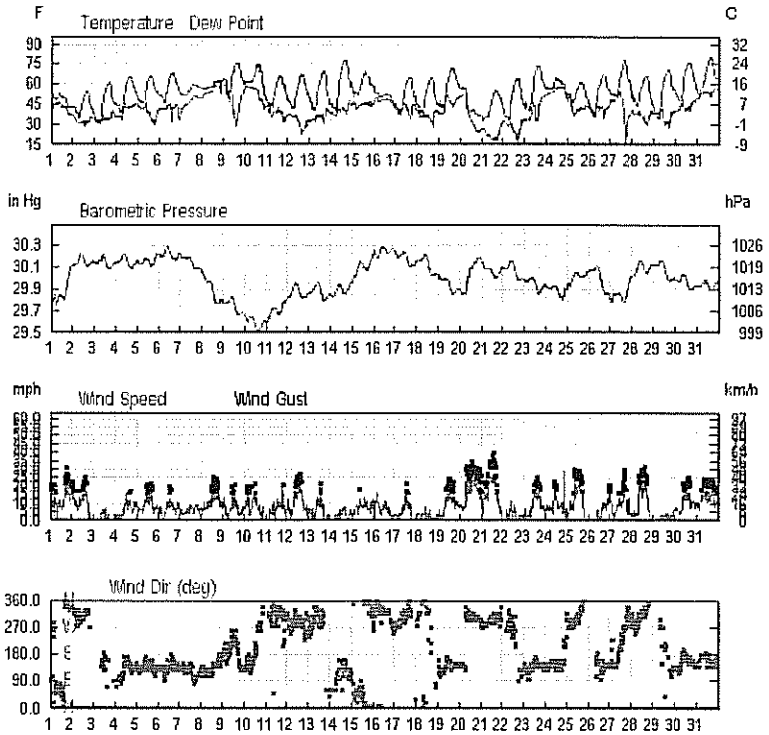
7	3.50	0.6	High angle: -23

History for Hearne, TX

Month of March, 2010

Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	**79** °F	**66** °F	**53** °F	
Mean Temperature	**66** °F	**55** °F	**44** °F	
Min Temperature	**56** °F	**43** °F	**32** °F	
Degree Days:				
Heating Degree Days (base 65)	22	10	0	315
Cooling Degree Days (base 65)	1	0	0	1
Growing Degree Days (base 50)	16	5	0	169
Dew Point:				
Dew Point	**59** °F	**41** °F	**16** °F	
Precipitation:				
Precipitation	**0.63** in	**0.05** in	**0.00** in	**1.57** in
Snowdepth	-	-	-	-
Wind:				
Wind	**28** mph	**7** mph	**0** mph	
Gust Wind	**46** mph	**20** mph	**16** mph	
Sea Level Pressure:				
Sea Level Pressure	**30.28** in	**30.00** in	**29.51** in	



Monthly Calendar Overview

« Previous Month | « 2009 | **March 2010** | 2011 » | Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6
	Actual: 53 | 43	**Actual:** 54 | 34	**Actual:** 61 | 32	**Actual:** 66 | 38	**Actual:** 66 | 45	**Actual:** 68 | 45
	Precip: 0.43	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
	Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -

Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	
7	8	9	10	11	12	13
Actual: 59 | 51	Actual: 62 | 56	Actual: 76 | 49	Actual: 75 | 55	Actual: 66 | 41	Actual: 67 | 41	Actual: 69 | 40
Precip: 0.01	Precip: 0.04	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
14	15	16	17	18	19	20
Actual: 78 | 40	Actual: 69 | 51	Actual: 58 | 51	Actual: 65 | 38	Actual: 64 | 37	Actual: 72 | 42	Actual: 58 | 36
Precip: 0.00	Precip: 0.00	Precip: 0.42	Precip: 0.01	Precip: 0.00	Precip: 0.00	Precip: 0.63
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
21	22	23	24	25	26	27
Actual: 55 | 32	Actual: 64 | 33	Actual: 73 | 39	Actual: 65 | 56	Actual: 61 | 45	Actual: 67 | 37	Actual: 78 | 51
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.03	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
28	29	30	31			
Actual: 66 | 43	Actual: 70 | 36	Actual: 76 | 47	Actual: 79 | 53			
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00			
Average: - | -	Average: - | -	Average: - | -	Average: - | -			
Precip: -	Precip: -	Precip: -	Precip: -			

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear · Mostly Cloudy Partly Sunny · Partly Cloudy Mostly Sunny · Cloudy · Rain · Snow · Hail Flurries · Thunderstorms · Hazy Fog · Sleet · '?' denotes 'chance of' · Unknown

Print This Calendar

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

Data Category · Condition · High Temp. · Lo Temp. · Precip. (in inches) · Daily Avg. Temp. · Temps in °F · -60 -30 0 30 60 90 120

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)			Gust Speed (mph)	Precip (in)	Events
March	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg		high	sum	
1	53	48	43	47	44	39	92	81	63	29.96	29.83	29.75	10	9	3	24	10	31		0.43	Rain
2	54	44	34	37	32	29	86	64	40	30.21	30.14	30.10	10	10	10	18	12	25		0.00	
3	61	46	32	36	33	30	94	67	37	30.21	30.14	30.08	10	9	5	7	1	-		0.00	
4	66	52	38	45	39	34	87	64	43	30.22	30.15	30.09	10	10	10	15	4	17		0.00	
5	66	56	45	46	40	31	85	62	29	30.19	30.14	30.10	10	10	7	16	9	22		0.00	
6	68	56	45	46	42	32	83	59	27	30.28	30.22	30.16	10	10	10	13	6	20		0.00	
7	59	55	51	52	46	36	79	71	53	30.22	30.16	30.08	10	10	10	9	6	-		0.01	Rain
8	62	59	56	59	55	50	90	87	77	30.06	29.92	29.75	10	6	2	20	9	25		0.04	Rain
9	76	62	49	59	46	29	93	58	18	29.83	29.75	29.66	10	8	0	16	8	21		0.00	Fog
10	75	65	55	58	55	41	91	70	39	29.66	29.59	29.51	10	8	4	15	8	22		0.00	
11	66	54	41	44	39	34	88	61	34	29.73	29.67	29.58	10	10	7	16	4	20		0.00	
12	67	54	41	38	33	23	80	49	19	29.95	29.87	29.81	10	10	5	20	9	28		0.00	
13	69	54	40	42	35	31	78	50	25	29.95	29.87	29.78	10	10	10	16	5	22		0.00	
14	78	59	40	48	40	36	86	54	24	29.94	29.88	29.83	10	10	7	8	2	-		0.00	
15	69	60	51	48	45	41	81	59	42	30.17	30.08	29.96	10	8	5	14	6	18		0.00	Rain
16	58	54	51	50	48	44	90	85	59	30.28	30.23	30.18	10	6	3	16	8	21		0.42	Rain
17	65	52	38	46	41	34	93	72	32	30.26	30.19	30.10	10	6	0	17	4	22		0.01	Fog , Rain
18	64	50	37	41	36	27	89	60	26	30.21	30.14	30.03	10	10	7	8	2	-		0.00	
19	72	57	42	52	43	37	87	64	36	30.04	29.96	29.85	10	8	5	21	5	24		0.00	

20	58	47	36	53	39	24	91	77	58	30.18	30.01	29.85	10	8	1	26	13	46	0.63	Rain , Thunderstorm
21	55	44	32	28	22	18	81	47	24	30.18	30.07	30.00	10	10	10	28	15	40	0.00	
22	64	48	33	34	28	16	88	50	16	30.16	30.08	29.98	10	10	10	12	2	-	0.00	
23	73	56	39	51	39	32	79	55	22	30.01	29.95	29.85	10	10	5	17	6	25	0.00	
24	65	60	56	58	55	52	90	84	73	29.94	29.89	29.80	10	7	2	17	8	23	0.03	Rain
25	61	53	45	51	43	37	93	68	47	30.06	30.00	29.90	10	9	5	23	8	30	0.00	Rain
26	67	52	37	44	40	34	92	67	29	30.11	30.02	29.86	10	9	3	10	2	-	0.00	Rain , Snow
27	78	64	51	54	43	17	90	60	10	29.96	29.83	29.78	10	10	7	18	10	30	0.00	
28	66	54	43	41	37	30	79	53	26	30.16	30.08	30.01	10	10	10	25	8	32	0.00	
29	70	53	36	42	35	27	91	59	20	30.17	30.10	29.98	10	10	7	5	0	-	0.00	
30	76	62	47	48	42	40	86	53	27	30.04	29.98	29.89	10	10	10	18	8	25	0.00	
31	79	66	53	56	53	48	91	65	37	29.98	29.93	29.88	10	10	7	18	11	24	0.00	

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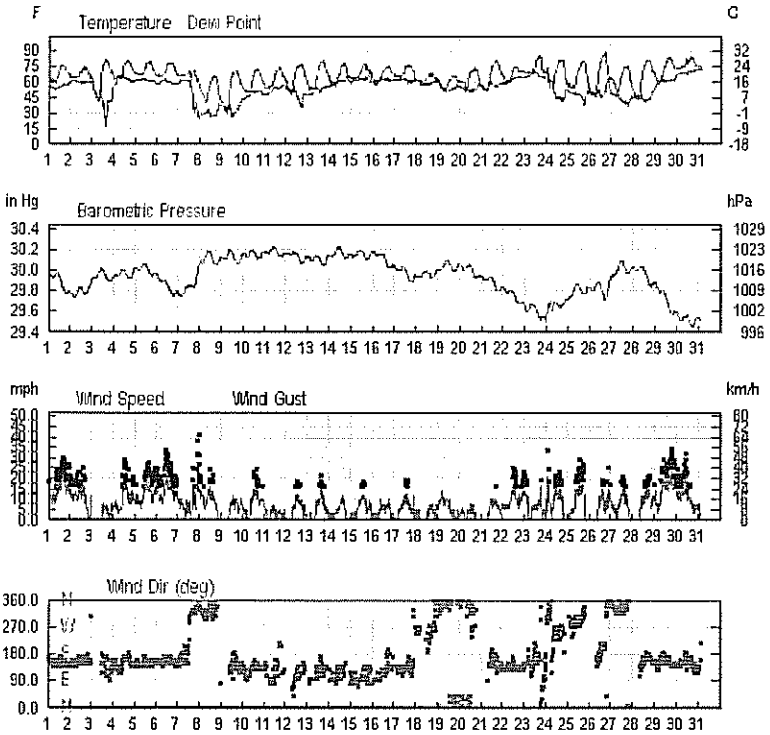
History for Hearne, TX

Month of April, 2010

Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	**88** °F	**77** °F	**65** °F	
Mean Temperature	**78** °F	**66** °F	**52** °F	
Min Temperature	**72** °F	**56** °F	**32** °F	
Degree Days:				
Heating Degree Days (base 65)	14	2	0	52
Cooling Degree Days (base 65)	13	3	0	89
Growing Degree Days (base 50)	28	16	2	494
Dew Point:				
Dew Point	**72** °F	**54** °F	**17** °F	
Precipitation:				
Precipitation	**0.08** in	**0.01** in	**0.00** in	**0.32** in
Snowdepth	-	-	-	-
Wind:				
Wind	**26** mph	**6** mph	**0** mph	
Gust Wind	**34** mph	**20** mph	**14** mph	
Sea Level Pressure:				
Sea Level Pressure	**30.24** in	**29.94** in	**29.46** in	



Monthly Calendar Overview

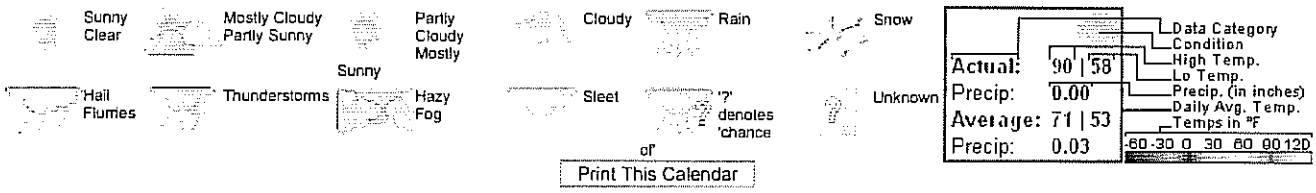
« Previous Month « 2009 **April 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
				Actual: 76 | 59	**Actual:** 74 | 64	**Actual:** 81 | 43
				Precip: 0.00	Precip: 0.00	Precip: 0.00
				Average: - | -	**Average:** - | -	**Average:** - | -

				Precip: -	Precip: -	Precip: -
4	5	6	7	8	9	10
Actual: 81 | 62	Actual: 79 | 67	Actual: 79 | 65	Actual: 72 | 62	Actual: 65 | 41	Actual: 71 | 32	Actual: 72 | 50
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.02	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
11	12	13	14	15	16	17
Actual: 73 | 53	Actual: 77 | 50	Actual: 80 | 52	Actual: 78 | 57	Actual: 78 | 63	Actual: 74 | 59	Actual: 77 | 65
Precip: 0.00	Precip: 0.00	Precip: 0.03	Precip: 0.01	Precip: 0.03	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
18	19	20	21	22	23	24
Actual: 68 | 59	Actual: 66 | 52	Actual: 73 | 52	Actual: 81 | 52	Actual: 75 | 60	Actual: 86 | 68	Actual: 82 | 57
Precip: 0.03	Precip: 0.08	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.06	Precip: 0.01
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
25	26	27	28	29	30	
Actual: 81 | 54	Actual: 88 | 47	Actual: 75 | 49	Actual: 81 | 45	Actual: 84 | 59	Actual: 84 | 72	
Precip: 0.00	Precip: 0.05	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	

« Previous Month « 2009 2011 » Next Month »

Calendar Key:



Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
April	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	76	68	59	58	56	53	81	66	51	29.98	29.90	29.77	10	10	10	23	13	30	0.00	
2	74	69	64	62	60	58	91	76	58	29.85	29.79	29.73	10	8	3	21	12	25	0.00	
3	81	62	43	61	42	17	94	57	9	30.02	29.95	29.89	10	7	0	8	1	-	0.00	Fog , Rain
4	81	72	62	66	62	56	92	74	52	30.01	29.96	29.92	10	7	2	21	8	29	0.00	
5	79	73	67	63	62	60	83	71	52	30.07	30.02	29.95	10	9	7	20	11	28	0.00	
6	79	72	65	62	60	57	83	68	50	29.98	29.86	29.75	10	9	7	26	15	33	0.00	
7	72	67	62	62	56	32	85	69	24	29.87	29.82	29.74	10	7	4	16	8	25	0.02	Rain
8	65	53	41	38	30	25	71	42	23	30.19	30.11	30.05	10	10	10	18	11	26	0.00	
9	71	52	32	39	33	27	92	56	21	30.20	30.13	30.07	10	10	10	12	3	20	0.00	
10	72	61	50	52	49	44	85	66	46	30.20	30.15	30.11	10	10	10	15	6	24	0.00	
11	73	63	53	58	52	48	83	70	50	30.23	30.18	30.13	10	9	4	9	4	-	0.00	
12	77	64	50	56	48	36	92	61	23	30.18	30.14	30.07	10	8	2	13	3	18	0.00	
13	80	66	52	56	51	47	88	62	35	30.14	30.10	30.05	10	10	7	16	3	22	0.03	
14	78	68	57	66	60	56	96	80	55	30.24	30.16	30.11	10	8	5	12	3	17	0.01	
15	78	70	63	67	63	59	94	80	58	30.20	30.15	30.10	10	9	7	12	4	18	0.03	Rain
16	74	66	59	64	61	57	93	80	60	30.18	30.12	30.02	10	8	4	10	3	16	0.00	
17	77	71	65	64	62	59	90	76	55	30.05	29.98	29.88	10	8	4	13	4	20	0.00	
18	68	64	59	62	59	57	96	86	70	30.00	29.96	29.93	10	10	7	8	2	-	0.03	Rain , Thunderstorm
19	66	59	52	61	54	51	97	82	62	30.10	30.04	29.99	10	6	3	14	7	20	0.08	Rain

20	73	62	52	58	54	50	94	70	48	30.06	30.01	29.93	10	6	4	8	2	-	0.00	
21	81	66	52	60	56	52	97	71	42	29.95	29.89	29.80	10	7	4	10	3	17	0.00	Rain
22	75	68	60	66	62	58	97	83	69	29.84	29.76	29.68	10	8	2	18	8	25	0.00	Rain
23	86	77	68	71	67	65	96	78	50	29.67	29.61	29.51	10	8	3	16	8	23	0.06	Rain , Thunderstorm
24	82	70	57	70	51	42	94	56	25	29.71	29.66	29.54	10	10	5	21	9	33	0.01	Rain
25	81	68	54	53	48	38	88	56	22	29.87	29.80	29.72	10	10	10	18	5	29	0.00	
26	88	68	47	63	50	45	95	61	25	29.88	29.82	29.71	10	10	3	15	3	20	0.05	Rain , Thunderstorm
27	75	62	49	50	44	38	90	52	27	30.10	30.01	29.95	10	10	7	16	8	21	0.00	
28	81	63	45	51	45	40	95	57	25	30.03	29.97	29.84	10	10	10	16	4	22	0.00	
29	84	72	59	63	61	55	94	69	46	29.88	29.75	29.57	10	9	5	24	12	34	0.00	
30	84	78	72	72	69	67	86	75	60	29.60	29.53	29.46	10	6	4	21	12	32	0.00	Rain

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Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: MATT BACK; JUSTIN GRIMM	
Date & Time: 9APR10 1050	County Name:
Stream Name: Campbell's Creek	
Segment No. or nearest downstream Segment No.: 1242 I	
Description of Site: 99915 001 waypoint @ Mumford Beneller Road	

At any point during the Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the use for the water body the investigator should stop conducting the UAA.

A. Stream Characteristics:

1. Check the following channel flow status that applies.

☐ dry ☐ no flow ☐ low ☒ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:

☐ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.

☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.

☒ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.

☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.

☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. 1.043 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 17.5 °C Water Temp 15.2 °C

5. Riparian Zone (Mark dominant categories with L (Left Bank) and R (Right Bank). Bank orientation is determined by the investigator facing downstream.)

L Forest	___ Urban	___ Rip rap
___ Shrub dominated corridor	R Pasture	___ Concrete
___ Herbaceous marsh	___ Row crops	Other (specify): ___
___ Mowed/maintained corridor	___ Denuded/Eroded bank	

6. Ease of bank access to the water body: ☐ Easy ☐ Moderately easy ☒ Moderately difficult ☐ Difficult

7. Please describe access opportunities or explain why the site is not easily accessible (Attach photos for documentation):

Plots 633 behind wire fence + steep bank
658

8. Dominant Primary Substrate Silt

☐Cobble ☐Sand ☐Silt ☒Mud/Clay ☒Gravel ☐Bedrock ☐Rip rap ☐ Concrete

Stream Name_____ Site: _____
Date: _____ Time: _____

B. Primary Contact Water Recreation Evaluation:

- Primary contact recreation draft definition: Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, and whitewater kayaking, canoeing, and rafting, involving a significant risk of ingestion of water.

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?

☐ Yes ☒ No primary contact recreation activities were observed

a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).

☐ Wading-Children ☐ Tubing ☒ No primary contact activities that commonly occur were observed
☐ Wading-Adults ☐ Surfing
☐ Swimming ☐ Whitewater-kayaking, canoeing, rafting
☐ Water skiing ☐ Other: _____
☐ Diving ☐ frequent public swimming-created by publicly owned land or commercial operations

b. Check the number of individuals observed at the site: ☒ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.

☐ Water in mouth or nose of the individual ☐ Primary touch: Individual's body (or portion) immersed in water
☐ Secondary touch: fishing, pets and related contact with water ☐ Individual is in a boat touching water
☐ Individual is on shore near water within 8 meters (25ft) of water ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☒ Not applicable

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).

Water very shallow & deep soft mud bottom
634

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).

Road crossing
635

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: _____

Date: _____ Time: _____

b. Check the number of individuals observed at the site.
☒ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body well away from water between 8 and 30 meters (100 ft) n/a

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
Water body not large enough for boat or sport fishing
636

3. If secondary contact recreation activities are observed, how often do water recreational activities occur that do not involve a significant risk of water ingestion? ☐ frequently ☐ infrequently n/a
Please describe how often the activities occur? ☐ Unknown ☐ Never ☐ Daily ☐ Monthly ☐ Yearly

4. If infrequently, what is the reason? ☐ physical characteristics of the water body ☐ limited public access ☐ other n/a
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).
n/a

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 & steep bank
633

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.
private property running along pasture, large amount of dumped trash
637

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 638 Downstream 639 Left Bank 640 Right Bank 641

Photos #s (150 meters) Upstream 643 Downstream 644 Left Bank 645 Right Bank 646

Photos #s (300 meters) Upstream 648 Downstream 649 Left Bank 650 Right Bank 651

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~~) feet / meters
Pool 1	19	3	2.0 / 0.61
Pool 2	44+13 = 57	4	2.2 / 0.67
Pool 3	26	11	3.3 / 1.01
Pool 4	19	3	2.1 / 0.64
Pool 5	30	2.5	2.1 / 0.64
Pool 6	35	4	2.9 / 0.88
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~~) feet / meters
30 meters	0.60 / 0.18
60 meters	1.3 / 0.39
90 meters	1.7 / 0.52
120 meters	2.2 / 0.67
150 meters	3.0 / 0.91
180 meters	0.3 / 0.09
210 meters	1.7 / 0.52
240 meters	3.2 / 0.98
270 meters	0.6 / 0.18
300 meters	0.9 / 0.27
Average	0.42

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

c) Stream width - Measure (1) the width at one point which represents the typical average width of the 300 meter reach; (2) the width at the narrowest point of the stream within the 300 meter reach; and (3) the width at the widest point of the stream within the 300 meter reach.

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	3
Width at narrowest point of the stream within 300 meter reach	0.9
Width at the widest point of the stream within 300 meter reach	4

d) Is there sufficient water within a 300 meter stream reach during base flow conditions to support primary contact recreation? ☐ Yes ☒ No

COMMENTS:
pools are hard to reach due to soft, steep bank

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	

N/A

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

☐ Drinking or water in mouth
☐ Bathing
☐ Walking
☐ Jogging/running
☐ Bicycling
☐ Standing
☐ Sitting
☐ Lying down/sleeping
☐ Playing on shoreline
☐ Picnicking
☐ Motorcycle/ATV
☐ Hunting/Trapping
☐ Wildlife watching
☒ None
☐ Other: _____

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☐ Yes ☒ No (If yes, please provide supporting documentation and photos.)
Comments: _____

3. Check any channel obstructions that apply (Attach photos). 642, 647

☐ Culverts ☐ Fences ☒ Log jams ☐ Rip rap ☐ Water control structure
☐ Barbed wire ☐ Dams ☐ Thick vegetation ☐ Low bridges ☐ None
☐ Utility pipe ☐ Other (specify):_____

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest). 635

☐ Campgrounds ☐ Stairs/walkway ☒ Roads (paved/unpaved) ☐ Other:_____
☐ Playgrounds ☐ Boating access (ramps) ☐ Populated area ☐ None of the Above
☒ Rural area ☐ Beach ☐ Docks or rafts
☐ Residential ☒ Bridge crossing ☐ Commercial outfitter
☐ National forests ☐ Commercial boating ☐ Nearby school
☐ Urban/suburban location ☐ Trails/paths (hiking/biking) ☐ Power Line Corridor
☐ Golf Course ☐ Paved parking lot ☐ Parks (national/city/county/state)
☐ Sports Field ☐ Unimproved parking lot ☐ Public Property
Comments:_____

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).

☒ Private Property ☒ Fence
☐ No trespass sign ☐ Barge/ship traffic
☐ Wildlife ☐ Industrial
655 ☒ Steep slopes ☐ None of the Above
☐ No public access ☐ Other:_____
☐ No roads
Comments:_____

6. Check any indications of human use (Attach photos).

635 ☒ Roads ☐ RV/ATV Tracks ☐ NPDES Discharge ☐ Organized event
☐ Rope swings ☐ Camping Sites ☐ Gates on corridor ☐ No Human Presence
☐ Dock/platform ☐ Fire pit/ring ☐ Children's toys
☐ Foot paths/prints ☐ Fishing Tackle ☐ Remnant's of Kid's play
☐ Other: _____
Comments:_____

Stream Name_____ Site: _____
Date: _____ Time: _____

7. Check all water characteristics that apply (Attach photos).
Aquatic Vegetation: ☐ absent ☒ rare ☐common ☐abundant 652
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 653
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: Squirrel

10. Evidence of wild animals or evidence of birds, cattle, hogs, etc.
☒ Tracks ☒ Fecal droppings ☐ Bird nests

11. Garbage Observed

Large garbage in the channel	☐ None	☐ Rare	☐ Common	☒ Abundant
Small garbage in the channel	☐ None	☐ Rare	☒ Common	☐ Abundant
Bank Garbage	☐ None	☒ Rare	☐ Common	☐ Abundant

Briefly describe the kinds of garbage observed: tires, household trash, washing machine
654, 656, 657

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).
cow pasture

Field Data Sheet - Basic RUAA Survey
Stream Flow (Discharge) Measurement

Stream:_____ Date:_____
Site:_____ Site
Description:_____
Time Begin:_____ Time End:_____ Meter Type:_____
Observers:_____ Stream Width*:_____ Section Width (W):_____
Observations:_____

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V)		Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
			At Point (ft/s)(m/s)	Average (ft/s)(m/s)	

: Wed Apr 14 2010

99915-9APR10.WAD
2010/04/09 10:51:55

MB

FlowTracker
P879
3.7
2.30
0.0%

(English Units)
ft
ft/s
ft^2
cfs

Accuracy	1.0%	1.0%
Depth	0.7%	5.7%
Velocity	1.1%	10.3%
Width	0.2%	0.2%
Method	3.3%	-
# Stations	5.8%	-
Overall	**6.8%**	**11.8%**

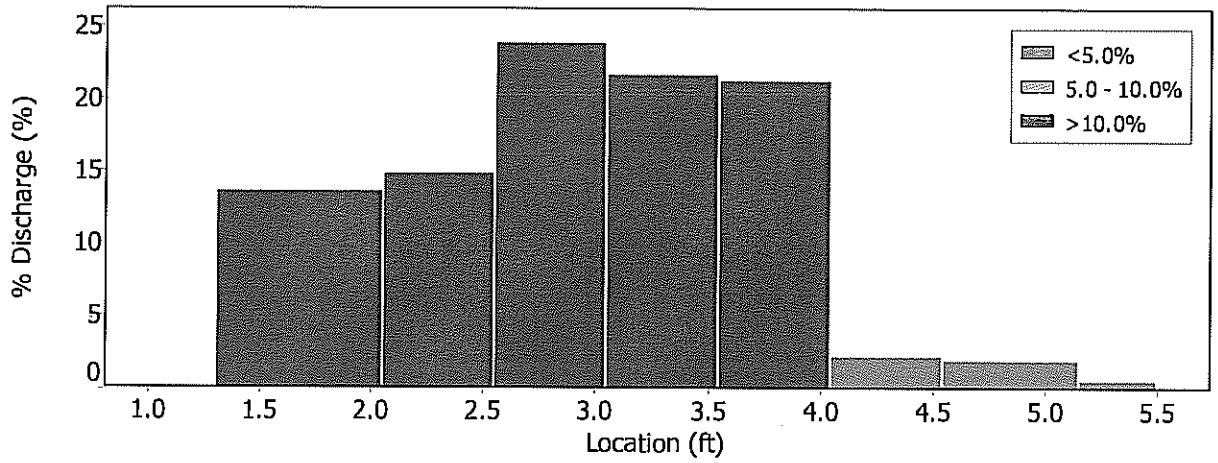
20	9
REW	4.700
37.6 dB	0.918
26.50 °F	0.195
Mid-Section	1.1366
	1.0429

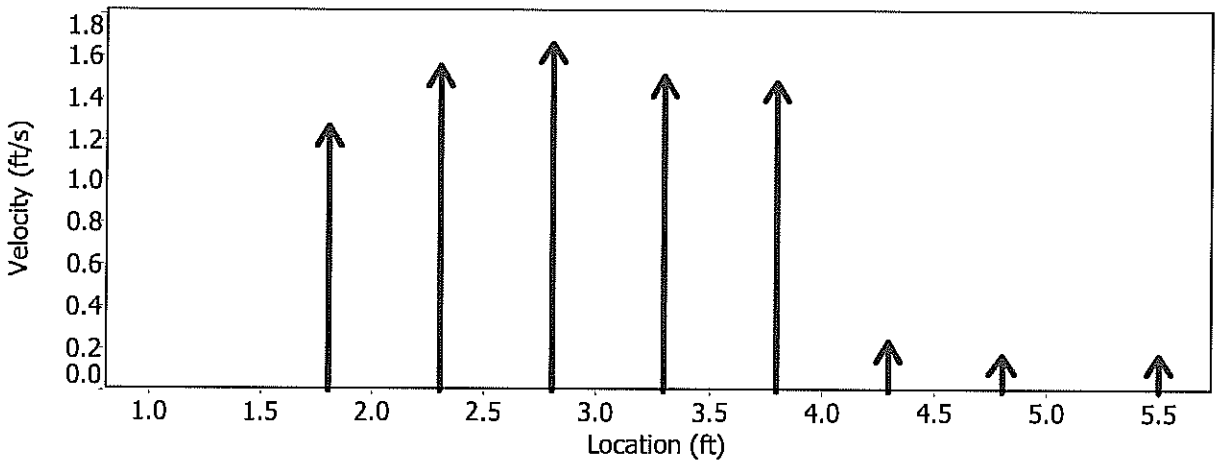
				Depth								
0	10:51	0.80	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
1	10:51	1.80	0.6	0.150	0.6	0.060	1.2612	1.00	1.2612	0.112	0.1418	13.6
2	10:52	2.30	0.6	0.200	0.6	0.080	1.5499	1.00	1.5499	0.100	0.1551	14.9
3	10:53	2.80	0.6	0.300	0.6	0.120	1.6604	1.00	1.6604	0.150	0.2490	23.9
4	10:55	3.30	0.6	0.300	0.6	0.120	1.5023	1.00	1.5023	0.150	0.2252	21.6
5	10:55	3.80	0.6	0.300	0.6	0.120	1.4803	1.00	1.4803	0.150	0.2220	21.3
6	10:56	4.30	0.6	0.200	0.6	0.080	0.2333	1.00	0.2333	0.100	0.0233	2.2
7	10:57	4.80	0.6	0.200	0.6	0.080	0.1706	1.00	0.1706	0.120	0.0205	2.0
8	10:57	5.50	None	0.100	0.0	0.0	0.0000	1.00	0.1706	0.035	0.0060	0.6

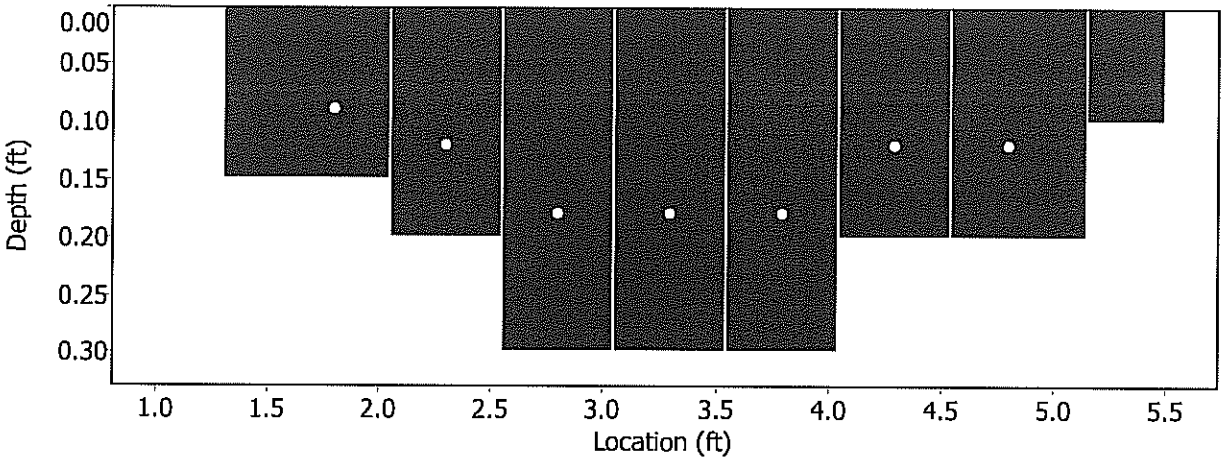
: Wed Apr 14 2010

99915-9APR10.WAD
2010/04/09 10:51:55

MB







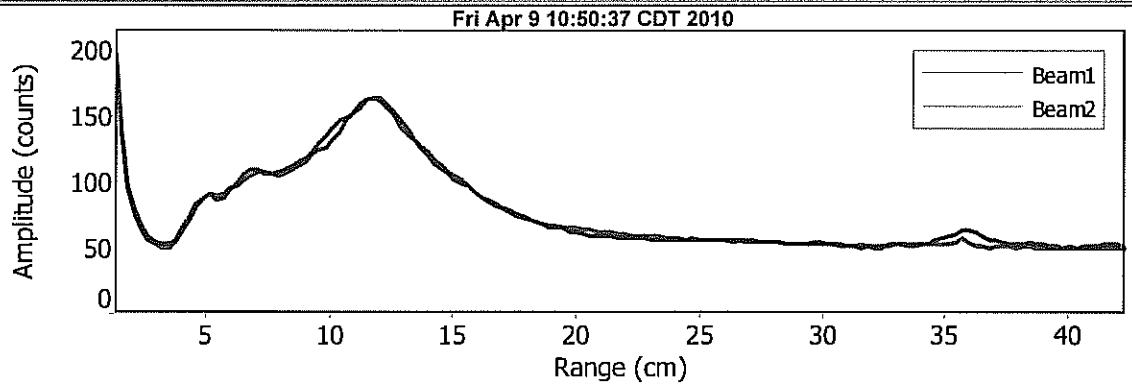
: Wed Apr 14 2010

99915-9APR10.WAD 2010/04/09 10:51:55	MB

: Wed Apr 14 2010

99915-9APR10.WAD
2010/04/09 10:51:55

MB



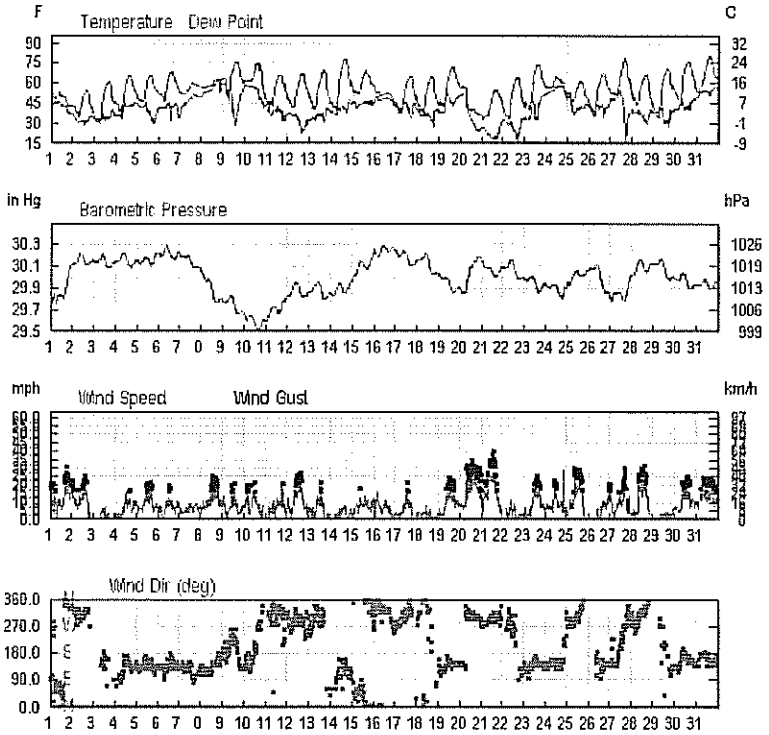
- Noise level check - Pass
- SNR check - Pass
- Peak location check - Pass
- Peak shape check - Pass

