

*A STUDY OF TEXAS RIVERS  
WITH ATTENTION TO RIVER ACCESS  
AND RECREATIONAL FISHERIES*

A Senior Thesis

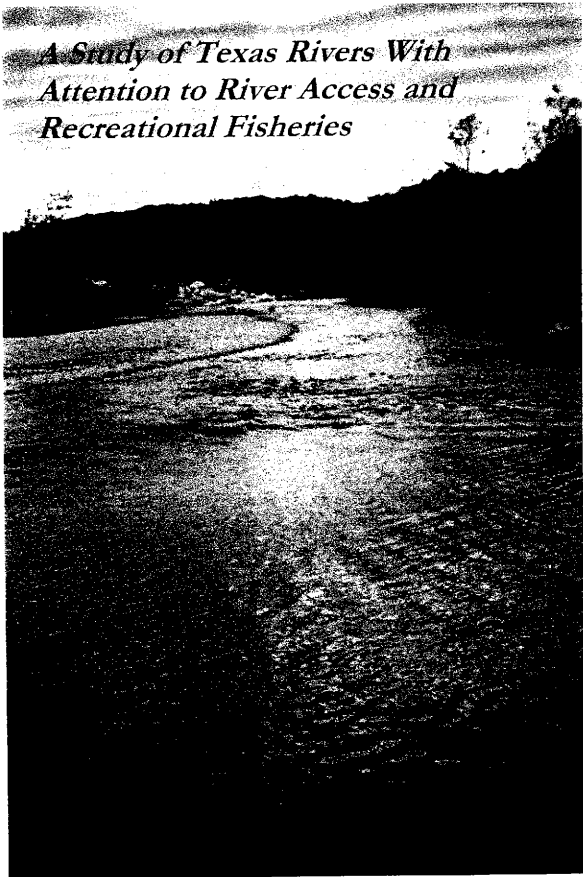
By

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1997-98 University Undergraduate Research Fellow  
Texas A&M University

Group: History/Political Science

*A Study of Texas Rivers With  
Attention to River Access and  
Recreational Fisheries*




# A Study of Texas Rivers with Attention to River Access and Recreational Fisheries

by  
Troy L. Baker

Submitted to the Office of Honors Programs and Academic Scholarships  
Texas A&M University  
in partial fulfillment of the requirements for  
1997-1998 University Undergraduate Research Fellows Program

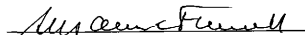
April 16, 1998

Approved as to style and content by:



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Dr. Robert B. Dittton, Faculty Advisor  
Department of Wildlife and Fisheries Sciences



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Honors Programs and Academic Scholarships

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## **Abstract**

Any angler can legally use a navigable Texas river or stream for recreational fishing. Often, however, the very definition of what navigability means is in question and private property boundaries are unclear. Over 98% of property adjacent to Texas rivers and streams is in private ownership, a unique situation found almost nowhere else. Thus, legal access to Texas rivers and streams by anglers is often difficult. This study seeks to examine and quantitatively describe the diverse range of issues to anglers related to river and stream access in Texas. A self-administered questionnaire was mailed to a sample of 679 anglers drawn from the 1994 Texas Angler Survey conducted by the Texas Parks and Wildlife Department. Anglers were surveyed to evaluate their attitudes and opinions on river access issue statements, satisfaction with current access levels, fishing preferences, and their willingness to pay for increasing access from willing landowners. Most anglers indicated they would fish more often if more river access points existed (69%) and almost three-quarters felt state agencies should improve public launch facilities (73%). Almost half thought the issue of river and stream access was important (44%).

## A Study of Texas Rivers with Attention to River Access and Recreational Fisheries<sup>1,4</sup>

By Troy L. Baker<sup>2</sup>

In Texas the public has the right to use most of the state's 80,000 miles of diverse waterways for recreational purposes because the bed in navigable rivers and streams is considered public property. However, 98% of land adjacent to rivers and streams in Texas is privately owned and river access points are often far apart. The number of access locations and modes of access on rivers is also highly variable. This diverse spatial and physical arrangement of river access locations and an unclear legal regime has led to numerous conflicts over recreational use on rivers.

Most access problems are often legal in nature and are brought about by differing opinions of private rights and public values on resource use (Gunter et al. 1987). Confrontations along rivers range from simple verbal warnings given to passing citizens to more serious situations where parties are threatened by physical intimidation, verbal abuse, or deadly weapons. Many times these conflicts result in a prosecution for "criminal trespass" (Kaiser 1994). Recreationists must endure landowners who are not familiar with river access law and are willing to protect their land by a show of force. Property owners adjacent to rivers must deal with litter, liability concerns, trespass, and loss of the most basic right of land ownership, privacy.

Many access problems occur near highway right-of-ways. These public access

locations are highly desirable as entrance and exit locations for anglers and other recreationists. Right-of-ways, however, often provide limited access, vary greatly in spatial orientation from river to river, rarely sustain parking for more than two or three vehicles, and can be fenced off by private landowners. Some right-of-ways are unsafe and are characterized by steep embankments and unimproved conditions. Legal entry to rivers may also be provided by willing property owners, state parks, and other public land. Conflicts arise between recreationists and private property owners when access locations are far apart, illegally obstructed, or are difficult to reach.

When conflicts do arise, issues like river navigability and property owner liability inevitably appear and muddy the legal waters. Texas water law is intricate and weaves the common law, civil law from Spain and Mexico and the early Republic of Texas, and relevant statutes put forth by the Texas Legislature (Riddell 1997). If a river is navigable, citizens have the right to fish, boat, float, or use the water for other recreational purposes. This law was established in 1863 when the Texas Supreme Court ruled that a successful navigability test directed the state to guard its navigable streams from obstruction and entitled the residents of the state the right to use these common highways for travel or trade (Selman v. Wolfe 1863).

