Field Data Sheets – Basic RUAA Survey

Data Collectors & Contact Information: Eric Williams Dean Ditto	
Date & Time: 5/21/10 9:40am	County Name: Hopkins
Stream Name: Running Creek	
Segment No. or nearest downstream Segment No.:	
Description of Site: CR 2174 Site #55	

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.

33° 03' 55.6479 N
95° 33' 21.9403 W

A. Stream Characteristics:

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

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

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

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

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

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

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

3. **Stream flow**

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the stream flow 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 0.0041cms . 1464 cfs
Only deep enough for a single velocity measurement.

4. Water Quality Data (Field Parameters)

Air Temp 25.3 °C Water Temp 22.0 °C

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

L+R	X Forest upstream		Urban		Rip rap
	Shrub dominated corridor	L+R	X Pasture downstream		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 place to park off road. Fenced with steep banks.

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

R.C. #55

site 55

Field Data Sheets – Basic RUAA Survey

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

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

☐ Yes ☑ No primary contact recreation activities were observed

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

☐ Wading-Children
☐ Wading-Adults
☐ Swimming
☐ Water skiing
☐ Diving
☐ Tubing
☐ Surfing
☐ Whitewater-kayaking, canoeing, rafting
☐ Other: _____
☐ frequent public swimming-created by publicly owned land / 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 ALL 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 far - 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).

Too shallow

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

None

4. Are areas with primary contact recreation activities/ bathing beach (e.g. state/local parks with swimming, etc.) located near (e.g. w/in 5 miles upstream and downstream) this site?

☐ Yes ☑ No

R.C. #55

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

a. Type of secondary contact recreation activities 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: _____

b. Individuals observed at the site.

☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

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

☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body far away - 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).
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 NA

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).
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).
No parking. Fenced private property. Steep banks

R.C. #55

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 banks

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

Bearing 40 **30** M Photo's Upstream 1 Downstream 2 Left Bank 3,4 Right Bank 5,6
Bearing____ **150** M Photo's Upstream____ Downstream____ Left Bank____ Right Bank____
Bearing____ **300** M Photo's Upstream____ Downstream____ Left Bank____ Right Bank____

7-10 Additional documentation

a) Substantial pools - Measure the length, width (@ widest point) and depth of each pool (if > 10 pools only measure 10 pools). A **substantial pool is >10 meters in length** for 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	NA		
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	.35
60 meters	
90 meters	
120 meters	
150 meters	
180 meters	
210 meters	
240 meters	
270 meters	
300 meters	
Average	

Private Property
No access

R.C. #55

Field Data Sheets – Basic RUAA Survey

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	0.5
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.

Bearing_____ **30** M Photo's Upstream____ Downstream____ Left Bank ____ Right Bank____
Bearing_____ **150** M Photo's Upstream____ Downstream____ Left Bank ____ Right Bank____
Bearing_____ **300** M Photo's Upstream____ Downstream____ Left Bank ____ Right Bank____

NA

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

RC. #55

Field Data Sheets – Basic RUAA Survey

F. Stream Site Location Summary

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
- X 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 X No (If yes, please provide supporting documentation and photos.)

Comments: _____

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

- X Culverts
- X Barbed wire
- Utility pipe
- X Fences
- Dams
- Other (specify): _____
- Log jams
- Thick vegetation
- X 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: _____
- X None of the Above

Comments: _____

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

- X Private Property
- No trespass sign
- Wildlife
- Steep slopes
- X No public access
- No roads
- X 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
- X No Human Presence

Comments: _____

R.C. #55

Field Data Sheets – Basic RUAA Survey

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

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

Other:

8. Vertebrates Observed within 300 meter reach

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

Comments:

9. Mammals Observed within 300 meter reach

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

Comments:

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

X Tracks ☐ Fecal droppings ☐ Bird nests

11. Garbage Observed

Large garbage in the channel	X None	Rare	Common	Abundant
Small garbage in the channel	X None	Rare	Common	Abundant
Bank Garbage	X 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 X No

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

None

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream: Running Creek Date: 5/21/10

Site: SS Site

Description: CR 2174

Time Begin: Time End: Meter Type:

Observers: Williams, Dittus Stream Width*: 1.7 Section Width (W): ~~1.7~~ DD 1.7

Observations:

Section Midpoint (m)	Section Depth (m) (cm) (D)	Observational Depth** (m)	Velocity (V) At Point (m/s)	Velocity (V) Average (m/s)	Flow (Q) (m^3/s) Q = (W)(D)(V)
.85	.08	.04	0.127		0.00541

cfs

.1464

only deep enough for one velocity measurment at midpoint

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information: L. Bean, S. Painter, J. White, E. Williams	
Date & Time: 5/20/11 9:30am	County Name: Hopkins Co
Stream Name: Running Creek	
Segment No. or nearest downstream Segment No.: 0512A-03 SP 7/10/11	
Description of Site: d/s of ~~Lake Elberta~~ RC001 Elberta Lake Club	

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.
   0.83 cfs SP 7/10/11

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: 25.2 °C Water Temp: 20.9 °C

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

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 SP 7/21/11

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name: Running Creek Site: Running Creek d/s Lake Elleita
Date: 5/20/11 Time: 9:30 am

B. Primary Contact Water Recreation Evaluation.

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

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

   a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).
   ☐ Wading-Children ☐ Tubing ☑ No primary contact activities that commonly occur were observed
   ☐ Wading-Adults ☐ Surfing ☐ Swimming ☐ Whitewater-kayaking, canoeing, rafting
   ☐ Water skiing ☐ Diving ☐ Other: _____
   ☐ frequent public swimming-created by publicly owned land or commercial operations

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

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

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

3. Describe if there is public access (e.g., parks, roads, etc.) (Attach photos, maps, etc. for documentation).
   Only accessible through private land, no public invited

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

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. JGW

   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
   JGW ☑ No secondary contact recreation activities were observed
   ☑ Other secondary contact activities: Pet dog was in stream at time of survey.

Stream Name: Running Creek Site: d/s of Lake Elberta
Date: 5/29/11 Time: 9:30am

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 depth

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 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).
steep, vegetated banks along with no public invitations to property limit the accessibility.

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: Running Creek Site: d/s of Lake Elkhorn
Date: 5/20/11 Time: 9:30 am

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 148 Downstream 149 Left Bank 150 Right Bank 151
Photos #s (150 meters) Upstream 152 Downstream 153 Left Bank 154 Right Bank 155
Photos #s (300 meters) Upstream ~~[illegible]~~ 157 Downstream 158 Left Bank 159 Right Bank 160

#156 - Dary ~~deleted~~
#161 - Tires
#162 - Hog wire flow
#163 - Channel obstruction

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	6 m	4.5 m	0.78 m
Pool 2	4 m	3 m	0.50 m
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	0.10
60 meters	0.15
90 meters	0.10
120 meters	0.14
150 meters	0.10
180 meters	0.13
210 meters	0.10
240 meters	0.50
270 meters	0.78
300 meters	0.35
Average	0.245 m

Stream Name: Running Creek Site: d/s of Lake Elbeta
Date: 5/20/11 Time: 9:30am

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	0.5
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:

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: Running Creek Site: d/s of Lake Elberta
Date: 3/20/11 Time: 9:30am

F. Additional RUAA Information

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

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

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☑ Yes ☐ No (If yes, please provide supporting documentation and photos.)
Comments: Lake Elberta is dammed up; siphon system pipes empty at 0 meters; old spillway ~60m upstream

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): logs			

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

Comments: _____

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

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

Comments: _____

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

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

Comments: _____

Field Data Sheets – Basic RUAA Survey

Stream Name: Running Creek Site: d/s of Lake Elberta
Date: 5/20/11 Time: 9:30am

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: frogs, fish.

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: neighborhood dog, turkey, hog 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

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).
0m, at the outlet of the Lake Elberta siphon system

0 meters
SP 7/10/11

~~Flow Meter Malfunction~~ SP
Returned ~~@ 11:~~

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream: Running Creek Date: 5/20/11
Site: d/s Lake Elbetta Site Description: RC001 SP 7/10/11
Time Begin: 11:30 Time End: 11:55 Meter Type: Type AA
Observers: Williams/Painter/Berry Stream Width*: 2.5 Section Width (W): .25
Observations:

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft) (m)	Velocity (V) At Point (ft/s)(m/s)	Velocity (V) Average (ft/s)(m/s)	Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
.12	.02			0.0	0
~~.25~~					
.37	.04			0.0	0
~~.50~~					
.625	.04			0.106	0.0011
~~.75~~					
.875	.08			0.241	0.0048
~~1.00~~					
1.125	.08			0.275	0.0055
~~1.25~~					
1.375	.06			0.173	0.0026
~~1.50~~					
1.625	.06			0.250	0.0038
~~1.75~~					
1.875	.06			0.123	0.0018
~~2.0~~					
2.125	0.10			0.157	0.0039
~~2.25~~					
2.375	0.04			0	0
~~2.5~~				Total	0.0235 cms
					0.83 cfs

SP 7/12/11

17.9 sec/5m
18.6 sec/5m

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information: L. Beran, S. Painter, J. White, E. Williams	
Date & Time: 5/20/11 12:30pm	County Name: Hopkins
Stream Name: Running Creek	
Segment No. or nearest downstream Segment No.: 0512A_03	SP 7/10/11
Description of Site: Junior Hinton RC002	

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.
   0.89 cfs SP 7/10/11

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: 26.5 °C Water Temp: 23.7 °C

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

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 SP 7/21/11

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name: S Fork Running Creek Site: Jr. Hinton
Date: 5/20/11 Time: 12:30pm

B. Primary Contact Water Recreation Evaluation:

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

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

   a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).
   ☐ Wading-Children ☐ Tubing ☑ No primary contact activities that commonly occur were observed
   ☐ Wading-Adults ☐ Surfing ☐ Swimming ☐ Whitewater-kayaking, canoeing, rafting
   ☐ Water skiing ☐ Diving ☐ Other: _____
   ☐ frequent public swimming-created by publicly owned land or commercial operations

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

   c. Check the following that apply regarding the individuals proximity to the water body.
   ☐ Water in mouth or nose of the individual
   ☐ Primary touch: Individual's body (or portion) immersed in water
   ☐ Secondary touch: fishing, pets and related contact with water
   ☐ Individual is in a boat touching water
   ☐ Individual is on shore near water within 8 meters (25ft) of water
   ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☑ Not applicable SP 7/10/11

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, poisonous snakes, submerged logs

3. Describe if there is public access (e.g., parks, roads, etc.) (Attach photos, maps, etc. for documentation).
   no public access, only accessible through Jr. Hinton prop.

