

# Economics of Large (>200 anglers) Fishing Tournaments at Lake Fork, Texas



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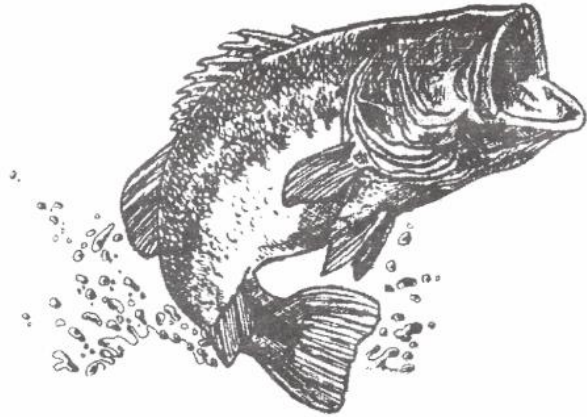
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# LAKE FORK RESERVOIR ANGLER SURVEY



TEXAS PARKS AND WILDLIFE DEPARTMENT

SABINE RIVER AUTHORITY

TEXAS A&M UNIVERSITY

## Lake Fork Reservoir Angler Survey



Conducted for the  
Texas Parks & Wildlife Department

by

Human Dimensions & Conservation Law Enforcement Laboratory  
Forest and Wildlife Research Center  
Mississippi State University

An economic survey of the Lake Fork fishery was done in 1994-1995, and repeated 20 years later in 2014-2015 by the Kevin Hunt (the original investigator, now with Mississippi State University).

# Economic Study June 2014 to May 2015

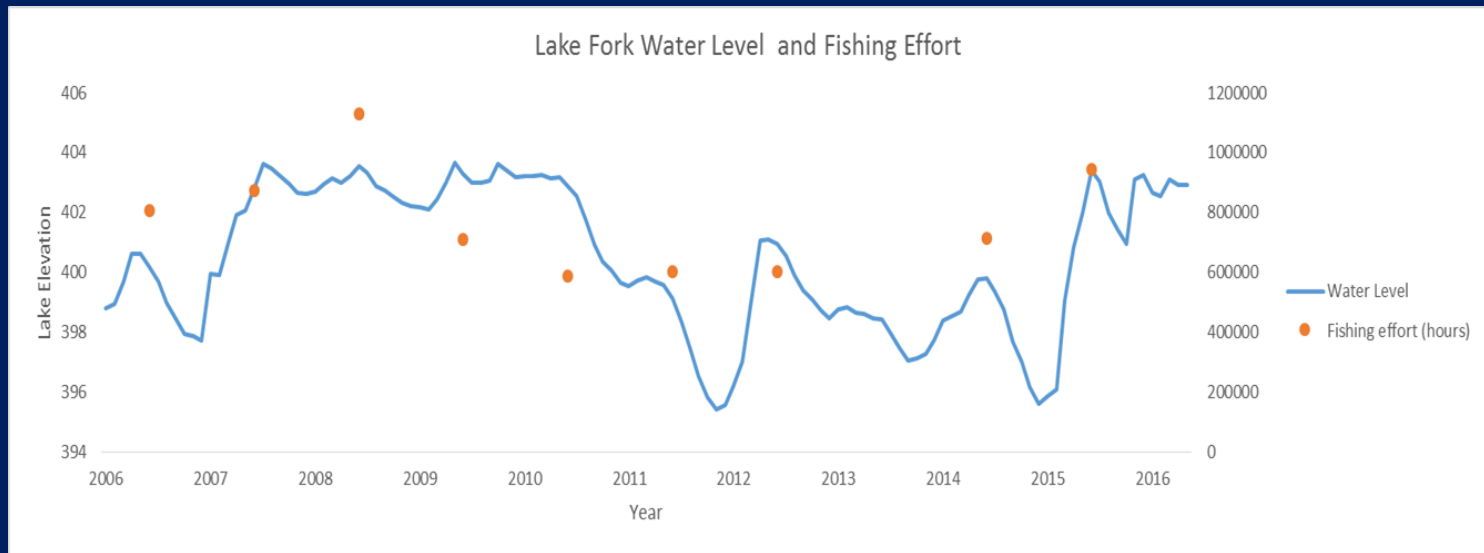
Table 7. Total expenditures, total consumer's surplus, and total economic value of Lake Fork Reservoir in 2015; by residence location.

Residence location	Expenditures	Consumer's surplus	Economic Value
Local Anglers	\$1,781,989	\$7,744,145	\$9,526,134
Non-Local	\$11,749,591	\$9,744,799	\$21,494,390
Out-of-State	\$5,295,817	\$2,067,937	\$7,363,754
TOTAL	\$18,827,397	\$19,556,881	\$38,384,278

- The direct expenditures of Lake Fork anglers was estimated to be just under 18 million dollars.
- The addition of Consumer's Surplus (the amount of money anglers would be willing to pay on top of what they actually paid rather than not fish Lake Fork) to the direct expenditures placed the "economic value" at an estimated ~38 million dollars.