The idea of navigability is confusing because the Texas interpretation involves the average width of the river or stream (Kaiser 1994; Riddell 1997). A stream may be considered “navigable by statute” if the stream averages 30 feet in width from the head to the mouth of the river. Many landowners argue a body of water does not have the average width required by state law and continue to deny citizens the public benefits of access. Fluctuating water levels throughout the year add another dimension to the issue. Even when a stream runs only several weeks a year, the bed is still considered navigable, and thus public property, because it is over



thirty feet in average width. Should the public have access to these areas? Where is the line drawn between private rights and public benefits?

The legal issue of liability is another topic often misunderstood. While perception of property owner liability exists, current law is clear. The recreational use statute limits landowner liability in cases of recreation if the landowner has not granted permission for the recreationist to enter his land (V.T.C.A. Civil Practices and Remedies 1997). Put simply, the landowner is not liable for any accidents or injuries sustained on the property if permission was not granted to the user. Unfortunately, myth is often more believable than truth. While the law is explicit about liability, stories of landowners found liable for accidents on their property persist and false perceptions on both sides continue.

The purpose of this paper is to understand river access issues in Texas and identify the boundaries which limit river recreation participation. It is necessary to investigate the extent of private involvement for providing increased access and to examine the legal barriers of river access. Other objectives of this paper were to increase understanding of constituency groups with an interest in river access and to understand the nature of conflict between public rights and private concerns. This information could be useful to managers who seek to target a group of anglers which, in the past, have been under-represented in statewide management plans.

## **Study Methods**

Because of the expected value differences between property owners and river recreationists, the attitudes and opinions of both groups on access issues need to be better understood. A focus on recreationists, or more specifically river anglers, was chosen for this paper due to the availability of a sampling frame and data from a previous study. Anglers (n=679) who indicated they fished on rivers and streams from a boat or the shore within the past year on the 1994 Texas statewide survey of general fishing license holders were included in this study (Ditton and Hunt 1996). The 1994 statewide survey was sent to 10,000 resident licensed anglers and a total of 4,888 questionnaires were completed. After eliminating non-deliverables, the overall effective response rate for the 1994 study was 60%. This is within the range of expected response rates for a mail survey (Salant and Dillman 1994).

A mail questionnaire was used to collect data from respondents on river angler fishing characteristics, river access satisfaction levels, and respondent attitudes and opinions on river access issues. Demographic information such as age, gender, income, race, and ethnicity was obtained from respondents by the 1994 Texas statewide survey so these questions did not have to be asked in this survey.

The survey instrument included a wide variety of questions designed to gain a better understanding of the Texas river angler. First, a series of questions were asked to provide a general fishing profile of river anglers. Respondents reported how many days fished in saltwater, freshwater, and days fished from a river or stream in Texas in the previous twelve months. Anglers were also asked to indicate how many years they have fished on rivers or streams in

Texas. Additionally, they were asked what other non-fishing activities they participated in on rivers and streams in Texas. They were also questioned on their most prevalent mode of fishing; knowing that whether anglers fished from the bank or from boats would be important to the river access question.

Eleven scaled questions were used to help understand opinions of respondents to various issues related to river access. Anglers were requested to rate each issue on a Likert type scale for agreement or disagreement. Finally, two open-ended questions were used to give anglers a chance to voice problems or opinions they might have with river and stream access in Texas. Responses were typed into a file as written and only names of individuals were removed to protect anglers' confidentiality. Open-ended comments may be obtained, in raw form, by the author of this paper.

Data acquisition was conducted between January and March 1998 using a four-page, twenty question questionnaire. Instead of using mailing labels, addresses were printed directly on the envelopes and questionnaires were sent by first class mail. This personalization was done to increase the response rate for this study. Survey methods recommended by Salant & Dillman were used to help with question development and the mailing process (Salant and Dillman 1994).

A personalized letter was initially sent to the sample of river anglers so they were aware of the survey. A week later, a second personalized letter was sent along with a survey and a postpaid business-reply envelope. A postcard reminder was sent one week later to encourage respondents to complete the survey. A final copy of the survey, a business reply envelope, and a personalized letter followed one week after the postcard mailing. Any address corrections obtained during the mailing process were data-entered and kept separate from other survey returns. A new mailing

process for respondents with a change of address was initiated after all new names and addresses had been received. This was done to ensure each respondent received survey materials according to the recommended time scale.

From the 679 questionnaires mailed, 313 (46%) were returned. When non-deliverables (n=122) were excluded, the final effective response rate was 56%. No non-response check was made for this study because addresses taken from the 1994 Texas statewide survey were four years old. Many phone numbers from the original sample were not available or not given so a representative non-response sample could not be obtained. This paper summarizes the results of the survey submitted by the 313 river angler respondents.

## **Study Results**

Anglers who fished rivers and streams in Texas were primarily white males. Their average age was 46 years and the median household income was in the \$30,000-\$39,999 category. Few of these anglers belonged to fishing clubs or organization (10%) or river or stream protection groups (1%). River anglers fished most often with family (14%), friends (23%), or with family and friends together(54%) and over half of respondents fished from a boat with a motor (57%). Besides fishing, respondents chose swimming (35%) and canoeing (9%) as the non-fishing activities they participated in most on rivers and streams in Texas. River anglers spent an average of 23 days fishing in freshwater, 16 days fishing Texas rivers and streams, and 12 days fishing in saltwater in the previous twelve months. By comparison, freshwater anglers from the 1994 Texas statewide survey averaged 24 days fishing in freshwater and only spent 5

days fishing on rivers and streams. About 90% of anglers from the 1994 study fished most with friends, family, or both and 9% belonged to a fishing group or organization (Ditton and Hunt 1996). River anglers indicated an average of 28 years experience fishing rivers and streams in Texas. Overall, a majority of anglers agreed if more access points were provided, they would fish rivers and streams more often (69%). However, it should be noted that even if a river has numerous access points, this does not mean access is easily gained. In addition to access quantity, river anglers agreed there should be more parking at public access points (63%), that existing access points need physical improvement (57%), and that more law enforcement presence was needed on rivers (43%). About one-third of anglers thought river and stream access points are overused (34%) and their ability to portage around obstacles was constrained (30%).