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~~ yes - Lake Elberta

C. Secondary Contact Water Recreation Evaluation:

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

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

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

Stream Name: Running Creek Site: Jr. Hinton
Date: 5/20/11 Time: 12:30pm

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).
poisonous snakes, logs

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).
poisonous snakes, logs

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).
only accessible through 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.
n/a

Field Data Sheets – Basic RUAA Survey

Stream Name: Running Creek Site: Jr. Hinton
Date: 5/20/11 Time: 12:30pm

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 164 Downstream 165 Left Bank 166 Right Bank 167
Photos #s (150 meters) Upstream 169 Downstream 170 Left Bank 171 Right Bank 172
Photos #s (300 meters) Upstream 173 Downstream ~~175~~ 174 Left Bank 175 Right Bank 176

#168 - Water moccasin
#177 - tributary
#178 - 50 gal drum
#179 - log jam w/ snakes
#180 - channel obstruction

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.

150m

	Length (meters)	Width (meters)	Depth (meters)
Pool 1	6.0 m	4.0 m	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	0.20
60 meters	0.22
90 meters	0.23
120 meters	0.34
150 meters	0.75
180 meters	0.05
210 meters	0.22
240 meters	0.20
270 meters	0.24
300 meters	0.26
Average	0.27m

Field Data Sheets – Basic RUAA Survey

Stream Name: Running Creek Site: Jr. Hinton
Date: 5/20/11 Time: 12:30 pm

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 m
Width at narrowest point of the stream within 300 meter reach	2 m
Width at the widest point of the stream within 300 meter reach	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: Running Creek Site: Dr. Hinton
Date: 5/20/11 Time: 12:30 pm

F. Additional RUAA Information

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

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

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

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

   Comments: _____

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

   Comments: difficult walk through rough, thickly vegetated terrain

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: Running Creek Site: Jr. Hinton
Date: 5/20/11 Time: 13:30pm

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: observed water moccasins, copper heads (5)

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:
50 gal drum

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: Running Creek Date: 5/20/11

Site: Jr. Hinton Site Description: RC002

Time Begin: 12:30pm Time End: 12:53pm Meter Type: Type AA

Observers: L. Beran, S. Painter Stream Width*: 3.6 Section Width (W): .36

Observations:

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft) (m)	Velocity (V) At Point (ft/s)(m/s)	Velocity (V) Average (ft/s)(m/s)	Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
.18	0.11			0.033	0.0013
~~.36~~					
.54	0.18			0.073	0.0047
~~.72~~					
.90	0.16			0.106	0.0061
~~1.08~~					
1.26	0.15			0.106	0.0057
~~1.44~~					
1.62	0.14			0.073	0.0037
~~1.80~~					
1.98	0.12			0.034	0.0015
~~2.16~~					
2.34	0.08			0.039	0.0011
~~2.52~~					
2.70	0.08			0.037	0.0011
~~2.88~~					
3.06	0.04			0.0	0
~~3.24~~					
3.42	0.04			0.0	0
~~3.6~~				Total	0.0252 cms
					0.89 cfs

SP 7/10/11

Field Data Sheets – Basic RUAA Survey

Data Collectors & Contact Information:	Eric Williams Dean Dittus
Date & Time: 5/21/10 11:00 am	County Name: Hopkins
Stream Name: Running Creek	
Segment No. or nearest downstream Segment No.: 0512A_02	SP 7/10/11
Description of Site: CR 2322 Site # 53	

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.

33° 01' 40.5466 N
95° 32' 09.9694 W

A. Stream Characteristics:

1. Check the following channel flow status that applies.

_ dry _ no flow _ low X normal _ high _ flooded

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

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

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

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

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

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

3. **Stream flow**

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the stream flow 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. 0.189 cms 6.637 cfs SP 7/10/11

4. Water Quality Data (Field Parameters)

Air Temp 27.4 °C Water Temp 22.5 °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 X 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 SP 7/20/11

7. Please describe access opportunities or explain why the site is not easily accessible (Attach photos for documentation): No Parking. moderately Steep overgrown bank. Private property. Parked in driveway.

8. Dominant Primary Substrate

_ Cobble X Sand _ Silt _ Mud/Clay _ Gravel _ Bedrock _ Rip rap _ Concrete

R.C. #53

Field Data Sheets – Basic RUAA Survey

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

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

☐ Yes ☑ No primary contact recreation activities were observed

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

☐ Wading-Children
☐ Wading-Adults
☐ Swimming
☐ Water skiing
☐ Diving
☐ Tubing
☐ Surfing
☐ Whitewater-kayaking, canoeing, rafting
☐ Other: _____
☐ frequent public swimming-created by publicly owned land / 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 ALL 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 far - 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).

Steep banks

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

None

4. Are areas with primary contact recreation activities/ bathing beach (e.g. state/local parks with swimming, etc.) located near (e.g. w/in 5 miles upstream and downstream) this site?

☐ Yes ☑ No

P.C. #53

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

a. Type of secondary contact recreation activities 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: _____

b. Individuals observed at the site.

☑ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

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

☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body far away - 8 and 30 meters (100 ft)

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

NA

~~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).
Steep banks

6. Describe why there is limited public access (e.g. lack of roads, river or stream banks overgrown, etc.) (Attach photos, maps, etc. for documentation).
No parking, steep overgrown banks, Private property.

R.C. #53

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 slick banks

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

Bearing 180 **30** M Photo's Upstream 11 Downstream 12 Left Bank 13 Right Bank 14
Bearing 84 **150** M Photo's Upstream 15 Downstream 16 Left Bank 17 Right Bank 18
Bearing 44 **300** M Photo's Upstream 19 Downstream 20 Left Bank 21 Right Bank 22

23-27 additional Documentation

a) ~~Substantial pools~~ - Measure the length, width (@ widest point) and depth of each pool (if > 10 pools only measure 10 pools). A **substantial pool is >10 meters in length** for 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	NA		
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	.8
60 meters	.4
90 meters	.3
120 meters	.37
150 meters	.33
180 meters	.2
210 meters	1.35
240 meters	.2
270 meters	.2
300 meters	.5
Average	.455

R.C. #53

Field Data Sheets – Basic RUAA Survey

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	2.0
Width at narrowest point of the stream within 300 meter reach	1.36
Width at the widest point of the stream within 300 meter reach	4.2

d) Is there sufficient water within a 300 meter stream reach during base flow conditions to support primary contact recreation? Yes No JEW 4/29/11

COMMENTS: The 1.25 m depth @ 210 meter transect.

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.

Bearing_____ **30** M Photo's Upstream____ Downstream____ Left Bank ____ Right Bank____
Bearing_____ **150** M Photo's Upstream____ Downstream____ Left Bank ____ Right Bank____
Bearing_____ **300** M Photo's Upstream____ Downstream____ Left Bank ____ Right Bank____

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

NA

R.C. #53

Field Data Sheets – Basic RUAA Survey

F. Stream Site Location Summary

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: _____

R.C.#53

Field Data Sheets – Basic RUAA Survey

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).
None

R.C. #55
#53

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream: Running Creek Date: 5-21-10

Site: ~~#55~~ #53 SP 7/19/11 Site

Description: CR 2322

Time Begin: Time End: Meter Type:

Observers: Dittus, Williams Stream Width*: 4.2 Section Width (W): .42

Observations:

Section Midpoint (m)	Section Depth (m) (cm) (D)	Observational Depth** (m)	Velocity (V) At Point (m/s)	Velocity (V) Average (m/s)	Flow (Q) (m^3/s) Q = (W)(D)(V)	cfs
.21	.2	.12	.022		0.00~~74~~ 18	.0489
.63	.3	.18	.123		0.015498	.5471
1.05	.24	.14	.157		0.0158256	.5586
1.47	.24	.14	.224		0.0225792	.7970
1.89	.3	.18	.207		0.026082	.9207
2.31	.3	.18	.224		0.028224	.9963
2.73	.23	.14	.234		0.0226044	.7979
3.15	.23	.14	.375		0.036225	1.2787
3.57	.23	.14	.195		0.018837	.6649
3.99	.09	.05	.039		0.000~~7~~15	.0260
					0.18~~80~~ 92	6.6~~363~~ 684

Field Data Sheets – Basic RUAA Survey

Data Collectors & Contact Information: Eric Williams Dean Dittus	
Date & Time: 5/21/10 2:55 pm	County Name: Hopkins
Stream Name: Running Creek	
Segment No. or nearest downstream Segment No.: 0512A_02	SP 7/10/11
Description of Site: FM 1567 Site 54	

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.

33° 00' 34.9096 N

95° 31' 37.3292 W

A. Stream Characteristics:

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

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

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

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

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

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

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

3. **Stream flow**

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the stream flow 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 cms Too deep to wade

4. Water Quality Data (Field Parameters)

Air Temp 30.8 °C Water Temp 33.8 °C

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

L+R X 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 parking. Private property

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

R.C. #54

Field Data Sheets – Basic RUAA Survey

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

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

☐ Yes ☒ No primary contact recreation activities were observed

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

☐ Wading-Children
☐ Wading-Adults
☐ Swimming
☐ Water skiing
☐ Diving
☐ Tubing
☐ Surfing
☐ Whitewater-kayaking, canoeing, rafting
☐ Other: _____
☐ frequent public swimming-created by publicly owned land / 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 ALL 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 far - between 8 and 30 meters (100 ft)
☒ Not applicable

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

None

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

No parking. Private property

4. Are areas with primary contact recreation activities/ bathing beach (e.g. state/local parks with swimming, etc.) located near (e.g. w/in 5 miles upstream and downstream) this site?

☐ Yes ☒ No

R.C. #54

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

a. Type of secondary contact recreation activities 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: _____

b. Individuals observed at the site.
☒ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

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

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

NA

~~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).
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).
No parking. Private property.

R.C. #54

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 safe access

E. Stream Channel and Substantial Pools Measurements

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

Bearing_____ **30** M Photo's Upstream____ Downstream____ Left Bank ____ Right Bank____
Bearing_____ **150** M Photo's Upstream____ Downstream____ Left Bank ____ Right Bank____
Bearing_____ **300** M Photo's Upstream____ Downstream____ Left Bank ____ Right Bank____

a) Substantial pools - Measure the length, width (@ widest point) and depth of each pool (if > 10 pools only measure 10 pools). A **substantial pool is >10 meters in length** for 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 NA	TDTW		
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	1.3 m
60 meters	
90 meters	
120 meters	
150 meters	
180 meters	TDTW
210 meters	
240 meters	
270 meters	
300 meters	
Average	1.3 m

go TD 1/11

R.C. #54

Field Data Sheets – Basic RUAA Survey

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	NA
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.