History for Hearne, TX

Month of March, 2010

Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	**79** °F	**66** °F	**53** °F	
Mean Temperature	**66** °F	**55** °F	**44** °F	
Min Temperature	**56** °F	**43** °F	**32** °F	
Degree Days:				
Heating Degree Days (base 65)	22	10	0	315
Cooling Degree Days (base 65)	1	0	0	1
Growing Degree Days (base 50)	16	5	0	169
Dew Point:				
Dew Point	**59** °F	**41** °F	**16** °F	
Precipitation:				
Precipitation	**0.63** in	**0.05** in	**0.00** in	**1.57** in
Snowdepth	-	-	-	-
Wind:				
Wind	**28** mph	**7** mph	**0** mph	
Gust Wind	**46** mph	**20** mph	**16** mph	
Sea Level Pressure:				
Sea Level Pressure	**30.28** in	**30.00** in	**29.51** in	



Monthly Calendar Overview

« Previous Month | « 2009 | **March 2010** | 2011 » | Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6
	Actual: 53 | 43	**Actual:** 54 | 34	**Actual:** 61 | 32	**Actual:** 66 | 38	**Actual:** 66 | 45	**Actual:** 68 | 45
	Precip: 0.43	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
	Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -

Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	
7	8	9	10	11	12	13
Actual: 59 | 51	**Actual:** 62 | 56	**Actual:** 76 | 49	**Actual:** 75 | 55	**Actual:** 66 | 41	**Actual:** 67 | 41	**Actual:** 69 | 40
Precip: 0.01	Precip: 0.04	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
14	15	16	17	18	19	20
Actual: 78 | 40	**Actual:** 69 | 51	**Actual:** 58 | 51	**Actual:** 65 | 38	**Actual:** 64 | 37	**Actual:** 72 | 42	**Actual:** 58 | 36
Precip: 0.00	Precip: 0.00	Precip: 0.42	Precip: 0.01	Precip: 0.00	Precip: 0.00	Precip: 0.63
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
21	22	23	24	25	26	27
Actual: 55 | 32	**Actual:** 64 | 33	**Actual:** 73 | 39	**Actual:** 65 | 56	**Actual:** 61 | 45	**Actual:** 67 | 37	**Actual:** 78 | 51
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.03	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
28	29	30	31			
Actual: 66 | 43	**Actual:** 70 | 36	**Actual:** 76 | 47	**Actual:** 79 | 53			
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00			
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -			
Precip: -	Precip: -	Precip: -	Precip: -			

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear, Mostly Cloudy Partly Sunny, Partly Cloudy Mostly Sunny, Cloudy, Rain, Snow, Hail Flurries, Thunderstorms, Hazy Fog, Sleet, '?' denotes 'chance of', Unknown

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

Data Category, Condition, High Temp., Lo Temp., Precip. (in inches), Daily Avg. Temp., Temps in °F (-60 -30 0 30 60 90 120)

Print This Calendar

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
March	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	53	48	43	47	44	39	92	81	63	29.96	29.83	29.75	10	9	3	24	10	31	0.43	Rain
2	54	44	34	37	32	29	86	64	40	30.21	30.14	30.10	10	10	10	18	12	25	0.00	
3	61	46	32	36	33	30	94	67	37	30.21	30.14	30.08	10	9	5	7	1	-	0.00	
4	66	52	38	45	39	34	87	64	43	30.22	30.15	30.09	10	10	10	15	4	17	0.00	
5	66	56	45	46	40	31	85	62	29	30.19	30.14	30.10	10	10	7	16	9	22	0.00	
6	68	56	45	46	42	32	83	59	27	30.28	30.22	30.16	10	10	10	13	6	20	0.00	
7	59	55	51	52	46	36	79	71	53	30.22	30.16	30.08	10	10	10	9	6	-	0.01	Rain
8	62	59	56	59	55	50	90	87	77	30.06	29.92	29.75	10	6	2	20	9	25	0.04	Rain
9	76	62	49	59	46	29	93	58	18	29.83	29.75	29.66	10	8	0	16	8	21	0.00	Fog
10	75	65	55	58	55	41	91	70	39	29.66	29.59	29.51	10	8	4	15	8	22	0.00	
11	66	54	41	44	39	34	88	61	34	29.73	29.67	29.58	10	10	7	16	4	20	0.00	
12	67	54	41	38	33	23	80	49	19	29.95	29.87	29.81	10	10	5	20	9	28	0.00	
13	69	54	40	42	35	31	78	50	25	29.95	29.87	29.78	10	10	10	16	5	22	0.00	
14	78	59	40	48	40	36	86	54	24	29.94	29.88	29.83	10	10	7	8	2	-	0.00	
15	69	60	51	48	45	41	81	59	42	30.17	30.08	29.96	10	8	5	14	6	18	0.00	Rain
16	58	54	51	50	48	44	90	85	59	30.28	30.23	30.18	10	6	3	16	8	21	0.42	Rain
17	65	52	38	46	41	34	93	72	32	30.26	30.19	30.10	10	6	0	17	4	22	0.01	Fog , Rain
18	64	50	37	41	36	27	89	60	26	30.21	30.14	30.03	10	10	7	8	2	-	0.00	
19	72	57	42	52	43	37	87	64	36	30.04	29.96	29.85	10	8	5	21	5	24	0.00	

20	58	47	36	53	39	24	91	77	58	30.18	30.01	29.85	10	8	1	26	13	46	0.63	Rain , Thunderstorm
21	55	44	32	28	22	18	81	47	24	30.18	30.07	30.00	10	10	10	28	15	40	0.00	
22	64	48	33	34	28	16	88	50	16	30.16	30.08	29.98	10	10	10	12	2	-	0.00	
23	73	56	39	51	39	32	79	55	22	30.01	29.95	29.85	10	10	5	17	6	25	0.00	
24	65	60	56	58	55	52	90	84	73	29.94	29.89	29.80	10	7	2	17	8	23	0.03	Rain
25	61	53	45	51	43	37	93	68	47	30.06	30.00	29.90	10	9	5	23	8	30	0.00	Rain
26	67	52	37	44	40	34	92	67	29	30.11	30.02	29.86	10	9	3	10	2	-	0.00	Rain , Snow
27	78	64	51	54	43	17	90	60	10	29.96	29.83	29.78	10	10	7	18	10	30	0.00	
28	66	54	43	41	37	30	79	53	26	30.16	30.08	30.01	10	10	10	25	8	32	0.00	
29	70	53	36	42	35	27	91	59	20	30.17	30.10	29.98	10	10	7	5	0	-	0.00	
30	76	62	47	48	42	40	86	53	27	30.04	29.98	29.89	10	10	10	18	8	25	0.00	
31	79	66	53	56	53	48	91	65	37	29.98	29.93	29.88	10	10	7	18	11	24	0.00	

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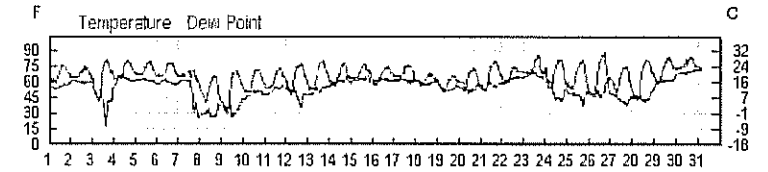
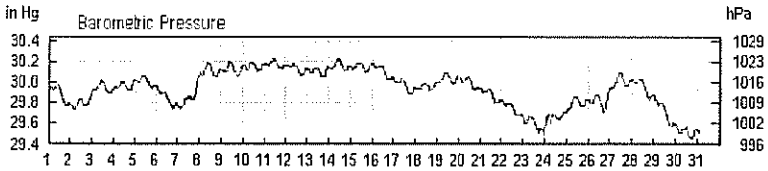
History for Hearne, TX

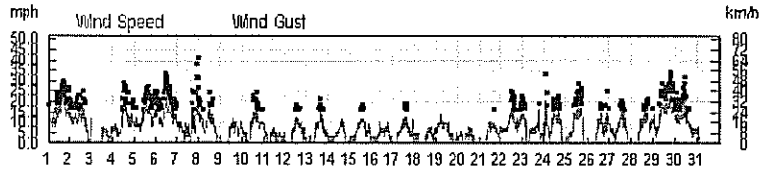
Month of April, 2010

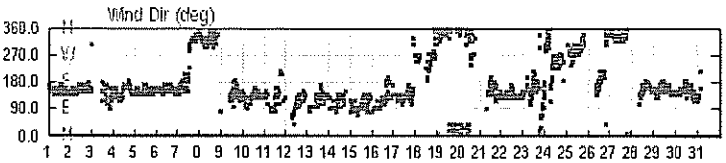
Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	**88** °F	**77** °F	**65** °F	
Mean Temperature	**78** °F	**66** °F	**52** °F	
Min Temperature	**72** °F	**56** °F	**32** °F	
Degree Days:				
Heating Degree Days (base 65)	14	2	0	52
Cooling Degree Days (base 65)	13	3	0	89
Growing Degree Days (base 50)	28	16	2	494
Dew Point:				
Dew Point	**72** °F	**54** °F	**17** °F	
Precipitation:				
Precipitation	**0.08** in	**0.01** in	**0.00** in	**0.32** in
Snowdepth	-	-	-	-
Wind:				
Wind	**26** mph	**6** mph	**0** mph	
Gust Wind	**34** mph	**20** mph	**14** mph	
Sea Level Pressure:				
Sea Level Pressure	**30.24** in	**29.94** in	**29.46** in	









Monthly Calendar Overview

« Previous Month « 2009 **April 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
				Actual: 76 | 59	**Actual:** 74 | 64	**Actual:** 81 | 43
				Precip: 0.00	Precip: 0.00	Precip: 0.00
				Average: - | -	**Average:** - | -	**Average:** - | -

				Precip: -	Precip: -	Precip: -
4	5	6	7	8	9	10
Actual: 81 | 62	Actual: 79 | 67	Actual: 79 | 65	Actual: 72 | 62	Actual: 65 | 41	Actual: 71 | 32	Actual: 72 | 50
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.02	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
11	12	13	14	15	16	17
Actual: 73 | 53	Actual: 77 | 50	Actual: 80 | 52	Actual: 78 | 57	Actual: 78 | 63	Actual: 74 | 59	Actual: 77 | 65
Precip: 0.00	Precip: 0.00	Precip: 0.03	Precip: 0.01	Precip: 0.03	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
18	19	20	21	22	23	24
Actual: 68 | 59	Actual: 66 | 52	Actual: 73 | 52	Actual: 61 | 52	Actual: 75 | 60	Actual: 66 | 68	Actual: 82 | 57
Precip: 0.03	Precip: 0.08	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.06	Precip: 0.01
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
25	26	27	28	29	30	
Actual: 81 | 54	Actual: 88 | 47	Actual: 75 | 49	Actual: 81 | 45	Actual: 64 | 59	Actual: 84 | 72	
Precip: 0.00	Precip: 0.05	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear · Mostly Cloudy Partly Sunny · Partly Cloudy Mostly Sunny · Cloudy · Rain · Snow · Hail Flurries · Thunderstorms · Hazy Fog · Sleet · '?' denotes 'chance of' · Unknown

Actual: 90 | 58 · Precip: 0.00 · Average: 71 | 53 · Precip: 0.03

Data Category · Condition · High Temp. · Lo Temp. · Precip. (in inches) · Daily Avg. Temp. · Temps in °F · -60 -30 0 30 60 90 120

Print This Calendar

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
April	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	76	68	59	58	56	53	81	66	51	29.98	29.90	29.77	10	10	10	23	13	30	0.00	
2	74	69	64	62	60	58	91	76	58	29.85	29.79	29.73	10	8	3	21	12	25	0.00	
3	81	62	43	61	42	17	94	57	9	30.02	29.95	29.89	10	7	0	8	1	-	0.00	Fog , Rain
4	81	72	62	66	62	56	92	74	52	30.01	29.96	29.92	10	7	2	21	8	29	0.00	
5	79	73	67	63	62	60	83	71	52	30.07	30.02	29.95	10	9	7	20	11	28	0.00	
6	79	72	65	62	60	57	83	68	50	29.98	29.86	29.75	10	9	7	26	15	33	0.00	
7	72	67	62	62	56	32	85	69	24	29.87	29.82	29.74	10	7	4	16	8	25	0.02	Rain
8	65	53	41	38	30	25	71	42	23	30.19	30.11	30.05	10	10	10	18	11	26	0.00	
9	71	52	32	39	33	27	92	56	21	30.20	30.13	30.07	10	10	10	12	3	20	0.00	
10	72	61	50	52	49	44	85	66	46	30.20	30.15	30.11	10	10	10	15	6	24	0.00	
11	73	63	53	58	52	48	83	70	50	30.23	30.18	30.13	10	9	4	9	4	-	0.00	
12	77	64	50	56	48	36	92	61	23	30.18	30.14	30.07	10	8	2	13	3	18	0.00	
13	80	66	52	56	51	47	88	62	35	30.14	30.10	30.05	10	10	7	16	3	22	0.03	
14	78	68	57	66	60	56	96	80	55	30.24	30.16	30.11	10	8	5	12	3	17	0.01	
15	78	70	63	67	63	59	94	80	58	30.20	30.15	30.10	10	9	7	12	4	18	0.03	Rain
16	74	66	59	64	61	57	93	80	60	30.18	30.12	30.02	10	8	4	10	3	16	0.00	
17	77	71	65	64	62	59	90	76	55	30.05	29.98	29.88	10	8	4	13	4	20	0.00	
18	68	64	59	62	59	57	96	86	70	30.00	29.96	29.93	10	10	7	8	2	-	0.03	Rain , Thunderstorm
19	66	59	52	61	54	51	97	82	62	30.10	30.04	29.99	10	6	3	14	7	20	0.08	Rain

20	73	62	52	58	54	50	94	70	48	30.06	30.01	29.93	10	6	4	8	2	-	0.00	
21	81	66	52	60	56	52	97	71	42	29.95	29.89	29.80	10	7	4	10	3	17	0.00	Rain
22	75	68	60	66	62	58	97	83	69	29.84	29.76	29.68	10	8	2	18	8	25	0.00	Rain
23	86	77	68	71	67	65	96	78	50	29.67	29.61	29.51	10	8	3	16	8	23	0.06	Rain , Thunderstorm
24	82	70	57	70	51	42	94	56	25	29.71	29.66	29.54	10	10	5	21	9	33	0.01	Rain
25	81	68	54	53	48	38	88	56	22	29.87	29.80	29.72	10	10	10	18	5	29	0.00	
26	88	68	47	63	50	45	95	61	25	29.88	29.82	29.71	10	10	3	15	3	20	0.05	Rain , Thunderstorm
27	75	62	49	50	44	38	90	52	27	30.10	30.01	29.95	10	10	7	16	8	21	0.00	
28	81	63	45	51	45	40	95	57	25	30.03	29.97	29.84	10	10	10	16	4	22	0.00	
29	84	72	59	63	61	55	94	69	46	29.88	29.75	29.57	10	9	5	24	12	34	0.00	
30	84	78	72	72	69	67	86	75	60	29.60	29.53	29.46	10	6	4	21	12	32	0.00	Rain

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Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: MB/JG	
Date & Time: 23 JUN 10 1430	County Name: ROBERTSON
Stream Name: CAMPBELLS 99916	
Segment No. or nearest downstream Segment No.: 1242T	
Description of Site: Campbells Creek on Jim Dunn's Private Road	

At any point during the Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the use for the water body the investigator should stop conducting the UAA.

A. Stream Characteristics:

1. Check the following channel flow status that applies.

☐ dry ☐ no flow ☐ low ☒ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:

☐ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.

☒ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.

☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.

☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.

☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. 0.037 cfs

4. Water Quality Data (Field Parameters)

Field parameters should be collected in accordance with the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1.

Air Temp 33.33 ° C Water Temp 26.34 ° 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	LR 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):

Dense vegetation & steep banks

8. Dominant Primary Substrate

☐Cobble ☐Sand ☐Silt ☐Mud/Clay ☒Gravel ☐Bedrock ☐Rip rap ☐ Concrete

Stream Name Campbells Site: 99916
Date: 23JUN10 Time: 1430

B. Primary Contact Water Recreation Evaluation:
- Primary contact recreation draft definition: Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, and whitewater kayaking, canoeing, and rafting, involving a significant risk of ingestion of water.

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?
☐ Yes ☒ No primary contact recreation activities were observed
a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).

☐ Wading-Children	☐ Tubing	☒ No primary contact activities that commonly occur were observed
☐ Wading-Adults	☐ Surfing	
☐ Swimming	☐ Whitewater-kayaking, canoeing, rafting	
☐ Water skiing	☐ Other: _____	
☐ Diving	☐ frequent public swimming-created by publicly owned land or commercial operations	

b. Check the number of individuals observed at the site: ☒ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Water in mouth or nose of the individual ☐ Primary touch: Individual's body (or portion) immersed in water
☐ Secondary touch: fishing, pets and related contact with water ☐ Individual is in a boat touching water
☐ Individual is on shore near water within 8 meters (25ft) of water ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☒ Not applicable

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
Very low flow and water depth

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: _____

Date: _____ Time: _____

b. Check the number of individuals observed at the site.
☒ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body well away from water between 8 and 30 meters (100 ft) n/a

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
Water too shallow, and flow too low

3. If secondary contact recreation activities are observed, how often do water recreational activities occur that do not involve a significant risk of water ingestion? ☐ frequently ☐ infrequently n/a
Please describe how often the activities occur? ☐ Unknown ☐ Never ☐ Daily ☐ Monthly ☐ Yearly n/a

4. If infrequently, what is the reason? ☐ physical characteristics of the water body ☐ limited public access ☐ other
If other, list reasons: n/a

5. Describe the physical characteristics of the water body that hinders the frequency of secondary contact recreation (depth, etc.) (Attach photos or depth measurements, etc. for documentation).
water depth, private road, bank angle vegetation cover

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).
no public access due to private property & road

D. Noncontact Recreation Evaluation

Noncontact recreation applies to water bodies where recreation activities do not involve a significant risk of water ingestion, and where primary and secondary contact recreation uses do not occur because of unsafe conditions, such as barge traffic.

1. Provide site-specific information and documentation (including photographs) regarding unsafe conditions, recreation activities, and presence or absence of water recreation activities.
n/a

E. Stream Channel and Substantial 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 2762 Downstream 63 Left Bank 2764 Right Bank 2765

Photos #s (150 meters) Upstream 2766 Downstream 2767 Left Bank 2768 Right Bank 2769

Photos #s (300 meters) Upstream 2770 Downstream 2771 Left Bank 2772 Right Bank 2773

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	16	2	0.68
Pool 2	10	1	0.70
Pool 3	25	3.5	0.55
Pool 4	10	3	0.61
Pool 5	11	4	1.04
Pool 6	10	3	0.70
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	0.03
60 meters	0.38
90 meters	0.21
120 meters	0.13
150 meters	0.37
180 meters	0.17
210 meters	0.28
240 meters	0.13
270 meters	0.31
300 meters	0.05
Average	0.21

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

c) Stream width - Measure (1) the width at one point which represents the typical average width of the 300 meter reach; (2) the width at the narrowest point of the stream within the 300 meter reach; and (3) the width at the widest point of the stream within the 300 meter reach.

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	2
Width at narrowest point of the stream within 300 meter reach	0.25
Width at the widest point of the stream within 300 meter reach	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 n/a
If accessible, take 10 width measurements which represent typical widths of the 300 meter reach. If the water is too deep and not accessible record the estimated average width of the water body.

Also, take photos facing upstream, downstream, left bank, and right bank at .
Photos #s (30 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (150 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

# Measurements	Width (meters)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Field Data Sheets – Basic RUAA Survey

Stream Name _____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

☐ Drinking or water in mouth
☐ Bathing
☐ Walking
☐ Jogging/running
☐ Bicycling
☐ Standing
☐ Sitting
☐ Lying down/sleeping
☐ Playing on shoreline
☐ Picnicking
☐ Motorcycle/ATV
☐ Hunting/Trapping
☐ Wildlife watching
☒ None
☐ Other: _____

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☐ Yes ☒ No (If yes, please provide supporting documentation and photos.)
Comments: _____

3. Check any channel obstructions that apply (Attach photos).

☐ Culverts ☐ Fences ☐ Log jams ☐ Rip rap ☐ Water control structure
☐ Barbed wire ☐ Dams ☐ Thick vegetation ☐ Low bridges ☒ None
☐ Utility pipe ☐ Other (specify): _____

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest).

☐ Campgrounds
☐ Playgrounds
☐ Rural area
☐ Residential
☐ National forests
☐ Urban/suburban location
☐ Golf Course
☐ Sports Field
☐ Stairs/walkway
☐ Boating access (ramps)
☐ Beach
☐ Bridge crossing
☐ Commercial boating
☐ Trails/paths (hiking/biking)
☐ Paved parking lot
☐ Unimproved parking lot
☐ Roads (paved/unpaved)
☐ Populated area
☐ Docks or rafts
☐ Commercial outfitter
☐ Nearby school
☐ Power Line Corridor
☐ Parks (national/city/county/state)
☐ Public Property
☒ Other: private driveway & bridge
☐ None of the Above

Comments: private property

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).

☒ Private Property
☒ No trespass sign
☐ Wildlife
☒ Steep slopes
☒ No public access
☐ No roads
☒ Fence
☐ Barge/ship traffic
☐ Industrial
☐ None of the Above
☐ Other: _____

Comments: _____

6. Check any indications of human use (Attach photos).

☒ Roads
☐ Rope swings
☐ Dock/platform
☐ Foot paths/prints
☐ Other: _____
☐ RV/ATV Tracks
☐ Camping Sites
☐ Fire pit/ring
☐ Fishing Tackle
☐ NPDES Discharge
☐ Gates on corridor
☐ Children's toys
☐ Remnant's of Kid's play
☐ Organized event
☐ No Human Presence

Comments: _____

Stream Name_____ Site: _____
Date: _____ Time: _____

7. Check all water characteristics that apply (Attach photos).

Aquatic Vegetation: ☒ absent ☐ rare ☐ common ☐ abundant
Algae Cover: ☐ absent ☒ rare ☐ common ☐ abundant
Odor: ☒ none ☐ rare ☐ common ☐ abundant
Color: ☒ clear ☐ green ☐ red ☐ brown ☐ black
Bottom Deposit: ☐ sludge ☐ solids ☐ fine sediments ☒ none ☐ other
Water Surface: ☐ clear ☐ scum ☐ foam ☒ debris ☐ oil
Other: leaf litter

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: lots of hog wallows

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: old machinery & tire

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).
Landowners said there is generally not sufficient water to get your feet wet much less to swim or fish in.

Field Data Sheet - Basic RUAA Survey
Stream Flow (Discharge) Measurement

Stream:_____ Date:_____
Site:_____ Site
Description:_____
Time Begin:_____ Time End:_____ Meter Type:_____
Observers:_____ Stream Width*:_____ Section Width (W):_____
Observations:_____

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V)		Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
			At Point (ft/s)(m/s)	Average (ft/s)(m/s)	

: Thu Jul 1 2010

99916-23JUN10.WAD
2010/06/23 13:33:58

MB

FlowTracker
P872
3.7
2.30
0.0%

(English Units)
ft
ft/s
ft^2
cfs

Accuracy	1.0%	1.0%
Depth	0.7%	1.2%
Velocity	4.4%	6.9%
Width	0.2%	0.2%
Method	3.7%	-
# Stations	9.4%	-
Overall	**11.1%**	**7.1%**

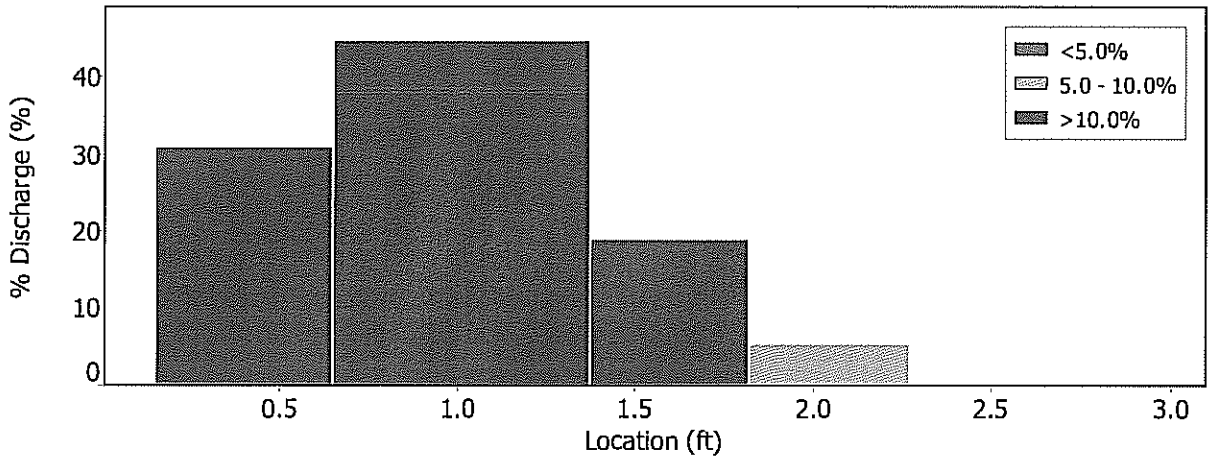
20	6
LEW	2.950
32.6 dB	1.324
80.62 °F	0.449
Mid-Section	0.0276
	0.0366

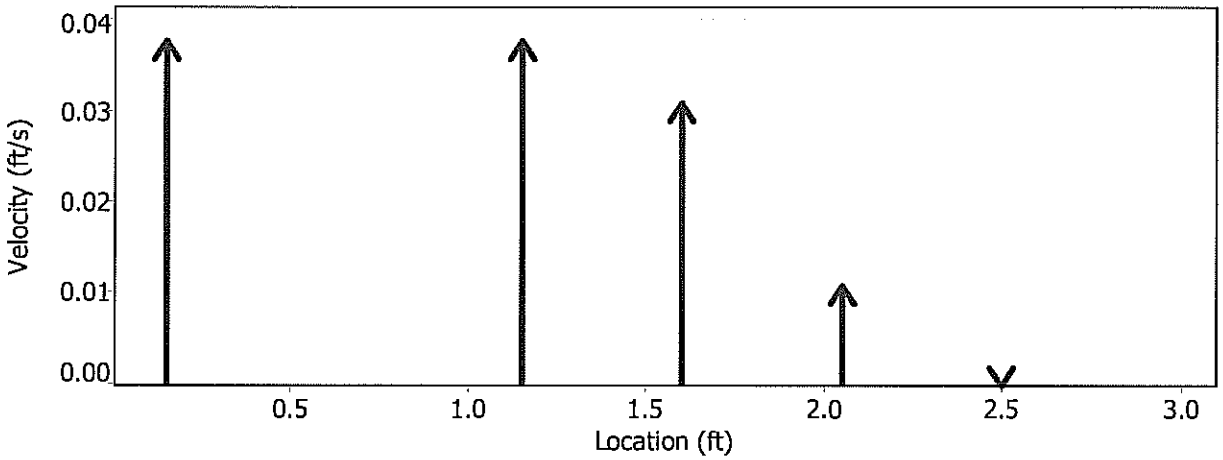
				Depth								
0	13:33	0.15	None	0.600	0.0	0.0	0.0000	1.00	0.0377	0.300	0.0113	31.0
1	*13:33*	*1.15*	*0.6*	*0.600*	*0.6*	*0.240*	*0.0377*	*1.00*	*0.0377*	*0.435*	*0.0164*	*44.9*
2	*13:34*	*1.60*	*0.6*	*0.500*	*0.6*	*0.200*	*0.0308*	*1.00*	*0.0308*	*0.225*	*0.0069*	*19.0*
3	13:35	2.05	0.6	0.400	0.6	0.160	0.0108	1.00	0.0108	0.180	0.0019	5.3
4	13:36	2.50	0.6	0.350	0.6	0.140	-0.0003	1.00	-0.0003	0.184	-0.0001	-0.2
5	13:36	3.10	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0

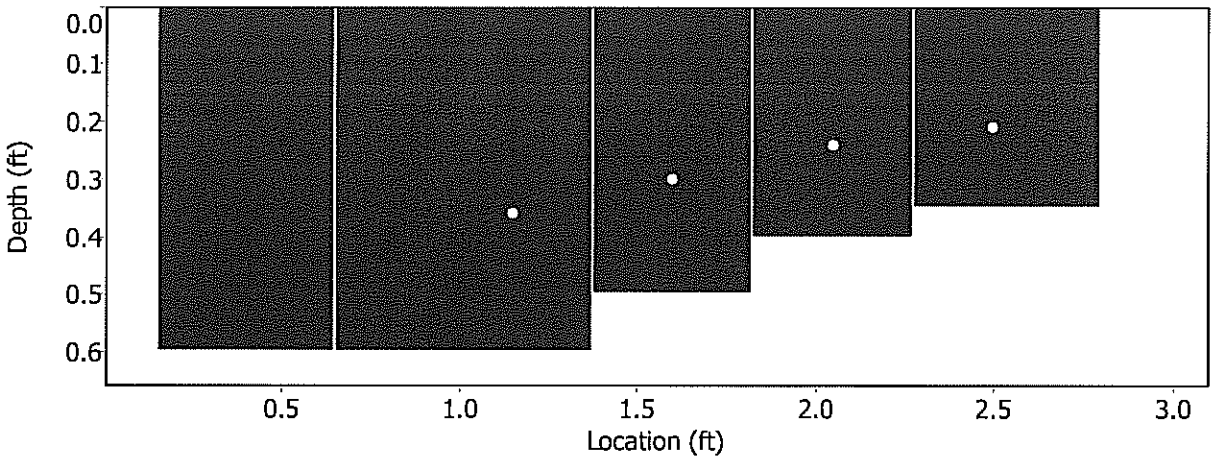
: Thu Jul 1 2010

99916-23JUN10.WAD
2010/06/23 13:33:58

MB







: Thu Jul 1 2010

99916-23JUN10.WAD
2010/06/23 13:33:58

MB

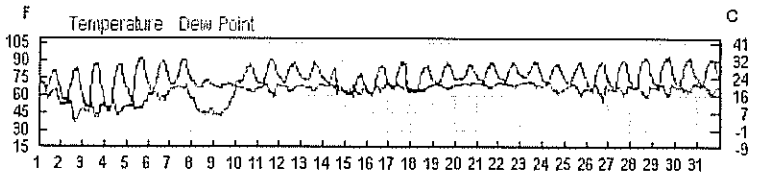
1	1.15	0.6	High angle: -38
2	1.60	0.6	High angle: -53

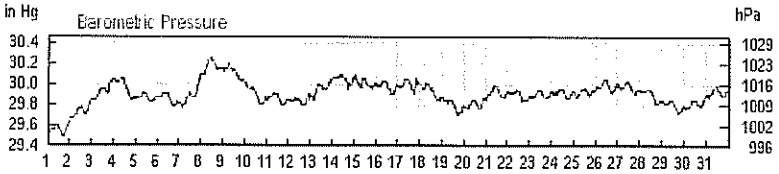
History for Hearne, TX

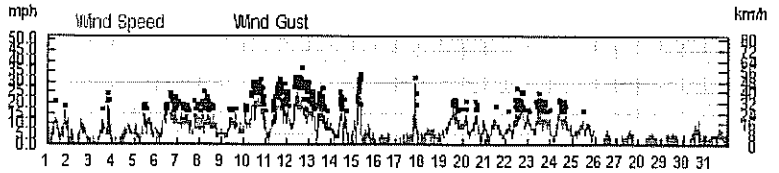
Month of May, 2010

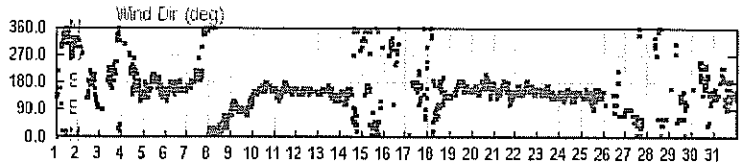
Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	**94** °F	**88** °F	**71** °F	
Mean Temperature	**83** °F	**77** °F	**67** °F	
Min Temperature	**76** °F	**66** °F	**47** °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	18	12	2	374
Growing Degree Days (base 50)	33	27	17	835
Dew Point:				
Dew Point	**73** °F	**63** °F	**38** °F	
Precipitation:				
Precipitation	**1.67** in	**0.08** in	**0.00** in	**2.52** in
Snowdepth	-	-	-	-
Wind:				
Wind	**29** mph	**6** mph	**0** mph	
Gust Wind	**41** mph	**20** mph	**10** mph	
Sea Level Pressure:				
Sea Level Pressure	**30.26** in	**29.91** in	**29.48** in	









Monthly Calendar Overview

« Previous Month | « 2009 | **May 2010** | 2011 » | Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1

Actual: 82 | 67
Precip: 0.00

Average: - | -
Precip: -

2	3	4	5	6	7	8
Actual: 83 | 55	Actual: 88 | 49	Actual: 87 | 47	Actual: 93 | 54	Actual: 91 | 62	Actual: 92 | 69	Actual: 74 | 67
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
9	10	11	12	13	14	15
Actual: 71 | 66	Actual: 88 | 69	Actual: 92 | 71	Actual: 89 | 71	Actual: 89 | 73	Actual: 83 | 65	Actual: 79 | 63
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 1.67	Precip: 0.38
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
16	17	18	19	20	21	22
Actual: 86 | 62	Actual: 69 | 66	Actual: 86 | 64	Actual: 88 | 71	Actual: 88 | 74	Actual: 90 | 72	Actual: 90 | 73
Precip: 0.00	Precip: 0.47	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
23	24	25	26	27	28	29
Actual: 90 | 76	Actual: 88 | 72	Actual: 89 | 71	Actual: 89 | 65	Actual: 91 | 66	Actual: 93 | 68	Actual: 94 | 68
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
30	31					
Actual: 93 | 70	Actual: 92 | 70					
Precip: 0.00	Precip: 0.00					
Average: - | -	Average: - | -					
Precip: -	Precip: -					

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear, Mostly Cloudy Partly Sunny, Partly Cloudy Mostly Sunny, Cloudy, Rain, Snow, Hail Flurries, Thunderstorms, Hazy Fog, Sleet, '?' denotes 'chance of', Unknown

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

Data Category, Condition, High Temp., Lo Temp., Precip. (in inches), Daily Avg. Temp., Temps in °F (-60 -30 0 30 60 90 120)

Print This Calendar

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
May	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	82	74	67	72	65	56	96	73	54	29.60	29.55	29.48	10	8	2	16	6	21	0.00	
2	83	69	55	56	49	38	92	57	20	29.78	29.72	29.64	10	10	10	12	3	16	0.00	Rain
3	88	68	49	54	48	42	90	54	20	30.03	29.92	29.84	10	9	5	18	3	25	0.00	Rain
4	87	67	47	57	49	42	98	59	22	30.06	29.98	29.85	10	9	1	9	2	-	0.00	
5	93	74	54	56	51	48	87	47	22	29.92	29.87	29.83	10	10	10	15	7	20	0.00	
6	91	76	62	64	61	57	94	64	34	29.91	29.86	29.78	10	10	7	16	8	24	0.00	
7	92	80	69	70	67	65	89	67	42	29.92	29.85	29.77	10	9	7	15	11	21	0.00	
8	74	70	67	58	49	43	60	47	35	30.26	30.17	30.09	10	10	10	15	10	25	0.00	
9	71	68	66	57	47	43	61	46	40	30.20	30.13	30.05	10	10	10	15	7	17	0.00	
10	88	78	69	68	66	64	88	68	45	30.01	29.91	29.79	10	10	7	23	12	31	0.00	
11	92	82	71	70	66	59	90	64	37	29.92	29.86	29.79	10	9	5	23	11	31	0.00	
12	89	80	71	70	67	64	89	67	46	29.90	29.84	29.79	10	9	7	24	14	37	0.00	