Economic Summary Statistic	Actual 1995	Inflated to 2015 dollars	Actual 2015	Percent change in buying power (inflated to actual)
Total Expenditures	27,487,000	42,915,970	18,827,397	-56%

- The initial survey in 1995 estimated the direct expenditures by recreational anglers to be just over 27 million dollars.
- When inflated to 2015 dollars, these expenditures should equal almost 43 million if angling activity remained the same as in 1995.
- However, the actual direct expenditures by Lake Fork anglers was estimated at just under 19 million dollars in 2014/2015.



- This 2015 estimate may be lower because of reduced fishing activity due to low lake levels, and the exclusion of many fishing tournaments from the study.
- Overall, fishing pressure appears to decline substantially during periods of low water level, as well as during periods of high gas prices, etc.

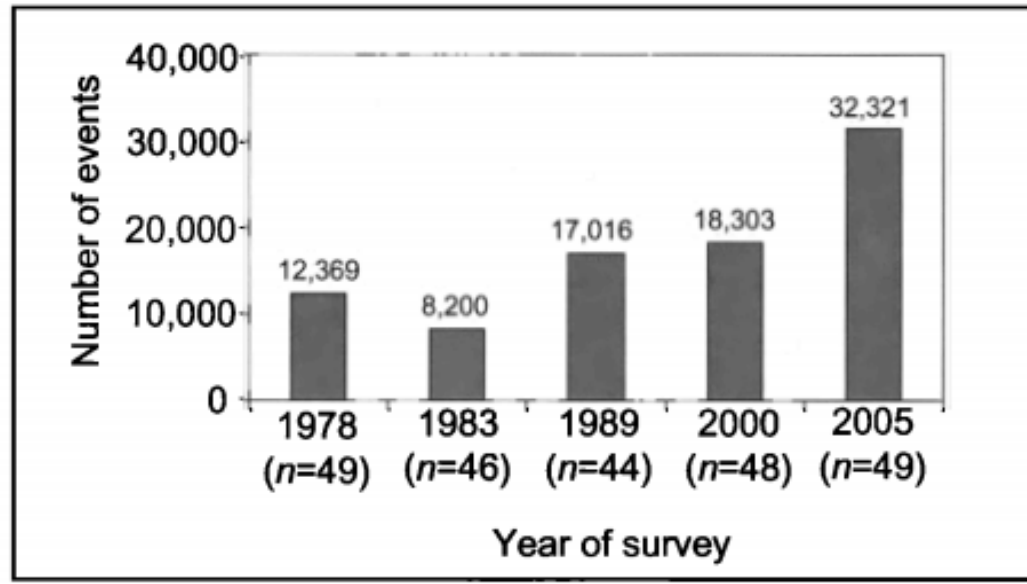


# Random Survey Design of the 2014-2015 surveys

- **Benefits:**
  - Allows us to subsample (i.e. Total annual fishing effort is extrapolated from surveys conducted on only a portion of days (~10%) during the year.)
  - Only way to estimate non-tournament “recreational” fishing effort.
- **Drawbacks:**
  - Non-random events (i.e. tournaments) result in biased estimates of fishing effort.
  - E.g. Increased effort over 2-3 days results in inflated estimates of fishing effort if extrapolated out to time periods not surveyed.

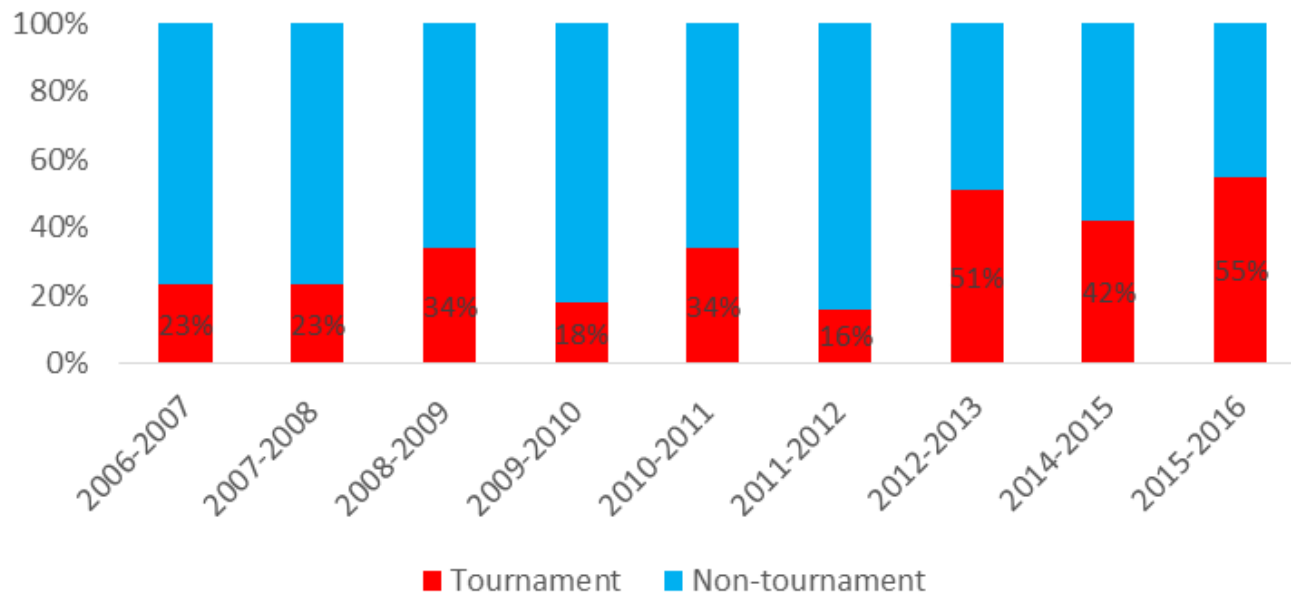
**Takeaway:** Fishing tournaments and their associated economic impact should be evaluated as discrete, stand-alone events.