Bearing 120 **30** M Photo's Upstream ~~32~~ 31 Downstream ~~33~~ 32 Left Bank ~~34~~ 33 Right Bank ~~38~~ 34

Bearing____ **150** M Photo's Upstream____ Downstream____ Left Bank____ Right Bank____

Bearing____ **300** M Photo's Upstream____ Downstream____ Left Bank____ Right Bank____

#28-29-30 ~~36-41~~ #35-40 Additional Documentation

# Measurements	Width (meters)
1	12
2	
3	
4	
5	
6	
7	
8	
9	
10	

R.C.#54

Field Data Sheets – Basic RUAA Survey

F. Stream Site Location Summary

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

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

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

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

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

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

Campgrounds	Stairs/walkway	X 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).

X 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	X No Human Presence
Dock/platform	Fire pit/ring	Children's toys	
Foot paths/prints	Fishing Tackle	Remnant's of Kid's play	
Other: _____			

Comments: _____

R.C.#54

Field Data Sheets – Basic RUAA Survey

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

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

Other:

8. Vertebrates Observed within 300 meter reach

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

Comments:

9. Mammals Observed within 300 meter reach

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

Comments:

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

X Tracks Fecal droppings Bird nests

11. Garbage Observed

Large garbage in the channel	X None	Rare	Common	Abundant
Small garbage in the channel	X None	Rare	Common	Abundant
Bank Garbage	X 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 X No

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

None

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream: Running Creek Date: 5-21-10

Site: 54 Site

Description: FM 1567

Time Begin: Time End: Meter Type:

Observers: Williams, Dittus Stream Width*: Section Width (W):

Observations:

Section Midpoint (m)	Section Depth (m) (cm) (D)	Observational Depth** (m)	Velocity (V)		Flow (Q) (m^3/s) Q = (W)(D)(V)
			At Point (m/s)	Average (m/s)	
	NA			Too deep to wade	

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information: L. Beran, S. Painter, J. White, E. Williams	
Date & Time: 5/20/11 2:00 pm	County Name: Hopkins Co.
Stream Name: Running Creek	
Segment No. or nearest downstream Segment No.: 0512H-02 SP 7/10/11	
Description of Site: Kerry Bailey property RC003	

Note: very near subsegment boundary, but 300 m reach was squarely in 02.

A. Stream Characteristics:

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

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

3. Streamflow
   Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the streamflow on the sampling date below. If the stream flow taken at one site is representative of the flow at another site(s), then that flow can be used as the observed flow and should be documented below. If the stream flow measured at one site is different from another site, then stream flow should be taken at both sites.
   1.40 cfs SP 7/10/11

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: 28.8 °C Water Temp: 23.8 °C

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

R, L 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):
   On Kerry Bailey property

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

Field Data Sheets – Basic RUAA Survey

Stream Name: Running Creek Site: Kelly Bailey
Date: 5/20/11 Time: 3pm

B. Primary Contact Water Recreation Evaluation:

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

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

   a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).
   ☐ Wading-Children ☐ Tubing ☑ No primary contact activities that commonly occur were observed
   ☐ Wading-Adults ☐ Surfing ☐ Swimming ☐ Whitewater-kayaking, canoeing, rafting
   ☐ Water skiing ☐ Diving ☐ Other: _____
   ☐ frequent public swimming-created by publicly owned land or commercial operations

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

   c. Check the following that apply regarding the individuals proximity to the water body.
   ☐ Water in mouth or nose of the individual
   ☐ Primary touch: Individual's body (or portion) immersed in water
   ☐ Secondary touch: fishing, pets and related contact with water
   ☐ Individual is in a boat touching water
   ☐ Individual is on shore near water within 8 meters (25ft) of water
   ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☑ Not applicable SY 7/10/11

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).
   Steep, vegetated banks, muddy, logs + rocks on bottom

3. Describe if there is public access (e.g., parks, roads, etc.) (Attach photos, maps, etc. for documentation).
   Only accessible through Kerry Bailey prop

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

C. Secondary Contact Water Recreation Evaluation:

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

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

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

Stream Name: Running Creek Site: Kerry Bailey
Date: 5/20/11 Time: 2:00pm

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).
Tall grass, vegetated banks, trees, logs in 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).
steep, vegetated banks, muddy water, logs on stream bottom, poisonous snakes

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).
Only accessible through Kerry Bailey 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.
n/a

Field Data Sheets – Basic RUAA Survey

Stream Name: Running Creek Site: Kerry Bailey
Date: 5/20/11 Time: 2:00 pm

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 182 Downstream 183 Left Bank 184 Right Bank 185
Photos #s (150 meters) Upstream 186 Downstream 187 Left Bank 188 Right Bank 189
Photos #s (300 meters) Upstream ~~190~~ Downstream ~~191~~ Left Bank ~~192~~ Right Bank ~~193~~ TOTW

(Flow) extra # 190 - Snake

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	0.80m
60 meters	1.00 m
90 meters	0.45 m
120 meters	1.20 m
150 meters	0.60m
180 meters	0.77m
210 meters	1.10m
240 meters	0.40m
270 meters	0.30m
300 meters	TOTW
Average	0.74m

JEW 7/9/11

Before 300m the channel became to deep and when field crew attempted to walk the bank vegetation was thick and were unable to follow the bend in the stream.

Stream Name: Running Creek Site: Kerry Bailey p
Date: 5/20/11 Time: 12pm

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	5m
Width at narrowest point of the stream within 300 meter reach	4m
Width at the widest point of the stream within 300 meter reach	6m

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: Running Creek Site: Kerry Bailey
Date: 5/30/11 Time: 2pm

F. Additional RUAA Information

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

☐ Drinking or water in mouth	☐ Playing on shoreline
☐ Bathing	☐ Picnicking
☐ Walking	☐ Motorcycle/ATV
☐ Jogging/running	☐ Hunting/Trapping
☐ Bicycling	☐ Wildlife watching
☐ Standing	☐ None
☐ Sitting	☑ Other: Kerry fertilizing coastal fields JEW 7/9/11
☐ Lying down/sleeping	

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☐ Yes ☑ No (If yes, please provide supporting documentation and photos.)
Comments: Interview with landowner confirmed that beaver dam upstream and likely downstream affects flow (backs up)

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): logs, overhanging trees			

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: vegetation	☐ 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: Ranning Creek Site: Kary Bailey prop
Date: 5/20/11 Time: 2 pm

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: wood on stream bottom

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: water mocasin (1)

9. Mammals Observed within 300 meter reach

Wild	sp ☒ 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: racoon

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).

n/a

Air 28.8°C
Water 23.8°C

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream: Running Creek Date: 5/24/11

Site: RC003 Site Description: Kerry Bailey property

Time Begin: Time End: Meter Type:

Observers: Stream Width*: 5m Section Width (W): 0.5m

Observations:

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft) (m)	Velocity (V) At Point (ft/s)(m/s)	Velocity (V) Average (ft/s)(m/s)	Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
.25m	0.81			0.022	0.0089
.75	0.97			0.022	0.0107
1.25	1.06			0.022	0.0117
1.75	1.06			0.00	0
2.25	.86			0.00	0
2.75	0.76			0.022	0.0084
3.25	0.75			0.0	0
3.75	0.45			0.0	0
4.25	0.25			0.0	0
4.75	0.15			0.0	0
				Total	0.0396 cms
					1.40 cfs

SP 7/10/11

Field Data Sheets – Basic RUAA Survey

Data Collectors & Contact Information:	Eric Williams Dean Dittus
Date & Time: 5/31/10 4:20 pm	County Name: Hopkins
Stream Name: Running Creek	
Segment No. or nearest downstream Segment No.:	0512A-01
Description of Site: CR 2436 Site 50	

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 X normal ☐ high ☐ flooded

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

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

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

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

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

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

3. **Stream flow**

Use USGS gage data (if a gage is located at a site or within a quarter mile of a site) or use the Stream Flow (Discharge) Measurement Form and follow the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1, RG-415. If USGS gage data is used for a site, include that information as an attachment and list the stream flow 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 ~~0.1858~~ cms ~~6.55 cfs~~

0.1926 cms 6.71 cfs

4. Water Quality Data (Field Parameters)

Air Temp 30.8 °C Water Temp 24.8 °C

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

L+R X 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 X Moderately difficult ☐ Difficult

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

No parking. Slick overgrown banks. Private property

8. Dominant Primary Substrate

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

R.C. #50

Field Data Sheets – Basic RUAA Survey

B. Primary Contact Water Recreation Evaluation:

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

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

Yes X No primary contact recreation activities were observed

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

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

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

c. Check ALL 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 far - between 8 and 30 meters (100 ft)
- X Not applicable

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

Steep banks. Logs in water.

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

No public access

4. Are areas with primary contact recreation activities/ bathing beach (e.g. state/local parks with swimming, etc.) located near (e.g. w/in 5 miles upstream and downstream) this site?

Yes X No

R.C. #50

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

a. Type of secondary contact recreation activities 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: _____

b. Individuals observed at the site.

☒ None ☐ 1-10 ☐ 11-20 ☐ 20-50 ☐ greater than 50

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

☐ Secondary touch: fishing, pets and related contact with water ☐ In a boat touching water
☐ Body on shore near water within 8 meters (25ft) of water ☐ Body far away - 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).
Slick banks

NA

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).
Slick banks

6. Describe why there is limited public access (e.g. lack of roads, river or stream banks overgrown, etc.) (Attach photos, maps, etc. for documentation).
No parking - Private property

R.C. #50

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 recreational activities observed. Water and bank access not inviting. SP 2/28/11

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

Bearing 230 **30** M Photo's Upstream ~~43~~ 41 Downstream ~~43~~ 42 Left Bank ~~44~~ 43 Right Bank ~~45~~ 44 ~~54-56~~ 54 Additional
Bearing 230 **150** M Photo's Upstream ~~46~~ 45 Downstream ~~47~~ 46 Left Bank ~~48~~ 47 Right Bank ~~49~~ 48 53-55 Documentation
Bearing 240 **300** M Photo's Upstream ~~50~~ 49 Downstream ~~51~~ 50 Left Bank ~~52~~ 51 Right Bank ~~53~~ 52

a) Substantial pools - Measure the length, width (@ widest point) and depth of each pool (if > 10 pools only measure 10 pools). A **substantial pool is >10 meters in length** for 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 NA			
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	1.3
60 meters	.85
90 meters	.64
120 meters	.63
150 meters	.50
180 meters	.70
210 meters	.90
240 meters	1.0
270 meters	1.35
300 meters	1.5
Average	.94

R.C. #50

Field Data Sheets – Basic RUAA Survey

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	8.0
Width at narrowest point of the stream within 300 meter reach	6.5
Width at the widest point of the stream within 300 meter reach	11.0

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.