13	89	81	73	70	68	64	82	67	43	30.02	29.94	29.84	10	10	7	20	13	30	0.00	
14	83	74	65	70	68	63	96	84	56	30.10	30.05	29.96	10	7	1	18	7	32	1.67	Rain , Thunderstorm
15	79	71	63	66	64	59	96	81	55	30.09	30.01	29.96	10	6	4	25	8	33	0.38	Rain , Thunderstorm
16	86	74	62	68	65	61	98	78	46	30.03	29.98	29.90	10	5	2	6	1	-	0.00	
17	89	78	66	73	68	63	100	79	47	30.06	29.99	29.91	10	7	1	29	2	41	0.47	Rain , Thunderstorm
18	86	75	64	69	65	63	96	75	51	30.02	29.96	29.85	10	7	5	8	3	-	0.00	
19	88	80	71	71	69	66	95	73	47	29.88	29.81	29.71	7	5	4	17	8	22	0.00	
20	88	81	74	72	71	70	89	76	55	29.85	29.80	29.76	7	6	4	14	9	21	0.00	Rain
21	90	81	72	72	70	67	95	71	48	29.98	29.92	29.85	10	6	4	13	7	18	0.00	
22	90	82	73	72	70	68	93	73	49	29.95	29.90	29.83	7	6	4	17	9	26	0.00	
23	90	83	76	73	71	68	86	69	51	29.95	29.90	29.87	10	6	4	16	10	24	0.00	Rain
24	88	80	72	72	68	61	94	69	42	29.97	29.92	29.86	7	5	3	16	8	22	0.00	
25	89	80	71	71	67	61	93	70	39	29.97	29.93	29.87	10	6	3	12	6	18	0.00	
26	89	77	65	71	65	55	96	68	31	30.05	29.98	29.92	10	7	4	7	1	-	0.00	
27	91	78	66	70	66	60	94	67	35	30.03	29.97	29.90	10	6	4	7	1	-	0.00	
28	93	80	68	69	65	59	93	62	32	29.96	29.90	29.81	10	6	3	6	1	-	0.00	
29	94	81	68	70	66	60	92	64	32	29.84	29.80	29.72	10	7	4	6	1	-	0.00	
30	93	82	70	72	67	63	91	65	38	29.85	29.81	29.77	10	9	5	12	2	-	0.00	Thunderstorm
31	92	81	70	71	67	62	94	65	36	29.98	29.92	29.88	10	9	4	8	3	-	0.00	

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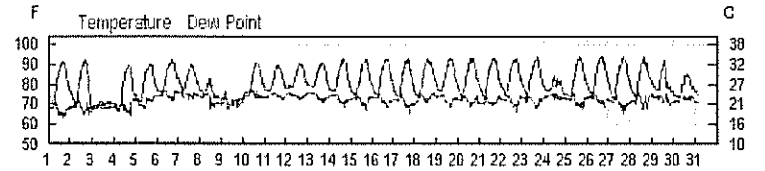
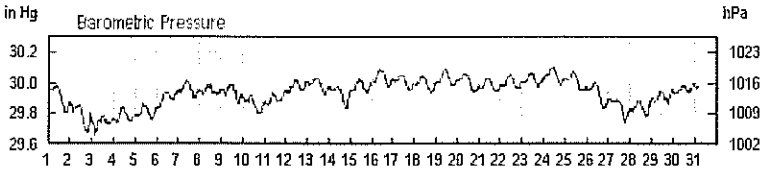
History for Hearne, TX

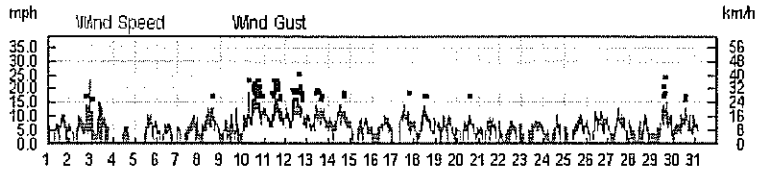
Month of June, 2010

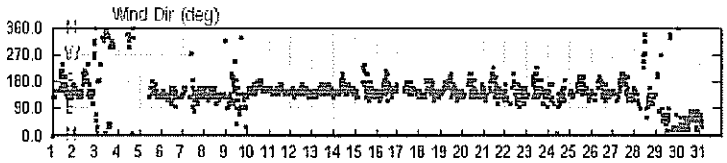
Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	**94** °F	**90** °F	**71** °F	
Mean Temperature	**85** °F	**82** °F	**70** °F	
Min Temperature	**78** °F	**74** °F	**67** °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	20	17	4	505
Growing Degree Days (base 50)	35	32	20	959
Dew Point:				
Dew Point	**77** °F	**72** °F	**63** °F	
Precipitation:				
Precipitation	**2.90** in	**0.14** in	**0.00** in	**4.22** in
Snowdepth	-	-	-	-
Wind:				
Wind	**23** mph	**5** mph	**0** mph	
Gust Wind	**29** mph	**18** mph	**12** mph	
Sea Level Pressure:				
Sea Level Pressure	**30.10** in	**29.93** in	**29.66** in	









Monthly Calendar Overview

« Previous Month « 2009 **June 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4	5
		Actual: 91 | 69	**Actual:** 92 | 69	**Actual:** 71 | 68	**Actual:** 89 | 67	**Actual:** 90 | 71
		Precip: 0.00	Precip: 0.47	Precip: 0.80	Precip: 0.00	Precip: 0.00
		Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -

			Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
6	7	8	9	10	11	12
Actual: 92 | 76	**Actual:** 90 | 76	**Actual:** 83 | 73	**Actual:** 77 | 70	**Actual:** 91 | 73	**Actual:** 90 | 77	**Actual:** 91 | 78
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 2.90	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
13	14	15	16	17	18	19
Actual: 91 | 76	**Actual:** 93 | 77	**Actual:** 93 | 74	**Actual:** 93 | 75	**Actual:** 93 | 74	**Actual:** 93 | 74	**Actual:** 93 | 76
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
20	21	22	23	24	25	26
Actual: 93 | 74	**Actual:** 93 | 73	**Actual:** 93 | 74	**Actual:** 93 | 73	**Actual:** 84 | 76	**Actual:** 94 | 74	**Actual:** 94 | 74
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.05	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
27	28	29	30			
Actual: 94 | 73	**Actual:** 93 | 72	**Actual:** 93 | 77	**Actual:** 85 | 73			
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00			
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -			
Precip: -	Precip: -	Precip: -	Precip: -			

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear · Mostly Cloudy Partly Sunny · Partly Cloudy Mostly Sunny · Cloudy · Rain · Snow · Hail Flurries · Thunderstorms · Hazy Fog · Sleet · '?' denotes 'chance of' · Unknown

Actual: 90 | 58 — Data Category, Condition, High Temp., Lo Temp.
Precip: 0.00 — Precip. (in Inches)
Average: 71 | 53 — Daily Avg. Temp.
Precip: 0.03 — Temps in °F (-60 -30 0 30 60 90 120)

Print This Calendar

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
June	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	91	80	69	71	67	63	94	64	39	29.99	29.92	29.81	10	10	5	10	3	16	0.00	
2	92	81	69	73	69	65	95	69	41	29.87	29.79	29.68	10	8	2	23	5	29	0.47	Rain , Thunderstorm
3	71	70	68	70	69	67	96	94	89	29.78	29.74	29.66	10	7	2	15	5	23	0.80	Rain , Thunderstorm
4	89	78	67	71	68	64	97	74	44	29.84	29.78	29.74	10	6	0	6	0	-	0.00	Fog
5	90	80	71	73	71	68	95	74	54	29.86	29.80	29.76	10	8	4	10	2	-	0.00	
6	92	84	76	77	75	72	95	76	52	29.93	29.89	29.83	7	4	2	7	4	-	0.00	
7	90	83	76	76	75	72	92	77	57	30.02	29.96	29.90	7	4	3	10	4	-	0.00	
8	83	78	73	76	73	68	94	86	63	30.00	29.95	29.92	10	7	5	13	5	18	0.00	Rain
9	77	74	70	74	70	68	96	94	91	30.00	29.94	29.86	10	6	1	13	3	17	2.90	Rain , Thunderstorm
10	91	82	73	77	75	71	96	80	54	29.92	29.87	29.80	7	4	3	18	8	24	0.00	Rain
11	90	84	77	77	74	72	91	76	59	29.93	29.89	29.85	7	5	3	17	10	23	0.00	
12	91	84	78	76	75	73	91	75	56	30.02	29.97	29.93	10	5	4	16	10	25	0.00	Rain
13	91	84	78	76	75	71	91	73	53	30.03	30.00	29.92	7	5	3	14	9	20	0.00	
14	93	85	77	76	73	68	93	72	46	29.98	29.94	29.83	7	5	3	14	8	21	0.00	Rain
15	93	84	74	75	72	67	96	72	42	30.03	29.98	29.93	7	5	2	9	4	-	0.00	
16	93	84	75	76	73	68	95	71	44	30.09	30.03	29.98	10	7	2	10	4	-	0.00	
17	93	84	74	76	72	66	95	72	44	30.05	30.02	29.96	10	6	0	14	4	18	0.00	Fog

18	93	84	74	76	73	70	93	71	49	30.05	30.00	29.93	10	10	7	14	6	18	0.00	
19	93	84	76	75	73	69	93	71	44	30.09	30.03	29.99	10	9	7	10	6	-	0.00	
20	93	84	74	75	72	69	94	69	45	30.06	30.01	29.93	10	10	7	10	4	17	0.00	
21	93	83	73	74	71	70	92	69	47	30.04	29.99	29.94	10	10	10	9	4	-	0.00	
22	93	84	74	75	72	67	92	67	42	30.06	30.00	29.97	10	10	10	8	3	-	0.00	
23	93	83	73	74	72	68	94	69	43	30.07	30.02	29.98	10	10	7	8	3	-	0.00	
24	84	80	76	76	74	72	91	83	68	30.10	30.05	29.99	10	10	5	10	3	-	0.05	Rain
25	94	84	74	76	72	68	95	71	44	30.08	30.01	29.94	10	10	5	10	3	16	0.00	
26	94	84	74	75	73	69	95	69	46	30.01	29.94	29.83	10	10	5	12	6	17	0.00	
27	94	84	73	74	71	66	94	67	39	29.90	29.84	29.74	10	10	7	13	5	-	0.00	
28	93	82	72	76	72	68	94	70	43	29.88	29.83	29.78	10	8	5	10	4	17	0.00	
29	93	85	77	75	73	70	91	78	49	29.94	29.90	29.86	10	7	4	15	4	24	0.00	Rain , Thunderstorm
30	85	79	73	74	73	71	92	81	66	29.99	29.95	29.92	7	6	4	13	5	17	0.00	Rain

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Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: DM BRA	
Date & Time: 9 Aug 10 0940'	County Name: Robertson
Stream Name: Campbells Creek	
Segment No. or nearest downstream Segment No.: 1242	
Description of Site: 49917 Upper reach of this creek. Private property	

At any point during the Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the use for the water body the investigator should stop conducting the UAA.

A. Stream Characteristics:

1. Check the following channel flow status that applies.

☑ dry ☐ no flow ☐ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:

☑ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.

☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.

☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.

☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.

☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. N/A 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 90°F 32.2 °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.)

_____ Forest	_____ Urban	_____ Rip rap
_____ Shrub dominated corridor	RL 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):

Upper reach of Drainage area. No channel. Slight depression in pasture leading to stock pond. Well off of County road on private property #799-800

8. Dominant Primary Substrate

☐Cobble ☐Sand ☐Silt ☑Mud/Clay ☐Gravel ☐Bedrock ☐Rip rap ☐ Concrete

Stream Name_____ Site: _____
Date: _____ Time: _____

B. Primary Contact Water Recreation Evaluation:

- Primary contact recreation draft definition: Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, and whitewater kayaking, canoeing, and rafting, involving a significant risk of ingestion of water.

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?
☐ Yes ☑ No primary contact recreation activities were observed

a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).

☐ Wading-Children ☐ Tubing ☑ No primary contact activities that commonly occur were observed
☐ Wading-Adults ☐ Surfing
☐ Swimming ☐ Whitewater-kayaking, canoeing, rafting
☐ Water skiing ☐ Other: _____
☐ Diving ☐ frequent public swimming-created by publicly owned land or commercial operations

b. Check the number of individuals observed at the site: ☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Water in mouth or nose of the individual ☐ Primary touch: Individual's body (or portion) immersed in water
☐ Secondary touch: fishing, pets and related contact with water ☐ Individual is in a boat touching water
☐ Individual is on shore near water within 8 meters (25ft) of water ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☑ Not applicable

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
No Water / No channel #199-800, with exception of stock pond at lower reach of transect

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
Private pasture well off of public roads. #199-800

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: _____

Date: _____ Time: _____

b. Check the number of individuals observed at the site.
☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body well away from water between 8 and 30 meters (100 ft)

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
No Water/No channel, #199-800 except for stock pond at lower reach of transect

3. If secondary contact recreation activities are observed, how often do water recreational activities occur that do not involve a significant risk of water ingestion? ☐ frequently ☐ infrequently
Please describe how often the activities occur? ☐ Unknown ☐ Never ☐ Daily ☐ Monthly ☐ Yearly

4. If infrequently, what is the reason? ☐ physical characteristics of the water body ☐ limited public access ☐ other
If other, list reasons: _____

5. Describe the physical characteristics of the water body that hinders the frequency of secondary contact recreation (depth, etc.) (Attach photos or depth measurements, etc. for documentation).
No Water/No channel #199-800
Same as above

6. Describe why there is limited public access (e.g. lack of roads, river or stream banks overgrown, etc.) (Attach photos, maps, etc. for documentation).
Private Property, No public access

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.

_____

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 801 Downstream 802 Left Bank 803 Right Bank 804

Photos #s (150 meters) Upstream 805 Downstream 806 Left Bank 807 Right Bank 808

Photos #s (~~300~~ meters) Upstream 809 Downstream 810 Left Bank 811 Right Bank 812

* 240

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	* below		
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	— Mud/Top of stock pond
180 meters	— " " " " "
210 meters	— " " " " "
240 meters	N/W Stock Pond
270 meters	N/W Stock Pond
300 meters	N/W Stock Pond
Average	

Stock Pond ≈ 142 m across

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

c) Stream width - Measure (1) the width at one point which represents the typical average width of the 300 meter reach; (2) the width at the narrowest point of the stream within the 300 meter reach; and (3) the width at the widest point of the stream within the 300 meter reach.

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	5
Width at narrowest point of the stream within 300 meter reach	3.5
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: Stock Pond on Private Property - NO public access

2. Non-wadeable Streams

If accessible, take 10 width measurements which represent typical widths of the 300 meter reach. If the water is too deep and not accessible record the estimated average width of the water body.

Also, take photos facing upstream, downstream, left bank, and right bank at .
Photos #s (30 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (150 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

# Measurements	Width (meters)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

☐ Drinking or water in mouth
☐ Bathing
☐ Walking
☐ Jogging/running
☐ Bicycling
☐ Standing
☐ Sitting
☐ Lying down/sleeping
☐ Playing on shoreline
☐ Picnicking
☐ Motorcycle/ATV
☐ Hunting/Trapping
☐ Wildlife watching
☑ None
☐ Other: _____

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☑ Yes ☐ No (If yes, please provide supporting documentation and photos.)
Comments: Stock Pond #810

3. Check any channel obstructions that apply (Attach photos).

☐ Culverts ☐ Fences ☐ Log jams ☐ Rip rap ☐ Water control structure
☐ Barbed wire ☑ Dams ☐ Thick vegetation ☐ Low bridges ☐ None
☐ Utility pipe ☐ Other (specify):_____

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest).

☐ Campgrounds
☐ Playgrounds
☐ Rural area
☐ Residential
☐ National forests
☐ Urban/suburban location
☐ Golf Course
☐ Sports Field
☐ Stairs/walkway
☐ Boating access (ramps)
☐ Beach
☐ Bridge crossing
☐ Commercial boating
☐ Trails/paths (hiking/biking)
☐ Paved parking lot
☐ Unimproved parking lot
☐ Roads (paved/unpaved)
☐ Populated area
☐ Docks or rafts
☐ Commercial outfitter
☐ Nearby school
☐ Power Line Corridor
☐ Parks (national/city/county/state)
☐ Public Property
☐ Other:_____
☑ None of the Above

Comments:_____

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).

☑ Private Property
☐ No trespass sign
☐ Wildlife
☐ Steep slopes
☑ No public access
☐ No roads
☑ Fence
☐ Barge/ship traffic
☐ Industrial
☐ None of the Above
☐ Other:_____

Comments: Private Property

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:_____

Stream Name _____ Site: _____
Date: _____ Time: _____

7. Check all water characteristics that apply (Attach photos).
Aquatic Vegetation: ☐ absent ☐ rare ☐ common ☑ abundant
Algae Cover: ☐ absent ☐ rare ☑ common ☐ abundant
Odor: ☑ none ☐ rare ☐ common ☐ abundant
Color: ☑ clear ☐ green ☐ red ☐ brown ☐ black
Bottom Deposit: ☑ sludge ☐ solids ☐ fine sediments ☐ none ☐ other
Water Surface: ☑ clear ☐ scum ☐ foam ☐ debris ☐ oil
Other: # 813

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: Pasture

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).

Upper reach of drainage area, No channel. Slight depression is dammed to retain water for livestock.

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream:_____ Date:_____

Site:_____ Site

Description:_____

Time Begin:_____ Time End:_____ Meter Type:_____

Observers:_____ Stream Width*:_____ Section Width (W):_____

Observations:_____

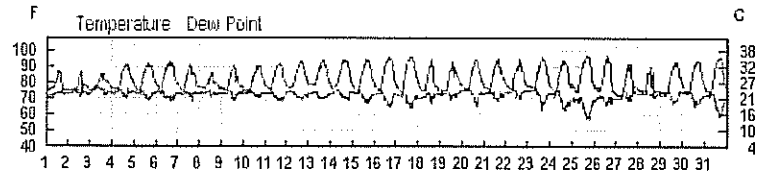
Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V)		Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
			At Point (ft/s)(m/s)	Average (ft/s)(m/s)	

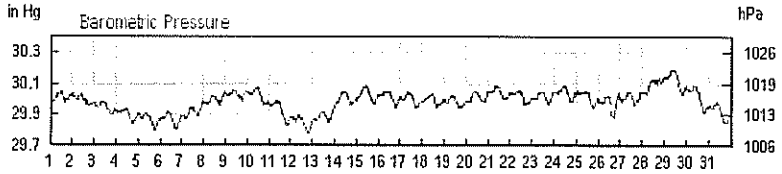
History for Hearne, TX

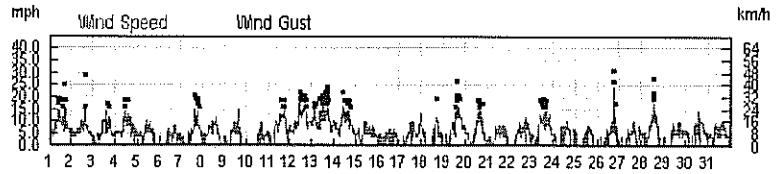
Month of July, 2010

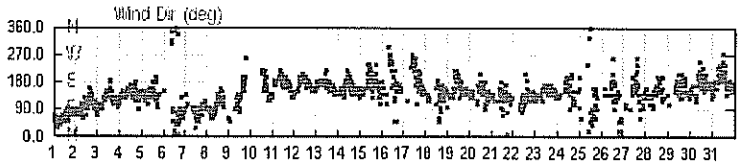
Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	**97** °F	**93** °F	**85** °F	
Mean Temperature	**86** °F	**84** °F	**80** °F	
Min Temperature	**78** °F	**75** °F	**72** °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	21	19	15	579
Growing Degree Days (base 50)	36	34	30	1047
Dew Point:				
Dew Point	**77** °F	**72** °F	**58** °F	
Precipitation:				
Precipitation	**0.46** in	**0.02** in	**0.00** in	**0.65** in
Snowdepth	-	-	-	-
Wind:				
Wind	**24** mph	**4** mph	**0** mph	
Gust Wind	**34** mph	**18** mph	**9** mph	
Sea Level Pressure:				
Sea Level Pressure	**30.20** in	**29.98** in	**29.78** in	









Monthly Calendar Overview

« Previous Month « 2009 **July 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
				Actual: 87 | 75	**Actual:** 87 | 75	**Actual:** 85 | 75
				Precip: 0.07	Precip: 0.46	Precip: 0.00

				Average: - | - Precip: -	Average: - | - Precip: -	Average: - | - Precip: -
4 Actual: 91 | 76 Precip: 0.00 Average: - | - Precip: -	5 Actual: 92 | 74 Precip: 0.00 Average: - | - Precip: -	6 Actual: 93 | 75 Precip: 0.00 Average: - | - Precip: -	7 Actual: 91 | 74 Precip: 0.00 Average: - | - Precip: -	8 Actual: 86 | 76 Precip: 0.00 Average: - | - Precip: -	9 Actual: 91 | 75 Precip: 0.00 Average: - | - Precip: -	10 Actual: 90 | 74 Precip: 0.00 Average: - | - Precip: -
11 Actual: 92 | 75 Precip: 0.00 Average: - | - Precip: -	12 Actual: 93 | 76 Precip: 0.00 Average: - | - Precip: -	13 Actual: 94 | 78 Precip: 0.00 Average: - | - Precip: -	14 Actual: 94 | 76 Precip: 0.00 Average: - | - Precip: -	15 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	16 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	17 Actual: 96 | 73 Precip: 0.00 Average: - | - Precip: -
18 Actual: 95 | 74 Precip: 0.00 Average: - | - Precip: -	19 Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	20 Actual: 95 | 76 Precip: 0.00 Average: - | - Precip: -	21 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	22 Actual: 95 | 76 Precip: 0.00 Average: - | - Precip: -	23 Actual: 95 | 77 Precip: 0.00 Average: - | - Precip: -	24 Actual: 94 | 73 Precip: 0.00 Average: - | - Precip: -
25 Actual: 97 | 74 Precip: 0.00 Average: - | - Precip: -	26 Actual: 97 | 75 Precip: 0.00 Average: - | - Precip: -	27 Actual: 92 | 72 Precip: 0.01 Average: - | - Precip: -	28 Actual: 90 | 74 Precip: 0.11 Average: - | - Precip: -	29 Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	30 Actual: 94 | 74 Precip: 0.00 Average: - | - Precip: -	31 Actual: 96 | 73 Precip: 0.00 Average: - | - Precip: -

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear · Mostly Cloudy Partly Sunny · Partly Cloudy Mostly Sunny · Cloudy · Rain · Snow · Hail Flurries · Thunderstorms · Hazy Fog · Sleet · '?' denotes 'chance of' · Unknown

Actual: 90 | 58 Precip: 0.00 Average: 71 | 53 Precip: 0.03

Data Category · Condition · High Temp. · Lo Temp. · Precip. (in inches) · Daily Avg. Temp. · Temps in °F

-90 -30 0 30 60 90 120

Print This Calendar

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
July	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	87	81	75	75	73	71	94	80	64	30.04	30.00	29.97	10	6	4	16	8	25	0.07	Rain
2	87	81	75	76	74	72	94	88	63	30.03	29.99	29.95	10	7	4	16	6	29	0.46	Rain
3	85	80	75	77	75	72	95	85	68	29.98	29.94	29.90	10	5	3	14	4	20	0.00	Rain
4	91	84	76	77	74	71	94	75	51	29.94	29.90	29.84	7	5	3	14	7	18	0.00	Rain
5	92	83	74	76	73	70	95	74	48	29.91	29.87	29.80	7	5	3	10	5	9	0.00	
6	93	84	75	75	72	69	94	69	44	29.92	29.87	29.80	7	5	3	8	2	-	0.00	
7	91	82	74	75	73	69	94	75	53	29.94	29.91	29.87	7	5	4	15	3	25	0.00	
8	86	81	76	75	74	72	90	81	63	30.02	29.98	29.95	10	6	3	12	5	16	0.00	Rain
9	91	83	75	76	73	70	94	79	51	30.06	30.02	29.98	7	5	3	15	2	18	0.00	Rain
10	90	82	74	75	73	71	96	77	53	30.08	30.02	29.96	7	4	3	9	1	-	0.00	
11	92	84	75	75	72	69	94	72	46	29.99	29.94	29.83	7	5	4	15	5	20	0.00	
12	93	84	76	75	73	70	92	70	47	29.90	29.86	29.78	7	5	4	21	9	22	0.00	
13	94	86	78	75	73	71	86	68	46	29.92	29.88	29.85	7	4	3	18	11	24	0.00	
14	94	85	76	76	73	70	91	69	46	30.05	30.00	29.95	7	5	3	16	9	22	0.00	
15	95	85	75	76	72	68	95	69	41	30.09	30.02	29.96	7	5	2	10	5	16	0.00	
16	95	85	75	75	71	66	94	67	38	30.06	30.02	29.94	10	6	3	7	2	-	0.00	Rain
17	96	84	73	74	71	65	94	63	35	30.05	30.00	29.94	10	9	3	10	2	16	0.00	

18	95	84	74	75	72	68	90	73	42	30.03	29.99	29.94	10	10	7	12	5	20	0.00	Thunderstorm
19	93	84	74	76	73	70	96	76	48	30.02	29.98	29.94	10	8	0	18	4	26	0.00	Fog
20	95	86	76	76	73	65	95	73	39	30.05	30.01	29.97	10	9	5	15	6	18	0.00	
21	95	85	75	75	73	69	95	71	42	30.09	30.05	29.99	10	9	5	8	2	16	0.00	Rain
22	95	86	76	76	74	70	94	75	45	30.06	30.01	29.96	10	9	7	12	3	20	0.00	
23	95	86	77	77	73	64	94	70	35	30.05	30.01	29.96	10	9	5	14	4	20	0.00	
24	94	84	73	76	71	63	96	69	37	30.09	30.04	29.98	10	9	4	10	3	-	0.00	
25	97	86	74	72	67	58	88	58	26	30.06	30.02	29.94	10	10	7	8	2	-	0.00	Rain
26	97	86	75	73	70	67	87	67	38	30.02	29.97	29.88	10	7	4	24	2	34	0.00	Rain , Thunderstorm
27	92	82	72	76	72	69	95	79	46	30.05	30.00	29.96	10	6	4	10	2	-	0.01	Rain , Thunderstorm
28	90	82	74	76	74	71	95	83	56	30.14	30.09	30.03	10	9	3	17	6	31	0.11	Rain , Thunderstorm
29	93	84	74	77	72	68	96	74	45	30.20	30.14	30.03	10	9	5	10	3	-	0.00	
30	94	84	74	76	72	66	95	71	41	30.09	30.04	29.91	10	9	2	14	5	18	0.00	
31	96	84	73	74	69	59	94	66	29	29.98	29.93	29.85	10	9	5	10	4	-	0.00	

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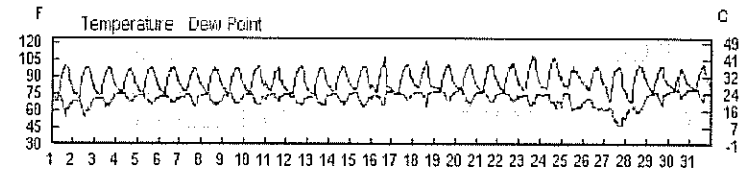
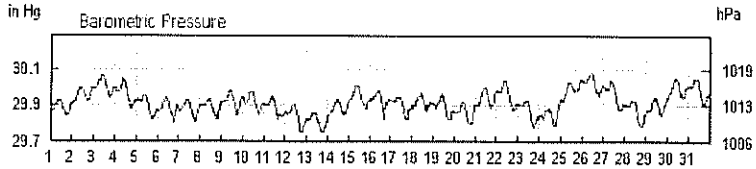
History for Hearne, TX

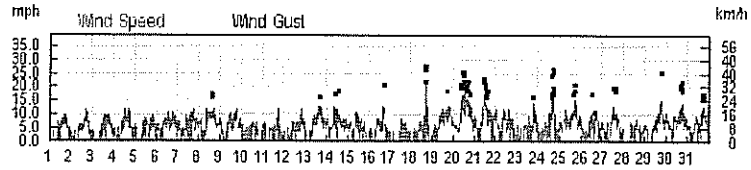
Month of August, 2010

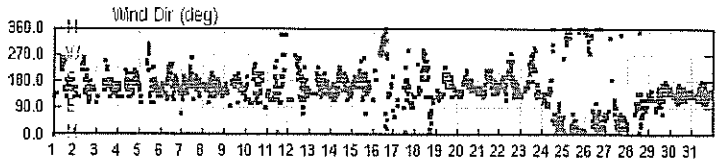
Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	**109** °F	**101** °F	**97** °F	
Mean Tempereture	**94** °F	**88** °F	**84** °F	
Min Temperature	**81** °F	**76** °F	**68** °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	29	24	19	730
Growing Degree Days (base 50)	44	38	34	1189
Dew Point:				
Dew Point	**81** °F	**71** °F	**48** °F	
Precipitation:				
Precipitation	**0.00** in	**0.00** in	**0.00** in	**0.00** in
Snowdepth	-	-	-	-
Wind:				
Wind	**21** mph	**4** mph	**0** mph	
Gust Wind	**29** mph	**18** mph	**9** mph	
Sea Level Pressure:				
Sea Level Pressure	**30.09** in	**29.92** in	**29.75** in	









Monthly Calendar Overview

« Previous Month | « 2009 | **August 2010** | 2011 » | Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
Actual: 100 | 69	**Actual:** 99 | 71	**Actual:** 98 | 73	**Actual:** 97 | 76	**Actual:** 98 | 75	**Actual:** 98 | 75	**Actual:** 98 | 78
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -

8	9	10	11	12	13	14
Actual: 98 | 77	**Actual:** 98 | 74	**Actual:** 100 | 75	**Actual:** 99 | 78	**Actual:** 99 | 75	**Actual:** 99 | 75	**Actual:** 100 | 77
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
15	16	17	18	19	20	21
Actual: 100 | 79	**Actual:** 109 | 76	**Actual:** 101 | 76	**Actual:** 104 | 81	**Actual:** 101 | 79	**Actual:** 101 | 80	**Actual:** 102 | 77
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
22	23	24	25	26	27	28
Actual: 103 | 77	**Actual:** 109 | 79	**Actual:** 108 | 79	**Actual:** 100 | 80	**Actual:** 100 | 79	**Actual:** 99 | 69	**Actual:** 101 | 68
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
29	30	31				
Actual: 100 | 77	**Actual:** 99 | 81	**Actual:** 101 | 80				
Precip: 0.00	Precip: 0.00	Precip: 0.00				
Average: - | -	**Average:** - | -	**Average:** - | -				
Precip: -	Precip: -	Precip: -				

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear · Mostly Cloudy Partly Sunny · Partly Cloudy Mostly Sunny · Cloudy · Rain · Snow · Hail Flurries · Thunderstorms · Hazy Fog · Sleet · '?' denotes 'chance of' · Unknown

Print This Calendar

Actual: 90 | 58 — Data Category, Condition, High Temp., Lo Temp.
Precip: 0.00 — Precip. (in inches)
Average: 71 | 53 — Daily Avg. Temp.
Precip: 0.03 — Temps in °F (-60 -30 0 30 60 90 120)

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
August	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	100	84	69	74	67	55	95	60	22	29.93	29.89	29.84	10	9	7	9	2	-	0.00	
2	99	85	71	70	64	55	90	55	25	30.00	29.96	29.91	10	9	4	12	2	16	0.00	
3	98	86	73	73	69	64	94	60	32	30.08	30.01	29.95	10	8	4	9	2	16	0.00	
4	97	86	76	77	73	68	94	66	38	30.05	29.98	29.89	7	6	3	12	4	17	0.00	Rain
5	98	86	75	74	71	65	92	62	34	29.96	29.91	29.83	7	5	3	8	3	-	0.00	
6	98	86	75	74	71	67	92	63	36	29.95	29.89	29.81	10	8	4	10	5	-	0.00	
7	98	88	78	75	71	64	86	60	33	29.94	29.88	29.81	10	10	10	12	5	16	0.00	
8	98	88	77	76	71	65	92	63	34	29.94	29.90	29.83	10	10	10	12	6	20	0.00	
9	98	86	74	76	71	66	95	63	34	29.99	29.93	29.85	10	10	7	12	5	16	0.00	
10	100	88	75	77	72	65	94	64	33	29.98	29.93	29.85	10	10	3	7	2	9	0.00	
11	99	88	78	76	73	68	89	64	36	29.96	29.90	29.83	10	10	10	12	3	24	0.00	Rain , Thunderstorm
12	99	87	75	76	71	65	92	63	33	29.90	29.85	29.75	10	10	7	9	2	-	0.00	
13	99	87	75	75	70	65	91	62	33	29.87	29.82	29.76	10	10	10	13	4	17	0.00	
14	100	88	77	76	72	66	92	62	33	29.94	29.88	29.83	10	10	7	13	6	18	0.00	
15	100	90	79	77	72	63	90	62	30	30.02	29.96	29.89	10	10	10	10	5	-	0.00	
16	109	92	76	79	72	65	90	64	26	29.99	29.93	29.83	10	10	10	13	3	23	0.00	
17	101	88	76	78	75	70	96	69	36	29.95	29.91	29.83	10	9	5	8	1	-	0.00	
18	104	92	81	78	75	65	88	65	28	29.97	29.92	29.87	10	10	10	21	3	29	0.00	Thunderstorm
19	101	90	79	79	75	69	94	67	35	29.97	29.90	29.83	10	10	10	13	4	21	0.00	
20	101	90	80	80	74	66	95	62	33	29.93	29.86	29.80	10	10	7	17	8	25	0.00	
21	102	90	77	79	74	68	96	64	33	30.01	29.94	29.89	10	10	10	17	7	23	0.00	

22	103	90	77	78	74	69	94	62	34	30.04	29.97	29.88	10	10	7	12	6	-	0.00
23	109	94	79	74	71	65	85	54	26	29.93	29.88	29.77	10	10	10	14	2	22	0.00
24	108	94	79	77	71	63	88	53	24	29.90	29.85	29.78	10	10	10	17	4	26	0.00
25	100	90	80	77	69	62	86	54	30	30.04	29.99	29.93	10	10	10	15	7	21	0.00
26	100	90	79	72	67	62	76	50	29	30.09	30.04	29.96	10	10	10	12	5	18	0.00
27	99	84	69	64	57	48	83	42	17	30.04	29.96	29.88	10	10	10	13	5	21	0.00
28	101	84	68	65	61	54	82	49	25	29.94	29.89	29.79	10	10	10	8	1	-	0.00
29	100	88	77	77	74	66	92	65	33	29.95	29.89	29.85	10	10	10	15	5	29	0.00
30	99	90	81	81	77	72	93	73	42	30.06	30.00	29.94	10	10	10	14	7	22	0.00
31	101	90	80	80	76	68	96	70	33	30.05	30.00	29.91	10	10	7	12	5	17	0.00

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Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: Matt Baeck Jeremy Nickolai	
Date & Time: 21 May 10 1130	County Name: ~~Robinson~~ Robertson
Stream Name: Campbells	
Segment No. or nearest downstream Segment No.: 1242 I	
Description of Site: 20561 downstream from Jack Rabbit lane	

At any point during the Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the use for the water body the investigator should stop conducting the UAA.

A. Stream Characteristics:

1. Check the following channel flow status that applies.

☐ dry ☐ no flow ☐ low ☑ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:

☐ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.

☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.

☑ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.

☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.

☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. 0.22 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 88 °F 31°C Water Temp 24 °C 75°F

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	LR 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):

Net wire fence between road and private property

8. Dominant Primary Substrate

☐Cobble ☑Sand ☐Silt ☐Mud/Clay ☐Gravel ☐Bedrock ☐Rip rap ☐ Concrete

Stream Name_____ Site: _____
Date: _____ Time: _____

B. Primary Contact Water Recreation Evaluation:

- Primary contact recreation draft definition: Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, and whitewater kayaking, canoeing, and rafting, involving a significant risk of ingestion of water.

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?
☐ Yes ☑ No primary contact recreation activities were observed

a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).

☐ Wading-Children ☐ Tubing ☑ No primary contact activities that commonly occur were observed
☐ Wading-Adults ☐ Surfing
☐ Swimming ☐ Whitewater-kayaking, canoeing, rafting
☐ Water skiing ☐ Other: _____
☐ Diving ☐ frequent public swimming-created by publicly owned land or commercial operations

b. Check the number of individuals observed at the site: ☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Water in mouth or nose of the individual ☐ Primary touch: Individual's body (or portion) immersed in water
☐ Secondary touch: fishing, pets and related contact with water ☐ Individual is in a boat touching water
☐ Individual is on shore near water within 8 meters (25ft) of water ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☒ Not applicable

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
Very low flow, narrow and shallow

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: _____

Date: _____ Time: _____

b. Check the number of individuals observed at the site.
☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body well away from water between 8 and 30 meters (100 ft)

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
Low flow, narrow and very shallow

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).
Low flow, narrow and very shallow

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).
Netwire fence along road. Private property on both sides of road.

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.

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 726 Downstream 727 Left Bank 728 Right Bank 729

Photos #s (150 meters) Upstream 730 Downstream 731 Left Bank 732 Right Bank 733

Photos #s (300 meters) Upstream 734 Downstream 735 Left Bank 736 Right Bank 737

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	10	2	0.75
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	0.51
60 meters	0.26
90 meters	0.12
120 meters	0.15
150 meters	0.25
180 meters	0.33
210 meters	0.16
240 meters	0.44
270 meters	0.09
300 meters	0.17
Average	0.25

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

c) Stream width - Measure (1) the width at one point which represents the typical average width of the 300 meter reach; (2) the width at the narrowest point of the stream within the 300 meter reach; and (3) the width at the widest point of the stream within the 300 meter reach.

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	1.5
Width at narrowest point of the stream within 300 meter reach	0.65
Width at the widest point of the stream within 300 meter reach	2.3

d) Is there sufficient water within a 300 meter stream reach during base flow conditions to support primary contact recreation? ☐ Yes ☑ No
COMMENTS:

_____
_____

2. Non-wadeable Streams
If accessible, take 10 width measurements which represent typical widths of the 300 meter reach. If the water is too deep and not accessible record the estimated average width of the water body.

Also, take photos facing upstream, downstream, left bank, and right bank at .
Photos #s (30 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (150 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

# Measurements	Width (meters)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

☐ Drinking or water in mouth
☐ Bathing
☐ Walking
☐ Jogging/running
☐ Bicycling
☐ Standing
☐ Sitting
☐ Lying down/sleeping
☐ Playing on shoreline
☐ Picnicking
☐ Motorcycle/ATV
☐ Hunting/Trapping
☐ Wildlife watching
☑ None
☐ Other: _____

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☐ Yes ☑ No (If yes, please provide supporting documentation and photos.)
Comments: _____

3. Check any channel obstructions that apply (Attach photos).

☑ Culverts ☑ Fences ☐ Log jams ☐ Rip rap ☐ Water control structure
☐ Barbed wire ☐ Dams ☐ Thick vegetation ☐ Low bridges ☐ None
☐ Utility pipe ☑ Other (specify): Water Gap below bridge

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: Private Property on both sides of road

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).

☑ Private Property
☑ No trespass sign
☐ Wildlife
☐ Steep slopes
☑ No public access
☐ No roads
☑ Fence
☐ Barge/ship traffic
☐ Industrial
☐ None of the Above
☐ Other: _____

Comments: _____

6. Check any indications of human use (Attach photos).

☐ Roads
☐ Rope swings
☐ Dock/platform
☐ Foot paths/prints
☐ Other: _____
☐ RV/ATV Tracks
☐ Camping Sites
☐ Fire pit/ring
☐ Fishing Tackle
☐ NPDES Discharge
☐ Gates on corridor
☐ Children's toys
☐ Remnant's of Kid's play
☐ Organized event
☑ No Human Presence

Comments: _____

Stream Name_____ Site: _____
Date: _____ Time: _____

7. Check all water characteristics that apply (Attach photos).
Aquatic Vegetation: ☐ absent ☑ rare ☐ common ☐ abundant
Algae Cover: ☐ absent ☑ rare ☐ common ☐ abundant
Odor: ☑ none ☐ rare ☐ common ☐ abundant
Color: ☐ clear ☐ green ☐ red ☑ brown ☐ black
Bottom Deposit: ☐ sludge ☐ solids ☑ fine sediments ☐ none ☐ other
Water Surface: ☑ clear ☐ scum ☐ foam ☐ debris ☐ oil
Other:

8. Vertebrates Observed within 300 meter reach

Snakes	☑ None	☐ slight presence	☐ moderate presence	☐ large presence
Water Dependent Birds	☑ None	☐ slight presence	☐ moderate presence	☐ large presence
Alligators	☑ None	☐ slight presence	☐ moderate presence	☐ large presence

Comments: _____

9. Mammals Observed within 300 meter reach

Wild	☑ None	☐ slight presence	☐ moderate presence	☐ large presence
Domesticated Pets	☑ None	☐ slight presence	☐ moderate presence	☐ large presence
Livestock	☐ None	☐ slight presence	☐ moderate presence	☑ large presence
Feral Hogs	☑ None	☐ slight presence	☐ moderate presence	☐ large presence

Comments: _____

10. Evidence of wild animals or evidence of birds, cattle, hogs, etc.
☑ Tracks ☑ Fecal droppings ☐ Bird nests

11. Garbage Observed
Large garbage in the channel ☐ None ☐ Rare ☑ Common ☐ Abundant
Small garbage in the channel ☐ None ☐ Rare ☑ Common ☐ Abundant
Bank Garbage ☐ None ☐ Rare ☑ Common ☐ Abundant
Briefly describe the kinds of garbage observed: Tires, batteries, household garbage dumped from bridge. Tires scattered along reach

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).
None

Field Data Sheet - Basic RUAA Survey
Stream Flow (Discharge) Measurement

Stream:_____ Date:_____
Site:_____ Site
Description:_____
Time Begin:_____ Time End:_____ Meter Type:_____
Observers:_____ Stream Width*:_____ Section Width (W):_____
Observations:_____

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V)		Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
			At Point (ft/s)(m/s)	Average (ft/s)(m/s)	

: Mon May 24 2010

20561-21MAY10.WAD
2010/05/21 11:44:10

JN

FlowTracker
P879
3.7
2.30
0.0%

(English Units)
ft
ft/s
ft^2
cfs

Accuracy	1.0%	1.0%
Depth	0.6%	3.3%
Velocity	0.9%	7.3%
Width	0.2%	0.2%
Method	2.9%	-
# Stations	4.2%	-
Overall	**5.3%**	**8.1%**

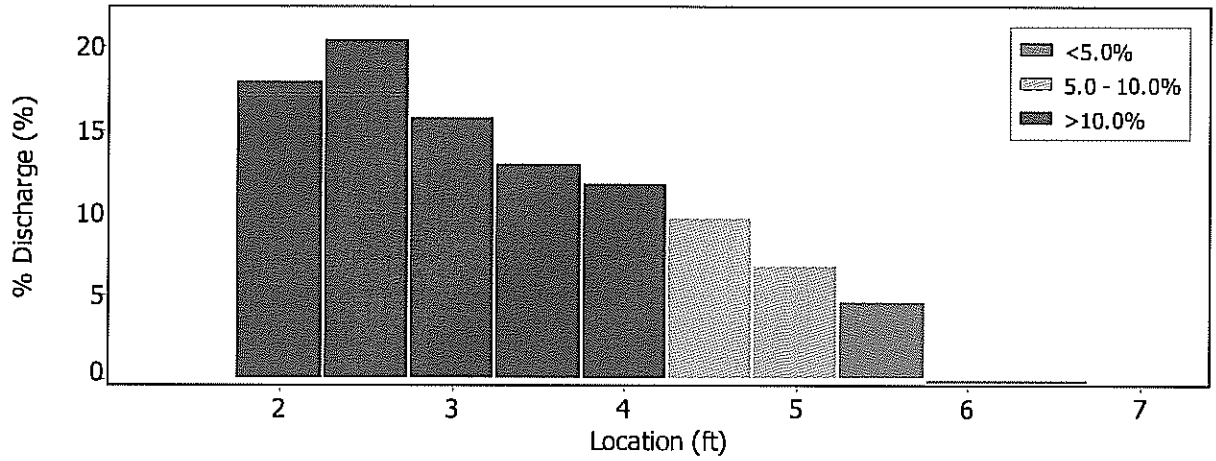
20	12
LEW	6.400
32.9 dB	2.980
74.98 °F	0.466
Mid-Section	0.0723
	0.2155

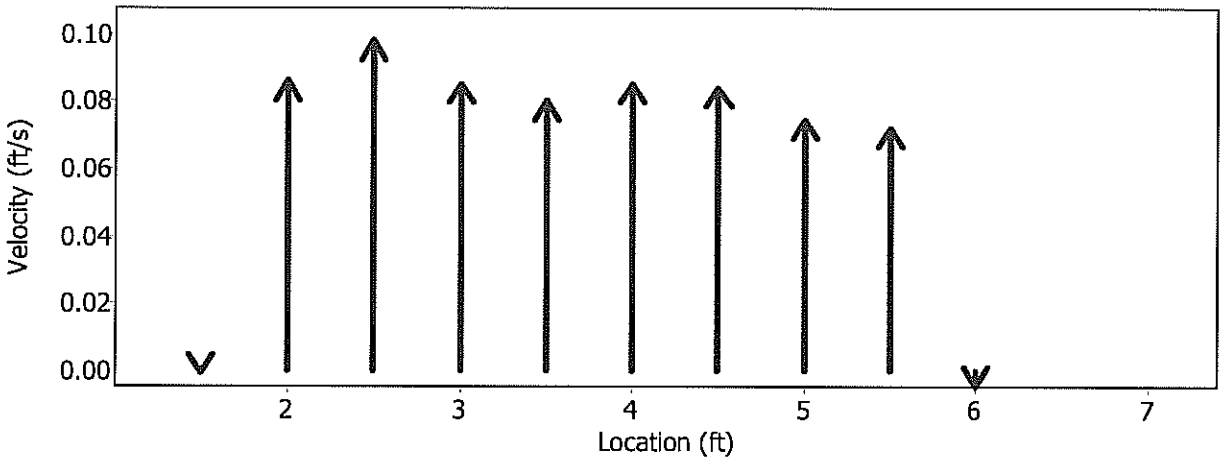
				Depth								
0	11:44	1.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
1	*11:44*	*1.50*	*0.6*	*0.500*	*0.6*	*0.200*	*-0.0007*	*1.00*	*-0.0007*	*0.250*	*-0.0002*	*-0.1*
2	11:45	2.00	0.6	0.900	0.6	0.360	0.0860	1.00	0.0860	0.450	0.0387	17.9
3	11:46	2.50	0.6	0.900	0.6	0.360	0.0981	1.00	0.0981	0.450	0.0441	20.5
4	11:47	3.00	0.6	0.800	0.6	0.320	0.0853	1.00	0.0853	0.400	0.0341	15.8
5	11:47	3.50	0.6	0.700	0.6	0.280	0.0801	1.00	0.0801	0.350	0.0280	13.0
6	11:48	4.00	0.6	0.600	0.6	0.240	0.0853	1.00	0.0853	0.300	0.0256	11.9
7	11:49	4.50	0.6	0.500	0.6	0.200	0.0840	1.00	0.0840	0.250	0.0210	9.7
8	11:49	5.00	0.6	0.400	0.6	0.160	0.0745	1.00	0.0745	0.200	0.0149	6.9
9	*11:50*	*5.50*	*0.6*	*0.280*	*0.6*	*0.112*	*0.0722*	*1.00*	*0.0722*	*0.140*	*0.0101*	*4.7*
10	*11:51*	*6.00*	*0.6*	*0.200*	*0.6*	*0.080*	*-0.0046*	*1.00*	*-0.0046*	*0.190*	*-0.0009*	*-0.4*
11	11:51	7.40	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0

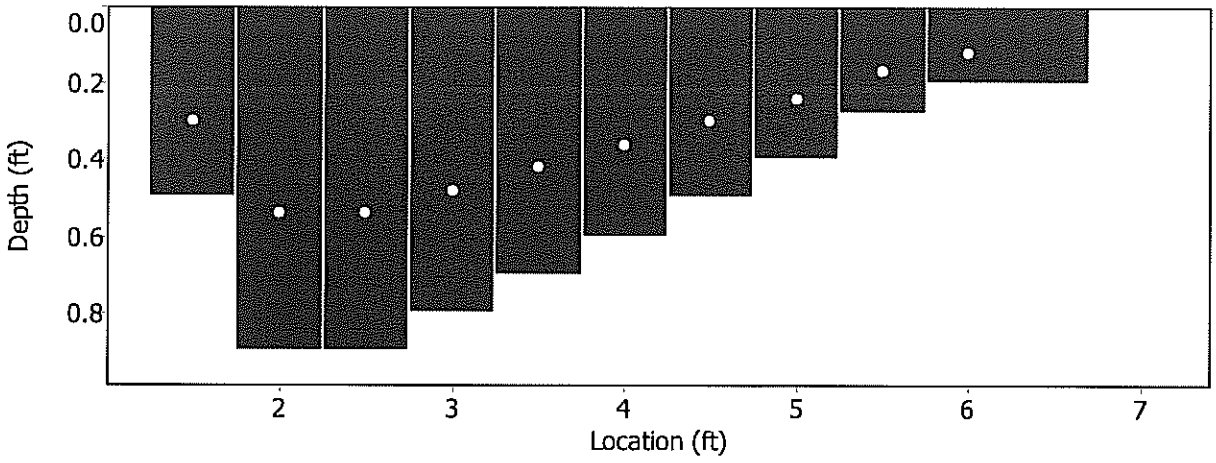
: Mon May 24 2010

20561-21MAY10.WAD
2010/05/21 11:44:10

JN







: Mon May 24 2010

20561-21MAY10.WAD
2010/05/21 11:44:10

JN

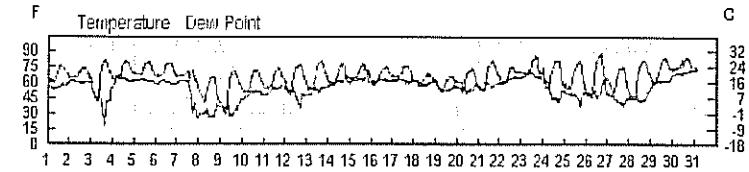
1	1.50	0.6	SNR (70.1) is different from typical SNR (32.9)
9	5.50	0.6	High SNR variation during measurement: 5.6,5.2
10	6.00	0.6	SNR (45.8) is different from typical SNR (32.9)

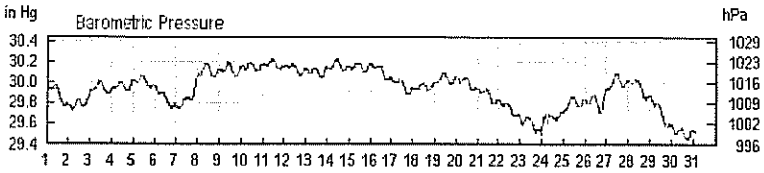
History for Hearne, TX

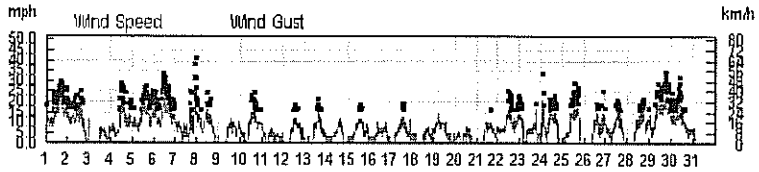
Month of April, 2010

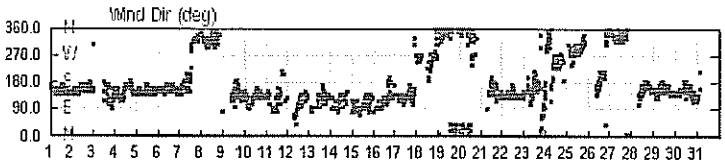
Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	**88** °F	**77** °F	**65** °F	
Mean Temperature	**78** °F	**66** °F	**52** °F	
Min Temperature	**72** °F	**56** °F	**32** °F	
Degree Days:				
Heating Degree Days (base 65)	14	2	0	52
Cooling Degree Days (base 65)	13	3	0	89
Growing Degree Days (base 50)	28	16	2	494
Dew Point:				
Dew Point	**72** °F	**54** °F	**17** °F	
Precipitation:				
Precipitation	**0.08** in	**0.01** in	**0.00** in	**0.32** in
Snowdepth	-	-	-	-
Wind:				
Wind	**26** mph	**6** mph	**0** mph	
Gust Wind	**34** mph	**20** mph	**14** mph	
Sea Level Pressure:				
Sea Level Pressure	**30.24** in	**29.94** in	**29.46** in	









Monthly Calendar Overview

« Previous Month « 2009 **April 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
				Actual: 76 | 59	**Actual:** 74 | 64	**Actual:** 81 | 43
				Precip: 0.00	Precip: 0.00	Precip: 0.00
				Average: - | -	**Average:** - | -	**Average:** - | -

				Precip: -	Precip: -	Precip: -
4	5	6	7	8	9	10
Actual: 81 | 62	Actual: 79 | 67	Actual: 79 | 65	Actual: 72 | 62	Actual: 65 | 41	Actual: 71 | 32	Actual: 72 | 50
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.02	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
11	12	13	14	15	16	17
Actual: 73 | 53	Actual: 77 | 50	Actual: 80 | 52	Actual: 78 | 57	Actual: 78 | 63	Actual: 74 | 59	Actual: 77 | 65
Precip: 0.00	Precip: 0.00	Precip: 0.03	Precip: 0.01	Precip: 0.03	Precip: 0.00	Precip: 0.00
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
18	19	20	21	22	23	24
Actual: 68 | 59	Actual: 66 | 52	Actual: 73 | 52	Actual: 81 | 52	Actual: 75 | 60	Actual: 86 | 66	Actual: 82 | 57
Precip: 0.03	Precip: 0.08	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.06	Precip: 0.01
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
25	26	27	28	29	30	
Actual: 81 | 54	Actual: 88 | 47	Actual: 75 | 49	Actual: 81 | 45	Actual: 84 | 59	Actual: 84 | 72	
Precip: 0.00	Precip: 0.05	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	
Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	Average: - | -	
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear · Mostly Cloudy Partly Sunny · Partly Cloudy Mostly Sunny · Cloudy · Rain · Snow · Hail Flurries · Thunderstorms · Hazy Fog · Sleet · '?' danotes 'chance of' · Unknown

Print This Calendar

Actual: 90 | 58 — Data Category, Condition, High Temp., Lo Temp.
Precip: 0.00 — Precip. (in inches)
Average: 71 | 53 — Daily Avg. Temp.
Precip: 0.03 — Temps in °F
-30 0 30 60 90 120

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)			Gust Speed (mph)	Precip (in)	Events
April	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg		high	sum	
1	76	68	59	58	56	53	81	66	51	29.98	29.90	29.77	10	10	10	23	13	30		0.00	
2	74	69	64	62	60	58	91	76	58	29.85	29.79	29.73	10	8	3	21	12	25		0.00	
3	81	62	43	61	42	17	94	57	9	30.02	29.95	29.89	10	7	0	8	1	-		0.00	Fog , Rain
4	81	72	62	66	62	56	92	74	52	30.01	29.96	29.92	10	7	2	21	8	29		0.00	
5	79	73	67	63	62	60	83	71	52	30.07	30.02	29.95	10	9	7	20	11	28		0.00	
6	79	72	65	62	60	57	83	68	50	29.98	29.86	29.75	10	9	7	26	15	33		0.00	
7	72	67	62	62	56	32	85	69	24	29.87	29.82	29.74	10	7	4	16	8	25		0.02	Rain
8	65	53	41	38	30	25	71	42	23	30.19	30.11	30.05	10	10	10	18	11	26		0.00	
9	71	52	32	39	33	27	92	56	21	30.20	30.13	30.07	10	10	10	12	3	20		0.00	
10	72	61	50	52	49	44	85	66	46	30.20	30.15	30.11	10	10	10	15	6	24		0.00	
11	73	63	53	58	52	48	83	70	50	30.23	30.18	30.13	10	9	4	9	4	-		0.00	
12	77	64	50	56	48	36	92	61	23	30.18	30.14	30.07	10	8	2	13	3	18		0.00	
13	80	66	52	56	51	47	88	62	35	30.14	30.10	30.05	10	10	7	16	3	22		0.03	
14	78	68	57	66	60	56	96	80	55	30.24	30.16	30.11	10	8	5	12	3	17		0.01	
15	78	70	63	67	63	59	94	80	58	30.20	30.15	30.10	10	9	7	12	4	18		0.03	Rain
16	74	66	59	64	61	57	93	80	60	30.18	30.12	30.02	10	8	4	10	3	16		0.00	
17	77	71	65	64	62	59	90	76	55	30.05	29.98	29.88	10	8	4	13	4	20		0.00	
18	68	64	59	62	59	57	96	86	70	30.00	29.96	29.93	10	10	7	8	2	-		0.03	Rain , Thunderstorm
19	66	59	52	61	54	51	97	82	62	30.10	30.04	29.99	10	6	3	14	7	20		0.08	Rain

20	73	62	52	58	54	50	94	70	48	30.06	30.01	29.93	10	6	4	8	2	-	0.00	
21	81	66	52	60	56	52	97	71	42	29.95	29.89	29.80	10	7	4	10	3	17	0.00	Rain
22	75	68	60	66	62	58	97	83	69	29.84	29.76	29.68	10	8	2	18	8	25	0.00	Rain
23	86	77	68	71	67	65	96	78	50	29.67	29.61	29.51	10	8	3	16	8	23	0.06	Rain , Thunderstorm
24	82	70	57	70	51	42	94	56	25	29.71	29.66	29.54	10	10	5	21	9	33	0.01	Rain
25	81	68	54	53	48	38	88	56	22	29.87	29.80	29.72	10	10	10	18	5	29	0.00	
26	88	68	47	63	50	45	95	61	25	29.88	29.82	29.71	10	10	3	15	3	20	0.05	Rain , Thunderstorm
27	75	62	49	50	44	38	90	52	27	30.10	30.01	29.95	10	10	7	16	8	21	0.00	
28	81	63	45	51	45	40	95	57	25	30.03	29.97	29.84	10	10	10	16	4	22	0.00	
29	84	72	59	63	61	55	94	69	46	29.88	29.75	29.57	10	9	5	24	12	34	0.00	
30	84	78	72	72	69	67	86	75	60	29.60	29.53	29.46	10	6	4	21	12	32	0.00	Rain

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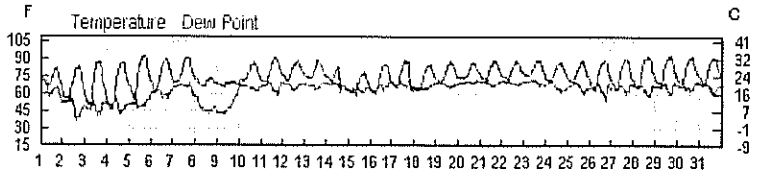
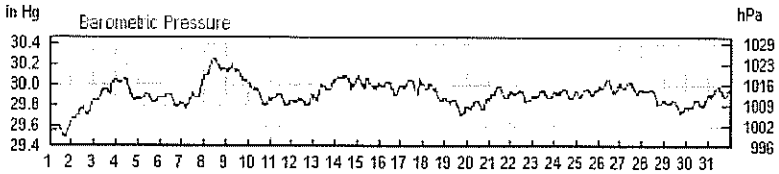
History for Hearne, TX

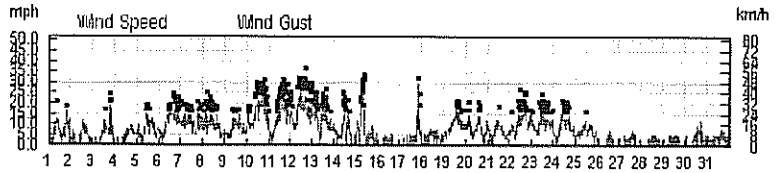
Month of May, 2010

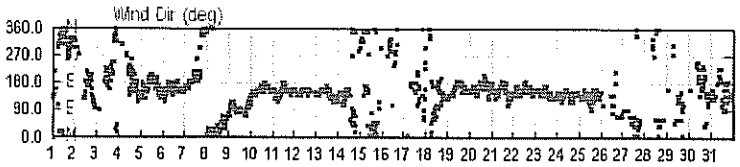
Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	**94** °F	**88** °F	**71** °F	
Mean Temperature	**83** °F	**77** °F	**67** °F	
Min Temperature	**76** °F	**66** °F	**47** °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	18	12	2	374
Growing Degree Days (base 50)	33	27	17	835
Dew Point:				
Dew Point	**73** °F	**63** °F	**38** °F	
Precipitation:				
Precipitation	**1.67** in	**0.08** in	**0.00** in	**2.52** in
Snowdepth	-	-	-	-
Wind:				
Wind	**29** mph	**6** mph	**0** mph	
Gust Wind	**41** mph	**20** mph	**10** mph	
Sea Level Pressure:				
Sea Level Pressure	**30.26** in	**29.91** in	**29.48** in	









Monthly Calendar Overview

« Previous Month | « 2009 | **May 2010** | 2011 » | Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1

Actual: 82 | 67
Precip: 0.00

Average: - | -
Precip: -

2	3	4	5	6	7	8
Actual: 83 | 55	**Actual:** 88 | 49	**Actual:** 87 | 47	**Actual:** 93 | 54	**Actual:** 91 | 62	**Actual:** 92 | 69	**Actual:** 74 | 67
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -

9	10	11	12	13	14	15
Actual: 71 | 66	**Actual:** 88 | 69	**Actual:** 92 | 71	**Actual:** 89 | 71	**Actual:** 89 | 73	**Actual:** 83 | 65	**Actual:** 79 | 63
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 1.67	Precip: 0.38
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -

16	17	18	19	20	21	22
Actual: 86 | 62	**Actual:** 89 | 66	**Actual:** 86 | 64	**Actual:** 88 | 71	**Actual:** 88 | 74	**Actual:** 90 | 72	**Actual:** 90 | 73
Precip: 0.00	Precip: 0.47	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -

23	24	25	26	27	28	29
Actual: 90 | 76	**Actual:** 88 | 72	**Actual:** 89 | 71	**Actual:** 89 | 65	**Actual:** 91 | 66	**Actual:** 93 | 68	**Actual:** 94 | 68
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -

30	31
Actual: 93 | 70	**Actual:** 92 | 70
Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -
Precip: -	Precip: -

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear · Mostly Cloudy Partly Sunny · Partly Cloudy Mostly Sunny · Cloudy · Rain · Snow · Hail Flurries · Thunderstorms · Hazy Fog · Sleet · '?' denotes 'chance of' · Unknown

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

Data Category
Condition
High Temp.
Lo Temp.
Precip. (in inches)
Daily Avg. Temp.
Temps in °F
-60 -30 0 30 60 90 120

Print This Calendar

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
May	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	82	74	67	72	65	56	96	73	54	29.60	29.55	29.48	10	8	2	16	6	21	0.00	
2	83	69	55	56	49	38	92	57	20	29.78	29.72	29.64	10	10	10	12	3	16	0.00	Rain
3	88	68	49	54	48	42	90	54	20	30.03	29.92	29.84	10	9	5	18	3	25	0.00	Rain
4	87	67	47	57	49	42	98	59	22	30.06	29.98	29.85	10	9	1	9	2	-	0.00	
5	93	74	54	56	51	48	87	47	22	29.92	29.87	29.83	10	10	10	15	7	20	0.00	
6	91	76	62	64	61	57	94	64	34	29.91	29.86	29.78	10	10	7	16	8	24	0.00	
7	92	80	69	70	67	65	89	67	42	29.92	29.85	29.77	10	9	7	15	11	21	0.00	
8	74	70	67	58	49	43	60	47	35	30.26	30.17	30.09	10	10	10	15	10	25	0.00	
9	71	68	66	57	47	43	61	46	40	30.20	30.13	30.05	10	10	10	15	7	17	0.00	
10	88	78	69	68	66	64	88	68	45	30.01	29.91	29.79	10	10	7	23	12	31	0.00	
11	92	82	71	70	66	59	90	64	37	29.92	29.86	29.79	10	9	5	23	11	31	0.00	
12	89	80	71	70	67	64	89	67	46	29.90	29.84	29.79	10	9	7	24	14	37	0.00	

13	89	81	73	70	68	64	82	67	43	30.02	29.94	29.84	10	10	7	20	13	30	0.00	
14	83	74	65	70	68	63	96	84	56	30.10	30.05	29.96	10	7	1	18	7	32	1.67	Rain , Thunderstorm
15	79	71	63	66	64	59	96	81	55	30.09	30.01	29.96	10	6	4	25	8	33	0.38	Rain , Thunderstorm
16	86	74	62	68	65	61	98	78	46	30.03	29.98	29.90	10	5	2	6	1	-	0.00	
17	89	78	66	73	68	63	100	79	47	30.06	29.99	29.91	10	7	1	29	2	41	0.47	Rain , Thunderstorm
18	86	75	64	69	65	63	96	75	51	30.02	29.96	29.85	10	7	5	8	3	-	0.00	
19	88	80	71	71	69	66	95	73	47	29.88	29.81	29.71	7	5	4	17	8	22	0.00	
20	88	81	74	72	71	70	89	76	55	29.85	29.80	29.76	7	6	4	14	9	21	0.00	Rain
21	90	81	72	72	70	67	95	71	48	29.98	29.92	29.85	10	6	4	13	7	18	0.00	
22	90	82	73	72	70	68	93	73	49	29.95	29.90	29.83	7	6	4	17	9	26	0.00	
23	90	83	76	73	71	68	86	69	51	29.95	29.90	29.87	10	6	4	16	10	24	0.00	Rain
24	88	80	72	72	68	61	94	69	42	29.97	29.92	29.86	7	5	3	16	8	22	0.00	
25	89	80	71	71	67	61	93	70	39	29.97	29.93	29.87	10	6	3	12	6	18	0.00	
26	89	77	65	71	65	55	96	68	31	30.05	29.98	29.92	10	7	4	7	1	-	0.00	
27	91	78	66	70	66	60	94	67	35	30.03	29.97	29.90	10	6	4	7	1	-	0.00	
28	93	80	68	69	65	59	93	62	32	29.96	29.90	29.81	10	6	3	6	1	-	0.00	
29	94	81	68	70	66	60	92	64	32	29.84	29.80	29.72	10	7	4	6	1	-	0.00	
30	93	82	70	72	67	63	91	65	38	29.85	29.81	29.77	10	9	5	12	2	-	0.00	Thunderstorm
31	92	81	70	71	67	62	94	65	36	29.98	29.92	29.88	10	9	4	8	3	-	0.00	

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Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: MTDM - BRA	
Date & Time: 12 Aug 10, 0950	County Name: Robertson
Stream Name: Campbells Creek	
Segment No. or nearest downstream Segment No.:	
Description of Site: 16395 Upstream from Old Hearne Road	

At any point during the Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the use for the water body the investigator should stop conducting the UAA.

A. Stream Characteristics:

1. Check the following channel flow status that applies.

☐ dry ☐ no flow ☐ low ☑ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:

☐ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.

☑ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.

☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.

☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.

☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. <0.5 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 88°F / 29.4°C Water Temp 26.7 °C / 80°F

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	RL 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): Access from County Road, over fence, not too much brush. #882, 881, 886

8. Dominant Primary Substrate

☐Cobble ☐Sand ☐Silt ☐Mud/Clay ☑Gravel ☐Bedrock ☐Rip rap ☐ Concrete

Stream Name_____ Site: _____
Date: _____ Time: _____

B. Primary Contact Water Recreation Evaluation:
- Primary contact recreation draft definition: Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, and whitewater kayaking, canoeing, and rafting, involving a significant risk of ingestion of water.

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?
☐ Yes ☑ No primary contact recreation activities were observed
a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).

☐ Wading-Children	☐ Tubing	☑ No primary contact activities that commonly occur were observed
☐ Wading-Adults	☐ Surfing	
☐ Swimming	☐ Whitewater-kayaking, canoeing, rafting	
☐ Water skiing	☐ Other: _____	
☐ Diving	☐ frequent public swimming-created by publicly owned land or commercial operations	

b. Check the number of individuals observed at the site: ☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Water in mouth or nose of the individual ☐ Primary touch: Individual's body (or portion) immersed in water
☐ Secondary touch: fishing, pets and related contact with water ☐ Individual is in a boat touching water
☐ Individual is on shore near water within 8 meters (25ft) of water ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☑ Not applicable

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
Low flow, no pools. # ~~882-885~~ 883-885
AD 12 Aug 10

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
Fence along Road # 881, 886

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: _____

Date: _____ Time: _____

b. Check the number of individuals observed at the site.
☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body well away from water between 8 and 30 meters (100 ft)

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
Low flow, no pools # 883-885

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).
Low flow, no pools #883-885

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).
Fence, Private property # 881-886

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.
Low flow, no pools # 883-885, Dumpsite #

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 887 Downstream 888 Left Bank 889 Right Bank 890
Photos #s (150 meters) Upstream 891 Downstream 892 Left Bank 893 Right Bank 894
Photos #s (300 meters) Upstream 895 Downstream 896 Left Bank 897 Right Bank 898

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	57	3	0.90
Pool 2	24	4	0.45
Pool 3	41	4	0.7
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	0.23
60 meters	0.47
90 meters	0.73
120 meters	0.40
150 meters	0.2
180 meters	0.12
210 meters	0.45
240 meters	0.45
270 meters	0.1
300 meters	0.54
Average	0.37

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

c) Stream width - Measure (1) the width at one point which represents the typical average width of the 300 meter reach; (2) the width at the narrowest point of the stream within the 300 meter reach; and (3) the width at the widest point of the stream within the 300 meter reach.

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	4
Width at narrowest point of the stream within 300 meter reach	0.45
Width at the widest point of the stream within 300 meter reach	4.5

d) Is there sufficient water within a 300 meter stream reach during base flow conditions to support primary contact recreation? ☐ Yes ☒ No

COMMENTS: Low flow, shallow pools

2. Non-wadeable Streams

If accessible, take 10 width measurements which represent typical widths of the 300 meter reach. If the water is too deep and not accessible record the estimated average width of the water body.

Also, take photos facing upstream, downstream, left bank, and right bank at .

Photos #s (30 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (150 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

# Measurements	Width (meters)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Stream Name_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

☐ Drinking or water in mouth
☐ Bathing
☐ Walking
☐ Jogging/running
☐ Bicycling
☐ Standing
☐ Sitting
☐ Lying down/sleeping
☐ Playing on shoreline
☐ Picnicking
☐ Motorcycle/ATV
☐ Hunting/Trapping
☐ Wildlife watching
☑ None
☐ Other: _____

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☐ Yes ☑ No (If yes, please provide supporting documentation and photos.)
Comments: _____

3. Check any channel obstructions that apply (Attach photos).

☐ Culverts ☐ Fences ☐ Log jams ☐ Rip rap ☐ Water control structure
☐ Barbed wire ☐ Dams ☐ Thick vegetation ☐ Low bridges ☑ None
☐ Utility pipe ☐ Other (specify):_____

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest).

