VC#82

Field Data Sheets – Basic RUAA Survey

Data Collectors & Contact Information:	Jim Muir, Randy Bax, Madeline Fangman
Date & Time: 8:20AM 7/17/10	County Name: Jasper
Stream Name: Nichols	
Segment No. or nearest downstream Segment No.:	site 82
Description of Site: 82 @ FM 1013	

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.

30°41'26.87 N
93°59'14.00 W

A. Stream Characteristics:

1. Check the following channel flow status that applies.

X 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 cms Dry SP 7/21/11

4. Water Quality Data (Field Parameters)

Air Temp ~~28.9~~ 28.1 °C MA Water Temp 0.0 °C

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

4L 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):

at Highway culvert

8. Dominant Primary Substrate

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

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B. Primary Contact Water Recreation Evaluation:

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

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

Yes / No primary contact recreation activities were observed

a. Check the following boxes 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).

Dry stream

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

off highway, ditch parking

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

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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.

☐ 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).
Dry Stream

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

Please describe how often the activities occur? Unknown Never Daily Monthly Yearly

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

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

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).
Ditch parking

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D. Noncontact Recreation Evaluation

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

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

n/a

E. Stream Channel and Substantial Pools Measurements

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

1. Wadeable Streams

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

Bearing 212° **30** M Photo's Upstream 167 Downstream 168 Left Bank 169 Right Bank 170
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		n/a	
Pool 5			
Pool 6			
Pool 7			
Pool 8			
Pool 9			
Pool 10			

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

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

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

Measurement Type	Width (meters)
Typical Average Width of 300 meter reach	
Width at narrowest point of the stream within 300 meter reach	Dry
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 212° **30** M Photo's Upstream 167 Downstream 168 Left Bank 169 Right Bank 170 - 5°
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	n/a
7	
8	
9	
10	

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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	✓ 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: _____

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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: Trash from traffic on Road

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

13. Please document any other relevant information regarding recreational activities and the water body in general (for example, area outside of the stream reach evaluated).
Not used for Recreation

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Stream Flow (Discharge) Measurement

Stream: Nichols Creek Date: 7/17

Site: #82 Site

Description: FM 1013

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

Observers: _____ 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)	

Dry

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Data Collectors & Contact Information:	Jim Muir, Landy Bow, Madeline Bergman
Date & Time: 7:55AM 7/17/10	County Name: Jasper
Stream Name: Nichols	
Segment No. or nearest downstream Segment No.: 81	0503A_08
Description of Site: 81 @ FM 1013	

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.

30°38'33.46N
93°57'54.90W

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 cms Dry SF 2/21/11

4. Water Quality Data (Field Parameters)

Air Temp ~~26.9~~ 27.7 ~~27.8~~ °C Water Temp 26.9 °C

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

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

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

7. Please describe access opportunities or explain why the site is not easily accessible (Attach photos for documentation):
Off main Highway, reflectors, culvert

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

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

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

☐ Yes ☒ No primary contact recreation activities were observed

a. Check the following boxes 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: _____
☒ No primary contact activities that commonly occur were observed
☐ frequent public swimming-created by publicly owned land / commercial operations

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).

Dry up stream, very Narrow 1-2' wide
Dried

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

No Access fences

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

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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.

☐ 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).
Dry up stream, narrow river
Dried

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

Please describe how often the activities occur? ☑ Unknown ☐ Never ☐ Daily ☐ Monthly ☐ Yearly

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

5. Describe the physical characteristics of the water body that hinders the frequency of secondary contact recreation (depth, etc.) (Attach photos or depth measurements, etc. for documentation).
Dry up stream, low depth
Dried
SP 4/28/11

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).
Ditch Parking, fences

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D. Noncontact Recreation Evaluation

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

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

n/a

E. Stream Channel and Substantial Pools Measurements

Please check the following which best describes the river or stream: X Wadeable but dry S.P. / 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 338° **30** M Photo's Upstream 163 Downstream 164 Left Bank 165 Right Bank 166
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	8m*	4m*	not measured
Pool 2			
Pool 3			
Pool 4			
Pool 5			
Pool 6	n/a		
Pool 7			
Pool 8			
Pool 9			
Pool 10			

* Estimated based on photographs. S.P. 6/28/11

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

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

Dry

Clarification (S.P. 6/28/11)
Entire reach appeared to be dry, except for a small pool on the downstream side. No depth measurement was taken because field crew was unaware of protocol.