Bearing_____ **30** M Photo's Upstream____ Downstream____ Left Bank ____ Right Bank____
Bearing_____ **150** M Photo's Upstream____ Downstream____ Left Bank ____ Right Bank____
Bearing_____ **300** M Photo's Upstream____ Downstream____ Left Bank ____ Right Bank____

NA

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

R.C. #50

Field Data Sheets – Basic RUAA Survey

F. Stream Site Location Summary

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
- [x] 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): _____
- [x] 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: _____
- [x] None of the Above

Comments: _____

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

- [x] 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
- [x] No Human Presence

Comments: _____

RC #50

Field Data Sheets – Basic RUAA Survey

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	X Abundant
Small garbage in the channel	X None	Rare	Common	Abundant
Bank Garbage	None	Rare	X Common	Abundant

Briefly describe the kinds of garbage observed: Tires, barrel, angle iron, plastic

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

13. Please document any other relevant information regarding recreational activities and the water body in general (for example, area outside of the stream reach evaluated).
None

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream: Running Creek Date: 5/21/10

Site: 50 Site

Description: CR 2436

Time Begin: Time End: Meter Type:

Observers: Williams, Dittus Stream Width*: 8.0 Section Width (W): .80

Observations:

Section Midpoint (m)	Section Depth (m) (cm) (D)	Observational Depth** (m)	Velocity (V) At Point (m/s)	Velocity (V) Average (m/s)	Flow (Q) (m^3/s) Q = (W)(D)(V)	cfs
.40	.20	.12	~~.039~~ .039		0.00~~47~~ 62	.2204 ~~.1652~~ sp
1.2	.50	.30	.038		0.0152	.5366
2.0	.51	.30	.022		0.008976	.3169
2.8	.51	.30	.022		0.008976	.3169
3.6	.51	.30	.039		0.015912	.5617
4.4	.52	.30	.056 ~~.0230~~		0.023296	.8223
5.2	.50	.30	.084		0.0336	1.1861
6.0	.30	.18	.118		0.02832	.9997
6.8	.30	.18	.173		0.04152	1.4657
7.6	.20	.12	.066		0.0~~053~~ sp 106	~~.1864~~ sp .3797
					~~0.1858~~ sp	6.~~5573~~ sp
					0.1926	7084

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information:	L. Beran, S. Painter, J. White, E. Williams
Date & Time: 5/20/11 4:30pm	County Name: Hopkins
Stream Name: Running Creek	
Segment No. or nearest downstream Segment No.:	~~RC004~~ SP 7/10/11 0512A-01
Description of Site: Anthony McKay Property	RC004

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 SP 7/10/11

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: 25.8 °C Water Temp: 23.1 °C

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

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
   SP 7/20/11

7. Please describe access opportunities or explain why the site is not easily accessible (Attach photos for documentation):
   Only accessible through private property, & unmaintained path, difficult drive; Bank access was moderately easy; open area.

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

Field Data Sheets – Basic RUAA Survey

Stream Name: Running Creek Site: Anthony McKay
Date: 5/20/11 Time: 4:30pm

B. Primary Contact Water Recreation Evaluation:

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

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

   a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).
   ☐ Wading-Children ☐ Tubing ☑ No primary contact activities that commonly occur were observed
   ☐ Wading-Adults ☐ Surfing ☐ Swimming ☐ Whitewater-kayaking, canoeing, rafting
   ☐ Water skiing ☐ Diving ☐ Other: _____
   ☐ frequent public swimming-created by publicly owned land or commercial operations

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

   c. Check the following that apply regarding the individuals proximity to the water body.
   ☐ Water in mouth or nose of the individual
   ☐ Primary touch: Individual's body (or portion) immersed in water
   ☐ Secondary touch: fishing, pets and related contact with water
   ☐ Individual is in a boat touching water
   ☐ Individual is on shore near water within 8 meters (25ft) of water
   ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☑ Not applicable SP 7/10/11

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).
   channel obstructions, poisonous snakes, mucky water, heavily vegetated, slick banks

3. Describe if there is public access (e.g., parks, roads, etc.) (Attach photos, maps, etc. for documentation).
   Only accessible through Anthony McKay's property

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

C. Secondary Contact Water Recreation Evaluation:

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

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

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

Stream Name: Running Creek Site: Anthony McKay
Date: 05/20/11 Time: 4:30 pm

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).
steep vegetated 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
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).
vegetated banks

6. Describe why there is limited public access (e.g., lack of roads, river or stream banks overgrown, etc.) (Attach photos, maps, etc. for documentation).
Only accessible through Anthony McKay 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.
Hunting blinds and deer feeders in field proximal to reach

Field Data Sheets – Basic RUAA Survey

Stream Name: Running Creek Site: Anthony McKay
Date: 5/20/11 Time: 4:30pm

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 190 Downstream 191 Left Bank 192 Right Bank 193
Photos #s (150 meters) Upstream 196 Downstream 197 Left Bank 198 Right Bank 199
Photos #s (300 meters) Upstream 204 Downstream 205 Left Bank 206 Right Bank 207

#194 snake
#195 feces
#200 cattle ~~evid~~ evidence
#201 beaver
~~#202~~ #203 manure @ high water edge
#208 cattle
#209 ~~deer~~ deer blind

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	0.83
60 meters	0.95
90 meters	0.60
120 meters	0.92
150 meters	0.50
180 meters	0.52
210 meters	0.60
240 meters	0.80
270 meters	0.50
300 meters	0.60
Average	0.68m

Field Data Sheets – Basic RUAA Survey

Stream Name: Running Creek Site: Anthony McKay
Date: 5/2011 Time: 4:30 pm

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	5.5m
Width at narrowest point of the stream within 300 meter reach	4m
Width at the widest point of the stream within 300 meter reach	7m

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: Running Creek Site: Anthony McKay
Date: 5/20/11 Time: 4:30pm

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: landowner indicated that beaver dams are likely backing up the stream

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

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

   Comments: _____

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

   Comments: _____

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

   Comments: _____

Field Data Sheets – Basic RUAA Survey

Stream Name: Running Creek Site: Anthony McKay
Date: 5/20/11 Time: 4:30pm

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: microalgae scum, light

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: observed lo 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: evidence of livestock in river

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:
no 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).

n/a

Air 25.8°C
Water 23.1°C

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream: Running Creek Date: 5/20/11

Site: McKay Site Description: RC004 SP 7/10/11

Time Begin: Time End: Meter Type: Type AA

Observers: L. Beran, S. Painter Stream Width*: 7.3 Section Width (W): .73

Observations:

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft) (m)	Velocity (V) At Point (ft/s)(m/s)	Velocity (V) Average (ft/s)(m/s)	Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
.36	0.26			0	0
1.09	0.38			0	0
1.82	0.40			0	0
2.55	0.45			0	0
3.28	0.53			0	0
4.01	0.78			0.00	0
4.74	0.64			0	0
5.47	0.80			0	0
6.20	0.67			0	0
6.93	0.39			0	0
				Total	0 cms
~~7.30~~					0 cfs

SP 7/10/11

Stagnant.

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information:	L. Beran, S. Painter, J. White, E. Williams
Date & Time: 5/20/11 @ 7:15 PM	County Name: Hopkins
Stream Name: Running Creek	
Segment No. or nearest downstream Segment No.: 0512A-01	SP 7/10/11
Description of Site: PC005 - Fred Sanders Property (North)	

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 SP 7/10/11

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: 23.1 °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.)

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):
   Accessed through series of gates @ Sanders residence, then drove 3/4 mile to site through pasture, then forest land.

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

Field Data Sheets – Basic RUAA Survey

Stream Name: Running Creek Site: ~~ESOT~~ RC005
Date: 5/20/11 Time: 7:15pm

B. Primary Contact Water Recreation Evaluation:

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

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

   a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).
   ☐ Wading-Children ☐ Tubing ☑ No primary contact activities that commonly occur were observed
   ☐ Wading-Adults ☐ Surfing ☐ Swimming ☐ Whitewater-kayaking, canoeing, rafting
   ☐ Water skiing ☐ Diving ☐ Other: _____
   ☐ frequent public swimming-created by publicly owned land or commercial operations

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

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

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
   muddy water bottom substrate, difficult to walk on, logs on bottom channel, poisonous snakes

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

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

C. Secondary Contact Water Recreation Evaluation:

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

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

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

Stream Name: Running Creek Site: ~~ESUT~~ RC005
Date: 5/20/11 Time: 7:15pm

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).
Thick bank vegetation, channel overgrowth

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).
Thick bank vegetation, channel overgrowth

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).
Only accessible from Fred Sanders 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.

~~earlier: Deer blind @ area where field crew parked. JEW 7/9/11~~

Fred has a duck blind on a pond just downstream of this site ≈ 350 m.
JEW 7/9/11

Field Data Sheets – Basic RUAA Survey

Stream Name: Running Creek Site: ~~ESRT~~ RC005
Date: 5/20/11 Time: 7:15 pm

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___

No photos taken too dark

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	0.25
60 meters	0.23
90 meters	0.80
120 meters	—
150 meters	—
180 meters	—
210 meters	—
240 meters	—
270 meters	—
300 meters	—
Average	0.43m

Not accessed Vegetation was too thick

Stream Name: Running Creek Site: ~~1644~~ RC005
Date: 5/20/11 Time: 7:15 pm

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	9 m
Width at narrowest point of the stream within 300 meter reach	7 m
Width at the widest point of the stream within 300 meter reach	11 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: Running Creek Site: ~~[illegible]~~ RC005
Date: 5/24/11 Time: 7:15 pm

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): logs, low hanging vegetation
   - ☐ Log jams
   - ☑ Thick vegetation
   - ☐ Rip rap
   - ☐ Low bridges
   - ☐ Water control structure
   - ☐ None

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

   Comments: _____

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

   Comments: _____

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

   Comments: _____

Field Data Sheets – Basic RUAA Survey

Stream Name: Running Creek Site: ~~USAT~~ RC005
Date: 05/20/11 Time: 7:15 pm

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

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

Other: _____

8. Vertebrates Observed within 300 meter reach

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

Comments: _____

9. Mammals Observed within 300 meter reach

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

Comments: _____

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

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

AIR 23.1°C
WATER

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream: Running Creek Date: 5/20/11

Site: ~~ESUT~~ Site Description: RC005

Time Begin: 7:15 pm Time End: Meter Type: Type AA

Observers: L. Beran, S. Painter Stream Width*: 9.4 Section Width (W): ~9.4 m

Observations:

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft) (m)	Velocity (V) At Point (ft/s)(m/s)	Velocity (V) Average (ft/s)(m/s)	Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
~~0.5 m~~	~~0.59 7.00~~			0	
0.5	0.19			0	0
~~1.85~~					
1.5	0.57			0	0
2.5	0.68			0	0
3.5	0.68			0	0
4.5	0.83			0	0
5.5	0.68			0	0
6.5	0.75			0	0
7.5	0.62			0	0
8.5	0.39			0	0
9.5	0			0	0
				Total	0 cms 0 cfs

SP 7/10/11

Stagnant.