☐ Campgrounds ☐ Stairs/walkway ☑ Roads (paved/unpaved) ☐ Other:_____
☐ Playgrounds ☐ Boating access (ramps) ☐ Populated area ☐ None of the Above
☑ Rural area ☐ Beach ☐ Docks or rafts
☐ Residential ☑ Bridge crossing ☐ Commercial outfitter
☐ National forests ☐ Commercial boating ☐ Nearby school
☐ Urban/suburban location ☐ Trails/paths (hiking/biking) ☐ Power Line Corridor
☐ Golf Course ☐ Paved parking lot ☐ Parks (national/city/county/state)
☐ Sports Field ☐ Unimproved parking lot ☐ Public Property
Comments: SH4 and Old Hearne Road cross this creek within this reach. #891, #888

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).

☑ Private Property ☑ Fence
☐ No trespass sign ☐ Barge/ship traffic
☐ Wildlife ☐ Industrial
☐ Steep slopes ☐ None of the Above
☑ No public access ☐ Other:_____
☐ No roads
Comments: Low flow, ~~poor~~ no good pools #891

6. Check any indications of human use (Attach photos).

☐ Roads ☐ RV/ATV Tracks ☐ NPDES Discharge ☐ Organized event
☐ Rope swings ☐ Camping Sites ☐ Gates on corridor ☑ No Human Presence
☐ Dock/platform ☐ Fire pit/ring ☐ Children's toys
☐ Foot paths/prints ☐ Fishing Tackle ☐ Remnant's of Kid's play
☐ Other: _____
Comments:_____

Stream Name_____ Site: _____
Date: _____ Time: _____

7. Check all water characteristics that apply (Attach photos).

Aquatic Vegetation: ☐ absent ☑ rare ☐ common ☐ abundant
Algae Cover: ☐ absent ☑ rare ☐ common ☐ abundant
Odor: ☐ none ☑ rare ☐ common ☐ abundant
Color: ☐ clear ☐ green ☐ red ☑ brown ☐ black
Bottom Deposit: ☑ sludge ☑ solids ☑ fine sediments ☐ none ☐ other
Water Surface: ☑ clear ☑ scum ☐ foam ☐ debris ☐ oil
Other:
See transect fig 5

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: bike, carpet, metal, fences, tires, #888, 884, 883

12. Is the site located in a wildlife preserve with large wildlife (i.e waterfowl) population? ☐ Yes ☑ No

13. Please document any other relevant information regarding recreational activities and the water body in general (for example, area outside of the stream reach evaluated).

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream:_____ Date:_____

Site:_____ Site

Description:_____

Time Begin:_____ Time End:_____ Meter Type:_____

Observers:_____ Stream Width*:_____ Section Width (W):_____

Observations:_____

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V)		Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
			At Point (ft/s)(m/s)	Average (ft/s)(m/s)	

: Fri Aug 13 2010

16395-12AUG10.WAD
2010/08/12 08:30:15

MB

FlowTracker	
P872	
3.7	
2.30	
0.0%	

(English Units)	
ft	
ft/s	
ft^2	
cfs	

Accuracy	1.0%	1.0%
Depth	0.7%	2.1%
Velocity	4.0%	4.6%
Width	0.2%	0.2%
Method	3.4%	-
# Stations	7.8%	-
Overall	**9.5%**	**5.1%**

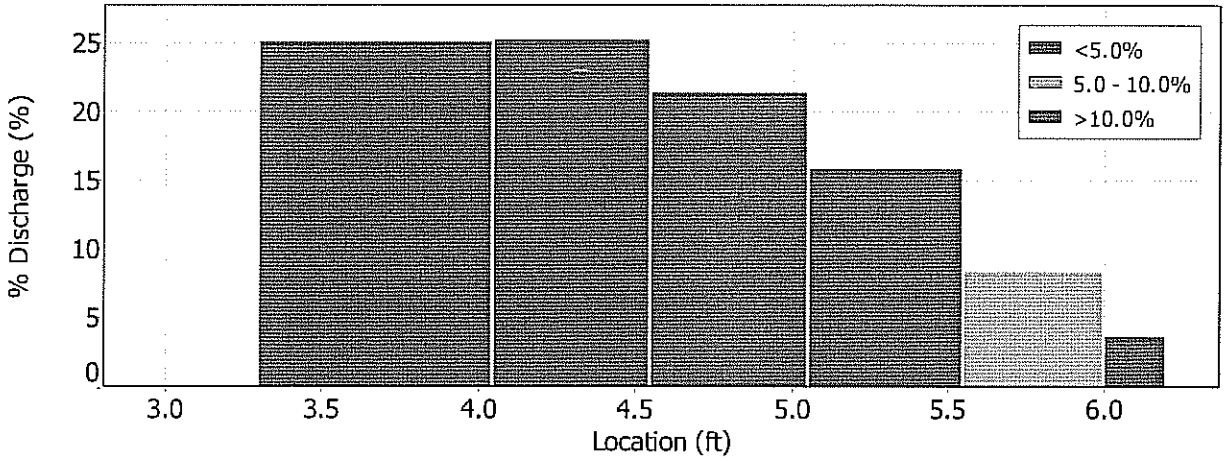
40	7
LEW	3.400
22.4 dB	0.697
80.36 °F	0.205
Mid-Section	0.0599
	0.0418

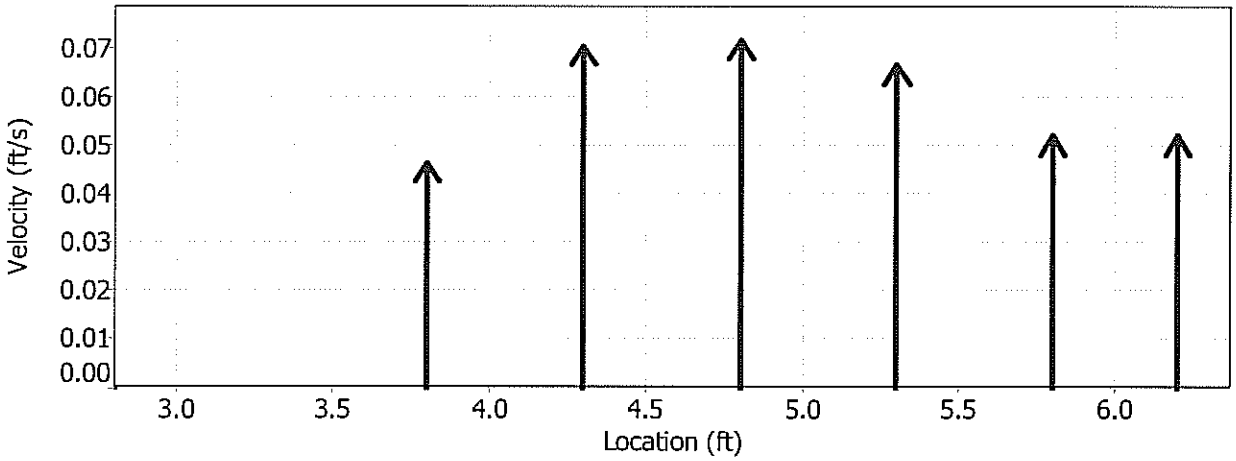
				Depth								
0	08:30	2.80	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
1	*08:33*	*3.80*	*0.6*	*0.300*	*0.6*	*0.120*	*0.0466*	*1.00*	*0.0466*	*0.225*	*0.0105*	*25.1*
2	*08:35*	*4.30*	*0.6*	*0.300*	*0.6*	*0.120*	*0.0705*	*1.00*	*0.0705*	*0.150*	*0.0106*	*25.3*
3	08:36	4.80	0.6	0.250	0.6	0.100	0.0719	1.00	0.0719	0.125	0.0090	21.5
4	08:37	5.30	0.6	0.200	0.6	0.080	0.0666	1.00	0.0666	0.100	0.0067	15.9
5	*08:39*	*5.80*	*0.6*	*0.150*	*0.6*	*0.060*	*0.0522*	*1.00*	*0.0522*	*0.067*	*0.0035*	*8.4*
6	08:39	6.20	None	0.150	0.0	0.0	0.0000	1.00	0.0522	0.030	0.0016	3.7

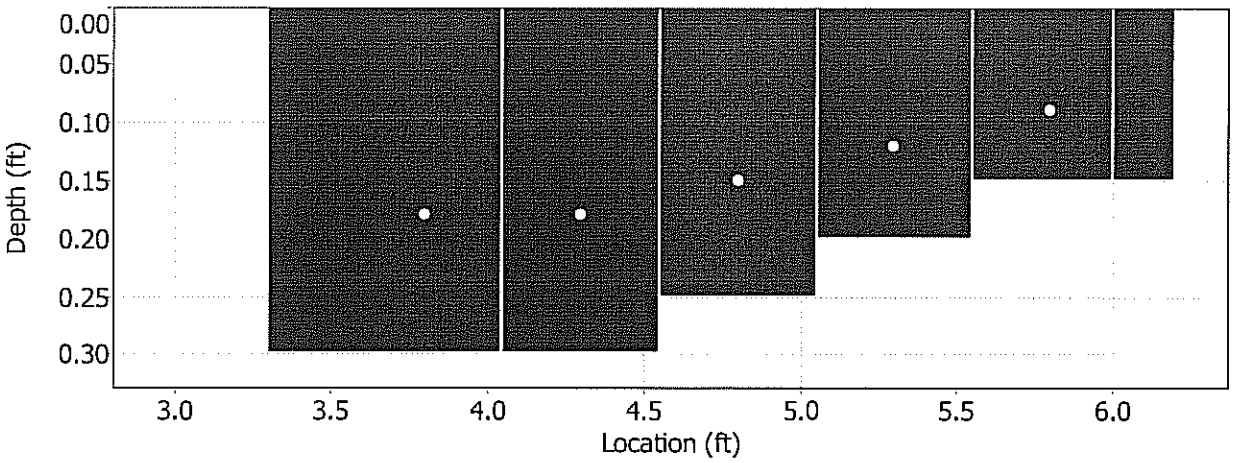
: Fri Aug 13 2010

16395-12AUG10.WAD
2010/08/12 08:30:15

MB







: Fri Aug 13 2010

16395-12AUG10.WAD
2010/08/12 08:30:15

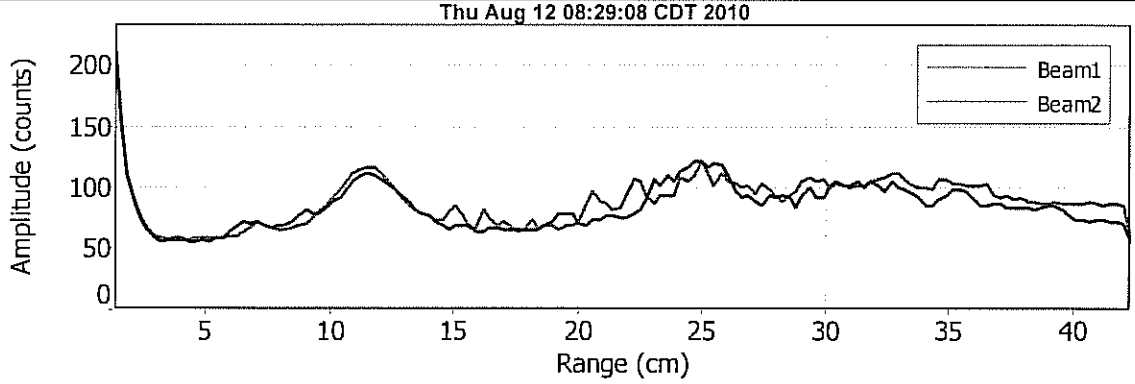
MB

1	3.80	0.6	Boundary QC is Poor; possible boundary interference
2	4.30	0.6	Boundary QC is Good; possible boundary interference
5	5.80	0.6	High angle: 24

: Fri Aug 13 2010

16395-12AUG10.WAD
2010/08/12 08:30:15

MB



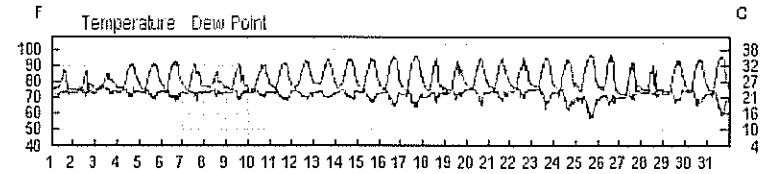
- Noise level check - Pass
- SNR check - Pass
- Peak location check - Pass
- Peak shape check - Pass

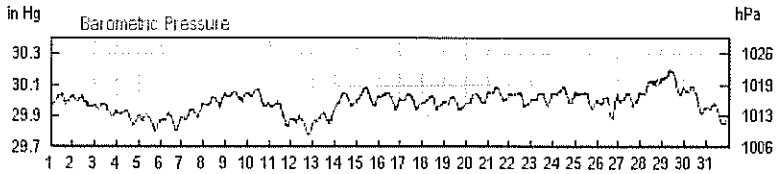
History for Hearne, TX

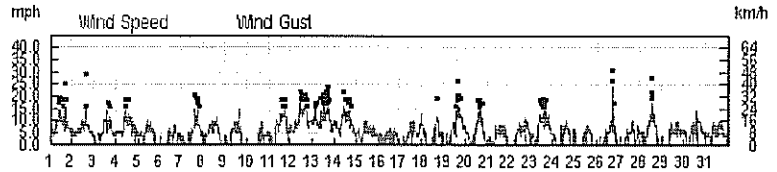
Month of July, 2010

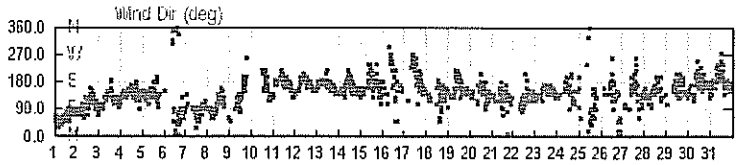
Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	**97** °F	**93** °F	**85** °F	
Mean Temperature	**86** °F	**84** °F	**80** °F	
Min Temperature	**78** °F	**75** °F	**72** °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	21	19	15	579
Growing Degree Days (base 50)	36	34	30	1047
Dew Point:				
Dew Point	**77** °F	**72** °F	**58** °F	
Precipitation:				
Precipitation	**0.46** in	**0.02** in	**0.00** in	**0.65** in
Snowdepth	-	-	-	-
Wind:				
Wind	**24** mph	**4** mph	**0** mph	
Gust Wind	**34** mph	**18** mph	**9** mph	
Sea Level Pressure:				
Sea Level Pressure	**30.20** in	**29.98** in	**29.78** in	









Monthly Calendar Overview

« Previous Month « 2009 **July 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1 **Actual:** 87 | 75 Precip: 0.07	2 **Actual:** 87 | 75 Precip: 0.46	3 **Actual:** 85 | 75 Precip: 0.00

				Average: - | - Precip: -	Average: - | - Precip: -	Average: - | - Precip: -
4 Actual: 91 | 76 Precip: 0.00 Average: - | - Precip: -	5 Actual: 92 | 74 Precip: 0.00 Average: - | - Precip: -	6 Actual: 93 | 75 Precip: 0.00 Average: - | - Precip: -	7 Actual: 91 | 74 Precip: 0.00 Average: - | - Precip: -	8 Actual: 86 | 76 Precip: 0.00 Average: - | - Precip: -	9 Actual: 91 | 75 Precip: 0.00 Average: - | - Precip: -	10 Actual: 90 | 74 Precip: 0.00 Average: - | - Precip: -
11 Actual: 92 | 75 Precip: 0.00 Average: - | - Precip: -	12 Actual: 93 | 76 Precip: 0.00 Average: - | - Precip: -	13 Actual: 94 | 78 Precip: 0.00 Average: - | - Precip: -	14 Actual: 94 | 76 Precip: 0.00 Average: - | - Precip: -	15 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	16 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	17 Actual: 96 | 73 Precip: 0.00 Average: - | - Precip: -
18 Actual: 95 | 74 Precip: 0.00 Average: - | - Precip: -	19 Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	20 Actual: 95 | 76 Precip: 0.00 Average: - | - Precip: -	21 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	22 Actual: 95 | 76 Precip: 0.00 Average: - | - Precip: -	23 Actual: 95 | 77 Precip: 0.00 Average: - | - Precip: -	24 Actual: 94 | 73 Precip: 0.00 Average: - | - Precip: -
25 Actual: 97 | 74 Precip: 0.00 Average: - | - Precip: -	26 Actual: 97 | 75 Precip: 0.00 Average: - | - Precip: -	27 Actual: 92 | 72 Precip: 0.01 Average: - | - Precip: -	28 Actual: 90 | 74 Precip: 0.11 Average: - | - Precip: -	29 Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	30 Actual: 94 | 74 Precip: 0.00 Average: - | - Precip: -	31 Actual: 96 | 73 Precip: 0.00 Average: - | - Precip: -

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear · Mostly Cloudy Partly Sunny · Partly Cloudy Mostly Sunny · Cloudy · Rain · Snow · Hail Flurries · Thunderstorms · Hazy Fog · Sleet · '?' denotes 'chance of' · Unknown

Print This Calendar

Actual: 90 | 58 — Data Category, Condition, High Temp., Lo Temp.
Precip: 0.00 — Precip. (in inches)
Average: 71 | 53 — Daily Avg. Temp.
Precip: 0.03 — Temps in °F (-60 -30 0 30 60 90 120)

Daily Observations

2010 July	Temp. (°F) high	avg	low	Dew Point (°F) high	avg	low	Humidity (%) high	avg	low	Sea Level Pressure (in) high	avg	low	Visibility (mi) high	avg	low	Wind (mph) high	avg	Gust Speed (mph) high	Precip (in) sum	Events
1	87	81	75	75	73	71	94	80	64	30.04	30.00	29.97	10	6	4	16	8	25	0.07	Rain
2	87	81	75	76	74	72	94	88	63	30.03	29.99	29.95	10	7	4	16	6	29	0.46	Rain
3	85	80	75	77	75	72	95	85	68	29.98	29.94	29.90	10	5	3	14	4	20	0.00	Rain
4	91	84	76	77	74	71	94	75	51	29.94	29.90	29.84	7	5	3	14	7	18	0.00	Rain
5	92	83	74	76	73	70	95	74	48	29.91	29.87	29.80	7	5	3	10	5	9	0.00	
6	93	84	75	75	72	69	94	69	44	29.92	29.87	29.80	7	5	3	8	2	-	0.00	
7	91	82	74	75	73	69	94	75	53	29.94	29.91	29.87	7	5	4	15	3	25	0.00	
8	86	81	76	75	74	72	90	81	63	30.02	29.98	29.95	10	6	3	12	5	16	0.00	Rain
9	91	83	75	76	73	70	94	79	51	30.06	30.02	29.98	7	5	3	15	2	18	0.00	Rain
10	90	82	74	75	73	71	96	77	53	30.08	30.02	29.96	7	4	3	9	1	-	0.00	
11	92	84	75	75	72	69	94	72	46	29.99	29.94	29.83	7	5	4	15	5	20	0.00	
12	93	84	76	75	73	70	92	70	47	29.90	29.86	29.78	7	5	4	21	9	22	0.00	
13	94	86	78	75	73	71	86	68	46	29.92	29.88	29.85	7	4	3	18	11	24	0.00	
14	94	85	76	76	73	70	91	69	46	30.05	30.00	29.95	7	5	3	16	9	22	0.00	
15	95	85	75	76	72	68	95	69	41	30.09	30.02	29.96	7	5	2	10	5	16	0.00	
16	95	85	75	75	71	66	94	67	38	30.06	30.02	29.94	10	6	3	7	2	-	0.00	Rain
17	96	84	73	74	71	65	94	63	35	30.05	30.00	29.94	10	9	3	10	2	16	0.00	

18	95	84	74	75	72	68	90	73	42	30.03	29.99	29.94	10	10	7	12	5	20	0.00	Thunderstorm
19	93	84	74	76	73	70	96	76	48	30.02	29.98	29.94	10	8	0	18	4	26	0.00	Fog
20	95	86	76	76	73	65	95	73	39	30.05	30.01	29.97	10	9	5	15	6	18	0.00	
21	95	85	75	75	73	69	95	71	42	30.09	30.05	29.99	10	9	5	8	2	16	0.00	Rain
22	95	86	76	76	74	70	94	75	45	30.06	30.01	29.96	10	9	7	12	3	20	0.00	
23	95	86	77	77	73	64	94	70	35	30.05	30.01	29.96	10	9	5	14	4	20	0.00	
24	94	84	73	76	71	63	96	69	37	30.09	30.04	29.98	10	9	4	10	3	-	0.00	
25	97	86	74	72	67	58	88	58	26	30.06	30.02	29.94	10	10	7	8	2	-	0.00	Rain
26	97	86	75	73	70	67	87	67	38	30.02	29.97	29.88	10	7	4	24	2	34	0.00	Rain , Thunderstorm
27	92	82	72	76	72	69	95	79	46	30.05	30.00	29.96	10	6	4	10	2	-	0.01	Rain , Thunderstorm
28	90	82	74	76	74	71	95	83	56	30.14	30.09	30.03	10	9	3	17	6	31	0.11	Rain , Thunderstorm
29	93	84	74	77	72	68	96	74	45	30.20	30.14	30.03	10	9	5	10	3	-	0.00	
30	94	84	74	76	72	66	95	71	41	30.09	30.04	29.91	10	9	2	14	5	18	0.00	
31	96	84	73	74	69	59	94	66	29	29.98	29.93	29.85	10	9	5	10	4	-	0.00	

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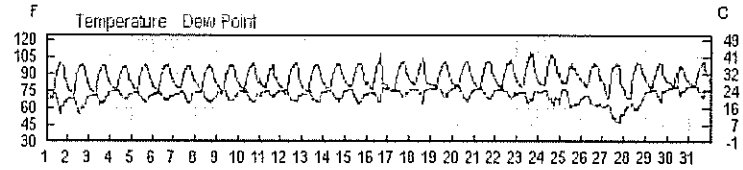
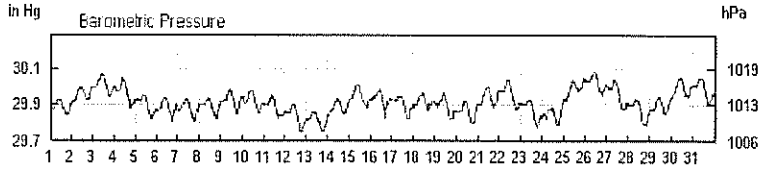
History for Hearne, TX

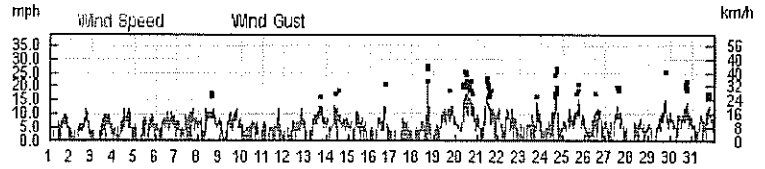
Month of August, 2010

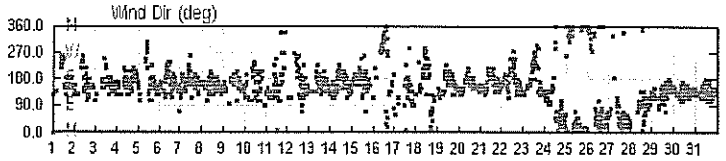
Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	**109** °F	**101** °F	**97** °F	
Mean Temperature	**94** °F	**88** °F	**84** °F	
Min Temperature	**81** °F	**76** °F	**68** °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	29	24	19	730
Growing Degree Days (base 50)	44	38	34	1189
Dew Point:				
Dew Point	**81** °F	**71** °F	**48** °F	
Precipitation:				
Precipitation	**0.00** in	**0.00** in	**0.00** in	**0.00** in
Snowdepth	-	-	-	-
Wind:				
Wind	**21** mph	**4** mph	**0** mph	
Gust Wind	**29** mph	**18** mph	**9** mph	
Sea Level Pressure:				
Sea Level Pressure	**30.09** in	**29.92** in	**29.75** in	









Monthly Calendar Overview

« Previous Month | « 2009 | **August 2010** | 2011 » | Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
Actual: 100 | 69	**Actual:** 99 | 71	**Actual:** 98 | 73	**Actual:** 97 | 76	**Actual:** 96 | 75	**Actual:** 98 | 75	**Actual:** 96 | 78
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -

8	9	10	11	12	13	14
Actual: 98 | 77	**Actual:** 98 | 74	**Actual:** 100 | 75	**Actual:** 99 | 78	**Actual:** 99 | 75	**Actual:** 99 | 75	**Actual:** 100 | 77
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
15	16	17	18	19	20	21
Actual: 100 | 79	**Actual:** 109 | 76	**Actual:** 101 | 76	**Actual:** 104 | 81	**Actual:** 101 | 79	**Actual:** 101 | 80	**Actual:** 102 | 77
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
22	23	24	25	26	27	28
Actual: 103 | 77	**Actual:** 109 | 79	**Actual:** 108 | 79	**Actual:** 100 | 80	**Actual:** 100 | 79	**Actual:** 99 | 69	**Actual:** 101 | 68
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
29	30	31				
Actual: 100 | 77	**Actual:** 99 | 81	**Actual:** 101 | 80				
Precip: 0.00	Precip: 0.00	Precip: 0.00				
Average: - | -	**Average:** - | -	**Average:** - | -				
Precip: -	Precip: -	Precip: -				

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear · Mostly Cloudy Partly Sunny · Partly Cloudy Mostly Sunny · Cloudy · Rain · Snow · Hail Flurries · Thunderstorms · Hazy Fog · Sleet · '?' denotes 'chance of' · Unknown

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

Data Category · Condition · High Temp. · Lo Temp. · Precip. (in inches) · Daily Avg. Temp. · Temps in °F

-80 -30 0 30 60 90 120

Print This Calendar

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
August	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	100	84	69	74	67	55	95	60	22	29.93	29.89	29.84	10	9	7	9	2	-	0.00	
2	99	85	71	70	64	55	90	55	25	30.00	29.96	29.91	10	9	4	12	2	16	0.00	
3	98	86	73	73	69	64	94	60	32	30.08	30.01	29.95	10	8	4	9	2	16	0.00	
4	97	86	76	77	73	68	94	66	38	30.05	29.98	29.89	7	6	3	12	4	17	0.00	Rain
5	98	86	75	74	71	65	92	62	34	29.96	29.91	29.83	7	5	3	8	3	-	0.00	
6	98	86	75	74	71	67	92	63	36	29.95	29.89	29.81	10	8	4	10	5	-	0.00	
7	98	88	78	75	71	64	86	60	33	29.94	29.88	29.81	10	10	10	12	5	16	0.00	
8	98	88	77	76	71	65	92	63	34	29.94	29.90	29.83	10	10	10	12	6	20	0.00	
9	98	86	74	76	71	66	95	63	34	29.99	29.93	29.85	10	10	7	12	5	16	0.00	
10	100	88	75	77	72	65	94	64	33	29.98	29.93	29.85	10	10	3	7	2	9	0.00	
11	99	88	78	76	73	68	89	64	36	29.96	29.90	29.83	10	10	10	12	3	24	0.00	Rain , Thunderstorm
12	99	87	75	76	71	65	92	63	33	29.90	29.85	29.75	10	10	7	9	2	-	0.00	
13	99	87	75	75	70	65	91	62	33	29.87	29.82	29.76	10	10	10	13	4	17	0.00	
14	100	88	77	76	72	66	92	62	33	29.94	29.88	29.83	10	10	7	13	6	18	0.00	
15	100	90	79	77	72	63	90	62	30	30.02	29.96	29.89	10	10	10	10	5	-	0.00	
16	109	92	76	79	72	65	90	64	26	29.99	29.93	29.83	10	10	10	13	3	23	0.00	
17	101	88	76	78	75	70	96	69	36	29.95	29.91	29.83	10	9	5	8	1	-	0.00	
18	104	92	81	78	75	65	88	65	28	29.97	29.92	29.87	10	10	10	21	3	29	0.00	Thunderstorm
19	101	90	79	79	75	69	94	67	35	29.97	29.90	29.83	10	10	10	13	4	21	0.00	
20	101	90	80	80	74	66	95	62	33	29.93	29.86	29.80	10	10	7	17	8	25	0.00	
21	102	90	77	79	74	68	96	64	33	30.01	29.94	29.89	10	10	10	17	7	23	0.00	

22	103	90	77	78	74	69	94	62	34	30.04	29.97	29.88	10	10	7	12	6	-	0.00
23	109	94	79	74	71	65	85	54	26	29.93	29.88	29.77	10	10	10	14	2	22	0.00
24	108	94	79	77	71	63	88	53	24	29.90	29.85	29.78	10	10	10	17	4	26	0.00
25	100	90	80	77	69	62	86	54	30	30.04	29.99	29.93	10	10	10	15	7	21	0.00
26	100	90	79	72	67	62	76	50	29	30.09	30.04	29.96	10	10	10	12	5	18	0.00
27	99	84	69	64	57	48	83	42	17	30.04	29.98	29.88	10	10	10	13	5	21	0.00
28	101	84	68	65	61	54	82	49	25	29.94	29.89	29.79	10	10	10	8	1	-	0.00
29	100	88	77	77	74	66	92	65	33	29.95	29.89	29.85	10	10	10	15	5	29	0.00
30	99	90	81	81	77	72	93	73	42	30.06	30.00	29.94	10	10	10	14	7	22	0.00
31	101	90	80	80	76	68	96	70	33	30.05	30.00	29.91	10	10	7	12	5	17	0.00

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Field Data Sheets – Basie RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: MB/AM - BRA	
Date & Time: 12 Aug 10 1110	County Name: Robertson
Stream Name: Campbells Creek	
Segment No. or nearest downstream Segment No.:	
Description of Site: 99915 Downstream from Bowman Henry Road.	

At any point during the Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the use for the water body the investigator should stop conducting the UAA.

A. Stream Characteristics:

1. Check the following channel flow status that applies.

☐ dry ☑ no flow ☐ low ☐ normal ☐ high ☐ flooded

MB 12 Aug 10

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. N/A 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 ~~93°F~~ 33.9°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.)

____ Forest	____ Urban	____ Rip rap
L Shrub dominated corridor	R Pasture	____ Concrete
____ Herbaceous marsh	____ Row crops	Other (specify): ____
____ Mowed/maintained corridor	____ Denuded/Eroded bank	

6. Ease of bank access to the water body: ☐ Easy ☑ Moderately easy ☐ Moderately difficult ☐ Difficult

7. Please describe access opportunities or explain why the site is not easily accessible (Attach photos for documentation):

County road crosses creek, Has fence on both sides. H899-902

8. Dominant Primary Substrate

☐Cobble ☐Sand ☐Silt ☐Mud/Clay ☑Gravel ☐Bedrock ☐Rip rap ☐ Concrete

Stream Name_____ Site: _____
Date: _____ Time: _____

B. Primary Contact Water Recreation Evaluation:

- Primary contact recreation draft definition: Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, and whitewater kayaking, canoeing, and rafting, involving a significant risk of ingestion of water.

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?
☐ Yes ☑ No primary contact recreation activities were observed

a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).

☐ Wading-Children ☐ Tubing ☑ No primary contact activities that commonly occur were observed
☐ Wading-Adults ☐ Surfing
☐ Swimming ☐ Whitewater-kayaking, canoeing, rafting
☐ Water skiing ☐ Other: _____
☐ Diving ☐ frequent public swimming-created by publicly owned land or commercial operations

b. Check the number of individuals observed at the site: ☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Water in mouth or nose of the individual ☐ Primary touch: Individual's body (or portion) immersed in water
☐ Secondary touch: fishing, pets and related contact with water ☐ Individual is in a boat touching water
☐ Individual is on shore near water within 8 meters (25ft) of water ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☑ Not applicable

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation) MP 12 Aug 10
No Water, No flow, muddy/gravel bottom. Lots of garbage & tires in creek. Muddy shallow pools, very small

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
County Road. # 899-902 #97-#908

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: _____

Date: _____ Time: _____

b. Check the number of individuals observed at the site.
☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body well away from water between 8 and 30 meters (100 ft)

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
No water, # Muddy pools, shallow, no flow, stagnant water
12 Aug 10 # 905, 906

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).
905, 906, 907 Mudhole, stagnant, Household garbage along road, Dead dog in large plastic bag thrown in creek from bridge.
#

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).
County Road at this site.

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.

Same as # 2 above

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 917 Downstream 918 Left Bank 919 Right Bank 920

Photos #s (150 meters) Upstream 909 Downstream 910 Left Bank 911 Right Bank 912

Photos #s (300 meters) Upstream 913 Downstream 914 Left Bank 915 Right Bank 916

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	18	3.0	0.51
Pool 2	10	4	0.56
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	— Dry
60 meters	— Dry
90 meters	0.1 puddle
120 meters	0.49
150 meters	0.4
180 meters	— Dry
210 meters	0.3
240 meters	0.43
270 meters	— Dry
300 meters	Dry
Average	N/A

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

c) Stream width - Measure (1) the width at one point which represents the typical average width of the 300 meter reach; (2) the width at the narrowest point of the stream within the 300 meter reach; and (3) the width at the widest point of the stream within the 300 meter reach.

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	2.5
Width at narrowest point of the stream within 300 meter reach	MT 12 Aug 10 ~~4.0~~ 0.0
Width at the widest point of the stream within 300 meter reach	4.0

d) Is there sufficient water within a 300 meter stream reach during base flow conditions to support primary contact recreation? ☐ Yes ☑ No

COMMENTS:
2 pools >10m long ≈ .5m deep both are stagnant.

2. Non-wadeable Streams

If accessible, take 10 width measurements which represent typical widths of the 300 meter reach. If the water is too deep and not accessible record the estimated average width of the water body.

Also, take photos facing upstream, downstream, left bank, and right bank at .
Photos #s (30 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (150 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

# Measurements	Width (meters)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

- ☐ Drinking or water in mouth
- ☐ Bathing
- ☐ Walking
- ☐ Jogging/running
- ☐ Bicycling
- ☐ Standing
- ☐ Sitting
- ☐ Lying down/sleeping
- ☐ Playing on shoreline
- ☐ Picnicking
- ☐ Motorcycle/ATV
- ☐ Hunting/Trapping
- ☐ Wildlife watching
- ☑ None
- ☐ Other: _____

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☐ Yes ☑ No (If yes, please provide supporting documentation and photos.)
Comments: _____

3. Check any channel obstructions that apply (Attach photos). #917

- ☐ 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

ATV 12 Aug 10

Comments: County road crosses creek. No flow.

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).