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

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

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

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

Bearing 330 **30** M Photo's Upstream 163 Downstream 164 Left Bank 116 Right Bank 166
Bearing_____ **150** M Photo's Upstream 168 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	

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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	✓ 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: _____

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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: Trash from highway drivers

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).
River not used for any kind of recreation

NC #81

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream: Nichols Creek Date: 7/17/10

Site: #81- FM103 Site

Description:

Time Begin: Time End: Meter Type:

Observers: 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)	

Dry

NC #83

Photo #171 Locked Gate

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information:	Jim Muir, Randy Bow, Madeline Fangman
Date & Time: 7/17/2010 8:30 AM	County Name: Jasper Co
Stream Name: Nichols Creek	
Segment No. or nearest downstream Segment No.:	
Description of Site: #83 - CoRd 408	

sf 3/21/11 Filled out in office

Private Property No Access

A. Stream Characteristics:

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

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

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

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

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

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

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

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

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

NC #80

Field Data Sheets – Basic RUAA Survey

Data Collectors & Contact Information:	Jim Muir, Randy Rowe, Madeline Langman
Date & Time: 3:30pm 7/16/10	County Name: Jasper
Stream Name: Nichols	
Segment No. or nearest downstream Segment No.:	0503A-07
Description of Site: Site 80 @ FM 82	

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.

30° 35' 38.76
93° 54' 57.28

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 cms Field crew visually confirmed zero flow

Clarification (SP 6/28/11): Field crew observed dry portions of the reach and deduced that the creek was not flowing, i.e. stagnant. SP 7/31/11

4. Water Quality Data (Field Parameters)

Air Temp 33.6 °C Water Temp 28.3 °C

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

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

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

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

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

NC #80

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).

Black Color

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

Parking on ditch

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

NC #80

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.

☐ 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)

n/a

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

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

n/a

Please describe how often the activities occur? ☑ Unknown ☐ Never ☐ Daily ☐ Monthly ☐ Yearly

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

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

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).
Lack of parking, trails, overgrown banks

NC #80

D. Noncontact Recreation Evaluation

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

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

Pic 146- Floaty, Pic 147 - Bat, Pic 148 fish Bones

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

Bearing 20° **30** M Photo's Upstream 149 Downstream 150 Left Bank 151 Right Bank 152
Bearing 345° **150** M Photo's Upstream 153 Downstream 154 Left Bank 155 Right Bank 156
Bearing 260° **300** M Photo's Upstream 159 Downstream 160 Left Bank 161 Right Bank 162

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		n/a	
Pool 6			
Pool 7			
Pool 8			
Pool 9			
Pool 10			

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

Clarification on following page. SP 6/28/11

Distance	Depth (meters)
30 meters	0.05
60 meters	0.47
90 meters	0.0
120 meters	0.71
150 meters	0.08
180 meters	0.0
210 meters	0.0
240 meters	0.0
270 meters	0.0
300 meters	0.0
Average	~~0.131~~ SP

NC #80

Field Data Sheets – Basic RUAA Survey

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

E. Stream Channel and Substantial Pools Measurements

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

1. Wadeable Streams

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

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

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

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

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

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

Distance	Depth (meters)
30 meters	0.05
60 meters	0.47
90 meters	Dry
120 meters	0.71
150 meters	0.08
180 meters	Dry
210 meters	
240 meters	
270 meters	
300 meters	
Average	0.33

Clarification sp 6/28/11

NC #80

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	4.1 m
Width at narrowest point of the stream within 300 meter reach	2.4 m
Width at the widest point of the stream within 300 meter reach	5.5m

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____

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

NC
#80

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	☑ 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: Pic 147 - Bat box, Pic 146 - floaty

NC #30

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:	MF- 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: Fish, Snake - 157, 158 - Cotton Mouth

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: Fishing supplies, Beer cans

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

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

None

NC #80

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream: Nichols Creek Date: 7/14/10

Site: #80 Site

Description: FM 82

Time Begin: Time End: Meter Type:

Observers: 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)	

Field crew visually confirmed zero flow.