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information:	L. Beran, S. Painter, J. White, E. Williams
Date & Time: 5/20/2011 6:30 PM	County Name: Hopkins
Stream Name: Running Creek	
Segment No. or nearest downstream Segment No.: 0512A_01	SP 7/10/11
Description of Site: RC006 Fred Sanders Property (South)	

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.
   0.00 cfs

4. Water Quality Data (Field Parameters)
   Field parameters should be collected in accordance with the procedures outlined in the most recent TCEQ Surface Water Quality Monitoring Procedures, Volume 1.
   Air Temp: 22.3 °C Water Temp: 25.2 °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, 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): Through a series of gates at Sander's residence then traveled to back side of property and down another trail.

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

Field Data Sheets – Basic RUAA Survey

Stream Name: Running Creek Site: RC006
Date: 5/20/11 Time: 6:30 PM

B. Primary Contact Water Recreation Evaluation:

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

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

   a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).
   ☐ Wading-Children ☐ Tubing ☑ No primary contact activities that commonly occur were observed
   ☐ Wading-Adults ☐ Surfing ☐ Swimming ☐ Whitewater-kayaking, canoeing, rafting
   ☐ Water skiing ☐ Diving ☐ Other: _____
   ☐ frequent public swimming-created by publicly owned land or commercial operations

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

   c. Check the following that apply regarding the individuals proximity to the water body.
   ☐ Water in mouth or nose of the individual
   ☐ Primary touch: Individual's body (or portion) immersed in water
   ☐ Secondary touch: fishing, pets and related contact with water
   ☐ Individual is in a boat touching water
   ☐ Individual is on shore near water within 8 meters (25ft) of water
   ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☑ Not applicable SP 7/10/11

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).
   Murky water, bottom substrate difficult to walk, logs and snakes!

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

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

C. Secondary Contact Water Recreation Evaluation:

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

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

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

Stream Name: Running Creek Site: RC006
Date: 5/20/11 Time: 6:30

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).
Thick veg. banks, channel overgrowth.

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).
Thick veg. banks channel overgrowth.

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).
Only through Sander's 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.

Deer ~~/duck~~ blinds.
SP 7/21/11

Field Data Sheets – Basic RUAA Survey

Stream Name: Running Creek Site: RC006
Date: 5/20/11 Time: 6:30

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 210 Downstream 211 Left Bank 213 Right Bank 212
Photos #s (150 meters) Upstream____ Downstream____ Left Bank____ Right Bank____
Photos #s (300 meters) Upstream____ Downstream____ Left Bank____ Right Bank____

} photos were not obtained due to low light conditions (cloud cover, time of day) 7/21/11

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	1.30 m
60 meters	0.83
90 meters	1.14
120 meters	0.40
150 meters	0.52
180 meters	0.25
210 meters	0.60
240 meters	1.00
270 meters	0.70
300 meters	—
Average	0.75m

→ Too swampy to wade

Field Data Sheets – Basic RUAA Survey

Stream Name: Running Creek Site: RC006
Date: 5/20/11 Time: 6:30

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	5.00
Width at narrowest point of the stream within 300 meter reach	3.50
Width at the widest point of the stream within 300 meter reach	6.00

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: Running Creek Site: RC006
Date: 5/20/11 Time: 6:30

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): Logs
   - ☐ Log jams
   - ☑ Thick vegetation
   - ☐ Rip rap
   - ☐ Low bridges
   - ☐ Water control structure
   - ☐ None

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

   Comments: _____

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

   Comments: _____

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

   Comments: _____

Field Data Sheets – Basic RUAA Survey

Stream Name: Running Creek Site: RC006
Date: 5/20/11 Time: 6:30

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: Signs of beavers.

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).

N/A

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream: Running Creek Date: 5/20/11

Site: RC006 Site Description: Fred Sanders

Time Begin: 6:30 Time End: Meter Type: AA

Observers: L. Beran; S. Painter Stream Width*: 5.00m Section Width (W): 0.50m

Observations:

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft) (m)	Velocity (V) At Point (ft/s)(m/s)	Velocity (V) Average (ft/s)(m/s)	Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
.25	0.07			—	0
				—	
.75	0.21			—	0
				—	
1.25	0.37			—	0
				—	
1.75	0.44			—	0
				—	
2.25	0.58			—	0
				—	
2.75	0.70			—	0
				—	
3.25	0.71			—	0
				—	
3.75	0.52			—	0
				—	
4.25	0.36			—	0
				—	
4.75	0.25			—	0
				—	
5.25	0.22			—	0
5.75	0.11				

Total 0 cms 0 cfs SP 7/10/11

NO Flow

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information: S. Painter, S. White, E. Williams	
Date & Time: 6-11-11 @ 2:30	County Name: Hopkins
Stream Name: Running Creek	
Segment No. or nearest downstream Segment No.: 0512A_03 SP 7/10/11	
Description of Site: RC001 Downstream of ~~Lake Elberta~~ Elberta Lake Club	

N - 33.05259°
W - 95.55505°

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.
   0.46 cfs SP 7/10/11

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: 38.6 °C Water Temp: 25.4 °C

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

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 JEW 7/21/11

7. Please describe access opportunities or explain why the site is not easily accessible (Attach photos for documentation):
   Through L. Eberta property, which permission was given. No others are invited to property

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

Field Data Sheets – Basic RUAA Survey

Stream Name: Running Creek Site: RC001
Date: 6-11-11 Time: 2:30 pm

B. Primary Contact Water Recreation Evaluation:

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

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

   a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).
   ☐ Wading-Children ☐ Tubing ☑ No primary contact activities that commonly occur were observed
   ☐ Wading-Adults ☐ Surfing ☐ Swimming ☐ Whitewater-kayaking, canoeing, rafting
   ☐ Water skiing ☐ Diving ☐ Other: _____
   ☐ frequent public swimming-created by publicly owned land or commercial operations

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

   c. Check the following that apply regarding the individuals proximity to the water body.
   ☐ Water in mouth or nose of the individual
   ☐ Primary touch: Individual's body (or portion) immersed in water
   ☐ Secondary touch: fishing, pets and related contact with water
   ☐ Individual is in a boat touching water
   ☐ Individual is on shore near water within 8 meters (25ft) of water
   ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☑ Not applicable SP 7/11/11

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 of water is too shallow and logs lay across channel.

3. Describe if there is public access (e.g., parks, roads, etc.) (Attach photos, maps, etc. for documentation).
   Access is only through gate to Lake Elberta. The public is not invited.

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

C. Secondary Contact Water Recreation Evaluation:

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

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

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

Stream Name: Running Creek Site: RC001
Date: 6-11-11 Time: 2:30pm

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).
Depth of water is 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).
Depth is too shallow with logs fallen across 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).
This property is only accessed by those who own residence off. I. Elberta.

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: Running Creek Site: RC001
Date: 6-11-11 Time: 2:20 pm

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 132 Downstream 133 Left Bank 134 Right Bank 135
Photos #s (150 meters) Upstream 136 Downstream 137 Left Bank 138 Right Bank 139
Photos #s (300 meters) Upstream 145 Downstream 146 Left Bank 147 Right Bank 148

Extra
131 - Syphon
140 Dog tracks
141 - Feces
142 " "
143 - trash
144 - coyote carcass

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	.09
60 meters	.07
90 meters	.11
120 meters	.04
150 meters	.55
180 meters	.16
210 meters	.08
240 meters	.11
270 meters	.36
300 meters	.29
Average	0.19m

Field Data Sheets – Basic RUAA Survey

Stream Name: Running Creek Site: RC001
Date: 6-11-11 Time: 2:24pm

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	~~10m~~ 2m
Width at narrowest point of the stream within 300 meter reach	~~3m~~ 1.6m
Width at the widest point of the stream within 300 meter reach	10.0m

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: Running Creek Site: PC001
Date: 6-11-11 Time: 2:30pm

F. Additional RUAA Information

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

2. Are there permanent or long-term hydrologic modifications that are constructed and operated in a way that affects the recreational uses? ☑ Yes ☐ No (If yes, please provide supporting documentation and photos.)
   Comments: Dam of L. Alberta
   Elberta SP 7/10/11

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

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

   Comments: _____

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

   Comments: _____

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

   Comments: _____

Field Data Sheets – Basic RUAA Survey

Stream Name: Running Creek Site: RC001
Date: 6-11-11 Time: 2:50 PM

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 & plastic bag.

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

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

—

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream: Running Creek Date: 6-11-11

Site: RC001 Site Description: Lake Elberta below dam.

Time Begin: 2:30 Time End: Meter Type: AA

Observers: J. White, E. Williams Stream Width*: 1.6 Section Width (W): .16

Observations:

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft) (m)	Velocity (V) At Point (ft/s)(m/s)	Velocity (V) Average (ft/s)(m/s)	Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
.08	.02			0.0	0
.24	.04			0.119	0.0008
.40	.06			0.119	0.0011
.56	.06			0.173	0.0017
.72	.06			0.190	0.0018
.88	.08			0.185	0.0024
1.04	.06			0.173	0.0017
1.20	.08			0.155	0.0020
1.36	.10			0.133	0.0016
1.44	0			0	0
				Total	0.0130 cms
					0.46 cfs

Section Stream Width

0.16
0.12
0.20

SP 7/14/11

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information: S. Painter J. White, E. Williams	
Date & Time: 6-11-11 @ 4:00	County Name: Hopkins
Stream Name: Running Creek	
Segment No. or nearest downstream Segment No.: 0512A_03	
Description of Site: RC002 @ Junior Hinton Property	

N - 33°02.879'
W - 95° 32.998'

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.
   0.33 cfs SP 7/12/11

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 Water Temp: 27.3 °C

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

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 JEW 7/21/11

7. Please describe access opportunities or explain why the site is not easily accessible (Attach photos for documentation):
   Through ~~to~~ gates and to back side of property.