- ☑ Private Property
- ☐ No trespass sign
- ☐ Wildlife
- ☐ Steep slopes
- ☐ No public access
- ☐ No roads
- ☑ Fence
- ☐ Barge/ship traffic
- ☐ Industrial
- ☐ None of the Above
- ☐ Other:_____

Comments: # 899-902

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 in creek, Tires, dead dog, Washing machine parts, baby buggy, etc, metal, see all photos # 904, 899, 907, 908, 913, 917, 918, 920

Stream Name_____ Site: _____
Date: _____ Time: _____

7. Check all water characteristics that apply (Attach photos).

Aquatic Vegetation: ☑ absent ☐ rare ☐ common ☐ abundant
Algae Cover: ☐ absent ☐ rare ☑ common ☐ abundant
Odor: ☐ none ☐ rare ☐ common ☑ abundant
Color: ☐ clear ☐ green ☐ red ☑ brown ☐ black
Bottom Deposit: ☑ sludge ☐ solids ☐ fine sediments ☐ none ☐ other
Water Surface: ☐ clear ☑ scum ☐ foam ☐ debris ☐ oil
Other: pic # 905, 906, 910

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: Saw Cow Tracks

10. Evidence of wild animals or evidence of birds, cattle, hogs, etc.
☑ Tracks ☐ Fecal droppings ☐ Bird nests

11. Garbage Observed

Large garbage in the channel	☐ None	☐ Rare	☐ Common	☑ Abundant
Small garbage in the channel	☐ None	☐ Rare	☐ Common	☑ Abundant
Bank Garbage	☐ None	☐ Rare	☐ Common	☑ Abundant

Briefly describe the kinds of garbage observed: Tires, metal, household trash washing machine, baby buggy, etc. You name, it is in the creek. Dead dog, Mattress near bridge, etc. Common dump area. #899 904, 907, 908, 913, 917, 918, 920

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).
See above comments

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream:_____ Date:_____

Site:_____ Site

Description:_____

Time Begin:_____ Time End:_____ Meter Type:_____

Observers:_____ Stream Width*:_____ Section Width (W):_____

Observations:_____

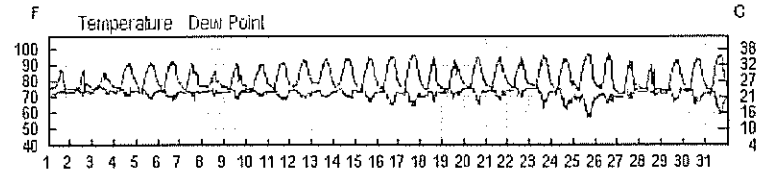
Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V)		Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
			At Point (ft/s)(m/s)	Average (ft/s)(m/s)	

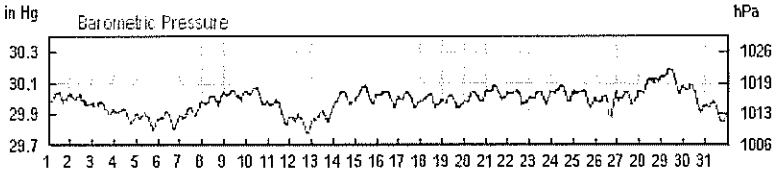
History for Hearne, TX

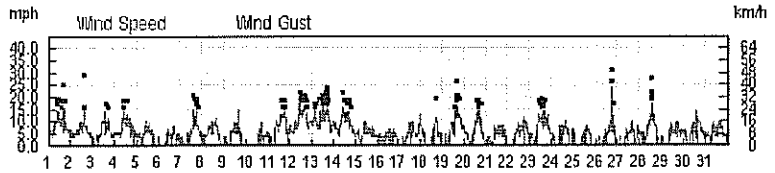
Month of July, 2010

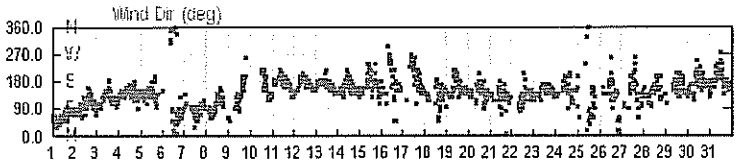
Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	**97** °F	**93** °F	**85** °F	
Mean Temperature	**86** °F	**84** °F	**80** °F	
Min Temperature	**78** °F	**75** °F	**72** °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	21	19	15	579
Growing Degree Days (base 50)	36	34	30	1047
Dew Point:				
Dew Point	**77** °F	**72** °F	**58** °F	
Precipitation:				
Precipitation	**0.46** in	**0.02** in	**0.00** in	**0.65** in
Snowdepth	-	-	-	-
Wind:				
Wind	**24** mph	**4** mph	**0** mph	
Gust Wind	**34** mph	**18** mph	**9** mph	
Sea Level Pressure:				
Sea Level Pressure	**30.20** in	**29.98** in	**29.78** in	









Monthly Calendar Overview

« Previous Month « 2009 **July 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
				Actual: 87 | 75	**Actual:** 87 | 75	**Actual:** 85 | 75
				Precip: 0.07	Precip: 0.46	Precip: 0.00

				Average: - | - Precip: -	Average: - | - Precip: -	Average: - | - Precip: -
4 Actual: 91 | 76 Precip: 0.00 Average: - | - Precip: -	5 Actual: 92 | 74 Precip: 0.00 Average: - | - Precip: -	6 Actual: 93 | 75 Precip: 0.00 Average: - | - Precip: -	7 Actual: 91 | 74 Precip: 0.00 Average: - | - Precip: -	8 Actual: 86 | 76 Precip: 0.00 Average: - | - Precip: -	9 Actual: 91 | 75 Precip: 0.00 Average: - | - Precip: -	10 Actual: 90 | 74 Precip: 0.00 Average: - | - Precip: -
11 Actual: 92 | 75 Precip: 0.00 Average: - | - Precip: -	12 Actual: 93 | 76 Precip: 0.00 Average: - | - Precip: -	13 Actual: 94 | 78 Precip: 0.00 Average: - | - Precip: -	14 Actual: 94 | 76 Precip: 0.00 Average: - | - Precip: -	15 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	16 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	17 Actual: 96 | 73 Precip: 0.00 Average: - | - Precip: -
18 Actual: 95 | 74 Precip: 0.00 Average: - | - Precip: -	19 Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	20 Actual: 95 | 76 Precip: 0.00 Average: - | - Precip: -	21 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	22 Actual: 95 | 76 Precip: 0.00 Average: - | - Precip: -	23 Actual: 95 | 77 Precip: 0.00 Average: - | - Precip: -	24 Actual: 94 | 73 Precip: 0.00 Average: - | - Precip: -
25 Actual: 97 | 74 Precip: 0.00 Average: - | - Precip: -	26 Actual: 97 | 75 Precip: 0.00 Average: - | - Precip: -	27 Actual: 92 | 72 Precip: 0.01 Average: - | - Precip: -	28 Actual: 90 | 74 Precip: 0.11 Average: - | - Precip: -	29 Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	30 Actual: 94 | 74 Precip: 0.00 Average: - | - Precip: -	31 Actual: 96 | 73 Precip: 0.00 Average: - | - Precip: -

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear · Mostly Cloudy Partly Sunny · Partly Cloudy Mostly Sunny · Cloudy · Rain · Snow · Hail Flurries · Thunderstorms · Hazy Fog · Sleet · '?' denotes 'chance of' · Unknown

Actual: 90 | 58 Precip: 0.00 Average: 71 | 53 Precip: 0.03

Data Category · Condition · High Temp. · Lo Temp. · Precip. (in inches) · Daily Avg. Temp. · Temps in °F · -60 -30 0 30 60 90 120

Print This Calendar

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
July	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	87	81	75	75	73	71	94	80	64	30.04	30.00	29.97	10	6	4	16	8	25	0.07	Rain
2	87	81	75	76	74	72	94	88	63	30.03	29.99	29.95	10	7	4	16	6	29	0.46	Rain
3	85	80	75	77	75	72	95	85	68	29.98	29.94	29.90	10	5	3	14	4	20	0.00	Rain
4	91	84	76	77	74	71	94	75	51	29.94	29.90	29.84	7	5	3	14	7	18	0.00	Rain
5	92	83	74	76	73	70	95	74	48	29.91	29.87	29.80	7	5	3	10	5	9	0.00	
6	93	84	75	75	72	69	94	69	44	29.92	29.87	29.80	7	5	3	8	2	-	0.00	
7	91	82	74	75	73	69	94	75	53	29.94	29.91	29.87	7	5	4	15	3	25	0.00	
8	86	81	76	75	74	72	90	81	63	30.02	29.98	29.95	10	6	3	12	5	16	0.00	Rain
9	91	83	75	76	73	70	94	79	51	30.06	30.02	29.98	7	5	3	15	2	18	0.00	Rain
10	90	82	74	75	73	71	96	77	53	30.08	30.02	29.96	7	4	3	9	1	-	0.00	
11	92	84	75	75	72	69	94	72	46	29.99	29.94	29.83	7	5	4	15	5	20	0.00	
12	93	84	76	75	73	70	92	70	47	29.90	29.86	29.78	7	5	4	21	9	22	0.00	
13	94	86	78	75	73	71	86	68	46	29.92	29.88	29.85	7	4	3	18	11	24	0.00	
14	94	85	76	76	73	70	91	69	46	30.05	30.00	29.95	7	5	3	16	9	22	0.00	
15	95	85	75	76	72	68	95	69	41	30.09	30.02	29.96	7	5	2	10	5	16	0.00	
16	95	85	75	75	71	66	94	67	38	30.06	30.02	29.94	10	6	3	7	2	-	0.00	Rain
17	96	84	73	74	71	65	94	63	35	30.05	30.00	29.94	10	9	3	10	2	16	0.00	

18	95	84	74	75	72	68	90	73	42	30.03	29.99	29.94	10	10	7	12	5	20	0.00	Thunderstorm
19	93	84	74	76	73	70	96	76	48	30.02	29.98	29.94	10	8	0	18	4	26	0.00	Fog
20	95	86	76	76	73	65	95	73	39	30.05	30.01	29.97	10	9	5	15	6	18	0.00	
21	95	85	75	75	73	69	95	71	42	30.09	30.05	29.99	10	9	5	8	2	16	0.00	Rain
22	95	86	76	76	74	70	94	75	45	30.06	30.01	29.96	10	9	7	12	3	20	0.00	
23	95	86	77	77	73	64	94	70	35	30.05	30.01	29.96	10	9	5	14	4	20	0.00	
24	94	84	73	76	71	63	96	69	37	30.09	30.04	29.98	10	9	4	10	3	-	0.00	
25	97	86	74	72	67	58	88	58	26	30.06	30.02	29.94	10	10	7	8	2	-	0.00	Rain
26	97	86	75	73	70	67	87	67	38	30.02	29.97	29.88	10	7	4	24	2	34	0.00	Rain , Thunderstorm
27	92	82	72	76	72	69	95	79	46	30.05	30.00	29.96	10	6	4	10	2	-	0.01	Rain , Thunderstorm
28	90	82	74	76	74	71	95	83	56	30.14	30.09	30.03	10	9	3	17	6	31	0.11	Rain , Thunderstorm
29	93	84	74	77	72	68	96	74	45	30.20	30.14	30.03	10	9	5	10	3	-	0.00	
30	94	84	74	76	72	66	95	71	41	30.09	30.04	29.91	10	9	2	14	5	18	0.00	
31	96	84	73	74	69	59	94	66	29	29.98	29.93	29.85	10	9	5	10	4	-	0.00	

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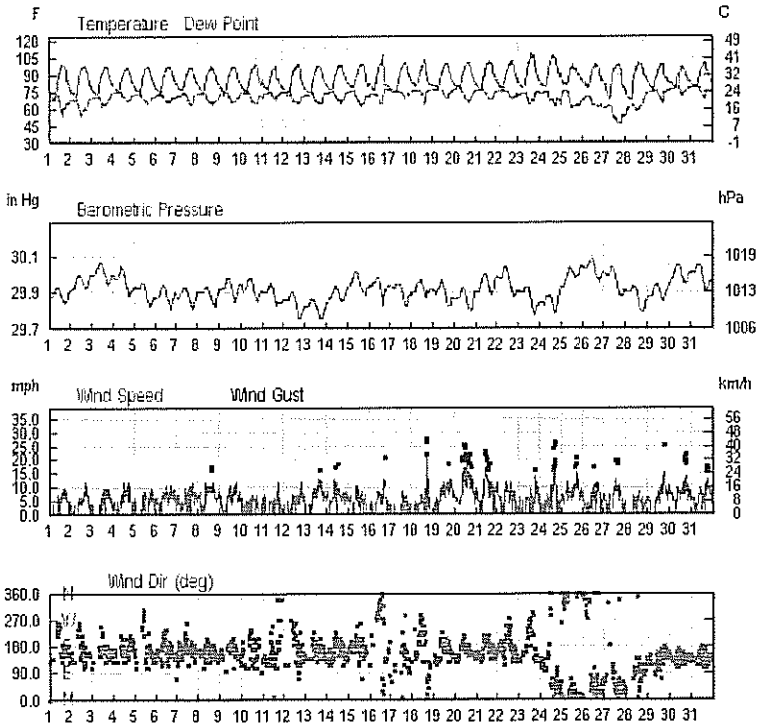
History for Hearne, TX

Month of August, 2010

Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	**109** °F	**101** °F	**97** °F	
Mean Temperature	**94** °F	**88** °F	**84** °F	
Min Temperature	**81** °F	**76** °F	**68** °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	29	24	19	730
Growing Degree Days (base 50)	44	38	34	1189
Dew Point:				
Dew Point	**81** °F	**71** °F	**48** °F	
Precipitation:				
Precipitation	**0.00** in	**0.00** in	**0.00** in	**0.00** in
Snowdepth	-	-	-	-
Wind:				
Wind	**21** mph	**4** mph	**0** mph	
Gust Wind	**29** mph	**18** mph	**9** mph	
Sea Level Pressure:				
Sea Level Pressure	**30.09** in	**29.92** in	**29.75** in	



Monthly Calendar Overview

« Previous Month « 2009 **August 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
Actual: 100 | 69	**Actual:** 99 | 71	**Actual:** 98 | 73	**Actual:** 97 | 76	**Actual:** 98 | 75	**Actual:** 98 | 75	**Actual:** 98 | 78
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -

8	9	10	11	12	13	14
Actual: 98 | 77	**Actual:** 98 | 74	**Actual:** 100 | 75	**Actual:** 99 | 78	**Actual:** 99 | 75	**Actual:** 99 | 75	**Actual:** 100 | 77
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
15	16	17	18	19	20	21
Actual: 100 | 79	**Actual:** 109 | 76	**Actual:** 101 | 76	**Actual:** 104 | 81	**Actual:** 101 | 79	**Actual:** 101 | 80	**Actual:** 102 | 77
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
22	23	24	25	26	27	28
Actual: 103 | 77	**Actual:** 109 | 79	**Actual:** 108 | 79	**Actual:** 100 | 80	**Actual:** 100 | 79	**Actual:** 99 | 69	**Actual:** 101 | 68
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
29	30	31				
Actual: 100 | 77	**Actual:** 99 | 81	**Actual:** 101 | 80				
Precip: 0.00	Precip: 0.00	Precip: 0.00				
Average: - | -	**Average:** - | -	**Average:** - | -				
Precip: -	Precip: -	Precip: -				

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear · Mostly Cloudy Partly Sunny · Partly Cloudy Mostly Sunny · Cloudy · Rain · Snow · Hail Flurries · Thunderstorms · Hazy Fog · Sleet · '?' denotes 'chance of' · Unknown

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

Data Category · Condition · High Temp. · Lo Temp. · Precip. (in inches) · Daily Avg. Temp. · Temps in °F

-30 0 30 60 90 120

Print This Calendar

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
August	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	100	84	69	74	67	55	95	60	22	29.93	29.89	29.84	10	9	7	9	2	-	0.00	
2	99	85	71	70	64	55	90	55	25	30.00	29.96	29.91	10	9	4	12	2	16	0.00	
3	98	86	73	73	69	64	94	60	32	30.08	30.01	29.95	10	8	4	9	2	16	0.00	
4	97	86	76	77	73	68	94	66	38	30.05	29.98	29.89	7	6	3	12	4	17	0.00	Rain
5	98	86	75	74	71	65	92	62	34	29.96	29.91	29.83	7	5	3	8	3	-	0.00	
6	98	86	75	74	71	67	92	63	36	29.95	29.89	29.81	10	8	4	10	5	-	0.00	
7	98	88	78	75	71	64	86	60	33	29.94	29.88	29.81	10	10	10	12	5	16	0.00	
8	98	88	77	76	71	65	92	63	34	29.94	29.90	29.83	10	10	10	12	6	20	0.00	
9	98	86	74	76	71	66	95	63	34	29.99	29.93	29.85	10	10	7	12	5	16	0.00	
10	100	88	75	77	72	65	94	64	33	29.98	29.93	29.85	10	10	3	7	2	9	0.00	
11	99	88	78	76	73	68	89	64	36	29.96	29.90	29.83	10	10	10	12	3	24	0.00	Rain , Thunderstorm
12	99	87	75	76	71	65	92	63	33	29.90	29.85	29.75	10	10	7	9	2	-	0.00	
13	99	87	75	75	70	65	91	62	33	29.87	29.82	29.76	10	10	10	13	4	17	0.00	
14	100	88	77	76	72	66	92	62	33	29.94	29.88	29.83	10	10	7	13	6	18	0.00	
15	100	90	79	77	72	63	90	62	30	30.02	29.96	29.89	10	10	10	10	5	-	0.00	
16	109	92	76	79	72	65	90	64	26	29.99	29.93	29.83	10	10	10	13	3	23	0.00	
17	101	88	76	78	75	70	96	69	36	29.95	29.91	29.83	10	9	5	8	1	-	0.00	
18	104	92	81	78	75	65	88	65	28	29.97	29.92	29.87	10	10	10	21	3	29	0.00	Thunderstorm
19	101	90	79	79	75	69	94	67	35	29.97	29.90	29.83	10	10	10	13	4	21	0.00	
20	101	90	80	80	74	66	95	62	33	29.93	29.86	29.80	10	10	7	17	8	25	0.00	
21	102	90	77	79	74	68	96	64	33	30.01	29.94	29.89	10	10	10	17	7	23	0.00	

22	103	90	77	78	74	69	94	62	34	30.04	29.97	29.86	10	10	7	12	6	-	0.00
23	109	94	79	74	71	65	85	54	26	29.93	29.88	29.77	10	10	10	14	2	22	0.00
24	108	94	79	77	71	63	88	53	24	29.90	29.85	29.78	10	10	10	17	4	26	0.00
25	100	90	80	77	69	62	86	54	30	30.04	29.99	29.93	10	10	10	15	7	21	0.00
26	100	90	79	72	67	62	76	50	29	30.09	30.04	29.96	10	10	10	12	5	18	0.00
27	99	84	69	64	57	48	83	42	17	30.04	29.98	29.88	10	10	10	13	5	21	0.00
28	101	84	68	65	61	54	82	49	25	29.94	29.89	29.79	10	10	10	8	1	-	0.00
29	100	88	77	77	74	66	92	65	33	29.95	29.89	29.85	10	10	10	15	5	29	0.00
30	99	90	81	81	77	72	93	73	42	30.06	30.00	29.94	10	10	10	14	7	22	0.00
31	101	90	80	80	76	68	96	70	33	30.05	30.00	29.91	10	10	7	12	5	17	0.00

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Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: MTS/MC - BRA	
Date & Time: 24 Aug 10, 0950	County Name: Robertson
Stream Name: Campbells Creek	
Segment No. or nearest downstream Segment No.:	
Description of Site: 99916 On private property about 1 mile from Public Road	

At any point during the Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the use for the water body the investigator should stop conducting the UAA.

A. Stream Characteristics:

1. Check the following channel flow status that applies.

☐ dry ☐ no flow ☑ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:

☐ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.

☑ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.

☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.

☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.

☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. <0.05 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 °C (86°F) Water Temp 25.8 °C (78.4°F)

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	RL 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):

On private property ≈ 1 mile from Public Road. Thick brush and trees along creek #1229-1230

8. Dominant Primary Substrate

☐Cobble ☑Sand ☐Silt ☐Mud/Clay ☐Gravel ☐Bedrock ☐Rip rap ☐ Concrete

Stream Name_____ Site: _____
Date: _____ Time: _____

B. Primary Contact Water Recreation Evaluation:

- Primary contact recreation draft definition: Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, and whitewater kayaking, canoeing, and rafting, involving a significant risk of ingestion of water.

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?
☐ Yes ☑ No primary contact recreation activities were observed

a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).

☐ Wading-Children ☐ Tubing ☑ No primary contact activities that commonly occur were observed
☐ Wading-Adults ☐ Surfing
☐ Swimming ☐ Whitewater-kayaking, canoeing, rafting
☐ Water skiing ☐ Other: _____
☐ Diving ☐ frequent public swimming-created by publicly owned land or commercial operations

b. Check the number of individuals observed at the site: ☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Water in mouth or nose of the individual ☐ Primary touch: Individual's body (or portion) immersed in water
☐ Secondary touch: fishing, pets and related contact with water ☐ Individual is in a boat touching water
☐ Individual is on shore near water within 8 meters (25ft) of water ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☑ Not applicable

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
Low flow, no significant pools. Avg depth of reach = 0.3 m

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
On private property about 1 mile from public road.

4. Is an area with primary contact recreation activities or a bathing beach (e.g. state/local parks with swimming, etc.) located near (e.g. within 5 miles upstream and downstream) this site? NO

C. Secondary Contact Water Recreation Evaluation:

- Secondary contact recreation 1: Water recreation activities, such as fishing, commercial and recreational boating, and limited body contact incidental to shoreline activity, not involving a significant risk of water ingestion and that commonly occur.
- Secondary contact recreation 2: Water recreation activities, such as fishing, commercial and recreational boating, and limited body contact incidental to shoreline activity, not involving a significant risk of water ingestion but that occur less frequently than for secondary contact recreation 1 due to (1) physical characteristics of the water body and/or (2) limited public access.

1. Were water recreation activities observed at the site, but the nature of the recreation does not involve a significant risk of ingestion (e.g. secondary contact recreation activities)? ☐ Yes ☐ No secondary contact recreation activities were observed

a. Check the following boxes of secondary contact recreation activities that were observed at the time of the sampling event at the site (Attach photos of activities or lack of activities).

☐ Fishing
☐ Boating-commercial, recreational
☐ Non-whitewater-kayaking, rafting, canoeing
☑ No secondary contact recreation activities were observed
☐ Other secondary contact activities: _____

Date: _____ Time: _____

b. Check the number of individuals observed at the site.
☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body well away from water between 8 and 30 meters (100 ft)

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
low flow, no significant pools

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).
low flow, shallow, no significant pools #1232, 1236, 1239, 1240
Brush #1241, 1242

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 about 1mile from public Road. Banks have thick brush & trees & vines.

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.
Rural property, Pasture on all sides. No public access. Low flow.
Brush in creek #1241

Field Data Sheets – Basic RUAA Survey

Stream Name _____ Site: _____
Date: _____

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 1231 Downstream 1232 Left Bank 1233 Right Bank 1234

Photos #s (150 meters) Upstream 1235 Downstream 1236 Left Bank 1237 Right Bank 1238

Photos #s (300 meters) Upstream 1245 Downstream 1246 Left Bank ~~1247~~ Right Bank ~~1248~~

24 Aug 10 NO Pics

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			

No significant pools

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	0.09
60 meters	0.28
90 meters	0.40
120 meters	0.03
150 meters	0.21
180 meters	0.42
210 meters	0.02
240 meters	0.76
270 meters	0.49
300 meters	0.33
Average	~~0.03~~ 0.3

24 Aug 10

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

c) Stream width - Measure (1) the width at one point which represents the typical average width of the 300 meter reach; (2) the width at the narrowest point of the stream within the 300 meter reach; and (3) the width at the widest point of the stream within the 300 meter reach.

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	1.0 B/AH 24 Hg 10
Width at narrowest point of the stream within 300 meter reach	0.20
Width at the widest point of the stream within 300 meter reach	3

d) Is there sufficient water within a 300 meter stream reach during base flow conditions to support primary contact recreation? ☐ Yes ☑ No

COMMENTS: No significant pools. Low flow, shallow stream, #1236

2. Non-wadeable Streams

If accessible, take 10 width measurements which represent typical widths of the 300 meter reach. If the water is too deep and not accessible record the estimated average width of the water body.

Also, take photos facing upstream, downstream, left bank, and right bank at .
Photos #s (30 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (150 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

# Measurements	Width (meters)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

☐ Drinking or water in mouth
☐ Bathing
☐ Walking
☐ Jogging/running
☐ Bicycling
☐ Standing
☐ Sitting
☐ Lying down/sleeping
☐ Playing on shoreline
☐ Picnicking
☐ Motorcycle/ATV
☐ Hunting/Trapping
☐ Wildlife watching
☑ None
☐ Other: _____

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☐ Yes ☑ No (If yes, please provide supporting documentation and photos.)
Comments: _____

3. Check any channel obstructions that apply (Attach photos).

☐ Culverts
☐ Barbed wire
☐ Utility pipe
☐ Fences
☐ Dams
☐ Other (specify): #1241
☑ Log jams
☐ Thick vegetation
☐ Rip rap
☐ Low bridges
☐ Water control structure
☑ None

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest).

☐ Campgrounds
☐ Playgrounds
☑ Rural area
☐ Residential
☐ National forests
☐ Urban/suburban location
☐ Golf Course
☐ Sports Field
☐ Stairs/walkway
☐ Boating access (ramps)
☐ Beach
☐ Bridge crossing
☐ Commercial boating
☐ Trails/paths (hiking/biking)
☐ Paved parking lot
☐ Unimproved parking lot
☐ Roads (paved/unpaved)
☐ Populated area
☐ Docks or rafts
☐ Commercial outfitter
☐ Nearby school
☐ Power Line Corridor
☐ Parks (national/city/county/state)
☐ Public Property
☐ Other:_____
☐ None of the Above

Comments:_____

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).

☑ Private Property
☐ No trespass sign
☐ Wildlife
☑ Steep slopes
☑ No public access
☐ No roads
☐ Fence
☐ Barge/ship traffic
☐ Industrial
☐ None of the Above
☐ Other:_____

Comments: #1242 Thick vegetation along banks #1229, 1230

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:_____

Stream Name_____ Site: _____
Date: _____ Time: _____

7. Check all water characteristics that apply (Attach photos).

Aquatic Vegetation: ☑ absent ☐ rare ☐ common ☐ abundant
Algae Cover: ☐ absent ☑ rare ☐ common ☐ abundant
Odor: ☐ none ☐ rare ☑ common ☐ abundant
Color: ☑ clear ☐ green ☐ red ☐ brown ☐ black
Bottom Deposit: ☐ sludge ☐ solids ☑ fine sediments ☐ none ☐ other
Water Surface: ☐ clear ☑ scum ☐ foam ☐ debris ☐ oil
Other: #1240. Scum on water over most of reach, #1242, 1243

8. Vertebrates Observed within 300 meter reach

Snakes	☑ None	☐ slight presence	☐ moderate presence	☐ large presence
Water Dependent Birds	☑ None	☐ slight presence	☐ moderate presence	☐ large presence
Alligators	☑ None	☐ slight presence	☐ moderate presence	☐ large presence

Comments: _____

9. Mammals Observed within 300 meter reach

Wild	☑ None	☐ slight presence	☐ moderate presence	☐ large presence
Domesticated Pets	☑ None	☐ slight presence	☐ moderate presence	☐ large presence
Livestock	☑ None	☐ slight presence	☐ moderate presence	☐ large presence
Feral Hogs	☑ None	☐ slight presence	☐ moderate presence	☐ large presence

Comments: _____

10. Evidence of wild animals or evidence of birds, cattle, hogs, etc.
☑ Tracks ☐ Fecal droppings ☐ Bird nests

11. Garbage Observed

Large garbage in the channel ☐ None ☐ Rare ☑ Common ☐ Abundant
Small garbage in the channel ☐ None ☑ Rare ☐ Common ☐ Abundant
Bank Garbage ☑ None ☐ Rare ☐ Common ☐ Abundant
Briefly describe the kinds of garbage observed: Tires in creek along 300 m reach #1231, 1232, 1236, 1239

12. Is the site located in a wildlife preserve with large wildlife (i.e waterfowl) population? ☐ Yes ☑ No

13. Please document any other relevant information regarding recreational activities and the water body in general (for example, area outside of the stream reach evaluated).

_____

Field Data Sheet - Basic RUAA Survey
Stream Flow (Discharge) Measurement

Stream:_____ Date:_____
Site:_____ Site
Description:_____
Time Begin:_____ Time End:_____ Meter Type:_____
Observers:_____ Stream Width*:_____ Section Width (W):_____
Observations:_____

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V)		Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
			At Point (ft/s)(m/s)	Average (ft/s)(m/s)	

: Mon Sep 27 2010

99916-24AUG10.WAD 2010/08/24 08:38:40	NC

FlowTracker P872 3.7 2.30 0.0%	**(English Units)** ft ft/s ft^2 cfs

Accuracy	1.0%	1.0%
Depth	0.6%	3.9%
Velocity	6.7%	22.7%
Width	0.2%	0.2%
Method	3.2%	-
# Stations	2.6%	-
Overall	**8.0%**	**23.1%**

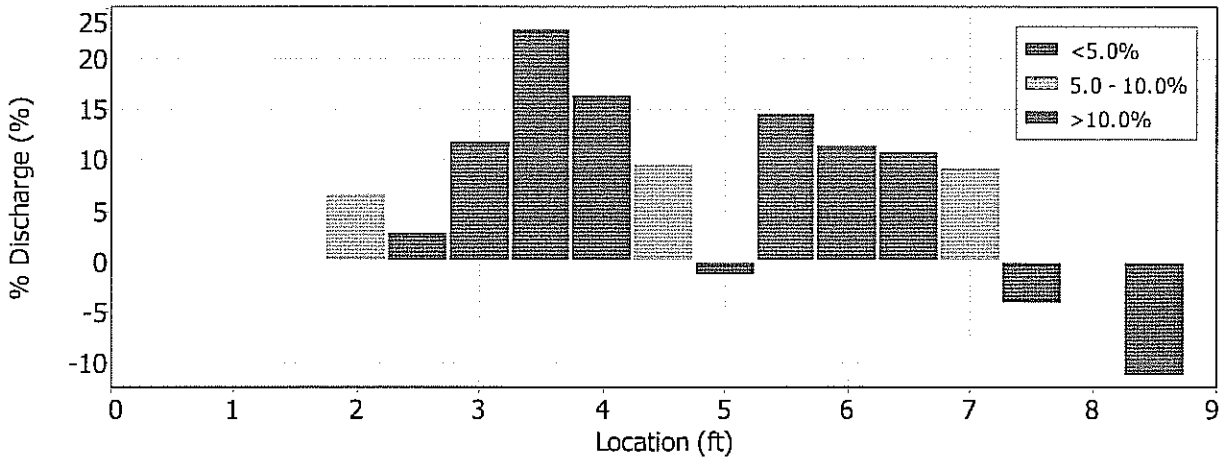
40	19
LEW	9.000
42.7 dB	3.950
78.38 °F	0.439
Mid-Section	0.0075
	0.0296

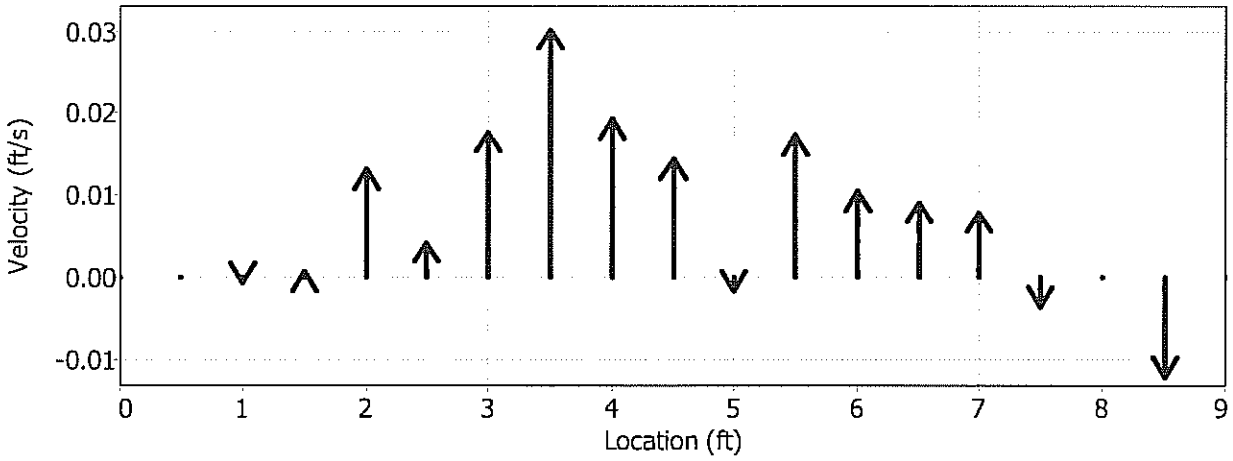
				Depth								
0	08:38	0.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
1	08:39	0.50	0.6	0.200	0.6	0.080	0.0000	1.00	0.0000	0.100	0.0000	0.0
2	*08:40*	*1.00*	*0.6*	*0.200*	*0.6*	*0.080*	*-0.0007*	*1.00*	*-0.0007*	*0.100*	*-0.0001*	*-0.2*
3	*08:41*	*1.50*	*0.6*	*0.200*	*0.6*	*0.080*	*0.0007*	*1.00*	*0.0007*	*0.100*	*0.0001*	*0.2*
4	08:42	2.00	0.6	0.300	0.6	0.120	0.0131	1.00	0.0131	0.150	0.0020	6.6
5	*08:43*	*2.50*	*0.6*	*0.400*	*0.6*	*0.160*	*0.0043*	*1.00*	*0.0043*	*0.200*	*0.0009*	*2.9*
6	08:44	3.00	0.6	0.400	0.6	0.160	0.0177	1.00	0.0177	0.200	0.0035	12.0
7	*08:45*	*3.50*	*0.6*	*0.450*	*0.6*	*0.180*	*0.0302*	*1.00*	*0.0302*	*0.225*	*0.0068*	*22.9*
8	08:46	4.00	0.6	0.500	0.6	0.200	0.0194	1.00	0.0194	0.250	0.0048	16.3
9	08:47	4.50	0.6	0.400	0.6	0.160	0.0144	1.00	0.0144	0.200	0.0029	9.8
10	*08:48*	*5.00*	*0.6*	*0.500*	*0.6*	*0.200*	*-0.0016*	*1.00*	*-0.0016*	*0.250*	*-0.0004*	*-1.4*
11	08:49	5.50	0.6	0.500	0.6	0.200	0.0174	1.00	0.0174	0.250	0.0043	14.7
12	08:50	6.00	0.6	0.650	0.6	0.260	0.0105	1.00	0.0105	0.325	0.0034	11.5
13	*08:52*	*6.50*	*0.6*	*0.700*	*0.6*	*0.280*	*0.0092*	*1.00*	*0.0092*	*0.350*	*0.0032*	*10.9*
14	08:53	7.00	0.6	0.700	0.6	0.280	0.0079	1.00	0.0079	0.350	0.0028	9.3
15	08:53	7.50	0.6	0.700	0.6	0.280	-0.0036	1.00	-0.0036	0.350	-0.0013	-4.3
16	08:55	8.00	0.6	0.550	0.6	0.220	0.0000	1.00	0.0000	0.275	0.0000	0.0
17	08:55	8.50	0.6	0.550	0.6	0.220	-0.0121	1.00	-0.0121	0.275	-0.0033	-11.3
18	08:55	9.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0