Survey results indicated a strong demand for improvement of public launch facilities at river access points (73%). Anglers can gain entry to existing launch facilities by fishing from specific public property sites around the state or anglers can access rivers and streams from private land. Many anglers fish most often in their county of residence (50%) and just over one-third of river anglers maintain an individual relationship with landowners and gain access from these willing parties (35%). When asked how much money river anglers would contribute to a private entity that would serve to increase access points and improve the quality of existing access locations, respondents indicated they would spend an average of fifty-one dollars per year. This figure includes respondents that answered zero to this question. Close to one-half of anglers indicated they agreed with the statement that monetary incentives be provided to the landowners to increase access (45%). Most respondents disagreed with the statement that

private property was clearly marked (62%).

## **Conclusions**

Historically, fisheries management in Texas has concentrated on large public reservoirs and largely ignored river ecosystems. Rivers offer the potential for a wide variety of recreational activities, provide needed habitat for many species of fish and wildlife, and make possible a different kind of fishing opportunity than public reservoirs (Texas Parks and Wildlife 1998; Stewart et al. 1993). With so much land owned by the citizens of the state, management of rivers brings property owners to the forefront of the issue. Can willing property owners be a key to improving the existing river access situation? Can negative perceptions be eliminated between public and private groups so cooperation can be fostered? Will future river access policies provide a clearer, more uniform conflict resolution framework than a current legal regime where problems are decided on a case by case basis?

As the population size in Texas increases, an increased demand for recreation and water consumption will probably occur (Araujo et al. 1990). This increased demand is more likely to be close to urban areas. Because of this, access to rivers closest to large urban centers will emerge as most important. A 1986 study found 67 percent of the respondents agreed 'more public recreation areas are needed along rivers and streams.' When respondents were asked "Which three of these areas"(given eight choices) "would you most like to visit in Texas?", 61 percent said a river or stream (Araujo et al. 1990). If access problems are not resolved, fishery managers risk losing a group of anglers which utilize the river as a recreational resource. Access problems

will also need to be addressed if the state has any goals to improve the attractiveness of recreational fishing on Texas rivers and streams.

State offices, property owners, and river anglers all share an interest in river access and place a high value on the protection of the resource but cooperation and communication between these different and often contentious groups will likely continue to be difficult. The lack of current communication will cause access questions to largely be decided on a case by case basis.

An effort must be made by all stakeholders to communicate with each other and work on eliminating false perceptions that may divide them. Hopefully, establishing common ground between the groups will lead to more effective communication on this issue.

River anglers appear to be similar to Texas freshwater anglers overall. Anglers who fish rivers and streams compare closely in categories like days fishing, fishing club membership, groups fished with, income levels, race, ethnicity, and age. There is, however, a notable difference in satisfaction rates between freshwater anglers and river anglers. One reason for this difference is a majority of river anglers require physically improved access locations, preferably with the space to get a boat in and out of the water. These improved conditions could be boat ramps, more parking locations, restrooms, and improved roads at access sites. Few access sites around the state offer such amenities. Furthermore, many river anglers are choosing to gain entry to rivers and streams by obtaining permission from private landowners and have indicated a willingness to pay for better access because current levels of access are not sufficient. Improved conditions means high costs and more people mean more environmental stress, noise, and litter (Gunter et al. 1987). As the number of river users increase in the future, especially close to urban areas, state offices must find a balance between the publics' access desires and a level of usage

and resource protection property owners deserve.

Although the results presented illuminate the importance of the river access issue, application of these results may not be possible at this time. First of all, this issue is politically contentious and is unlikely to be brought up by politicians or state resource managers who must answer to their constituents. Second, these results need verification by other social research efforts or a similar survey of licensed river anglers. While the statistics presented are descriptive, possible attitude and opinion changes might exist within another sampling frame. A larger, more comprehensive study conducted by the state could provide this needed verification and would allow managers to make informed decisions about river access in Texas. Nevertheless, it is hoped this study will provide a baseline knowledge about Texas river anglers, identify relevant issues, and lead to better management of the unique and precious Texas waterways.

### **Acknowledgments**

I would like to thank the members of the Human Dimensions Lab at Texas A&M University for their assistance throughout this project. I would also like to thank everyone I communicated with over the course of this study. Your insights, your expertise, and your advice were critical to the development of this report. Funding support was provided by the University Undergraduate Research Fellows Program and the Department of Wildlife and Fisheries Sciences at Texas A&M University.

<sup>1</sup> Presented at Texas A&M University Research Week, March 1998.

<sup>2</sup> Department of Wildlife and Fisheries Sciences, Texas A&M University, College Station, Texas 77843.

<sup>3</sup> Since anglers were asked to circle all that apply, the "Other" category in Table 14 contains combinations of responses from respondents. See the questionnaire, Question 9, in Appendix A for further clarification.

<sup>4</sup> The citations in this document follow the style of the Journal of Soil and Water Conservation.



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## Appendix A

Survey Questionnaire, Cover Letters, And Human Subjects Approval Sheet



## 1998 TEXAS RIVER ANGLER SURVEY

*In the following questions, please tell us about your fishing activity on rivers or streams in Texas. The information you provide will remain strictly confidential and you will not be identified with your answers.*

1. Since this time last year, how many **DAYS** did you go fishing in Texas in:

\_\_\_\_\_ FRESHWATER  
\_\_\_\_\_ SALTWATER

2. Since this time last year, have you fished any rivers or streams in Texas?

- 1 YES  
2 NO (*If NO, please skip ahead to Question #3*)

If yes, how many days did you go fishing in rivers or streams in Texas?

\_\_\_\_\_ TOTAL DAYS FISHED IN RIVERS OR STREAMS

3. How many years have you been fishing in rivers or streams in Texas?

\_\_\_\_\_ YEARS

4. Who do you go fishing with in rivers or streams in Texas most often? (*PLEASE CIRCLE ONLY ONE*)

- 1 BY YOURSELF  
2 WITH FRIENDS (NOT FAMILY)  
3 WITH FAMILY ONLY  
4 WITH FAMILY AND FRIENDS TOGETHER

5. Do you belong to a fishing club or organization?

- 1 YES (*If YES, please identify:* \_\_\_\_\_)  
2 NO

6. Do you belong to a river or stream protection group?

- 1 YES (*If YES, please identify:* \_\_\_\_\_)  
2 NO



## 1998 TEXAS RIVER ANGLER SURVEY

7. Below is a list of statements about access to rivers or streams in Texas. Please indicate the extent to which you agree or disagree with the following statements about river access issues in Texas.