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

Field Data Sheets – Basic RUAA Survey

Stream Name: Running Creek Site: RC002
Date: 6-11-11 Time: 4:00

B. Primary Contact Water Recreation Evaluation:

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

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

   a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).
   ☐ Wading-Children ☐ Tubing ☑ No primary contact activities that commonly occur were observed
   ☐ Wading-Adults ☐ Surfing ☐ Swimming ☐ Whitewater-kayaking, canoeing, rafting
   ☐ Water skiing ☐ Diving ☐ Other: _____
   ☐ frequent public swimming-created by publicly owned land or commercial operations

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

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

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
   Low depth, logs / jams + private property also heavily vegetated banks.

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

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? Lake Elberta

C. Secondary Contact Water Recreation Evaluation:

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

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

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

Stream Name: Running Creek Site: RC002
Date: 6-11-11 Time: 4:00

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 depth, logs/jams + heavily vegetated banks. 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).
Low depth, logs/jams, private property and vegetated banks.

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

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 – Basic RUAA Survey

Stream Name: Running Creek Site: RC002
Date: 6-11-11 Time: 4:00

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 149 Downstream 150 Left Bank 151 Right Bank 152
Photos #s (150 meters) Upstream 153 Downstream 154 Left Bank 155 Right Bank 156
Photos #s (300 meters) Upstream 158 Downstream 159 Left Bank 160 Right Bank 161

157 - Fence
~~142-3 (Snake)~~
162 - vegetation

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.

Snake not visible JSW 7/21/11

	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	.10
60 meters	.12
90 meters	.10
120 meters	.19
150 meters	.12
180 meters	.26
210 meters	.20
240 meters	.53
270 meters	.25
300 meters	.50
Average	0.24m

Field Data Sheets – Basic RUAA Survey

Stream Name: Running Creek Site: RC001
Date: 6-11-11 Time: 4:00

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

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	3.0m
Width at narrowest point of the stream within 300 meter reach	1.4m
Width at the widest point of the stream within 300 meter reach	6.0m

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: Running Creek Site: RC002
Date: 6-11-11 Time: 4:00

F. Additional RUAA Information

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

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

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

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

   Comments: _____

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

   Comments: _____

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

   Comments: _____

Field Data Sheets – Basic RUAA Survey

Stream Name: Running Creek Site: RC001
Date: 6-11-11 Time: 4:00

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: 1 snake (mocassin)

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:
Buckets, Drum, Shoe, cable

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: Running Creek Date: 6-11-11

Site: RC002 Site Description: Junior Hinton Property

Time Begin: 4:00 Time End: Meter Type: AA

Observers: E. Williams Stream Width*: 1.40m Section Width (W): .14

Observations:

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft) (m)	Velocity (V) At Point (ft/s)(m/s)	Velocity (V) Average (ft/s)(m/s)	Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
.07	.02m			—	0
.21	.06m			.106	0.0009
.35	.06m			.154	0.0013
.49	.08m			.190	0.0021
.63	.06m			.190	0.0016
.77	.04m			.169	0.0009
.91	.04m			.095	0.0005
1.05	.04m			.081	0.0005
1.19	.04m			.119	0.0007
1.33	.04m			.168	0.0009
				Total	0.0094 cms
					0.33 cfs

SP 7/10/11

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information: J. Williams, J. White, S. Painter	
Date & Time: 6-11-11 @ 7:30	County Name: Hopkins
Stream Name: Running Creek	
Segment No. or nearest downstream Segment No.: 0512A_02	
Description of Site: #53 - Co Rd 2322	

N-33.02792°
W-95.53603°

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.
   0.39 cfs SP 7/10/11

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: 24.1 °C Water Temp: 22.8 °C

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

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):
   Accessible from Co Rd 2322

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

Field Data Sheets – Basic RUAA Survey

Stream Name: Running Creek Site: #53
Date: 6/11/11 Time: 7:30am

B. Primary Contact Water Recreation Evaluation:

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

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

   a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).
   ☐ Wading-Children ☐ Tubing ☑ No primary contact activities that commonly occur were observed
   ☐ Wading-Adults ☐ Surfing ☐ Swimming ☐ Whitewater-kayaking, canoeing, rafting
   ☐ Water skiing ☐ Diving ☐ Other: _____
   ☐ frequent public swimming-created by publicly owned land or commercial operations

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

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

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

3. Describe if there is public access (e.g., parks, roads, etc.) (Attach photos, maps, etc. for documentation).
   Yes, off of CR 2322. No fence

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

C. Secondary Contact Water Recreation Evaluation:

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

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

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

Stream Name: Running Creek Site: #53
Date: 6/11/11 Time: 7:30 am

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 depth, with vegetated banks (overgrown)

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 depths, vegetated banks

6. Describe why there is limited public access (e.g., lack of roads, river or stream banks overgrown, etc.) (Attach photos, maps, etc. for documentation).
Only accessable from CR 2322 which has overgrown 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

Field Data Sheets – Basic RUAA Survey

Stream Name: Running Creek Site: # 53
Date: 6/11/11 Time: 7:30am

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 75 Downstream 76 Left Bank 77 Right Bank 78
Photos #s (150 meters) Upstream 79 Downstream 80 Left Bank 81 Right Bank 82
Photos #s (300 meters) Upstream 85 Downstream 86 Left Bank 87 Right Bank 88

Extra Photos #83,84 - fishing evidence #89,90 - access

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	5.0	2.5m	.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	.10
60 meters	.20
90 meters	.21
120 meters	.10
150 meters	.30
180 meters	.09
210 meters	.09
240 meters	.50
270 meters	.08
300 meters	~~.03~~ .30
Average	0.20m

Field Data Sheets – Basic RUAA Survey

Stream Name: Running Creek Site: #53
Date: 6/11/14 Time: 7:30am

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	1.5m
Width at narrowest point of the stream within 300 meter reach	.50m
Width at the widest point of the stream within 300 meter reach	2.0m

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: Running Creek Site: #53
Date: 6/11/11 Time: 7:30am

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
   - ☑ Log jams
   - ☐ Thick vegetation
   - ☐ Rip rap
   - ☐ Low bridges
   - ☐ Water control structure
   - ☐ None
   - ☑ Other (specify): Remnants of Fence

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

   Comments: _____

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

   Comments: _____

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

   Comments: Fish nets, carcass (fish)

Field Data Sheets – Basic RUAA Survey

Stream Name: Running Creek Site: #53
Date: 6/11/11 Time: 7:30 am

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: Frogs

9. Mammals Observed within 300 meter reach

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

Comments: _____

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

11. Garbage Observed

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

JGW

Briefly describe the kinds of garbage observed:
C-Perlin, fence remnants, household, and metal

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: Running Creek Date: 6-11-11

Site: 53 Site Description: CR 2322

Time Begin: 7:30 Time End: Meter Type: AA

Observers: E. Williams Stream Width*: 1.87 Section Width (W): .187

Observations:

Section Width	Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft) (m)	Velocity (V) At Point (ft/s)(m/s)	Velocity (V) Average (ft/s)(m/s)	Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
0.23	.187	0.08			0.00	—
0.14	.274	.10m			0.054	0.008
0.19	.461	.14m			0.123	0.0032
↓	.648	.18m			0.106	0.0036
	.835	.20m			.032	0.0012
0.18	1.02	.24m			.022	0.0010
0.19	1.20	.18m			.022	0.0007
↓	1.39m	.14m			.022	0.0006
	1.58m	.16m			—	0
0.20	1.76m	.03m			—	0
					Total	0.0110 cms
						0.39 cfs

SP 7/10/11

.187
.187
.274
.187
.461
.187
.648
.187
.835

.835
.185
1.020
.187
1.207
.187
1.394
.187
1.581
.187
1.768

33.01005° N
95.52689° W

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information: S. Painter, V. White, E. Williams	
Date & Time: 6/10/11 @ 4:00pm	County Name: Hopkins
Stream Name: Running Creek	
Segment No. or nearest downstream Segment No.: 0512A_02	
Description of Site: #54- FM 1567E	

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 Too deep to wade SP 7/10/11

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: 32.6 °C Water Temp: 28.2 °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, 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):
   Accessible from FM 1567E on north (u/s) side, mowed up to bank

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

Field Data Sheets – Basic RUAA Survey

Stream Name: Running Creek Site: #54
Date: 6/10/11 Time: 4:00pm

B. Primary Contact Water Recreation Evaluation:

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

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

   a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).
   ☐ Wading-Children ☐ Tubing ☒ No primary contact activities that commonly occur were observed
   ☐ Wading-Adults ☐ Surfing ☐ Swimming ☐ Whitewater-kayaking, canoeing, rafting
   ☐ Water skiing ☐ Diving ☐ Other: _____
   ☐ frequent public swimming-created by publicly owned land or commercial operations

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

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

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
   heavily vegetated along most of reach, logs in channel, murky water

3. Describe if there is public access (e.g., parks, roads, etc.) (Attach photos, maps, etc. for documentation).
   accessible from FM 1567E

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

C. Secondary Contact Water Recreation Evaluation:

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

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

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

Stream Name: Running Creek Site: #54
Date: 6/10/11 Time: 4:00pm

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).
heavily vegetated 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
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).
heavily vegetated banks

6. Describe why there is limited public access (e.g., lack of roads, river or stream banks overgrown, etc.) (Attach photos, maps, etc. for documentation).
accessible from FM 1567E

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: Running Creek Site: ~~#90~~ #54 # 7/6/11
Date: 6/10/11 Time: 4:00pm

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 70 Downstream 71 Left Bank 72 Right Bank 73
Photos #s (150 meters) Upstream ~~61~~ 59 Downstream ~~60~~ Left Bank 63 Right Bank 62
Photos #s (300 meters) Upstream 65 Downstream 66 Left Bank 67 Right Bank 68

60 - oxbow
64 - homemade bridge
69 - fence across water
74 - food sign

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	1.0
60 meters	1.9
90 meters	1.2
120 meters	1.2
150 meters	1.3
180 meters	0.9
210 meters	0.75
240 meters	1.23
270 meters	0.9
300 meters	1.2
Average	1.16m

Measured via kyack

Field Data Sheets – Basic RUAA Survey

Stream Name: Running Creek Site: #50 #54 SP 7/10/11
Date: 6/10/11 Time: 4:00pm

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	9 m
Width at narrowest point of the stream within 300 meter reach	3 m
Width at the widest point of the stream within 300 meter reach	15 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: Running Creek Site: #54
Date: 6/10/11 Time: 4pm

F. Additional RUAA Information

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

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

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

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

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

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: + rot line w/bobber attached to bridge abutment

Field Data Sheets – Basic RUAA Survey

Stream Name: Running Creek Site: #54
Date: 6/10/11 Time: 4pm

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:
55 gal drum, treadmill, beer cans, household garbage at road crossing

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: Running Creek Date: 6/10/11
Site: #54 Site Description: FM 1567E
Time Begin: 4:10pm Time End: Meter Type: Type AA
Observers: Stream Width*: ~15 m Section Width (W):
Observations:

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

Flow was not measured because the stream was To Deep to Wade. One ~~flow~~ velocity measurement at 1.2 m deep was 0. Stream appeared to be stagnant.