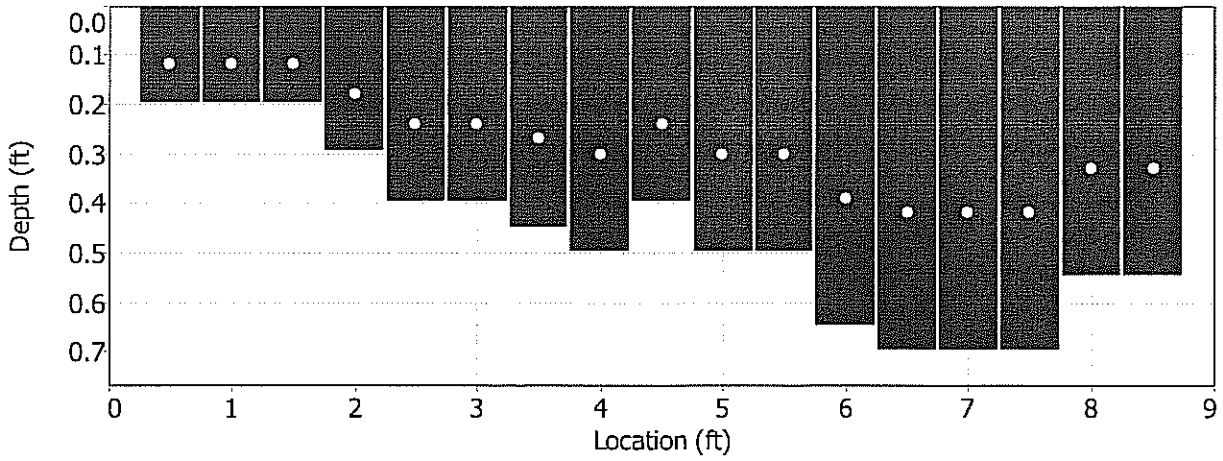
: Mon Sep 27 2010

99916-24AUG10.WAD
2010/08/24 08:38:40

NC







: Mon Sep 27 2010

99916-24AUG10.WAD
2010/08/24 08:38:40

NC

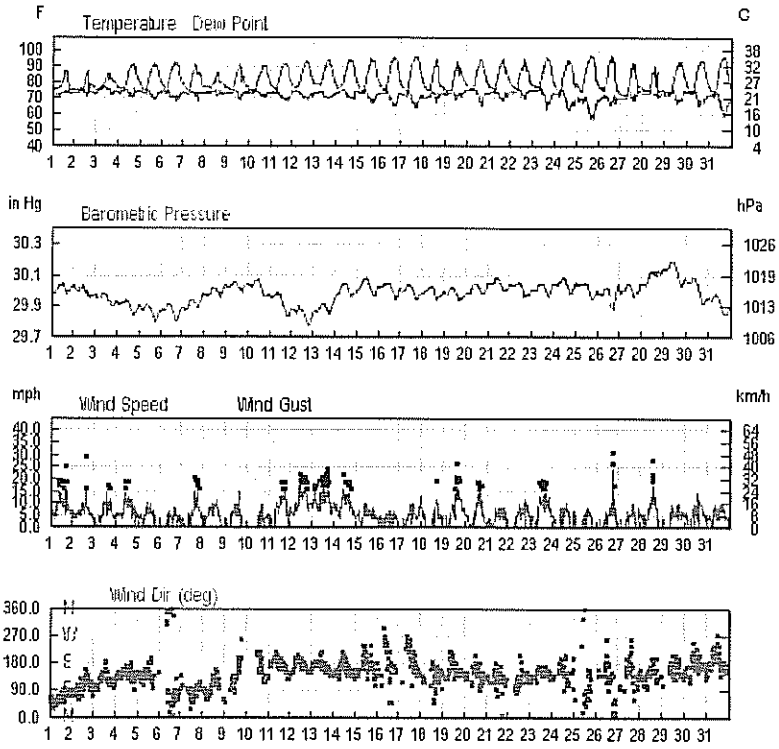
2	1.00	0.6	SNR (58.3) is different from typical SNR (42.7)
3	1.50	0.6	SNR (60.2) is different from typical SNR (42.7)
5	2.50	0.6	Boundary QC is Good; possible boundary interference
7	3.50	0.6 0.6	High angle: 46 High SNR variation during measurement: 6.0,6.0
10	5.00	0.6	High SNR variation during measurement: 5.6,5.2
13	6.50	0.6	High SNR variation during measurement: 5.6,5.2

History for Hearne, TX

Month of July, 2010

Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	**97** °F	**93** °F	**85** °F	
Mean Temperature	**86** °F	**84** °F	**80** °F	
Min Temperature	**78** °F	**75** °F	**72** °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	21	19	15	579
Growing Degree Days (base 50)	36	34	30	1047
Dew Point:				
Dew Point	**77** °F	**72** °F	**58** °F	
Precipitation:				
Precipitation	**0.46** in	**0.02** in	**0.00** in	**0.65** in
Snowdepth	-	-	-	-
Wind:				
Wind	**24** mph	**4** mph	**0** mph	
Gust Wind	**34** mph	**18** mph	**9** mph	
Sea Level Pressure:				
Sea Level Pressure	**30.20** in	**29.98** in	**29.78** in	



Monthly Calendar Overview

« Previous Month « 2009 **July 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
				Actual: 87 | 75	**Actual:** 87 | 75	**Actual:** 85 | 75
				Precip: 0.07	Precip: 0.46	Precip: 0.00

				Average: - | - Precip: -	Average: - | - Precip: -	Average: - | - Precip: -
4 Actual: 91 | 76 Precip: 0.00 Average: - | - Precip: -	5 Actual: 92 | 74 Precip: 0.00 Average: - | - Precip: -	6 Actual: 93 | 75 Precip: 0.00 Average: - | - Precip: -	7 Actual: 91 | 74 Precip: 0.00 Average: - | - Precip: -	8 Actual: 86 | 76 Precip: 0.00 Average: - | - Precip: -	9 Actual: 91 | 75 Precip: 0.00 Average: - | - Precip: -	10 Actual: 90 | 74 Precip: 0.00 Average: - | - Precip: -
11 Actual: 92 | 75 Precip: 0.00 Average: - | - Precip: -	12 Actual: 93 | 76 Precip: 0.00 Average: - | - Precip: -	13 Actual: 94 | 78 Precip: 0.00 Average: - | - Precip: -	14 Actual: 94 | 76 Precip: 0.00 Average: - | - Precip: -	15 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	16 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	17 Actual: 96 | 73 Precip: 0.00 Average: - | - Precip: -
18 Actual: 95 | 74 Precip: 0.00 Average: - | - Precip: -	19 Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	20 Actual: 95 | 76 Precip: 0.00 Average: - | - Precip: -	21 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	22 Actual: 95 | 76 Precip: 0.00 Average: - | - Precip: -	23 Actual: 95 | 77 Precip: 0.00 Average: - | - Precip: -	24 Actual: 94 | 73 Precip: 0.00 Average: - | - Precip: -
25 Actual: 97 | 74 Precip: 0.00 Average: - | - Precip: -	26 Actual: 97 | 75 Precip: 0.00 Average: - | - Precip: -	27 Actual: 92 | 72 Precip: 0.01 Average: - | - Precip: -	28 Actual: 90 | 74 Precip: 0.11 Average: - | - Precip: -	29 Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	30 Actual: 94 | 74 Precip: 0.00 Average: - | - Precip: -	31 Actual: 96 | 73 Precip: 0.00 Average: - | - Precip: -

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear, Mostly Cloudy Partly Sunny, Partly Cloudy Mostly Sunny, Cloudy, Rain, Snow, Hail Flurries, Thunderstorms, Hazy Fog, Sleet, '?' denotes 'chance of', Unknown

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

Data Category, Condition, High Temp., Lo Temp., Precip. (in inches), Daily Avg. Temp., Temps in °F (-60 -30 0 30 60 90 120)

Print This Calendar

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)			Gust Speed (mph)	Precip (in)	Events
July	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg		high	sum	
1	87	81	75	75	73	71	94	80	64	30.04	30.00	29.97	10	6	4	16	8	25		0.07	Rain
2	87	81	75	76	74	72	94	88	63	30.03	29.99	29.95	10	7	4	16	6	29		0.46	Rain
3	85	80	75	77	75	72	95	85	68	29.98	29.94	29.90	10	5	3	14	4	20		0.00	Rain
4	91	84	76	77	74	71	94	75	51	29.94	29.90	29.84	7	5	3	14	7	18		0.00	Rain
5	92	83	74	76	73	70	95	74	48	29.91	29.87	29.80	7	5	3	10	5	9		0.00	
6	93	84	75	75	72	69	94	69	44	29.92	29.87	29.80	7	5	3	8	2	-		0.00	
7	91	82	74	75	73	69	94	75	53	29.94	29.91	29.87	7	5	4	15	3	25		0.00	
8	86	81	76	75	74	72	90	81	63	30.02	29.98	29.95	10	6	3	12	5	16		0.00	Rain
9	91	83	75	76	73	70	94	79	51	30.06	30.02	29.98	7	5	3	15	2	18		0.00	Rain
10	90	82	74	75	73	71	96	77	53	30.08	30.02	29.96	7	4	3	9	1	-		0.00	
11	92	84	75	75	72	69	94	72	46	29.99	29.94	29.83	7	5	4	15	5	20		0.00	
12	93	84	76	75	73	70	92	70	47	29.90	29.86	29.78	7	5	4	21	9	22		0.00	
13	94	86	78	75	73	71	86	68	46	29.92	29.88	29.85	7	4	3	18	11	24		0.00	
14	94	85	76	76	73	70	91	69	46	30.05	30.00	29.95	7	5	3	16	9	22		0.00	
15	95	85	75	76	72	68	95	69	41	30.09	30.02	29.96	7	5	2	10	5	16		0.00	
16	95	85	75	75	71	66	94	67	38	30.06	30.02	29.94	10	6	3	7	2	-		0.00	Rain
17	96	84	73	74	71	65	94	63	35	30.05	30.00	29.94	10	9	3	10	2	16		0.00	

18	95	84	74	75	72	68	90	73	42	30.03	29.99	29.94	10	10	7	12	5	20	0.00	Thunderstorm
19	93	84	74	76	73	70	96	76	48	30.02	29.98	29.94	10	8	0	18	4	26	0.00	Fog
20	95	86	76	76	73	65	95	73	39	30.05	30.01	29.97	10	9	5	15	6	18	0.00	
21	95	85	75	75	73	69	95	71	42	30.09	30.05	29.99	10	9	5	8	2	16	0.00	Rain
22	95	86	76	76	74	70	94	75	45	30.06	30.01	29.96	10	9	7	12	3	20	0.00	
23	95	86	77	77	73	64	94	70	35	30.05	30.01	29.96	10	9	5	14	4	20	0.00	
24	94	84	73	76	71	63	96	69	37	30.09	30.04	29.98	10	9	4	10	3	-	0.00	
25	97	86	74	72	67	58	88	58	26	30.06	30.02	29.94	10	10	7	8	2	-	0.00	Rain
26	97	86	75	73	70	67	87	67	38	30.02	29.97	29.88	10	7	4	24	2	34	0.00	Rain , Thunderstorm
27	92	82	72	76	72	69	95	79	46	30.05	30.00	29.96	10	6	4	10	2	-	0.01	Rain , Thunderstorm
28	90	82	74	76	74	71	95	83	56	30.14	30.09	30.03	10	9	3	17	6	31	0.11	Rain , Thunderstorm
29	93	84	74	77	72	68	96	74	45	30.20	30.14	30.03	10	9	5	10	3	-	0.00	
30	94	84	74	76	72	66	95	71	41	30.09	30.04	29.91	10	9	2	14	5	18	0.00	
31	96	84	73	74	69	59	94	66	29	29.98	29.93	29.85	10	9	5	10	4	-	0.00	

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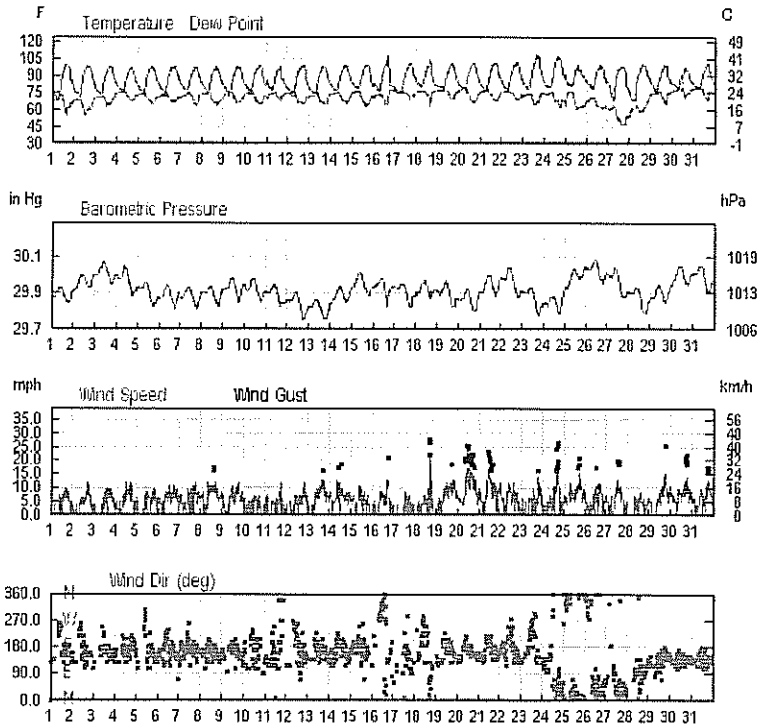
History for Hearne, TX

Month of August, 2010

Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	**109** °F	**101** °F	**97** °F	
Mean Temperature	**94** °F	**88** °F	**84** °F	
Min Temperature	**81** °F	**76** °F	**68** °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	29	24	19	730
Growing Degree Days (base 50)	44	38	34	1189
Dew Point:				
Dew Point	**81** °F	**71** °F	**48** °F	
Precipitation:				
Precipitation	**0.00** in	**0.00** in	**0.00** in	**0.00** in
Snowdepth	-	-	-	-
Wind:				
Wind	**21** mph	**4** mph	**0** mph	
Gust Wind	**29** mph	**18** mph	**9** mph	
Sea Level Pressure:				
Sea Level Pressure	**30.09** in	**29.92** in	**29.75** in	



Monthly Calendar Overview

« Previous Month « 2009 **August 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
Actual: 100 | 69	**Actual:** 99 | 71	**Actual:** 98 | 73	**Actual:** 97 | 76	**Actual:** 98 | 75	**Actual:** 98 | 75	**Actual:** 98 | 78
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -

8	9	10	11	12	13	14
Actual: 98 | 77	**Actual:** 98 | 74	**Actual:** 100 | 75	**Actual:** 99 | 78	**Actual:** 99 | 75	**Actual:** 99 | 75	**Actual:** 100 | 77
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
15	16	17	18	19	20	21
Actual: 100 | 79	**Actual:** 109 | 76	**Actual:** 101 | 76	**Actual:** 104 | 81	**Actual:** 101 | 79	**Actual:** 101 | 80	**Actual:** 102 | 77
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
22	23	24	25	26	27	28
Actual: 103 | 77	**Actual:** 109 | 79	**Actual:** 108 | 79	**Actual:** 100 | 80	**Actual:** 100 | 79	**Actual:** 99 | 69	**Actual:** 101 | 68
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
29	30	31				
Actual: 100 | 77	**Actual:** 99 | 81	**Actual:** 101 | 80				
Precip: 0.00	Precip: 0.00	Precip: 0.00				
Average: - | -	**Average:** - | -	**Average:** - | -				
Precip: -	Precip: -	Precip: -				

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear · Mostly Cloudy Partly Sunny · Partly Cloudy Mostly Sunny · Cloudy · Rain · Snow · Hail Flurries · Thunderstorms · Hazy Fog · Sleet · '?' denotes 'chance of' · Unknown

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

Data Category · Condition · High Temp. · Lo Temp. · Precip. (in inches) · Daily Avg. Temp. · Temps in °F · 60-30 0 30 60 90 120

Print This Calendar

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
August	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	100	84	69	74	67	55	95	60	22	29.93	29.89	29.84	10	9	7	9	2	-	0.00	
2	99	85	71	70	64	55	90	55	25	30.00	29.96	29.91	10	9	4	12	2	16	0.00	
3	98	86	73	73	69	64	94	60	32	30.08	30.01	29.95	10	8	4	9	2	16	0.00	
4	97	86	76	77	73	68	94	66	38	30.05	29.98	29.89	7	6	3	12	4	17	0.00	Rain
5	98	86	75	74	71	65	92	62	34	29.96	29.91	29.83	7	5	3	8	3	-	0.00	
6	98	86	75	74	71	67	92	63	36	29.95	29.89	29.81	10	8	4	10	5	-	0.00	
7	98	88	78	75	71	64	86	60	33	29.94	29.88	29.81	10	10	10	12	5	16	0.00	
8	98	88	77	76	71	65	92	63	34	29.94	29.90	29.83	10	10	10	12	6	20	0.00	
9	98	86	74	76	71	66	95	63	34	29.99	29.93	29.85	10	10	7	12	5	16	0.00	
10	100	88	75	77	72	65	94	64	33	29.98	29.93	29.85	10	10	3	7	2	9	0.00	
11	99	88	78	76	73	68	89	64	36	29.96	29.90	29.83	10	10	10	12	3	24	0.00	Rain , Thunderstorm
12	99	87	75	76	71	65	92	63	33	29.90	29.85	29.75	10	10	7	9	2	-	0.00	
13	99	87	75	75	70	65	91	62	33	29.87	29.82	29.76	10	10	10	13	4	17	0.00	
14	100	88	77	76	72	66	92	62	33	29.94	29.88	29.83	10	10	7	13	6	18	0.00	
15	100	90	79	77	72	63	90	62	30	30.02	29.96	29.89	10	10	10	10	5	-	0.00	
16	109	92	76	79	72	65	90	64	26	29.99	29.93	29.83	10	10	10	13	3	23	0.00	
17	101	88	76	78	75	70	96	69	36	29.95	29.91	29.83	10	9	5	8	1	-	0.00	
18	104	92	81	78	75	65	88	65	28	29.97	29.92	29.87	10	10	10	21	3	29	0.00	Thunderstorm
19	101	90	79	79	75	69	94	67	35	29.97	29.90	29.83	10	10	10	13	4	21	0.00	
20	101	90	80	80	74	66	95	62	33	29.93	29.86	29.80	10	10	7	17	8	25	0.00	
21	102	90	77	79	74	68	96	64	33	30.01	29.94	29.89	10	10	10	17	7	23	0.00	

22	103	90	77	78	74	69	94	62	34	30.04	29.97	29.88	10	10	7	12	6	-	0.00
23	109	94	79	74	71	65	85	54	26	29.93	29.88	29.77	10	10	10	14	2	22	0.00
24	108	94	79	77	71	63	88	53	24	29.90	29.85	29.76	10	10	10	17	4	26	0.00
25	100	90	80	77	69	62	86	54	30	30.04	29.99	29.93	10	10	10	15	7	21	0.00
26	100	90	79	72	67	62	76	50	29	30.09	30.04	29.96	10	10	10	12	5	18	0.00
27	99	84	69	64	57	48	83	42	17	30.04	29.98	29.88	10	10	10	13	5	21	0.00
28	101	84	68	65	61	54	82	49	25	29.94	29.89	29.79	10	10	10	8	1	-	0.00
29	100	88	77	77	74	66	92	65	33	29.95	29.89	29.85	10	10	10	15	5	29	0.00
30	99	90	81	81	77	72	93	73	42	30.06	30.00	29.94	10	10	10	14	7	22	0.00
31	101	90	80	80	76	68	96	70	33	30.05	30.00	29.91	10	10	7	12	5	17	0.00

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Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: MS/NC - BRA	
Date & Time: 24 Aug 10 0905	County Name: Robertson
Stream Name: Campbells Creek	
Segment No. or nearest downstream Segment No.:	
Description of Site: 99917 On private property, ≈ 1 mile from OSR	

At any point during the Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the use for the water body the investigator should stop conducting the UAA.

A. Stream Characteristics:

1. Check the following channel flow status that applies.

☑ dry ☐ no flow ☐ low ☐ normal ☐ high ☐ flooded

2. Check the following stream type that applies on the day of the survey:

☑ Ephemeral: A stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.

☐ Intermittent: A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 cubic feet per second is considered intermittent.

☐ Intermittent w/ perennial pools: An intermittent stream which maintains persistent pools even when flow in the stream is less than 0.1 cubic feet per second.

☐ Perennial: A stream which flows continuously throughout the year. Perennial streams have a 7Q2 equal to or greater than 0.1 cubic feet per second.

☐ Designated or unclassified tidal stream: A stream that is tidally influenced. If you checked this box, you will need to contact the Water Quality Standards Group and evaluate whether or not a bathing beach is located along the tidal stream and whether or not a bathing beach is located along the estuary, bay or Gulf water that the tidal stream flows into.

3. Streamflow

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites. N/A 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 °C (86 °F) Water Temp N/A °C

5. Riparian Zone (Mark dominant categories with L (Left Bank) and R (Right Bank). Bank orientation is determined by the investigator facing downstream.)

_____ Forest	_____ Urban	_____ Rip rap
_____ Shrub dominated corridor	RL 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):

Approx. 1 mile from OSR onto private property. Has fences + multiple gates. Top of watershed. No flow. Stock pond at end of reach. #1228

8. Dominant Primary Substrate

☐Cobble ☐Sand ☐Silt ☑Mud/Clay ☐Gravel ☐Bedrock ☐Rip rap ☐ Concrete

Stream Name_____ Site: _____
Date: _____ Time: _____

B. Primary Contact Water Recreation Evaluation:

- Primary contact recreation draft definition: Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, and whitewater kayaking, canoeing, and rafting, involving a significant risk of ingestion of water.

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?
☐ Yes ☐ No primary contact recreation activities were observed

a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).

☐ Wading-Children ☐ Tubing ☑ No primary contact activities that commonly occur were observed
☐ Wading-Adults ☐ Surfing
☐ Swimming ☐ Whitewater-kayaking, canoeing, rafting
☐ Water skiing ☐ Other: _____
☐ Diving ☐ frequent public swimming-created by publicly owned land or commercial operations

b. Check the number of individuals observed at the site: ☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Water in mouth or nose of the individual ☐ Primary touch: Individual's body (or portion) immersed in water
☐ Secondary touch: fishing, pets and related contact with water ☐ Individual is in a boat touching water
☐ Individual is on shore near water within 8 meters (25ft) of water ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☑ Not applicable

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
No flow or channel, only slight depression in pasture, Top of watershed, Stock pond near end of Reach. Lots of cows in pasture #1223-1226 1228

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
about 1 mile from OSR, multiple gates and fences. Private property, #1228

4. Is an area with primary contact recreation activities or a bathing beach (e.g. state/local parks with swimming, etc.) located near (e.g. within 5 miles upstream and downstream) this site? N/D

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: _____

Date: _____ Time: _____

b. Check the number of individuals observed at the site.
☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body well away from water between 8 and 30 meters (100 ft)

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
No water or channel. Pond at end of reach. Private property. #1223-1226

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 channel or flow. Top of watershed. Only slight depression in pasture until you reach stock pond. #1223-1226

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).
about 1 mile from OSR, multiple gates and fences. Private property. #1228

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.
No flow or channel. Stock pond at end of reach. herds of cows, Private property. #1223-1226, 1228

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____

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____

#1227 Pic of 300 reach

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			

Dry - No Water

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	

Dry - No Water

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

c) Stream width - Measure (1) the width at one point which represents the typical average width of the 300 meter reach; (2) the width at the narrowest point of the stream within the 300 meter reach; and (3) the width at the widest point of the stream within the 300 meter reach.

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	Dry
Width at narrowest point of the stream within 300 meter reach	Dry
Width at the widest point of the stream within 300 meter reach	Dry

d) Is there sufficient water within a 300 meter stream reach during base flow conditions to support primary contact recreation? ☐ Yes ☑ No

COMMENTS: MP 24 Pg 10
Top of ~~Reach~~ Transect. No channel. All pasture with stock pond at ~~[illegible]~~ end of reach.

2. Non-wadeable Streams

If accessible, take 10 width measurements which represent typical widths of the 300 meter reach. If the water is too deep and not accessible record the estimated average width of the water body.

Also, take photos facing upstream, downstream, left bank, and right bank at .
Photos #s (30 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (150 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

# Measurements	Width (meters)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

☐ Drinking or water in mouth
☐ Bathing
☐ Walking
☐ Jogging/running
☐ Bicycling
☐ Standing
☐ Sitting
☐ Lying down/sleeping
☐ Playing on shoreline
☐ Picnicking
☐ Motorcycle/ATV
☐ Hunting/Trapping
☐ Wildlife watching
☑ None
☐ Other: _____

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☑ Yes ☐ No (If yes, please provide supporting documentation and photos.)
Comments: Pond at end of reach for livestock water.

3. Check any channel obstructions that apply (Attach photos).

☐ Culverts ☐ Fences ☐ Log jams ☐ Rip rap ☐ Water control structure
☐ Barbed wire ☐ Dams ☐ Thick vegetation ☐ Low bridges ☑ None
☐ Utility pipe ☐ Other (specify):_____

4. Check all surrounding conditions that promote recreational activities (Attach photos of evidence or unusual items of interest).

☐ Campgrounds ☐ Stairs/walkway ☐ Roads (paved/unpaved) ☐ Other:_____
☐ Playgrounds ☐ Boating access (ramps) ☐ Populated area ☐ None of the Above
☑ Rural area ☐ Beach ☐ Docks or rafts
☐ Residential ☐ Bridge crossing ☐ Commercial outfitter
☐ National forests ☐ Commercial boating ☐ Nearby school
☐ Urban/suburban location ☐ Trails/paths (hiking/biking) ☐ Power Line Corridor
☐ Golf Course ☐ Paved parking lot ☐ Parks (national/city/county/state)
☐ Sports Field ☐ Unimproved parking lot ☐ Public Property
Comments: All rage and pasture land.

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).

☑ Private Property ☑ Fence
☐ No trespass sign ☐ Barge/ship traffic
☐ Wildlife ☐ Industrial
☐ Steep slopes ☐ None of the Above
☐ No public access ☐ Other:_____
☐ No roads
Comments: No public access. #1228

6. Check any indications of human use (Attach photos).

☐ Roads ☐ RV/ATV Tracks ☐ NPDES Discharge ☐ Organized event
☐ Rope swings ☐ Camping Sites ☐ Gates on corridor ☑ No Human Presence
☐ Dock/platform ☐ Fire pit/ring ☐ Children's toys
☐ Foot paths/prints ☐ Fishing Tackle ☐ Remnant's of Kid's play
☐ Other: _____
Comments:_____

Stream Name_____ Site: _____
Date: _____ Time: _____

7. Check all water characteristics that apply (Attach photos).
Aquatic Vegetation: ☑ absent ☐ rare ☐ common ☐ abundant
Algae Cover: ☑ absent ☐ rare ☐ common ☐ abundant
Odor: ☑ none ☐ rare ☐ common ☐ abundant
Color: N/A ☐ clear ☐ green ☐ red ☐ brown ☐ black
Bottom Deposit: ☐ sludge ☐ solids ☐ fine sediments ☐ none ☑ other
Water Surface: N/A ☐ clear ☐ scum ☐ foam ☐ debris ☐ oil
Other: Dry, slight depression to stock pond.

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: Cows in pasture

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).
Stock pond at end of reach. No channel. This is at the top of the drainage area. #1228 #1223 1224, 1221

Field Data Sheet - Basie RUAA Survey
Stream Flow (Discharge) Measurement

Stream:_____ Date:_____
Site:_____ Site
Description:_____
Time Begin:_____ Time End:_____ Meter Type:_____
Observers:_____ Stream Width*:_____ Section Width (W):_____
Observations:_____

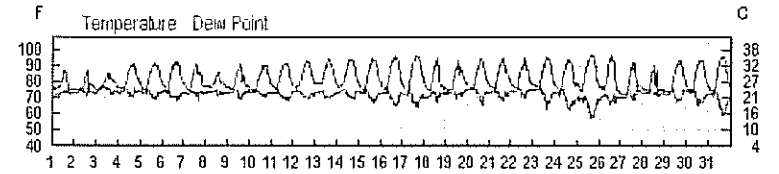
Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V)		Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
			At Point (ft/s)(m/s)	Average (ft/s)(m/s)	

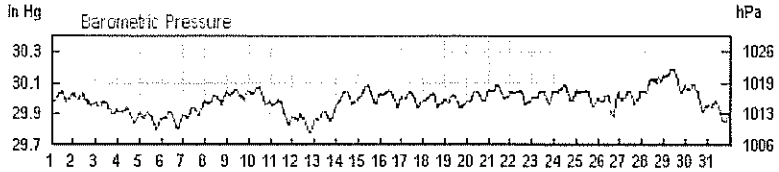
History for Hearne, TX

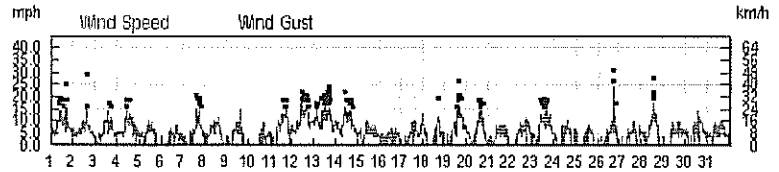
Month of July, 2010

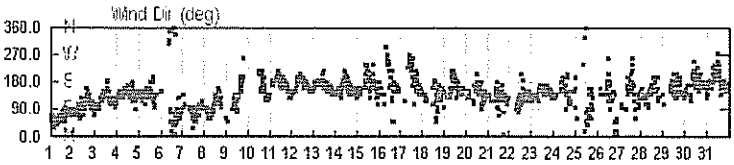
Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	**97** °F	**93** °F	**85** °F	
Mean Temperature	**86** °F	**84** °F	**80** °F	
Min Temperature	**78** °F	**75** °F	**72** °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	21	19	15	579
Growing Degree Days (base 50)	36	34	30	1047
Dew Point:				
Dew Point	**77** °F	**72** °F	**58** °F	
Precipitation:				
Precipitation	**0.46** in	**0.02** in	**0.00** in	**0.65** in
Snowdepth	-	-	-	-
Wind:				
Wind	**24** mph	**4** mph	**0** mph	
Gust Wind	**34** mph	**18** mph	**9** mph	
Sea Level Pressure:				
Sea Level Pressure	**30.20** in	**29.98** in	**29.78** in	









Monthly Calendar Overview

« Previous Month « 2009 **July 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1 **Actual:** 87 | 75 Precip: 0.07	2 **Actual:** 87 | 75 Precip: 0.46	3 **Actual:** 85 | 75 Precip: 0.00

				Average: - | - Precip: -	Average: - | - Precip: -	Average: - | - Precip: -
4 Actual: 91 | 76 Precip: 0.00 Average: - | - Precip: -	5 Actual: 92 | 74 Precip: 0.00 Average: - | - Precip: -	6 Actual: 93 | 75 Precip: 0.00 Average: - | - Precip: -	7 Actual: 91 | 74 Precip: 0.00 Average: - | - Precip: -	8 Actual: 86 | 76 Precip: 0.00 Average: - | - Precip: -	9 Actual: 91 | 75 Precip: 0.00 Average: - | - Precip: -	10 Actual: 90 | 74 Precip: 0.00 Average: - | - Precip: -
11 Actual: 92 | 75 Precip: 0.00 Average: - | - Precip: -	12 Actual: 93 | 76 Precip: 0.00 Average: - | - Precip: -	13 Actual: 94 | 78 Precip: 0.00 Average: - | - Precip: -	14 Actual: 94 | 76 Precip: 0.00 Average: - | - Precip: -	15 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	16 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	17 Actual: 96 | 73 Precip: 0.00 Average: - | - Precip: -
18 Actual: 95 | 74 Precip: 0.00 Average: - | - Precip: -	19 Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	20 Actual: 95 | 76 Precip: 0.00 Average: - | - Precip: -	21 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	22 Actual: 95 | 76 Precip: 0.00 Average: - | - Precip: -	23 Actual: 95 | 77 Precip: 0.00 Average: - | - Precip: -	24 Actual: 94 | 73 Precip: 0.00 Average: - | - Precip: -
25 Actual: 97 | 74 Precip: 0.00 Average: - | - Precip: -	26 Actual: 97 | 75 Precip: 0.00 Average: - | - Precip: -	27 Actual: 92 | 72 Precip: 0.01 Average: - | - Precip: -	28 Actual: 90 | 74 Precip: 0.11 Average: - | - Precip: -	29 Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	30 Actual: 94 | 74 Precip: 0.00 Average: - | - Precip: -	31 Actual: 96 | 73 Precip: 0.00 Average: - | - Precip: -

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear · Mostly Cloudy Partly Sunny · Partly Cloudy Mostly Sunny · Cloudy · Rain · Snow · Hail Flurries · Thunderstorms · Hazy Fog · Sleet · '?' denotes 'chance of' · Unknown

Actual: 90 | 58 Precip: 0.00 Average: 71 | 53 Precip: 0.03

Data Category · Condition · High Temp. · Lo Temp. · Precip. (in inches) · Daily Avg. Temp. · Temps in °F · -60 -30 0 30 60 90 120

Print This Calendar

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
July	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	87	81	75	75	73	71	94	80	64	30.04	30.00	29.97	10	6	4	16	8	25	0.07	Rain
2	87	81	75	76	74	72	94	88	63	30.03	29.99	29.95	10	7	4	16	6	29	0.46	Rain
3	85	80	75	77	75	72	95	85	68	29.98	29.94	29.90	10	5	3	14	4	20	0.00	Rain
4	91	84	76	77	74	71	94	75	51	29.94	29.90	29.84	7	5	3	14	7	18	0.00	Rain
5	92	83	74	76	73	70	95	74	48	29.91	29.87	29.80	7	5	3	10	5	9	0.00	
6	93	84	75	75	72	69	94	69	44	29.92	29.87	29.80	7	5	3	8	2	-	0.00	
7	91	82	74	75	73	69	94	75	53	29.94	29.91	29.87	7	5	4	15	3	25	0.00	
8	86	81	76	75	74	72	90	81	63	30.02	29.98	29.95	10	6	3	12	5	16	0.00	Rain
9	91	83	75	76	73	70	94	79	51	30.06	30.02	29.98	7	5	3	15	2	18	0.00	Rain
10	90	82	74	75	73	71	96	77	53	30.08	30.02	29.96	7	4	3	9	1	-	0.00	
11	92	84	75	75	72	69	94	72	46	29.99	29.94	29.83	7	5	4	15	5	20	0.00	
12	93	84	76	75	73	70	92	70	47	29.90	29.86	29.78	7	5	4	21	9	22	0.00	
13	94	86	78	75	73	71	86	68	46	29.92	29.88	29.85	7	4	3	18	11	24	0.00	
14	94	85	76	76	73	70	91	69	46	30.05	30.00	29.95	7	5	3	16	9	22	0.00	
15	95	85	75	76	72	68	95	69	41	30.09	30.02	29.96	7	5	2	10	5	16	0.00	
16	95	85	75	75	71	66	94	67	38	30.06	30.02	29.94	10	6	3	7	2	-	0.00	Rain
17	96	84	73	74	71	65	94	63	35	30.05	30.00	29.94	10	9	3	10	2	16	0.00	

18	95	84	74	75	72	68	90	73	42	30.03	29.99	29.94	10	10	7	12	5	20	0.00	Thunderstorm
19	93	84	74	76	73	70	96	76	48	30.02	29.98	29.94	10	8	0	18	4	26	0.00	Fog
20	95	86	76	76	73	65	95	73	39	30.05	30.01	29.97	10	9	5	15	6	18	0.00	
21	95	85	75	75	73	69	95	71	42	30.09	30.05	29.99	10	9	5	8	2	16	0.00	Rain
22	95	86	76	76	74	70	94	75	45	30.06	30.01	29.96	10	9	7	12	3	20	0.00	
23	95	86	77	77	73	64	94	70	35	30.05	30.01	29.96	10	9	5	14	4	20	0.00	
24	94	84	73	76	71	63	96	69	37	30.09	30.04	29.98	10	9	4	10	3	-	0.00	
25	97	86	74	72	67	58	86	58	26	30.06	30.02	29.94	10	10	7	8	2	-	0.00	Rain
26	97	86	75	73	70	67	87	67	38	30.02	29.97	29.88	10	7	4	24	2	34	0.00	Rain , Thunderstorm
27	92	82	72	76	72	69	95	79	46	30.05	30.00	29.96	10	6	4	10	2	-	0.01	Rain , Thunderstorm
28	90	82	74	76	74	71	95	83	56	30.14	30.09	30.03	10	9	3	17	6	31	0.11	Rain , Thunderstorm
29	93	84	74	77	72	68	96	74	45	30.20	30.14	30.03	10	9	5	10	3	-	0.00	
30	94	84	74	76	72	66	95	71	41	30.09	30.04	29.91	10	9	2	14	5	18	0.00	
31	96	84	73	74	69	59	94	66	29	29.98	29.93	29.85	10	9	5	10	4	-	0.00	