I FEEL:	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a) There should be more parking spaces at public access points .....	1	2	3	4	5
b) State agencies should improve existing public launch facilities.....	1	2	3	4	5
c) There are enough river access sites to Texas rivers to meet my needs .....	1	2	3	4	5
d) Most river access points I frequent need physical improvement .....	1	2	3	4	5
e) Current law regarding access to Texas rivers is clear .....	1	2	3	4	5
f) The state should offer monetary incentives to landowners to provide more river access.....	1	2	3	4	5
g) There should be a greater law enforcement presence on rivers and streams in Texas .....	1	2	3	4	5
h) Private property is usually clearly marked along banks of rivers or streams I fish .....	1	2	3	4	5
i) More river access points would allow me to fish rivers or streams in Texas more often .....	1	2	3	4	5
j) My ability to portage around obstacles is constrained .....	1	2	3	4	5
k) There is over-use of access points on rivers or streams in Texas .....	1	2	3	4	5

8. Which of the following do you do most of your fishing from in rivers or streams in Texas?

1. BOAT WITH MOTOR
2. CANOE
3. BOAT WITHOUT MOTOR
4. BANK/WADE
5. TUBE OR BELLY BOAT



## 1998 TEXAS RIVER ANGLER SURVEY

9. Since this time last year, which other **NON-FISHING** activities did you participate in on Texas rivers?  
(*CIRCLE ALL THAT APPLY*)

1. CANOEING
2. KAYAKING
3. TUBING
4. RAFTING
5. SWIMMING

**Suppose a fund was established by a private entity to help anglers gain greater access to Texas rivers. This fund would improve existing access sites and provide the means for the purchase of new lands from willing landowners for improved river access.**

10. What is the highest dollar amount you would contribute to this fund each year?

\_\_\_\_\_ DOLLARS EACH YEAR

11. Since this time last year, have you encountered problems with landowners when using rivers or streams in Texas? Please explain. (*Use additional sheets if necessary*)
12. Since this time last year, have you encountered problems with other anglers when using rivers or streams in Texas? Please explain. (*Use additional sheets if necessary*)
13. Since this time last year, have you received permission from a landowner to access rivers or streams in Texas from their property?
1. YES
  2. NO



# 1998 TEXAS RIVER ANGLER SURVEY

14. Is the river or stream you fish most often in Texas within your COUNTY?

1 YES  
2 NO

15. Do you own property along any rivers or streams in Texas?

1 YES  
2 NO

- |   | Not at all Satisfied | Slightly Satisfied | Moderately Satisfied | Very Satisfied | Extremely Satisfied |
|---|----------------------|--------------------|----------------------|----------------|---------------------|
| 16. Overall, how satisfied are you with access to streams or rivers in Texas? ..... | 1                    | 2                  | 3                    | 4              | 5                   |

- |  | Not at all Important | Slightly Important | Moderately Important | Very Important | Extremely Important |
|--|----------------------|--------------------|----------------------|----------------|---------------------|
| 17. How important to you is the issue of river and stream access in Texas? ..... | 1                    | 2                  | 3                    | 4              | 5                   |

19. Was this survey completed by the person to whom it was addressed?

1 YES  
2 NO

20. What is the Zip Code of your current home residence? \_\_\_\_\_

*Your contribution of time to this study is greatly appreciated. Please return your completed questionnaire in the business reply envelope as soon as possible. Thank you.*

Texas A&M University  
Department of Wildlife and Fisheries Sciences  
College Station, TX 77843-2258  
1/98



**TEXAS A&M UNIVERSITY**  
Department of Wildlife & Fisheries Sciences

10001

January 5, 1998

Bob Smith  
123 River Boulevard  
Troutville, TX 12345

Dear Bob:

Next week you will receive a request to complete a questionnaire about your fishing activity on Texas rivers or streams. This study is being conducted as the basis for an undergraduate senior thesis at Texas A&M University. Dr. Robert Ditton, a professor in the Department of Wildlife and Fisheries Sciences, is serving as an advisor for this project. I am conducting this study to determine the attitudes and opinions of river anglers on the issue of river or stream access in Texas.

The information you provide will be useful to fisheries managers who must make decisions regarding the river or stream access of anglers in Texas.

I would greatly appreciate your taking a few minutes to complete and return your questionnaire when it arrives.

Thank you in advance for your help.

Sincerely,

A handwritten signature in cursive script that reads "Troy Baker".

Troy Baker  
Project Director



**TEXAS A&M UNIVERSITY**  
Department of Wildlife & Fisheries Sciences

10001

January 12, 1998

Bob Smith  
123 River Boulevard  
Troutville, TX 12345

Dear Bob:

With the help of the Department of Wildlife and Fisheries Sciences, I am conducting this study to determine the attitudes and opinions of river anglers on the issue of river or stream access in Texas. This study is being conducted as the basis for an undergraduate senior thesis at Texas A&M University. Dr. Robert Ditton, a professor in the Department of Wildlife and Fisheries Sciences, is serving as an advisor for this project.

The information you provide will be useful to fisheries managers who must make decisions regarding the river or stream access of anglers in Texas. Your name was selected from respondents to the 1994 Survey of Texas Anglers that was conducted by this department and the Texas Parks and Wildlife Department. You are one of a small number of anglers selected to participate in this study. It is important YOU and no one else complete the questionnaire. All responses will be strictly confidential and you will not be identified with your answers. There is an identification number on the questionnaire for mailing purposes only.

After you complete the questionnaire, please return it in the postage-paid, business reply envelope as soon as possible. If you have any questions, please feel free to call Troy Baker collect at (409) 845-4283. Thank you for your assistance.