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information: S. Painter, J. White, E. Williams	
Date & Time: 6-11-11 @ 5:45	County Name: Hopkins
Stream Name: Running Creek	
Segment No. or nearest downstream Segment No.: 0512A-02	
Description of Site: RC003 - Kerry Bailey property	

N-32°.99658°
W-95°.51751°

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 SP 7/10/11

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: 25.5 °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	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
   gew 7/9/11

7. Please describe access opportunities or explain why the site is not easily accessible (Attach photos for documentation): Through K. Bailey's ~~fence~~ gate off of CR

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

Field Data Sheets – Basic RUAA Survey

Stream Name: Running Creek Site: RC003
Date: 6-11-11 Time: 5:45

B. Primary Contact Water Recreation Evaluation:

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

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

   a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).
   ☐ Wading-Children ☐ Tubing ☑ No primary contact activities that commonly occur were observed
   ☐ Wading-Adults ☐ Surfing ☐ Swimming ☐ Whitewater-kayaking, canoeing, rafting
   ☐ Water skiing ☐ Diving ☐ Other: _____
   ☐ frequent public swimming-created by publicly owned land or commercial operations

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

   c. Check the following that apply regarding the individuals proximity to the water body.
   ☐ Water in mouth or nose of the individual
   ☐ Primary touch: Individual's body (or portion) immersed in water
   ☐ Secondary touch: fishing, pets and related contact with water
   ☐ Individual is in a boat touching water
   ☐ Individual is on shore near water within 8 meters (25ft) of water
   ☐ Individual is well away from water between 8 and 30 meters (100 ft) ☑ Not applicable SP 7/10/11

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).
   Steep, heavily vegetated banks. Private property with snake presence.

3. Describe if there is public access (e.g., parks, roads, etc.) (Attach photos, maps, etc. for documentation).
   No - private property w/ 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 SP 7/10/11

C. Secondary Contact Water Recreation Evaluation:

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

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

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

Stream Name: Running Creek Site: RC003
Date: 6-11-11 Time: 5:45

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).
Steep vegetated (heavily) banks, snakes, 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).
Steep, heavily vegetated banks, private property and snakes.

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).
Locked gate off of CR

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 – Basic RUAA Survey

Stream Name: Running Creek Site: RC003
Date: 6-11-11 Time: 5:45

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 164 Downstream 165 Left Bank 166 Right Bank 167
Photos #s (150 meters) Upstream 168 Downstream 169 Left Bank 170 Right Bank 171
Photos #s (300 meters) Upstream 174 Downstream 175 Left Bank 176 Right Bank 177

Extra
172 - trib @150m
173 - bottle/limbs

OK JSW

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	0.92
60 meters	1.03
90 meters	0.98
120 meters	0.70
150 meters	0.33
180 meters	0.89
210 meters	0.63
240 meters	0.62
270 meters	0.49
300 meters	0.58
Average	0.72m

Field Data Sheets – Basic RUAA Survey

Stream Name: Running Creek Site: RC003
Date: 6-11-11 Time: 5:45

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

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	6
Width at narrowest point of the stream within 300 meter reach	2.5
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: Field crew could not wade, had to use a kayak to obtain ≤ 300m data points

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: Running Creek Site: RC003
Date: 6-11-11 Time: 5:45

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): Tire/axel below bridge
   - ☐ 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

   7/9/11 JEW

   Comments: _____

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

   Comments: _____

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

   Comments: _____

Field Data Sheets – Basic RUAA Survey

Stream Name: Running Creek Site: RC003
Date: 10-11-11 Time: 5:45

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:
Tire, ~~Axl~~ Axle, Bottle

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: Running Creek Date: 6-11-11

Site: RC003 Site Description: Kerry Bailey

Time Begin: 5:45 Time End: Meter Type: AA

Observers: J. White, E. Williams Stream Width*: 6.0m Section Width (W): .60

Observations:

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft) (m)	Velocity (V) At Point (ft/s)(m/s)	Velocity (V) Average (ft/s)(m/s)	Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
.30	.36			0	0
.90	.94			0	0
1.50	1			0	0
2.10	1.5			0	0
2.70	1.5			0	0
3.20	1.4			0	0
3.80	1.2			0	0
4.40	.93			0	0
5.00	.50			0	0
5.60	.28			0	0
				Total	0 cms
					0 cfs

Section Width
0.00
0.55
0.55
0.60
0.70

SM 7/10/11

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information: S. Painter, J. White, E. Williams	
Date & Time: 6/10/11 @ 2:30 pm	County Name: Hopkins Co.
Stream Name: Running Creek	
Segment No. or nearest downstream Segment No.: 0512 A-01	
Description of Site: #50- Co Rd 2436	

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 SP 7/10/11

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 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.)

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 JEN 7/21/11

7. Please describe access opportunities or explain why the site is not easily accessible (Attach photos for documentation):
   Accessible from 2436, heavily vegetated banks

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

Field Data Sheets – Basic RUAA Survey

Stream Name: Ft Running Creek Site: #50
Date: 6/10/11 Time: 2:30pm

B. Primary Contact Water Recreation Evaluation:

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

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

   a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).
   ☐ Wading-Children ☐ Tubing ☒ No primary contact activities that commonly occur were observed
   ☐ Wading-Adults ☐ Surfing ☐ Swimming ☐ Whitewater-kayaking, canoeing, rafting
   ☐ Water skiing ☐ Diving ☐ Other: _____
   ☐ frequent public swimming-created by publicly owned land or commercial operations

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

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

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

3. Describe if there is public access (e.g., parks, roads, etc.) (Attach photos, maps, etc. for documentation).
   accessible from Co Rd 2436

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

C. Secondary Contact Water Recreation Evaluation:

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

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

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

Stream Name: Running Creek Site: #50
Date: 6/10/11 Time: 2:30pm

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).
heavily vegetated 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
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).
heavily vegetated banks

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

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: Running Creek Site: #50
Date: 6/10/11 Time: 2:30pm

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 44 Downstream 45 Left Bank 46 Right Bank 47 #56-57
Photos #s (150 meters) Upstream 48 Downstream 49 Left Bank 50 Right Bank 51 Beaver dam
Photos #s (300 meters) Upstream 52 Downstream 53 Left Bank 54 Right Bank 55 58 - tree cut by beaver

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	0.90
60 meters	1.15
90 meters	1.1
120 meters	1.0
150 meters	1.1
180 meters	1.3
210 meters	1.5
240 meters	1.6
270 meters	1.55
300 meters	1.5
Average	1.27m

Obtained via Kyack

Field Data Sheets – Basic RUAA Survey

Stream Name: Running Creek Site: #50
Date: 6/10/11 Time: 2:30pm

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	9.0m ~~7.5~~
Width at narrowest point of the stream within 300 meter reach	6.0m
Width at the widest point of the stream within 300 meter reach	12.0m ~~9.0~~ ~~10.~~

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

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name: Running Creek Site: #50
Date: 6/10/11 Time: 2:30pm

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: Beaver dam observed ~ 375 m d/s of road crossing

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

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

   Comments: _____

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

   Comments: _____

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

   Comments: short footpath from on NE side of bridge

Field Data Sheets – Basic RUAA Survey

Stream Name: Running Creek Site: #50
Date: 6/10/11 Time: 3:30pm

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: oil slick over much of reach, unsure of origin

8. Vertebrates Observed within 300 meter reach

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

Comments: turtles, fish observed, hawk

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:
on bank at Rd.; christmas lights, foam pad, feedsack, some bottles and can

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

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

Interviewed mother + daughter who drove by, indicated that fishing is ~~an~~ common, swimming does not occur to their knowledge

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream: Running Creek Date: 6/10/11

Site: #50 Site Description: Co Rd 2436

Time Begin: 2:30 Time End: 2:50 Meter Type: Type AA

Observers: E. Williams, S. Painter Stream Width*: 10 m Section Width (W):

Observations:

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft) (m)	Velocity (V) At Point (ft/s)(m/s)	Velocity (V) Average (ft/s)(m/s)	Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
9.5m	0.90			0	0
8.5m	0.98			0	0
7.5m	0.98			0	0
6.5m	0.89			0	0
5.5m	0.96			0	0
4.5m	0.94			0	0
3.5m	1.00			0	0
2.5m	0.84			0	0
1.5m	1.00			0	0
0.5m	0.98			0	0
				Total	0 cms
					0 cfs

SP 7/10/11

Taken just d/s of bridge, stagnant.

33° 59.003' N
95° 31.167' W

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information:	S. Painter, J. White, E. Williams
Date & Time: 6/11/11 @ 12:30 pm	County Name: Hopkins
Stream Name: Running Creek	
Segment No. or nearest downstream Segment No.: 0512A-01	SP 7/10/11
Description of Site: ~~RC004~~ @ Anthony McKay RC004	

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 SP 7/10/11

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: 25.4 °C

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

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):
   Only accessible through McKay property,

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

Field Data Sheets – Basic RUAA Survey

Stream Name: Running Creek Site: RC004
Date: 6/11/11 Time: 12:30 pm

B. Primary Contact Water Recreation Evaluation:

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

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

   a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).
   ☐ Wading-Children ☐ Tubing ☑ No primary contact activities that commonly occur were observed
   ☐ Wading-Adults ☐ Surfing ☐ Swimming ☐ Whitewater-kayaking, canoeing, rafting
   ☐ Water skiing ☐ Diving ☐ Other: _____
   ☐ frequent public swimming-created by publicly owned land or commercial operations

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

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

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
   logs in & across channel, snakes, algae on surface, murky water, vegetation on banks

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

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

C. Secondary Contact Water Recreation Evaluation:

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

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

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

Stream Name: Running Creek Site: RC 004
Date: 6/11/11 Time: 12:30 am

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).
log, algae, murky water, bank vegetation.