NC#79

Field Data Sheets – Basic RUAA Survey

Data Collectors & Contact Information:	Jim Muir, Randy Bow, Madeline Fangman
Date & Time: 3:10pm 7/16/10	County Name: Jasper
Stream Name: Nichols	
Segment No. or nearest downstream Segment No.: Site 79	0502A-07
Description of Site: site 79 @ CR 413 on FM 82	

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 X no flow low normal high flooded

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

X **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 cms Field crew visually confirmed zero flow SP 7/21/11

Clarification (SP 8/30/11): Field crew observed dry portions of the reach, and deduced that the creek was not flowing, i.e. stagnant.

4. Water Quality Data (Field Parameters)

Air Temp 30.1 °C Water Temp 28.4 °C

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

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 X Difficult

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

Steep Banks

8. Dominant Primary Substrate

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

NC#79

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: _____
☒ No primary contact activities that commonly occur were observed
☐ frequent public swimming-created by publicly owned land / commercial operations

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).
Low Depth to dry - pools with dry reaches

3. Describe if there is public access (e.g. parks, roads, etc.) (Attach photos, maps, etc. for documentation).
Carthy Road. no where to pull off

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

NC #79

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.

- 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)

n/a

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

n/a

Please describe how often the activities occur? ✓ Unknown Never Daily Monthly Yearly

4. If infrequently, what is the reason? ✓ physical characteristics of the water body ✓ limited public access
- other

If other, list reasons: _____

5. Describe the physical characteristics of the water body that hinders the frequency of secondary contact recreation (depth, etc.) (Attach photos or depth measurements, etc. for documentation).
Low to Dry 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).
Lack parking, steep banks

NC# 79

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.

Posted No trespasing Signs and fences

E. Stream Channel and Substantial Pools Measurements

Please check the following which best describes the river or stream: ✓ Wadeable SP 2/4/11 ✗ 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 245 **30** M Photo's Upstream 142 Downstream 143 Left Bank 144 Right Bank 145 ○ MF

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			
Pool 6			
Pool 7			
Pool 8	Not collected - Field crew was	Pools were present unaware of protocol	
Pool 9			
Pool 10			

SP 2/21/11

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

Distance	Depth (meters)
30 meters	
60 meters	
90 meters	
120 meters	
150 meters	Not collected
180 meters	
210 meters	
240 meters	
270 meters	
300 meters	
Average	

SP 2/28/11

NL
#79

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	not collected
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 245° **30** M Photo's Upstream 142 Downstream 143 Left Bank 144 Right Bank 145
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	

NC #79

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	✓ 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: _____

NC #79

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, no chance of recreation

NC #79

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream: Nichols Date: 7/16/10

Site: Site #79 - CR 413 Site

Description:

Time Begin: Time End: Meter Type:

Observers: 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)	

Field crew usually confirmed zero flow

NC#-

No photo

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information:	Jim Muir, Randy Boyd, Madeline Fangman
Date & Time: 7/16/10 ~2:55pm	County Name: Jasper Co.
Stream Name: Nichols Creek	
Segment No. or nearest downstream Segment No.:	0502A_07
Description of Site: #77 - Unnamed Street	

SP 2/1/11

Filled out in office

Private Property
No Access

A. Stream Characteristics:

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

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

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

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

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

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

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

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

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

NC #78

Photo #141
Locked Gate

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information:	Jim Muir, Randy Bow, Madeline Farquhar
Date & Time: 7/16/10 2:47pm	County Name: Jasper Co
Stream Name: Nichols Creek	
Segment No. or nearest downstream Segment No.:	0503A-07
Description of Site: #78 - Driveway	

SP 2/21/11
Filled out in office

Private Property
No Access

A. Stream Characteristics:

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

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

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

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

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

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

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

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

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

NC #75

Photo # 140

Locked gate

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information:	Jim Muir, Randy Bow, Madeline Fangman
Date & Time: 7/16/2010 2:18pm	County Name: Jasper Co.
Stream Name: Nichols Creek	
Segment No. or nearest downstream Segment No.:	0502A-06
Description of Site: #75- Unnamed Street	