Sincerely,

A handwritten signature in cursive script that reads "Troy Baker".

Troy Baker  
Project Director





**TEXAS A&M UNIVERSITY**  
Department of Wildlife & Fisheries Sciences

10001

February 4, 1998

Bob Smith  
123 River Boulevard  
Troutville, TX 12345

Dear Bob:

About three weeks ago, we wrote to you regarding your preferences and opinions on river or stream access in Texas. As of today, we have not yet received your completed questionnaire. If you have recently returned your survey, please accept our thanks.

This study is the basis for an undergraduate senior thesis and is being conducted to determine the attitudes and opinions of river anglers on the issue of river or stream access in Texas. Dr. Robert Ditton, a professor in the Department of Wildlife and Fisheries Sciences, is serving as an advisor for this project. When making future management decisions, managers need to consider you, the angler. The information you provide will be useful to fisheries managers who must make decisions regarding the river or stream access of anglers in Texas.

We have had a good response rate on this survey so far, but the success and accuracy of our study depends on you and the others who have not yet responded. You and the other river anglers who have not responded may have different opinions and may represent a completely different portion of the fishing public than those who have sent in their questionnaires. We need to hear from YOU.

Enclosed is a second questionnaire, in case you misplaced the first one. Your opinions are important to us and your help is appreciated. Thank you for your assistance.

Sincerely,

A handwritten signature in cursive script that reads "Troy Baker".

Troy Baker  
Project Director

Texas A&M University  
Form I  
Summary Cover Sheet  
Protocol for Human Subjects in Research

Please check off or provide details on the following (enter N/A if not applicable):

Exemption Requested  
See Page 2

Principal Investigator Name Froy Baker Faculty Graduate Student\*  (UNDERGRAD)

College/Dept Wildlife & Fisheries Sciences Mail Stop 2258 Phone 845-5767

Project Title A Study of Texas Rivers With Attention to River Access & Recreational Fisheries

Subjective Estimate of Risk to Subject:  Low  Moderate  High  None

Gender of subjects:  Male  Female Both  18 (ages of all total participants (n): 679)

Source of Subjects:

- Psychology Subject Pool  
 Other TAMU Students  
 Community  
 Posted Notices\*\*  
 Prisons

Subject Recruitment:

- Direct Person-to-person contact  
 Telephone Solicitation  
 Newspaper Ad\*\*  
 Letter\*\*

Other (Please describe) DATABASE OF LICENSED ANGLERS Texas Parks & Wildlife

Compensation\*\*\* Yes  No

Deception† Yes  No

Location of Experiment: Texas A&M University

Invasive or Sensitive Procedures: Yes  No

- Blood Samples  Urine Samples  
 Physical Measurements  Stress Exercise  
(electrodes, etc.)  Review of Medical Records  
 Psychological Inventory  Other (Specify) \_\_\_\_\_  
 tDNA

Sensitive Subject Matter: Yes  No

- Alcohol, Drugs, Sex  
 Depression/Suicide  
 Learning Disability  
 Other (Specify) \_\_\_\_\_

Use of Video  or Audio tapes  (please indicate) N/A

Provisions for Confidentiality/Anonymity

- Retained Yes  No   
Retained/Length of Time \_\_\_\_\_  
Destroy/Erase Yes  No   
Other (explain) \_\_\_\_\_  
Use specified in consent form? Yes  No   
Use/Access to tapes: \_\_\_\_\_

- Replies Coded  
 Secure Storage  
 Anonymous Response  
 Confidential Response

Exact Location Where Signed Consent Forms Will be Filed: N/A  
(Must be kept on file for 3 years after the completion of the project).

- \* Must include signature of committee chair on protocol
- \*\* Please attach
- \*\*\* Please attach conditions, schedule of payment.
- † If yes, attach a debriefing form

**REQUEST FOR EXEMPTION from full IRB review**

Some research projects involving human subjects are exempt from full review by the IRB. See the attached sheet on research categories exempt from full IRB review.

Request for Exemption [Please refer to attached "Categories Exempt From Full IRB Review."]

- Established Educational Settings/Normal Educational Practices (a letter of approval from a school official must be obtained before the study can be conducted; send copy to the IRB)
- Use of educational anonymous tests (cognitive, diagnostic, aptitude, advancement; attach copy).
- Survey or interview procedures, [unless subjects might be identified, put at legal or personal risk, and unless survey or procedures deal with sensitive matters of personal behavior]
- Observations of public behavior [unless subjects might be identified, put at legal or personal risk, and unless observations deal with sensitive matters of personal behavior]
- Anonymous collection or study of existing documents, records, materials, or diagnostic specimens.
- Taste and food quality evaluation and consumer acceptance studies.

**APPROVED**

The U.S. population is becoming increasingly culturally, linguistically, economically, and ethnically diverse. The research needs to make a concerted effort to ensure that research subjects reflect the population demographically, including these groups who have been traditionally underrepresented. However, it is recognized that the available pool of subjects may preclude having a balanced population. If you cannot use a diverse population in your research, you must justify why not.

Loy Baker 2/12/98  
Principal Investigator Signature and Date

Robert Dille 2/17/98  
Graduate Committee Chair Signature and Date

*Livingstone Fellowship Program - AIDS*

W. B. Bean 2/17/98  
Department Head Signature and Date

[Signature] 2/17/98  
Institutional Review Board Signature and Date

## Form II

### Part A

- 1) Project Title: A Study of Texas Rivers With Attention to River Access and Recreational Fisheries
- 2) Principal Investigator: Troy Baker
- 3) Department: Wildlife and Fisheries Sciences
- 4) College: College of Agriculture and Life Sciences
- 5) Phone: 845-5769
- 6) Sponsor: University Honors Program--Undergraduate Fellows Program

### Part B

I have read the Belmont Report, "Ethical Principles and Guidelines for the Protection of Human Subjects for Research" and subscribe to the principles it contains. In light of this Declaration, I present for the Board's consideration the following information which will be explained to the subject about the proposed research:

1.