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 #2

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).
only accessible through McKay 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.
deer blind and feeder (~ 20 m from reach)

Field Data Sheets – Basic RUAA Survey

Stream Name: Running Creek Site: RC004
Date: 6/11/11 Time: 12:30 pm

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 117 Downstream 118 Left Bank 119 Right Bank 120 129 - bird droppings
Photos #s (150 meters) Upstream 121 Downstream 122 Left Bank 123 Right Bank 124
Photos #s (300 meters) Upstream 125 Downstream 126 Left Bank 127 Right Bank 128

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	1.1
60 meters	1
90 meters	1.1
120 meters	0.8
150 meters	1
180 meters	0.67
210 meters	0.77
240 meters	0.75
270 meters	0.8
300 meters	0.72
Average	0.87m

Stream Name: Running Creek Site: RC004
Date: 6/11/11 Time: 12:30pm

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

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	7
Width at narrowest point of the stream within 300 meter reach	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: _____

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: Ramsey Creek Site: RC004
Date: 6/11/11 Time: 12:30pm

F. Additional RUAA Information

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

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

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

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

   Comments: _____

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

   Comments: _____

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

   Comments: _____

Field Data Sheets – Basic RUAA Survey

Stream Name: Running Creek Site: RC004
Date: 6/11/11 Time: 12:30

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: entire water surface covered w/ brown algae film

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: 1 snake, 1 bird

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: 1 coyote

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: Running Creek Date: 6/11/11

Site: RC004 Site Description: Anthony McKay

Time Begin: 12:30 pm Time End: 12:50 pm Meter Type: Type AA

Observers: S. Painter, E. Williams Stream Width*: 7.2m Section Width (W): 0.72

Observations:

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft) (m)	Velocity (V) At Point (ft/s)(m/s)	Velocity (V) Average (ft/s)(m/s)	Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
0.36m	0.16			0	0
1.08	0.32			0	0
1.80	0.34			0	0
2.52	0.40			0	0
3.24	0.48			0	0
3.96	0.64			0	0
4.68	0.74			0	0
5.40	0.70			0	0
6.12	0.58			0	0
6.84	0.56			0	0
				Total	0 cms
					0 cfs

7/10/11 SP

32.97556°N
95.52027°W

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information: S. Painter, J. White, E. Williams	
Date & Time: 6/11/11 @ 10:45pm	County Name: Hopkins
Stream Name: Running Creek	
Segment No. or nearest downstream Segment No.: DS12A-01 SP 7/10/11	
Description of Site: RC005, Sanders ~~downstream~~ upstream	

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.
   1.54 cfs SP 7/10/11

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: 25.3 °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.)

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):
   Accessible from Sanders property, 4WD trail ends ~100m from the bank, heavily vegetated bank

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

Field Data Sheets – Basic RUAA Survey

Stream Name: Running Creek Site: RC005
Date: 6/11/11 Time: 10:45am

B. Primary Contact Water Recreation Evaluation:

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

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

   a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).
   ☐ Wading-Children ☐ Tubing ☑ No primary contact activities that commonly occur were observed
   ☐ Wading-Adults ☐ Surfing ☐ Swimming ☐ Whitewater-kayaking, canoeing, rafting
   ☐ Water skiing ☐ Diving ☐ Other: _____
   ☐ frequent public swimming-created by publicly owned land or commercial operations

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

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

2. If primary contact recreation activities are not observed, describe the physical characteristics of the water body that may hinder the frequency of primary contact (depth, etc.) (Attach photos, etc. for documentation).
   Low, muddy, stagnant, muddy bottom deposits, heavy vegetation on bank

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

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

C. Secondary Contact Water Recreation Evaluation:

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

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

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

Stream Name: Running Creek Site: RC005
Date: 6/11/11 Time: 10:45

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).
leaf, mucky stagnant water, muddy bottom deposits, heavy vegetation on bank

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 #2

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).
only accessible through Sanders property

D. Noncontact Recreation Evaluation

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name: Running Creek Site: ~~10:45 am~~ RC005
Date: 6/11/11 Time: 10:45 am

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 104 Downstream 105 Left Bank 106 Right Bank 107
Photos #s (150 meters) Upstream 108 Downstream 109 Left Bank 110 Right Bank 111
Photos #s (300 meters) Upstream 113 Downstream 114 Left Bank 115 Right Bank 116

112 - Wading ~~Water~~ bird

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	0.80
60 meters	0.80
90 meters	~~0.8~~ 1.3
120 meters	0.93
150 meters	0.50
180 meters	0.40
210 meters	0.35
240 meters	0.30
270 meters	0.35
300 meters	0.35
Average	0.60m

Stream Name: Running Creek Site: RC005
Date: 6/11/11 Time: 10:45 am

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 m
Width at narrowest point of the stream within 300 meter reach	2 m
Width at the widest point of the stream within 300 meter reach	20m

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: Running Creek Site: RC005
Date: 6/11/11 Time: 10:45am

F. Additional RUAA Information

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

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

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

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

   Comments: _____

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

   Comments: _____

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

   Comments: _____

Field Data Sheets – Basic RUAA Survey

Stream Name: Running Creek Site: RC005
Date: 6/11/11 Time: 10:45am

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 duckweed

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: 1 snake, 1 wading bird, duck

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: Running Creek Date: 6/11/11

Site: RC006 Site Description: Sanders, upstream

Time Begin: 10:45 Time End: 11:05 Meter Type: Type AA

Observers: S. Painter, E. Williams Stream Width*: 8.8 Section Width (W): .88

Observations:

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft) (m)	Velocity (V) At Point (ft/s)(m/s)	Velocity (V) Average (ft/s)(m/s)	Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
0.44	0.18			0	0
1.32	0.64			0	0
2.20	0.80			0.~~022~~ 32	0
3.08	0.74			0	0
4.96	0.48			0.022	0.0146
5.84	0.50			0.022	0.0097
6.72	0.56			0.022	0.0108
7.60	0.44			0.022	0.0085
8.48	0.16			0	0
				Total	0.0436 cms
					1.54 cfs

Section Width
0.88
1.38
1.38
0.88

7/10/11 SP

32.96979° N
95.52179° W

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information: S. Painter, J. Willite, E. Williams	
Date & Time: 6/11/11 - 9:00am	County Name: Hopkins Co
Stream Name: Running Creek	
Segment No. or nearest downstream Segment No.: 0512A_01 SP 7/19/11	
Description of Site: RC006 - Sanders downstream	

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.
   0.39 cfs SP 7/10/11

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: 25.8 °C Water Temp: 29.6 °C

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

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 JEW 7/21/11

7. Please describe access opportunities or explain why the site is not easily accessible (Attach photos for documentation):
   Accessible from Sanders property, at end of 4WD/road to vegetated banks

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

Field Data Sheets – Basic RUAA Survey

Stream Name: Running Creek Site: RC006
Date: 6/11/11 Time: 9:00 am

B. Primary Contact Water Recreation Evaluation:

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

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

   a. Check the following boxes of primary contact recreation activities observed at the time of the sampling event at the site (Attach photos of the activities or lack of activities).
   ☐ Wading-Children ☐ Tubing ☑ No primary contact activities that commonly occur were observed
   ☐ Wading-Adults ☐ Surfing ☐ Swimming ☐ Whitewater-kayaking, canoeing, rafting
   ☐ Water skiing ☐ Diving ☐ Other: _____
   ☐ frequent public swimming-created by publicly owned land or commercial operations

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

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

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

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

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

C. Secondary Contact Water Recreation Evaluation:

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

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

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

Field Data Sheets – Basic RUAA Survey

Stream Name: Running Creek Site: RC006
Date: 6/11/11 Time: 9:00 am

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).
vegetation, logs, shallow depth

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 #2

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).
only accessible ~~f~~ through Sanders 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.
Deer blind ~100 m from stream, landowner uses the area for hunting duck and deer

Field Data Sheets – Basic RUAA Survey

Stream Name: Running Creek Site: [redacted] RC006
Date: 6/11/11 Time: 9:00am

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 91 Downstream 92 Left Bank 93 Right Bank 94 99 - snake
Photos #s (150 meters) Upstream 95 Downstream 96 Left Bank 97 Right Bank 98
Photos #s (300 meters) Upstream ~~99~~ 100 Downstream ~~100~~ 101 Left Bank ~~101~~ 102 Right Bank ~~102~~ 103 JEW 7/21/11

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	0.80
60 meters	0.63
90 meters	0.40
120 meters	0.40
150 meters	0.50
180 meters	0.30
210 meters	0.40
240 meters	0.43
270 meters	0.50
300 meters	0.70
Average	0.51m

Field Data Sheets – Basic RUAA Survey

Stream Name: Running Creek Site: RC006
Date: 6/11/11 Time: 9:00am

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 m
Width at narrowest point of the stream within 300 meter reach	3.5 m
Width at the widest point of the stream within 300 meter reach	6 m

7/10/11 SP
Copied from Basic survey; data not collected on comprehensive trip.

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: Running Creek Site: #RC004
Date: 6/11/11 Time: 9:00am

F. Additional RUAA Information

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

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

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

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

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

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

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

Comments: _____

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

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

Comments: _____

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

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

Comments: 4WD trail ends near trail

Field Data Sheets – Basic RUAA Survey

Stream Name: Running Creek Site: RC0010
Date: 6/11/11 Time: 9:00am

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: duck, 1 snake

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 observed

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:
1 can

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

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

—

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream: Running Creek Date: 6/11/11

Site: #RC006 Site Description: Sanders, downstream

Time Begin: 9:00am Time End: Meter Type: Tyre AA

Observers: S. Painter, E. Williams Stream Width*: 5.7 Section Width (W): 0.57

Observations:

Section Midpoint (ft) (m)	Section Depth (ft) (m) (cm) (D)	Observational Depth** (ft) (m)	Velocity (V) At Point (ft/s)(m/s)	Velocity (V) Average (ft/s)(m/s)	Flow (Q) (m^3/s) (ft^3/s) Q = (W)(D)(V)
0.28	0.14			0.022	0.0017
0.85	0.24			0	0
1.42	0.30			0	0
1.99	0.58			0	0
2.56	0.72			0	0
3.13	0.74			0.022	0.0093
3.70	0.52			0	0
4.27	0.38			0	0
4.84	0.22			0	0
5.41	0.10			0	0
				Total	0.0110 cms
					0.39 cfs

SP 7/10/11