SP 2/21/11 Filled out in office

Private Property No Access

A. Stream Characteristics:

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

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

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

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

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

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

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

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

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

NC # 76

Field Data Sheets – Basic RUAA Survey

Data Collectors & Contact Information:	Jim Mule, Randy Bowl, Madeline Langman
Date & Time: 12:20pm 7/16/10	County Name: Newton ~~Jasper~~
Stream Name: Nichols	
Segment No. or nearest downstream Segment No.: 76	0602A_DO
Description of Site: 76 @ US Hwy 96	

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.

30° 28' 23.68 N
93° 48' 19.29 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 cms Field crew visually confirmed zero flow SP 2/21/11

Clarification (SP 6/28/11) Field crew observed dry portions of the reach and deduced that the creek was not flowing, i.e. stagnant.

4. Water Quality Data (Field Parameters)

Air Temp 30.5 °C Water Temp 26.5 29.8 °C

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

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

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

7. Please describe access opportunities or explain why the site is not easily accessible (Attach photos for documentation):
Park in Ditch walk to River

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

NC#76

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

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).

NO flow

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

Ditch on side of busy road

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

NC#76

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.

- 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)

n/a

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

n/a

Please describe how often the activities occur? ✓ Unknown Never Daily Monthly Yearly

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

5. Describe the physical characteristics of the water body that hinders the frequency of secondary contact recreation (depth, etc.) (Attach photos or depth measurements, etc. for documentation).
NO flow, low 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).
NO Public Parking

NL #76

D. Noncontact Recreation Evaluation

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

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

Pic 135 - Puma Track

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 316° **30** M Photo's Upstream 127 Downstream 128 Left Bank 129 Right Bank 130
Bearing 305° **150** M Photo's Upstream 131 Downstream 132 Left Bank 133 Right Bank 134
Bearing 325° **300** M Photo's Upstream 136 Downstream 137 Left Bank 138 Right Bank 139

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			
Pool 6	n/a		
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.

Clarification on following page. SP 6/28/14

Distance	Depth (meters)
30 meters	0.27
60 meters	0.15
90 meters	0.42
120 meters	0.0
150 meters	0.6
180 meters	0.0
210 meters	0.46
240 meters	0.0
270 meters	0.0
300 meters	0.0
Average	~~0.19~~ SP

NC #76

Field Data Sheets – Basic RUAA Survey

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

E. Stream Channel and Substantial Pools Measurements

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

1. Wadeable Streams

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

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

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

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

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

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

Distance	Depth (meters)
30 meters	0.27
60 meters	0.15
90 meters	0.42
120 meters	Dry
150 meters	0.60
180 meters	Dry
210 meters	0.46
240 meters	Dry
270 meters	
300 meters	
Average	0.38

Clarification SP 6/28/11

NC#76

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	2.5 m
Width at narrowest point of the stream within 300 meter reach	0.0 m
Width at the widest point of the stream within 300 meter reach	3.8 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.

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	n/a
6	
7	
8	
9	
10	

NC#76

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	✓ 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: Busy Main Highway

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: Trash
Comments: 4 wheeler tracks

NC #16

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: Minos, 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: Pic 135 Puma 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: cans, cups, candy wrapers

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).
Rual Forest

NC #76

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream: Nichols Creek Date: 7/16/10

Site: #76 Site

Description: US Hwy 96

Time Begin: Time End: Meter Type:

Observers: 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)	

Field crew visually confirmed zero flow

NC#74

Photo # 126 - Locked Gate

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information:	Jim Muir, Randy Bow, Madeline Fangman
Date & Time: 07/16/10 12:02 pm	County Name: Jasper Co
Stream Name: Nichols Creek	
Segment No. or nearest downstream Segment No.:	0502A_05
Description of Site:	#74- Unnamed Street