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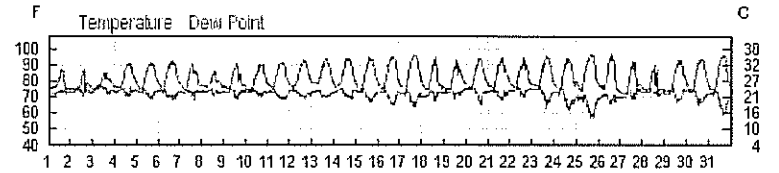
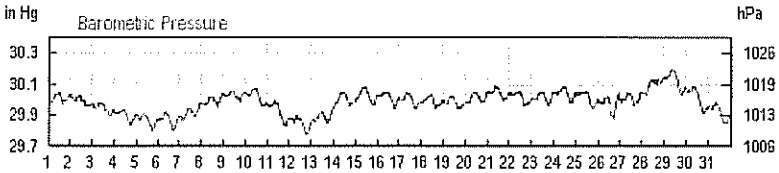
History for Hearne, TX

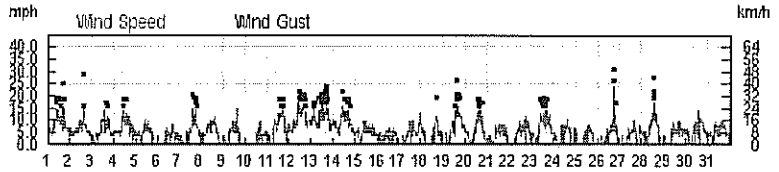
Month of July, 2010

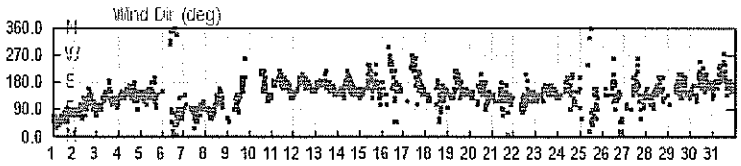
Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	**97** °F	**93** °F	**85** °F	
Mean Temperature	**86** °F	**84** °F	**80** °F	
Min Temperature	**78** °F	**75** °F	**72** °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	21	19	15	579
Growing Degree Days (base 50)	36	34	30	1047
Dew Point:				
Dew Point	**77** °F	**72** °F	**58** °F	
Precipitation:				
Precipitation	**0.46** in	**0.02** in	**0.00** in	**0.65** in
Snowdepth	-	-	-	-
Wind:				
Wind	**24** mph	**4** mph	**0** mph	
Gust Wind	**34** mph	**18** mph	**9** mph	
Sea Level Pressure:				
Sea Level Pressure	**30.20** in	**29.98** in	**29.78** in	









Monthly Calendar Overview

« Previous Month « 2009 **July 2010** 2011 » Next Month »

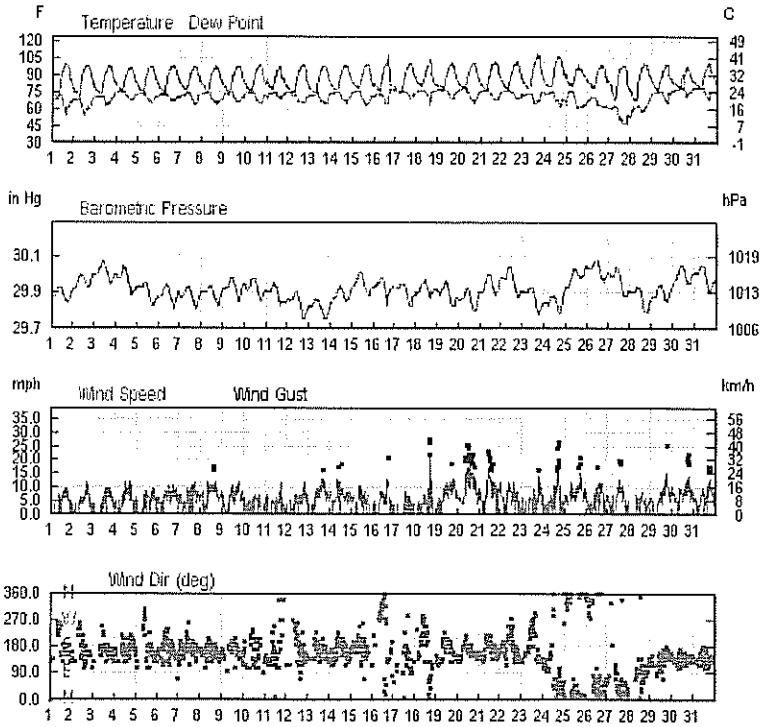
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
				Actual: 87 | 75	**Actual:** 87 | 75	**Actual:** 85 | 75
				Precip: 0.07	Precip: 0.46	Precip: 0.00

History for Hearne, TX

Month of August, 2010

Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	**109** °F	**101** °F	**97** °F	
Mean Temperature	**94** °F	**88** °F	**84** °F	
Min Temperature	**81** °F	**76** °F	**68** °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	29	24	19	730
Growing Degree Days (base 50)	44	38	34	1189
Dew Point:				
Dew Point	**81** °F	**71** °F	**48** °F	
Precipitation:				
Precipitation	**0.00** in	**0.00** in	**0.00** in	**0.00** in
Snowdepth	-	-	-	-
Wind:				
Wind	**21** mph	**4** mph	**0** mph	
Gust Wind	**29** mph	**18** mph	**9** mph	
Sea Level Pressure:				
Sea Level Pressure	**30.09** in	**29.92** in	**29.75** in	



Monthly Calendar Overview

« Previous Month « 2009 **August 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
Actual: 100 | 69	**Actual:** 99 | 71	**Actual:** 98 | 73	**Actual:** 97 | 76	**Actual:** 98 | 75	**Actual:** 98 | 75	**Actual:** 98 | 78
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -

8	9	10	11	12	13	14
Actual: 98 | 77	**Actual:** 98 | 74	**Actual:** 100 | 75	**Actual:** 99 | 78	**Actual:** 99 | 75	**Actual:** 99 | 75	**Actual:** 100 | 77
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -

15	16	17	18	19	20	21
Actual: 100 | 79	**Actual:** 109 | 76	**Actual:** 101 | 76	**Actual:** 104 | 81	**Actual:** 101 | 79	**Actual:** 101 | 80	**Actual:** 102 | 77
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -

22	23	24	25	26	27	28
Actual: 103 | 77	**Actual:** 109 | 79	**Actual:** 108 | 79	**Actual:** 100 | 80	**Actual:** 100 | 79	**Actual:** 99 | 69	**Actual:** 101 | 68
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -

29	30	31
Actual: 100 | 77	**Actual:** 99 | 81	**Actual:** 101 | 80
Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear · Mostly Cloudy Partly Sunny · Partly Cloudy Mostly Sunny · Cloudy · Rain · Snow · Hail Flurries · Thunderstorms · Hazy Fog · Sleet · '?' denotes 'chance of' · Unknown

Print This Calendar

Actual: 90 | 58
Precip: 0.00
Average: 71 | 53
Precip: 0.03

Data Category · Condition · High Temp. · Lo Temp. · Precip. (in inches) · Daily Avg. Temp. · Temps in °F · -60 -30 0 30 60 90 120

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
August	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	100	84	69	74	67	55	95	60	22	29.93	29.89	29.84	10	9	7	9	2	-	0.00	
2	99	85	71	70	64	55	90	55	25	30.00	29.96	29.91	10	9	4	12	2	16	0.00	
3	98	86	73	73	69	64	94	60	32	30.08	30.01	29.95	10	8	4	9	2	16	0.00	
4	97	86	76	77	73	68	94	66	38	30.05	29.98	29.89	7	6	3	12	4	17	0.00	Rain
5	98	86	75	74	71	65	92	62	34	29.96	29.91	29.83	7	5	3	8	3	-	0.00	
6	98	86	75	74	71	67	92	63	36	29.95	29.89	29.81	10	8	4	10	5	-	0.00	
7	98	88	78	75	71	64	86	60	33	29.94	29.88	29.81	10	10	10	12	5	16	0.00	
8	98	88	77	76	71	65	92	63	34	29.94	29.90	29.83	10	10	10	12	6	20	0.00	
9	98	86	74	76	71	66	95	63	34	29.99	29.93	29.85	10	10	7	12	5	16	0.00	
10	100	88	75	77	72	65	94	64	33	29.98	29.93	29.85	10	10	3	7	2	9	0.00	
11	99	88	78	76	73	68	89	64	36	29.96	29.90	29.83	10	10	10	12	3	24	0.00	Rain , Thunderstorm
12	99	87	75	76	71	65	92	63	33	29.90	29.85	29.75	10	10	7	9	2	-	0.00	
13	99	87	75	75	70	65	91	62	33	29.87	29.82	29.76	10	10	10	13	4	17	0.00	
14	100	88	77	76	72	66	92	62	33	29.94	29.88	29.83	10	10	7	13	6	18	0.00	
15	100	90	79	77	72	63	90	62	30	30.02	29.96	29.89	10	10	10	10	5	-	0.00	
16	109	92	76	79	72	65	90	64	26	29.99	29.93	29.83	10	10	10	13	3	23	0.00	
17	101	88	76	78	75	70	96	69	36	29.95	29.91	29.83	10	9	5	8	1	-	0.00	
18	104	92	81	78	75	65	88	65	28	29.97	29.92	29.87	10	10	10	21	3	29	0.00	Thunderstorm
19	101	90	79	79	75	69	94	67	35	29.97	29.90	29.83	10	10	10	13	4	21	0.00	
20	101	90	80	80	74	66	95	62	33	29.93	29.86	29.80	10	10	7	17	8	25	0.00	
21	102	90	77	79	74	68	96	64	33	30.01	29.94	29.89	10	10	10	17	7	23	0.00	

22	103	90	77	78	74	69	94	62	34	30.04	29.97	29.88	10	10	7	12	6	-	0.00
23	109	94	79	74	71	65	85	54	26	29.93	29.88	29.77	10	10	10	14	2	22	0.00
24	108	94	79	77	71	63	88	53	24	29.90	29.85	29.78	10	10	10	17	4	26	0.00
25	100	90	80	77	69	62	86	54	30	30.04	29.99	29.93	10	10	10	15	7	21	0.00
26	100	90	79	72	67	62	76	50	29	30.09	30.04	29.96	10	10	10	12	5	18	0.00
27	99	84	69	64	57	48	83	42	17	30.04	29.98	29.88	10	10	10	13	5	21	0.00
28	101	84	68	65	61	54	82	49	25	29.94	29.89	29.79	10	10	10	8	1	-	0.00
29	100	88	77	77	74	66	92	65	33	29.95	29.89	29.85	10	10	10	15	5	29	0.00
30	99	90	81	81	77	72	93	73	42	30.06	30.00	29.94	10	10	10	14	7	22	0.00
31	101	90	80	80	76	68	96	70	33	30.05	30.00	29.91	10	10	7	12	5	17	0.00

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Field Data Sheets – Basic RUAA Survey

(should be completed for each site)

Data Collectors & Contact Information: MD/JB- BRA	
Date & Time: 31 Aug 10	County Name: Robertson
Stream Name: Campbells Creek	
Segment No. or nearest downstream Segment No.:	
Description of Site: 20561 Downstream from Jackrabbit Lane	

At any point during the Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the use for the water body the investigator should stop conducting the UAA.

A. Stream Characteristics:

1. Check the following channel flow status that applies.

☐ dry ☑ no flow ☐ low ☐ normal ☐ high ☐ flooded

MD 31 Aug 10

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. N/A cfs

4. Water Quality Data (Field Parameters)

Field parameters should be collected in accordance with the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1.

Air Temp 28.3 °C (83°F) Water Temp N/A °C

5. Riparian Zone (Mark dominant categories with L (Left Bank) and R (Right Bank). Bank orientation is determined by the investigator facing downstream.)

____ Forest	____ Urban	____ Rip rap
____ Shrub dominated corridor	AL 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):

County road crosses creek, fence & heavy brush & vines on upstream side, fence on downstream side. All private property #1325-1329, 1331, 1332

8. Dominant Primary Substrate

☐ Cobble ☑ Sand ☐ Silt ☐ Mud/Clay ☐ Gravel ☐ Bedrock ☐ Rip rap ☐ Concrete

Stream Name_____ Site: _____
Date: _____ Time: _____

B. Primary Contact Water Recreation Evaluation:
- Primary contact recreation draft definition: Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, and whitewater kayaking, canoeing, and rafting, involving a significant risk of ingestion of water.

1. Were water recreation activities that involve a significant risk of ingestion (full body immersion) observed at this site?
☐ Yes ☑ No primary contact recreation activities were observed
a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).

☐ Wading-Children	☐ Tubing	☑ No primary contact activities that commonly occur were observed
☐ Wading-Adults	☐ Surfing	
☐ Swimming	☐ Whitewater-kayaking, canoeing, rafting	
☐ Water skiing	☐ Other: _____	
☐ Diving	☐ frequent public swimming-created by publicly owned land or commercial operations	

b. Check the number of individuals observed at the site: ☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Water in mouth or nose of the individual ☐ Primary touch: Individual's body (or portion) immersed in water
☐ Secondary touch: fishing, pets and related contact with water ☐ Individual is in a boat touching water
☐ Individual is on shore near water within 8 meters (25ft) of water ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☑ Not applicable

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
No flow, small stagnant pools, sticks.

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
County road crosses creek. Fences on both sides. Private property
Tr-1325-1329

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: _____

Date: _____ Time: _____

b. Check the number of individuals observed at the site.
☒ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

c. Check the following that apply regarding the individuals proximity to the water body.
☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body well away from water between 8 and 30 meters (100 ft)

2. If secondary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of secondary contact (Attach photos, etc. for documentation).
No flow, Small stagnant pools. Stinks.

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, Small stagnant pools, Stinks,

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 with fences. At 1325 - 1329, Upstream fence is very dense with brush & vines.

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.
No flow. Private property.

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 1333 Downstream 1334 Left Bank 1335 Right Bank 1336
Photos #s (150 meters) Upstream 1337 Downstream 1338 Left Bank 1339 Right Bank 1340
Photos #s (300 meters) Upstream 1341 Downstream 1342 Left Bank 1343 Right Bank 1344

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			

No Substantial Pools

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	~~0.09~~ 0.0
60 meters	0.09
90 meters	0.0
120 meters	0.0
150 meters	0.0
180 meters	0.06
210 meters	0.29
240 meters	0.0
270 meters	0.27
300 meters	0.45
Average	N/A

Field Data Sheets – Basic RUAA Survey

Stream Name_____ Site: _____
Date: _____ Time: _____

c) Stream width - Measure (1) the width at one point which represents the typical average width of the 300 meter reach; (2) the width at the narrowest point of the stream within the 300 meter reach; and (3) the width at the widest point of the stream within the 300 meter reach.

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	No flow
Width at narrowest point of the stream within 300 meter reach	
Width at the widest point of the stream within 300 meter reach	Small pools

d) Is there sufficient water within a 300 meter stream reach during base flow conditions to support primary contact recreation? ☐ Yes ☑ No

COMMENTS: Small pools. Mostly stagnant water. Stinks.

2. Non-wadeable Streams

If accessible, take 10 width measurements which represent typical widths of the 300 meter reach. If the water is too deep and not accessible record the estimated average width of the water body.

Also, take photos facing upstream, downstream, left bank, and right bank at .
Photos #s (30 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (150 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____
Photos #s (300 meters) Upstream____ Downstream____ Left Bank ____ Right Bank____

# Measurements	Width (meters)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Field Data Sheets – Basic RUAA Survey

Stream Name _____ Site: _____
Date: _____ Time: _____

F. Additional RUAA Information

1. Check the following activities observed over the site reach.

☐ Drinking or water in mouth
☐ Bathing
☐ Walking
☐ Jogging/running
☐ Bicycling
☐ Standing
☐ Sitting
☐ Lying down/sleeping
☐ Playing on shoreline
☐ Picnicking
☐ Motorcycle/ATV
☐ Hunting/Trapping
☐ Wildlife watching
☑ None
☐ Other: _____

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☐ Yes ☑ No (If yes, please provide supporting documentation and photos.)
Comments: _____

3. Check any channel obstructions that apply (Attach photos).

☐ Culverts
☑ Fences #1330
☐ Log jams
☐ Rip rap
☐ Water control structure
☐ Barbed wire
☐ Dams 1333
☐ Thick vegetation
☐ Low bridges
☐ None
☐ Utility pipe
☐ Other (specify): Water Gap

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: County road crosses creek.

5. Check all surrounding conditions that impede recreational activities (Attach photos of evidence or unusual items of interest).

☑ Private Property
☐ No trespass sign
☐ Wildlife
☐ Steep slopes
☐ No public access
☐ No roads
☑ Fence
☐ Barge/ship traffic
☐ Industrial
☐ None of the Above
☐ Other: _____

Comments: #1325-1329, Garbage & trash in creek #1330-1332 1346-1348

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: _____

Stream Name_____ Site: _____
Date: _____ Time: _____

7. Check all water characteristics that apply (Attach photos).
Aquatic Vegetation: ☑ absent ☐ rare ☐ common ☐ abundant
Algae Cover: ☐ absent ☑ rare ☐ common ☐ abundant
Odor: ☐ none ☐ rare ☐ common ☑ abundant
Color: ☐ clear ☐ green ☐ red ☑ brown ☑ black. #1333, 1347, 1348
Bottom Deposit: ☐ sludge ☐ solids ☑ fine sediments ☐ none ☐ other
Water Surface: ☐ clear ☑ scum ☐ foam ☐ debris ☐ oil #1348
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: Cows water in creek.

10. Evidence of wild animals or evidence of birds, cattle, hogs, etc.
☑ Tracks ☐ Fecal droppings ☐ Bird nests

11. Garbage Observed
Large garbage in the channel ☐ None ☐ Rare ☐ Common ☑ Abundant
Small garbage in the channel ☐ None ☐ Rare ☑ Common ☐ Abundant
Bank Garbage ☐ None ☑ Rare ☐ Common ☐ Abundant
Briefly describe the kinds of garbage observed: Tires, bottles, cans, household trash. Bridge is common dumping area. Battery, cooler, etc. #1348 1347, 1346, 1333, 1332, 1330, 1331

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).
Usually no flow, small pools of stagnant water.

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream:_____ Date:_____

Site:_____ Site

Description:_____

Time Begin:_____ Time End:_____ Meter Type:_____

Observers:_____ Stream Width*:_____ Section Width (W):_____

Observations:_____

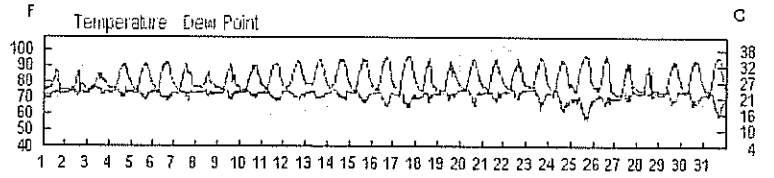
Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft)(m)	Velocity (V)		Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
			At Point (ft/s)(m/s)	Average (ft/s)(m/s)	

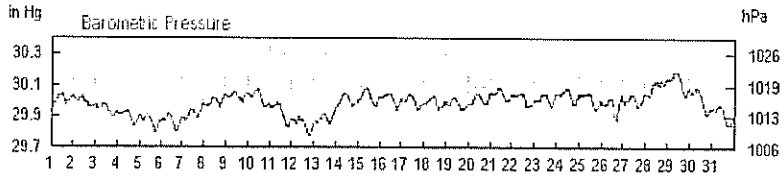
History for Hearne, TX

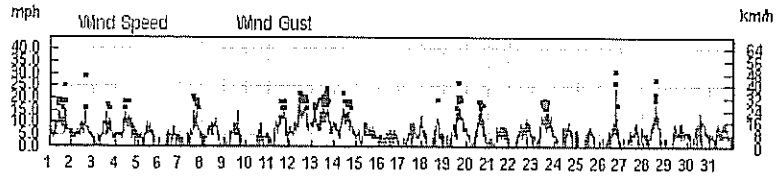
Month of July, 2010

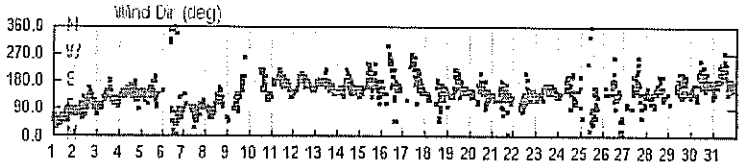
Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	97 °F	93 °F	85 °F	
Mean Temperature	86 °F	84 °F	80 °F	
Min Temperature	78 °F	75 °F	72 °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	21	19	15	579
Growing Degree Days (base 50)	36	34	30	1047
Dew Point:				
Dew Point	77 °F	72 °F	58 °F	
Precipitation:				
Precipitation	0.46 in	0.02 in	0.00 in	0.65 in
Snowdepth	-	-	-	-
Wind:				
Wind	24 mph	4 mph	0 mph	
Gust Wind	34 mph	18 mph	9 mph	
Sea Level Pressure:				
Sea Level Pressure	30.20 in	29.98 in	29.78 in	









Monthly Calendar Overview

« Previous Month « 2009 **July 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
				Actual: 87 | 75	Actual: 87 | 75	Actual: 85 | 75
				Precip: 0.07	Precip: 0.46	Precip: 0.00

				Average: - | - Precip: -	Average: - | - Precip: -	Average: - | - Precip: -
4 Actual: 91 | 76 Precip: 0.00 Average: - | - Precip: -	5 Actual: 92 | 74 Precip: 0.00 Average: - | - Precip: -	6 Actual: 93 | 75 Precip: 0.00 Average: - | - Precip: -	7 Actual: 91 | 74 Precip: 0.00 Average: - | - Precip: -	8 Actual: 86 | 76 Precip: 0.00 Average: - | - Precip: -	9 Actual: 91 | 75 Precip: 0.00 Average: - | - Precip: -	10 Actual: 90 | 74 Precip: 0.00 Average: - | - Precip: -
11 Actual: 92 | 75 Precip: 0.00 Average: - | - Precip: -	12 Actual: 93 | 76 Precip: 0.00 Average: - | - Precip: -	13 Actual: 94 | 78 Precip: 0.00 Average: - | - Precip: -	14 Actual: 94 | 76 Precip: 0.00 Average: - | - Precip: -	15 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	16 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	17 Actual: 96 | 73 Precip: 0.00 Average: - | - Precip: -
18 Actual: 95 | 74 Precip: 0.00 Average: - | - Precip: -	19 Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	20 Actual: 95 | 76 Precip: 0.00 Average: - | - Precip: -	21 Actual: 95 | 75 Precip: 0.00 Average: - | - Precip: -	22 Actual: 95 | 76 Precip: 0.00 Average: - | - Precip: -	23 Actual: 95 | 77 Precip: 0.00 Average: - | - Precip: -	24 Actual: 94 | 73 Precip: 0.00 Average: - | - Precip: -
25 Actual: 97 | 74 Precip: 0.00 Average: - | - Precip: -	26 Actual: 97 | 75 Precip: 0.00 Average: - | - Precip: -	27 Actual: 92 | 72 Precip: 0.01 Average: - | - Precip: -	28 Actual: 90 | 74 Precip: 0.11 Average: - | - Precip: -	29 Actual: 93 | 74 Precip: 0.00 Average: - | - Precip: -	30 Actual: 94 | 74 Precip: 0.00 Average: - | - Precip: -	31 Actual: 96 | 73 Precip: 0.00 Average: - | - Precip: -

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear, Mostly Cloudy Partly Sunny, Partly Cloudy Mostly Sunny, Cloudy, Rain, Snow, Hail Flurries, Thunderstorms, Hazy Fog, Sleet, '?' denotes 'chance of', Unknown

Print This Calendar

Actual: 90 | 58 — Data Category, Condition, High Temp., Lo Temp.
Precip: 0.00 — Precip. (in inches)
Average: 71 | 53 — Daily Avg. Temp.
Precip: 0.03 — Temps in °F (-60 -30 0 30 60 90 120)

Daily Observations

2010 Temp. (°F)				Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
July	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	87	81	75	75	73	71	94	80	64	30.04	30.00	29.97	10	6	4	16	8	25	0.07	Rain
2	87	81	75	76	74	72	94	88	63	30.03	29.99	29.95	10	7	4	16	6	29	0.46	Rain
3	85	80	75	77	75	72	95	85	68	29.98	29.94	29.90	10	5	3	14	4	20	0.00	Rain
4	91	84	76	77	74	71	94	75	51	29.94	29.90	29.84	7	5	3	14	7	18	0.00	Rain
5	92	83	74	76	73	70	95	74	48	29.91	29.87	29.80	7	5	3	10	5	9	0.00	
6	93	84	75	75	72	69	94	69	44	29.92	29.87	29.80	7	5	3	6	2	-	0.00	
7	91	82	74	75	73	69	94	75	53	29.94	29.91	29.87	7	5	4	15	3	25	0.00	
8	86	81	76	75	74	72	90	81	63	30.02	29.98	29.95	10	6	3	12	5	16	0.00	Rain
9	91	83	75	76	73	70	94	79	51	30.06	30.02	29.98	7	5	3	15	2	18	0.00	Rain
10	90	82	74	75	73	71	96	77	53	30.08	30.02	29.96	7	4	3	9	1	-	0.00	
11	92	84	75	75	72	69	94	72	46	29.99	29.94	29.83	7	5	4	15	5	20	0.00	
12	93	84	76	75	73	70	92	70	47	29.90	29.86	29.78	7	5	4	21	9	22	0.00	
13	94	86	78	75	73	71	86	68	46	29.92	29.88	29.85	7	4	3	18	11	24	0.00	
14	94	85	76	76	73	70	91	69	46	30.05	30.00	29.95	7	5	3	16	9	22	0.00	
15	95	85	75	76	72	68	95	69	41	30.09	30.02	29.96	7	5	2	10	5	16	0.00	
16	95	85	75	75	71	66	94	67	38	30.06	30.02	29.94	10	6	3	7	2	-	0.00	Rain
17	96	84	73	74	71	65	94	63	35	30.05	30.00	29.94	10	9	3	10	2	16	0.00	

18	95	84	74	75	72	68	90	73	42	30.03	29.99	29.94	10	10	7	12	5	20	0.00	Thunderstorm
19	93	84	74	76	73	70	96	76	48	30.02	29.98	29.94	10	8	0	18	4	26	0.00	Fog
20	95	86	76	76	73	65	95	73	39	30.05	30.01	29.97	10	9	5	15	6	18	0.00	
21	95	85	75	75	73	69	95	71	42	30.09	30.05	29.99	10	9	5	8	2	16	0.00	Rain
22	95	86	76	76	74	70	94	75	45	30.06	30.01	29.96	10	9	7	12	3	20	0.00	
23	95	86	77	77	73	64	94	70	35	30.05	30.01	29.96	10	9	5	14	4	20	0.00	
24	94	84	73	76	71	63	96	69	37	30.09	30.04	29.98	10	9	4	10	3	-	0.00	
25	97	86	74	72	67	58	88	58	26	30.06	30.02	29.94	10	10	7	8	2	-	0.00	Rain
26	97	86	75	73	70	67	87	67	38	30.02	29.97	29.88	10	7	4	24	2	34	0.00	Rain , Thunderstorm
27	92	82	72	76	72	69	95	79	46	30.05	30.00	29.96	10	6	4	10	2	-	0.01	Rain , Thunderstorm
28	90	82	74	76	74	71	95	83	56	30.14	30.09	30.03	10	9	3	17	6	31	0.11	Rain , Thunderstorm
29	93	84	74	77	72	68	96	74	45	30.20	30.14	30.03	10	9	5	10	3	-	0.00	
30	94	84	74	76	72	66	95	71	41	30.09	30.04	29.91	10	9	2	14	5	18	0.00	
31	96	84	73	74	69	59	94	66	29	29.98	29.93	29.85	10	9	5	10	4	-	0.00	

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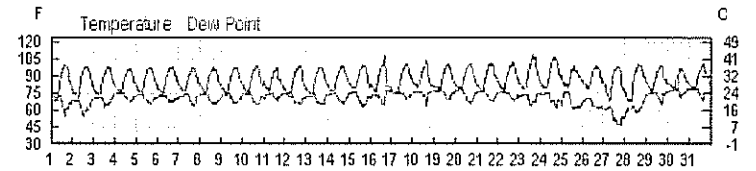
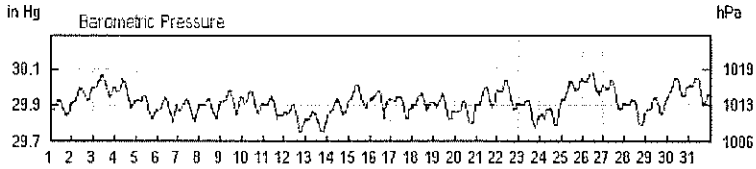
History for Hearne, TX

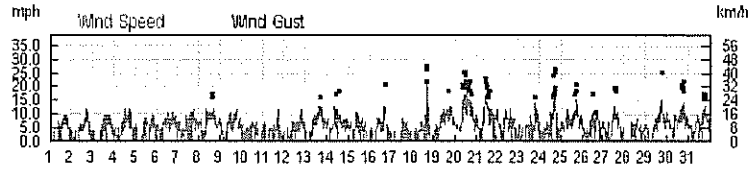
Month of August, 2010

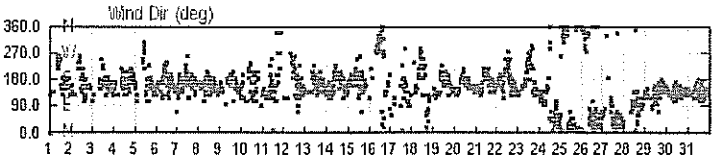
Monthly Summary

	Max:	Avg:	Min:	Sum:
Temperature:				
Max Temperature	**109** °F	**101** °F	**97** °F	
Mean Temperature	**94** °F	**88** °F	**84** °F	
Min Temperature	**81** °F	**76** °F	**68** °F	
Degree Days:				
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	29	24	19	730
Growing Degree Days (base 50)	44	38	34	1189
Dew Point:				
Dew Point	**81** °F	**71** °F	**48** °F	
Precipitation:				
Precipitation	**0.00** in	**0.00** in	**0.00** in	**0.00** in
Snowdepth	-	-	-	-
Wind:				
Wind	**21** mph	**4** mph	**0** mph	
Gust Wind	**29** mph	**18** mph	**9** mph	
Sea Level Pressure:				
Sea Level Pressure	**30.09** in	**29.92** in	**29.75** in	









Monthly Calendar Overview

« Previous Month « 2009 **August 2010** 2011 » Next Month »

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
Actual: 100 | 69	**Actual:** 99 | 71	**Actual:** 98 | 73	**Actual:** 97 | 76	**Actual:** 96 | 75	**Actual:** 98 | 75	**Actual:** 98 | 78
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -

8	9	10	11	12	13	14
Actual: 98 | 77	**Actual:** 98 | 74	**Actual:** 100 | 75	**Actual:** 99 | 78	**Actual:** 99 | 75	**Actual:** 99 | 75	**Actual:** 100 | 77
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
15	16	17	18	19	20	21
Actual: 100 | 79	**Actual:** 109 | 76	**Actual:** 101 | 76	**Actual:** 104 | 81	**Actual:** 101 | 79	**Actual:** 101 | 80	**Actual:** 102 | 77
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
22	23	24	25	26	27	28
Actual: 103 | 77	**Actual:** 109 | 79	**Actual:** 108 | 79	**Actual:** 100 | 80	**Actual:** 100 | 79	**Actual:** 99 | 69	**Actual:** 101 | 68
Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00	Precip: 0.00
Average: - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -	**Average:** - | -
Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -	Precip: -
29	30	31				
Actual: 100 | 77	**Actual:** 99 | 81	**Actual:** 101 | 80				
Precip: 0.00	Precip: 0.00	Precip: 0.00				
Average: - | -	**Average:** - | -	**Average:** - | -				
Precip: -	Precip: -	Precip: -				

« Previous Month « 2009 2011 » Next Month »

Calendar Key:

Sunny Clear · Mostly Cloudy Partly Sunny · Partly Cloudy Mostly Sunny · Cloudy · Rain · Snow · Hail Flurries · Thunderstorms · Hazy Fog · Sleet · '?' denotes 'chance of' · Unknown

Actual: 90 | 58 — Data Category
Precip: 0.00 — Condition
Average: 71 | 53 — High Temp.
Precip: 0.03 — Lo Temp.
Precip. (in inches)
Daily Avg. Temp.
Temps in °F
-30 0 30 60 90 120

Print This Calendar

Daily Observations

2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Pressure (in)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Precip (in)	Events
August	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
1	100	84	69	74	67	55	95	60	22	29.93	29.89	29.84	10	9	7	9	2	-	0.00	
2	99	85	71	70	64	55	90	55	25	30.00	29.96	29.91	10	9	4	12	2	16	0.00	
3	98	86	73	73	69	64	94	60	32	30.08	30.01	29.95	10	8	4	9	2	16	0.00	
4	97	86	76	77	73	68	94	66	38	30.05	29.98	29.89	7	6	3	12	4	17	0.00	Rain
5	98	86	75	74	71	65	92	62	34	29.96	29.91	29.83	7	5	3	8	3	-	0.00	
6	98	86	75	74	71	67	92	63	36	29.95	29.89	29.81	10	8	4	10	5	-	0.00	
7	98	88	78	75	71	64	86	60	33	29.94	29.88	29.81	10	10	10	12	5	16	0.00	
8	98	88	77	76	71	65	92	63	34	29.94	29.90	29.83	10	10	10	12	6	20	0.00	
9	98	86	74	76	71	66	95	63	34	29.99	29.93	29.85	10	10	7	12	5	16	0.00	
10	100	88	75	77	72	65	94	64	33	29.98	29.93	29.85	10	10	3	7	2	9	0.00	
11	99	88	78	76	73	68	89	64	36	29.96	29.90	29.83	10	10	10	12	3	24	0.00	Rain , Thunderstorm
12	99	87	75	76	71	65	92	63	33	29.90	29.85	29.75	10	10	7	9	2	-	0.00	
13	99	87	75	75	70	65	91	62	33	29.87	29.82	29.76	10	10	10	13	4	17	0.00	
14	100	88	77	76	72	66	92	62	33	29.94	29.88	29.83	10	10	7	13	6	18	0.00	
15	100	90	79	77	72	63	90	62	30	30.02	29.96	29.89	10	10	10	10	5	-	0.00	
16	109	92	76	79	72	65	90	64	26	29.99	29.93	29.83	10	10	10	13	3	23	0.00	
17	101	88	76	78	75	70	96	69	36	29.95	29.91	29.83	10	9	5	8	1	-	0.00	
18	104	92	81	78	75	65	88	65	28	29.97	29.92	29.87	10	10	10	21	3	29	0.00	Thunderstorm
19	101	90	79	79	75	69	94	67	35	29.97	29.90	29.83	10	10	10	13	4	21	0.00	
20	101	90	80	80	74	66	95	62	33	29.93	29.86	29.80	10	10	7	17	8	25	0.00	
21	102	90	77	79	74	68	96	64	33	30.01	29.94	29.89	10	10	10	17	7	23	0.00	

22	103	90	77	78	74	69	94	62	34	30.04	29.97	29.88	10	10	7	12	6	-	0.00
23	109	94	79	74	71	65	85	54	26	29.93	29.88	29.77	10	10	10	14	2	22	0.00
24	108	94	79	77	71	63	88	53	24	29.90	29.85	29.78	10	10	10	17	4	26	0.00
25	100	90	80	77	69	62	86	54	30	30.04	29.99	29.93	10	10	10	15	7	21	0.00
26	100	90	79	72	67	62	76	50	29	30.09	30.04	29.96	10	10	10	12	5	18	0.00
27	99	84	69	64	57	48	83	42	17	30.04	29.98	29.88	10	10	10	13	5	21	0.00
28	101	84	68	65	61	54	82	49	25	29.94	29.89	29.79	10	10	10	8	1	-	0.00
29	100	88	77	77	74	66	92	65	33	29.95	29.89	29.85	10	10	10	15	5	29	0.00
30	99	90	81	81	77	72	93	73	42	30.06	30.00	29.94	10	10	10	14	7	22	0.00
31	101	90	80	80	76	68	96	70	33	30.05	30.00	29.91	10	10	7	12	5	17	0.00

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