- a) The source of subjects for this study were provided by Texas Parks and Wildlife Department. 679 licensed anglers are included in this study
- b) These anglers were *randomly* picked from a database of licensed anglers.
- c) Ages from this study will vary (they are not presently known)
- d) No compensation will be offered to respondents
- e) This experiment will be conducted at Texas A&M University and will be a nine month study
- f) Specific steps will be taken to insure confidentiality of respondents. A barcode will be used on each questionnaire to ensure confidentiality. Respondents will in no way be identified with their responses. The names and addresses of these individuals will be held under lock and key during the course of the study and destroyed after completion of the final report.
- g) No special physical or psychological conditions exist for this study

2.

- a) Participants in this study will be asked to fill out a questionnaire about river access issues in Texas. They will be asked questions about their fishing behavior, attitudes on related issues, past experiences with river access problems, satisfaction levels with current river access, and they will be asked how important the issue of river access is to them. Participants will receive four mailings. Each mailing will be about a week apart. The first letter will describe the study, the second letter will include a survey with a letter, the third mailing will be a postcard reminder, and the fourth mailing will be a follow-up survey if they have not answered within a specified period of time. The survey should take an average respondent about 10 minutes to complete. A copy of the questionnaire is attached.
- b) No deception or coercion will occur in this study.

3.

- a) Since the questionnaire procedure is handled with appropriate confidentiality measures, no potential risks affect the respondent. They are asked to participate, not forced to participate so no discomfort to the respondent should occur. No action will be taken if participants decide not to complete the questionnaire.
- b) A participant in this study will not receive any benefits or be affected by any consequences by participating in this study. Participation is purely a volunteer matter. Again, no action will be taken by the researcher if the participant does or does not respond.

4.

Principal Investigator Joy Baker (Signature) Date: 2/12/98

Department Head R. D. King (Signature) Date: 2/22/98

Project Advisor Robert B. Dill (Signature) Date: 2/10/98

**Appendix B**  
**Tables of Survey Results**

# Demographic Characteristics

Table 1. Percent of river and stream anglers by age category.

Age Category	%
<20	0.0
20-29	3.9
30-39	28.6
40-49	30.5
50-59	24.1
>60	12.9
Total	100.0

Mean Age: 46.0  
Median Age: 45  
N=311

Table 2. Percent of river and stream anglers by gender.  
(Data from 1994 statewide survey)

Gender	%
Male	87.8
Female	12.2
Total	100.0

N=311

Table 3. Percent of river and stream anglers by race. (Data from 1994 statewide survey)

Race	%
White	84.0
Black	12.1
Asian or Pacific Islander	3.2
American Indian, Eskimo, or Aleut	0.7
<b>Total</b>	<b>100.0</b>

N=313

Table 4. Percent of river and stream anglers by Spanish/Hispanic ethnicity. (Data from 1994 statewide survey)

Spanish/Hispanic Ethnicity	%
Not Spanish/Hispanic	93.5
Mexican, Mexican American, Chicano	5.2
Puerto Rican	0.0
Cuban	0.0
Other Spanish/Hispanic	1.3
<b>Total</b>	<b>100.0</b>

N=230



Table 5. Percent of river and stream anglers by income.  
(Data from 1994 statewide survey)

Income	%
Under \$10,000	2.4
\$10,000 to \$19,999	11.2
\$20,000 to \$29,999	14.9
\$30,000 to \$39,999	14.9
\$40,000 to \$49,999	16.9
\$50,000 to \$59,999	12.2
\$60,000 to \$69,999	8.1
\$70,000 to \$79,999	4.4
\$80,000 to \$89,999	3.7
\$90,000 to \$99,000	2.7
\$100,000 and above	8.5
<b>Total</b>	<b>100.0</b>

Median Income

Category: \$30,000 to \$39,000

N=295

# Fishing Profile

Table 6. Percent of river and stream anglers by whether or not they have fished rivers or streams in Texas since this time last year.

Response	%
Yes	77.2
No	22.8
Total	100.0

N=302

If yes, number of days fished in a river or stream in Texas since this time last year.

	Days fished in a river or stream in Texas							Mean
	0	1	2	3	4	5	>5	
% of Anglers	0.4	3.0	14.5	9.8	11.1	10.6	50.6	16.1

N=235

Table 7. Percent of river and stream anglers by number of days fished in both freshwater and saltwater in Texas; and mean days fished by category.

	Number of days <sup>a</sup>					Mean
	0	1-13	14-33	34-63	>64	
Days fishing fresh water (N=208)	7	48.7	26.2	11.4	6.7	23.3
Days fishing salt water (N=240)	31.3	47.5	13.3	5.4	2.5	12.1

<sup>a</sup> Categories of fishing frequency >0 are based on Graefe (1980).

Table 8. Percent of river and stream anglers by whether they fish most often in Texas within their county.

Response	%
Yes	50.3
No	49.7
Total	100.0

N= 309

Table 9. Percent of river and stream anglers by whether they own property along any rivers or streams in Texas.

Response	%
Yes	12.9
No	87.1
Total	100.0

N=310

Table 10. Percent of river and stream anglers by membership in a fishing club or organization.

Response	%
Yes	10.1
No	89.9
Total	100.0

N=308

Table 11. Percent of river and stream anglers by membership in a river or stream protection group.

Response	%
Yes	1.0
No	99.0
Total	100.0

N=311

Table 12. Percent of river and stream anglers by type of group they fished with most often.

Group	%
By yourself	9.9
With friends (not family)	22.8
With family only	13.5
With family and friends together	53.8
Total	100.0

N=303

Table 13. Percent of river and stream anglers by whether they gained permission from a landowner to access a river or stream in Texas from their property.

Response	%
Yes	34.5
No	65.5
Total	100.0

N=304

Table 14. Percent of river and stream anglers by type of non-fishing activities they participated in since this time last year.

Activity	%
Canoeing	8.8
Kayaking	1.6
Tubing	12.6
Rafting	1.6
Swimming	34.6
Other <sup>3</sup>	40.8
Total	100.0

N=182

Table 15. Percent of river and stream anglers by what they would contribute to a private entity that would help anglers gain greater access to Texas rivers from willing landowners.