SP 2/20/11 Filled out in office

Private Property No Access

A. Stream Characteristics:

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

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

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

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

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

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

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

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

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

NC #69

Photo #125

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information:	Jim Muir, Randy Bono, Madeline Fangman
Date & Time: 07/16/10 11:29 am	County Name: Newton Co
Stream Name: Nichols Creek	
Segment No. or nearest downstream Segment No.: 0502A-04	
Description of Site: #69- Co Rd	

SP 2/20/11 Filled out in office

Private Property
No Access

A. Stream Characteristics:

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

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

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

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

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

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

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

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

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

NC #71

No photo

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information:	Jim Mull, Randy Bow, Madeline Faagman
Date & Time: 7/16/10 ~11:30 am	County Name: Newton
Stream Name: Nichols Creek	
Segment No. or nearest downstream Segment No.:	0502A_04
Description of Site: #71 Holmes Road	

SP 2bd/11 Filled out in office

Private Property No Access

A. Stream Characteristics:

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

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

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

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

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

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

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

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

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

NC #73

Field Data Sheets – Basic RUAA Survey

(to be completed for each site)

Data Collectors & Contact Information:	Jim Muir, Randy Bow, Madeline Fongman
Date & Time: 7/16/10 11:20 am	County Name: Newton
Stream Name: Nichols Creek	
Segment No. or nearest downstream Segment No.:	0502A_03
Description of Site: #73 Driveway	

SP 2/20/11 Filled out in office

Photo #124

Private Property No Access

A. Stream Characteristics:

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

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

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

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

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

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

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

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

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

NC #68

Field Data Sheets – Basic RUAA Survey

Data Collectors & Contact Information:	Jim Mauk, Randy Bow, Madeline Langman
Date & Time: 7/16/10 11:12 am	County Name: Newton
Stream Name: Nichols Creek	
Segment No. or nearest downstream Segment No.:	Site 68 0502A_03
Description of Site: 68 @ Driveway	

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.

Pic 123 Locked gate

30° 29' 55.1
93° 48' 32.9"

Private property. No Access

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. _____ cms

4. Water Quality Data (Field Parameters)

Air Temp _____ ° C Water Temp _____ ° C

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

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

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

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

_____

_____

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

NC #67

Field Data Sheets – Basic RUAA Survey

Data Collectors & Contact Information:	Jim Mrit, Randy Bow, Madeline Gagman
Date & Time: 7/16/10 10:22AM	County Name: Newton
Stream Name: Nichols Creek	
Segment No. or nearest downstream Segment No.:	Site 67 0502A_02
Description of Site:	68mi 67 @ State Hwy 87

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.

30° 28' 23.48 N
93° 48' 19.35 W

A. Stream Characteristics:

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

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

X **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 cms Field crew visually confirmed zero flow SP 3/21/11

Clarification (SP 03/30/11): Field crew observed dry portions of the reach, and deduced that the creek was not flowing, i.e. stagnant.

4. Water Quality Data (Field Parameters)

Air Temp 27.3 °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.)

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 X Moderately easy Moderately difficult Difficult

7. Please describe access opportunities or explain why the site is not easily accessible (Attach photos for documentation):
Park on steep ditch, walk to River

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

NCH67

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).

Log Jams

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

Ditch parking

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

NC #67

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.

n/a

☐ 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).
low 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

n/a

Please describe how often the activities occur? ☑ Unknown ☐ Never ☐ Daily ☐ Monthly ☐ Yearly

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

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

NC #67

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

pic 110 - fishing bobber

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 285 **30** M Photo's Upstream 111 Downstream 112 Left Bank 113 Right Bank 114
Bearing 300 **150** M Photo's Upstream 115 Downstream 116 Left Bank 117 Right Bank 118
Bearing 280 **300** M Photo's Upstream 119 Downstream 120 Left Bank 121 Right Bank 122

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			
Pool 6		n/a	
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.

Clarification on following page (SP 6/28/11)

Distance	Depth (meters)
30 meters	0.89
60 meters	0.14
90 meters	0.55
120 meters	0.28
150 meters	0.25
180 meters	0.23
210 meters	0.41
240 meters	0.40
270 meters	0.93
300 meters	0.0
Average	0.377 SP

NC #67

Field Data Sheets – Basic RUAA Survey

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

E. Stream Channel and Substantial Pools Measurements

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

1. Wadeable Streams

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

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

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

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

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

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

Distance	Depth (meters)
30 meters	0.89
60 meters	0.14
90 meters	0.55
120 meters	0.28
150 meters	0.25
180 meters	0.23
210 meters	0.41
240 meters	0.40
270 meters	0.93
300 meters	DRY
Average	0.45

Clarification SP 6/28/11

NC #67

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	4.0 m
Width at narrowest point of the stream within 300 meter reach	0 m
Width at the widest point of the stream within 300 meter reach	6.5 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.

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	

n/a

NC#67

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	☒ 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: _____

NC#67

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: Bull frogs, minos

9. Mammals Observed within 300 meter reach

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

Comments:

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

11. Garbage Observed

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

Briefly describe the kinds of garbage observed: Beer cans.

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

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

NC#67

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream: Nichols Creek Date: 7/16/10

Site: #67 Site

Description: SH 87

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

Observers: _____ 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)	

Field crew visually confirmed zero flow

NC #166

Field Data Sheets – Basic RUAA Survey

Data Collectors & Contact Information:	Jim Muir, Randy, Bob, Madeline Fergnan
Date & Time: 9:07AM 7/16/2010	County Name: Newton
Stream Name: Nichols Creek	
Segment No. or nearest downstream Segment No.: 66	0502A_01
Description of Site: 66 @ FM 253	

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.

30° 25' 23.27 N
93° 47' 01.96 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 cms. Field crew visually confirmed zero flow EF 2/21/11

Clarification (SP 6/28/11): Field crew observed dry portions of the reach, and deduced that the creek was not flowing, i.e. stagnant.

4. Water Quality Data (Field Parameters)

Air Temp 27 °C Water Temp 21.2 °C

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

RB/LB 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):
Drive down to creek, nice banks

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

NC#166

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

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).

Low depth, narrow width

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

Parking on side of ditch SF Bridge in ditch

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

NC1166

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.

☐ 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)

n/a

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

NC #66

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.

Picture #97 = fish net.

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 350 **30** M Photo's Upstream 98 Downstream 99 Left Bank 100 Right Bank 101
Bearing 340 **150** M Photo's Upstream 102 Downstream 103 Left Bank 104 Right Bank 105
Bearing 345 **300** M Photo's Upstream 106 Downstream 107 Left Bank 108 Right Bank 109

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			
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.

Clarification on following page (SP 6/28/11)

Distance	Depth (meters)	Pic°Angle
30 meters	0.40	350°
60 meters	0.82	
90 meters	0.30	
120 meters	0.52	
150 meters	0.00	
180 meters	0.01	340°
210 meters	0.00	
240 meters	0.00	
270 meters	0.00	
300 meters	0.00	
Average	~~0.00~~ 0.205 SP N/A.	345°

NC #66

Field Data Sheets – Basic RUAA Survey

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

E. Stream Channel and Substantial Pools Measurements

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

1. Wadeable Streams

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

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

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

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

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

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

Distance	Depth (meters)
30 meters	0.40
60 meters	0.82
90 meters	0.30
120 meters	0.52
150 meters	Dry
180 meters	0.61
210 meters	
240 meters	Dry
270 meters	
300 meters	
Average	0.41

Clarification ep 6/28/11

NC#606

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	4m
Width at narrowest point of the stream within 300 meter reach	0
Width at the widest point of the stream within 300 meter reach	4.5m

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

COMMENTS:

Dry

2. Non-wadeable Streams

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

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	

NC #166

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	☑ 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: _____

NC #16

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:	clear	green	red	X brown	black	
Bottom Deposit:	sludge	X solids	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: Catfish Nesting ground

9. Mammals Observed within 300 meter reach

Wild	X None	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 Deer, coon, Alligator

11. Garbage Observed

Large garbage in the channel	None	X 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: Old Appliances

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

NC#66

Field Data Sheet - Basic RUAA Survey

Stream Flow (Discharge) Measurement

Stream: Nichols Creek Date: 7/16/2010

Site: #66 Site

Description: FM 853

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

Observers: _____ 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)	

Field Crew visually confirmed zero flow