Contribution	% of anglers
\$0	40.4
\$1 to \$20	28.4
\$21 to \$40	15.0
\$41 to \$60	8.5
\$61 to \$80	0.0
\$81 to \$100	5.4
>\$100	2.3
<b>Total</b>	<b>100.0</b>

Mean Contribution: \$51

N=260

Table 16. Percent of river and stream anglers by their mode of fishing.

Location	%
Boat With Motor	55.6
Canoe	6.7
Boat Without Motor	6.1
Bank/Wade	31.3
Tube or Belly Boat	0.3
<b>Total</b>	<b>100.0</b>

N=297

# Attitudes & Opinions

Table 17. Percent of river and stream anglers by support or opposition to various statements about river access issues in Texas.

Statement	Value <sup>a</sup>				
	1	2	3	4	5
There should be more parking spaces at public access points (N=308)	1.6	6.5	29.2	39.6	23.1
State agencies should improve existing public launch facilities (N=307)	1.3	4.6	20.8	47.9	25.4
There are enough river access sites to Texas rivers to meet my needs (N=308)	16.6	26.6	21.1	30.2	5.5
Most river access points I frequent need physical improvement (N=305)	2.3	10.5	30.2	40.3	16.7
Current law regarding access to Texas rivers is clear (N=305)	11.8	28.5	33.4	23.0	3.3
The state should offer monetary incentives to landowners to provide more river access (N=309)	7.2	18.6	29.0	28.3	16.9
There should be a greater law enforcement presence on rivers and streams in Texas (N=308)	5.8	14.6	37.0	27.0	15.6
Private property is usually clearly marked along banks of rivers and streams I fish (N=308)	21.8	39.9	15.6	20.8	1.9
More river access points would allow me to fish rivers or streams in Texas more often (N=307)	3.0	7.8	20.5	48.5	20.2
My ability to portage around obstacles is constrained (N=303)	2.6	16.8	50.9	23.4	6.3
There is over-use of access points on rivers or streams in Texas (N=307)	1.6	19.2	45.6	26.4	7.2

<sup>a</sup> 1=Strongly Disagree 2=Disagree 3=Neutral 4=Agree 5=Strongly Agree



Table 18. Percent of river and stream anglers according to their overall satisfaction with access to rivers or streams in Texas.

Satisfaction	Value <sup>a</sup>				
	1	2	3	4	5
Overall satisfaction with access to rivers or streams in Texas	13.9	19.8	48.8	13.5	4.0
N=303					

<sup>a</sup> 1=Not at all Satisfied 2=Slightly Satisfied 3=Moderately Satisfied 4=Very Satisfied 5=Extremely Satisfied

Table 19. Percent of river and stream anglers by the importance of river and stream access in Texas.

Importance	Value <sup>a</sup>				
	1	2	3	4	5
Importance of river and stream access in Texas	6.1	17.2	32.7	28.8	15.2
N=309					

<sup>a</sup> 1=Not at all Important 2=Slightly Important 3=Moderately Important 4=Very Important 5=Extremely Important

## Appendix C

### Open Ended Comments in Raw Form

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Of the 313 individuals who responded to this survey in 1998, 93 (30%) took the time to volunteer comments. Using an open-ended format, anglers were asked, "Since this time last year, have you encountered problems with landowners when using rivers or streams in Texas? Please explain." An open-ended question was also asked, "Since this time last year, have you encountered problems with other anglers when using rivers or streams in Texas? Please explain." Respondents were requested to use additional sheets if necessary. The material within this section has not been edited except to delete names of respondents or any other individuals; comments appear as written by respondents.

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**Question: Since this time last year, have you encountered problems with landowners when using rivers or streams in Texas? Please explain.**

No, however I have not had the chance to go fishing as I would like.

Portage on Blanco River. Rest Areas for children. Some land owners allow on a case by case basis.

When I was a young boy of 12 years old I fished the rivers and streams of Texas but they have become so polluted that I do not fish them anymore that is why I fish lakes and private lakes.

90% of private access will not let me cross their property.

Have fenced across the river and have posted with private property signs.

When we go fishing on the rivers we respect the landowners property as we take care of our own for this reason we have access to move places along the river then time permit us to go.

Most land owners do not want you all there land, that's why they bought land next to river banks. Because you can not use public boat ramps because to many drunks using public boat ramps. People driving river drunk or drinking beer need law (Bad) on public boat ramp and rivers.

Lack of private property markers such as fences, signs.

The people that have the land think they own the rivers. They try to keep you off with posted signs. My opinion, if land owner would let people on their land maybe parent would take there children more often. This would keep kids off the street and off drugs. and away from gangs etc.

Because of distance and lack of clarity on laws I fish lakes.

refused access. Claims of private ownership of river bed.

If you boat down the stream some landowners will call the game warden and try to make you leave. They think they own the stream.

Access to Richland Creek in my area was fenced off to prevent people from getting to the creek. Access was fenced off at the end of a county road to prevent access to Post Oak Creek at Richland Chambers Res.

I respect the landowner laws.

Electrical fence was installed in Wimberly on Blanco prohibiting tubers from entering water and walking back to tubing starting point. If you tube downstream. Need access to walk back upstream.

Had problems with landowners while rafting the Guadalupe.

Overcrowding

Good Topic! I love to fish rivers and streams. However the lack of public access and overcrowding in areas with access has almost made it impossible to enjoy a river fishing trip.

I respect private property

No, cause I've really haven't done any fishing in the past two years. I've been working and living in Houston, Texas.

Land owners will rarely allow access on their rivers and streams.

I only use fishing piers for fishing - I cannot use a boat. Only use lakes for fishing and all facilities are A-One.

Most land owners seem to think the river belongs to them, when it is owned by the State of Texas.

Making camp

While I never encountered a landowner - uncertainty over whether walking within low water channels in permanent streams was trespass caused a less than satisfactory experience - A simple statement published by the state that listed permanent streams by county that could be carried by the angler would really help.

Most landowners don't want you to litter on their land Lease land for hunting and fishing is the biggest problem.

Only to the extent of not knowing boundaries

I was denied access to take boat out with a motor problem by owner. He had good reason to deny, boaters/fisher persons trashed land and left gate open.

Truck: If I don't know the landowner, I don't cross his land.

Boat: However, if I see a good spot I do get out on the bank at times. I do not cross anyone's land, not even wading and will not cross any fence or land marked by signs. I do put in at bridges or other places and will set on banks anywhere I think I see a good spot; usually it's so far away from anybody I have no problems. But most of my fishing is done by lines I also have a few good sand bars which I catch bait and now and then fish on. I find that most people put there land off limit because of people that litter whether there fishing or not. Also this is farm land and people will steal. I've even got permission to cross land where someone for no reason at all turn a value on a fertilizer or whatever it was for cotton. I think it was 400 gallons before water had been added. Not to mention the cost nothing going to grow in that spot for a while. I fish where I can and if told to get off I do. I always said I got 15 yards from the waters edge have I.

I don't fish anymore. Fishing, hunting is too expensive. Licenses are too, too high. All the questions about rivers--are you leading to federal help and control--forget it.

Not usually they just need to post signs more. That way you will know whether you can fish there or not.

I do not trespass on private land. The problem in Hutchinson County, is the question of the Canadian River boundaries.

I have not been able to find a good point on the Brazos River to put my boat in. Except from the ground.

I simply obey the law.

Not with land owners - Just their barbed wire in the stream.

Access, river obstructions (fencing, wires), trash in water, or bank, and trot lines stretching across are the biggest problems to me in that order. Note: I fish the red river mostly. You have to have an Oklahoma license even though the only access I know of on the Texas side are in two places, not in Wichita county. Why can't Oklahoma honor Texas fishing licenses? Access is terrible as well as for the little Wichita river and the Brazos.

It is necessary to have overnight stays when "floating" the Colorado River and sometimes camping is not available where you "need" it -- once we couldn't make it to our prearranged campsite and were forced to stay on a sandbar mid river - not safe!

Landowners were concerned about trespassing and potential damage to property by anglers

My brother and myself was fishing on the Brazos River on a sandbar with Rod and Reels, and the landowner came up and said he own the land to the waters. He ask us to get off - We did.

Landowners say highway right of way is not legal to put boats in rivers.

I respect their right to own the property and so should yall! This survey stinks of yall trying to take something that doesn't belong to yall! All yall want is to make more money somehow and exploiting private land shouldn't be it!

We have encountered problems with landowners junk that is thrown into the Brazos River in places either to stop erosion or because some people feel that it is a good dumping area. I like it fine the way God made it and intended it to be yet.

I do not fish rivers or streams. I have no idea where a good access point on a good bass fishing river is in my area (Brazoria, Harris counties). I own an 18' I/O SEARAY Looking for 'Large Mouth'. Please Help!

The landowner ran us off at a river crossing near land, saying it was his property.

This is a letter concerning the survey of rivers and streams. I fish mostly lake Toledo Bend due to some of the issues you have raised. I find most public access ramps to these streams and rivers lack security, not enough parking space and some ramps are in poor condition. Naturally I would like to see improvements in these areas. The thing that really upsets me is when you ask questions like how much money would I be willing to contribute to a private entity to help anglers have better access. I feel that I already contribute moneys through boater registration, hunting and fishing licence and trailer registration. I feel those who direct these funds are missing them by putting these moneys in projects that do not have anything to do with hunting and fishing. If you have read this I appreciate it. Neither you or myself may not be able to do a lot about it, but to gripe. I really do not mean this in a bad way but this is the way I feel weather real or imagined. Thanks.

No - But I have before this year.

I don't use landowners' property

No access for rest room or even to stretch your legs. I have even been threatened.

The landowners have shot guns, hollered at me, my bait has been stolen, my trot lines cut, and stolen. My fishing lines have been run and the fish removed etc.

All landowners I have encountered have been courteous and very informative with helpful hints on where the fish are and what obstacles await down the stream.

**Question: Since this time last year, have you encountered problems with other anglers when using rivers or streams in Texas? Please explain.**

When fishing around their boat dock.

Too many leave line in river and fisherman and people canoeing, kayaking, tubing, rafting from public park do not respect property owner property along the river.

Can not take family because of beer drinking use of words, bad driving, drunk boaters out law's netting fish think they own rivers. Netting too many fish, you are not to be netting anyway. on our river in Anglina County to Sam Rayburn.

Trash & Unkept camp and fishing sites.

While fishing boat and skiers coming by at high speed making big wakes.

Yes, troutline being cut.

rude behavior fearful.

Where I fish there is parking only for about 2 or 3. Everybody gets mad because someone gets their spot. It is also marked for emergency parking only on the road.

Access area are absolutely filthy with trash and garbage left by fishermen.

Fisherman running too close to you -- blocking boat ramps - no respect.

The only problem I have encounter with other people on the river is the discharge of firearms from people on the bank shooting into the water.

My only complaint is other anglers leave trash and do land damage. Which spoils it for everyone.

No--with the exception of your totally rude boaters. Many lack courtesy

I run drop lines in Big Brazos during spring and early summer I have had lines run by others.

The main problems are people who ski or just ride in boats not respecting fishermen. By this I mean running too close to you while your fishing or playing around at the boat ramps.

I fish the San Jacinto River near Houston, (Sheldon), I personally will not put by boat in the water on week ends, because of all the Stupid, Drunks, High speed boats, and just crazy people out of control. There needs to be some done about these weekend boaters.

Although some "seedy looking" characters tend to camp at public access points and trash up the area.

Many act as if the rights are all theirs - (probably not native Texans) Rudeness! Drinking!

Littering! (We just leave!)

Limited places to park and leave vehicle, or trailers.

Most are slobs that litter beer cans and crap. Not giving any respect for the next person that may visit. Fishing line pulled out and left.

I live on the Gulf Coast.

No - As a matter of fact, I can't remember any in several years.

A few that ran over my line or driving too fast and too close. A lot more stealing of property even left for minutes.

Again, all have been very helpful and informative.