**Figure 1.** Estimated numbers of tournaments on inland waters in the United States.  $n$  is the number of responding fisheries management agencies. Estimates for 2005 are from the present survey; estimates for 1978 were from Shupp (1979), for 1983 were from Duttweiler (1985), for 1989 were from Schramm et al. (1991b), and for 2000 were from Kerr and Kamke (2003). Estimates for 1989 include some competitive events that may not be categorized as tournaments.



- Although historical data on the frequency of fishing tournaments is lacking, studies conducted nationwide since 1978 suggest the frequency of these events is increasing.
- It is believed that the frequency of tournaments at Lake Fork has also significantly increased since the 1995 economic study in spite of the current restrictive 16" to 24" slot length limit.

## Tournament vs. Non-tournament anglers in Lake Fork Creel Surveys



- Tournament fishing effort versus Non-tournament fishing effort has only been estimated during random creel surveys since 2006 at Lake Fork.
- Trends suggest tournament effort at Lake Fork is increasing.
- Tournament effort at Lake Fork was estimated at 422,529 hours in 2015/2016, and 55% of all angling effort was by tournament anglers.



# 2007-2008 Sam Rayburn Study

- A study at Sam Rayburn Reservoir in 2007/2008 estimated that the direct expenditures of tournament anglers was almost 3 times that of non-tournament angling.
- Tournaments were analyzed as individual, discrete events.
- 405 tournaments (~8/week) occurred between Nov 2007 and Oct 2008 with 25,396 participants.
- Estimated total direct expenditures associated with tournaments was \$23,674,305.
  - (estimate includes practice trips and tournament entry fees)

Tourney type	Direct expenditures (US\$)
Bass club	2,860,275 (12)
Lower open	8,972,317 (38)
Upper open	5,518,667 (23)
BBS	6,323,046 (27)
Total	23,674,305

- Estimated total direct expenditures for Non-tournament angling was \$8,204,883.

# Our 2015/2016 Tournament Study

- Many tournaments were randomly encountered included during the 2014/2015 economic study. Between 1 and 12 tournaments per month were held at Lake Fork.
- However, several particularly large tournaments were specifically avoided during the 2014/2015 study to avoid biasing the overall fishing effort used to estimate annual angling expenditures.
- In 2015 and 2016, we individually surveyed multiple large fishing tournaments held annually at Lake Fork to estimate the annual economic impact of these events.

# Tournament Format

<b>Tournament</b>	<b>Format</b>	<b>Days</b>	<b># of Anglers</b>
Mad Dog Moore Memorial	5 fish, big fish pot	1	336
Berkley Big Bass	hourly big bass	2	1,136
Sealy Big Bass	hourly big bass	3	2,367
Bass Champs North Region	5 fish, big fish pot	1	667
Legend of Lake Fork	hourly big bass	3	1,227
Skeeter Owner's	hourly big bass	2	2,190
LFSA Catfish Classic	hourly big catfish	2	194

We surveyed a random number of anglers from 7 tournaments with ~200 anglers or more participants.

# Survey Methods

- Names and addresses were requested from tournament organizers.
- Surveys were either mailed; or pre-packaged and provided to tournament organizers.
- If addresses were provided, a reminder/thank you card was sent to non-respondents to increase response rate.
- Respondents were provided a pre-stamped envelope to return surveys and a web link to complete the survey online if desired.

# Response

- **We obtained 554 usable responses; from 2,500 surveys**
  - **22% overall response rate**
- **Returned surveys included expenditures of 1,122 tournament anglers within surveyed groups.**

# Response (response rate%)

Mad Dog – Provided names and addresses; mailed surveys. (34%)

Berkley Big Bass – Surveys mailed by Bass Champs. (24%)

Sealy Big Bass – email addresses provided by Sealy Outdoors; Sealy Outdoors mailed additional surveys. (20%)

Bass Champs North Region – Surveys mailed by Bass Champs. (20%)

Legend of Lake Fork – Contact info. collected during event. (34%)

Skeeter Owners – Surveys mailed by Skeeter Boats. (32%)

Catfish Classic – Surveys mailed by Lake Fork Sportsman's Association. (8%)



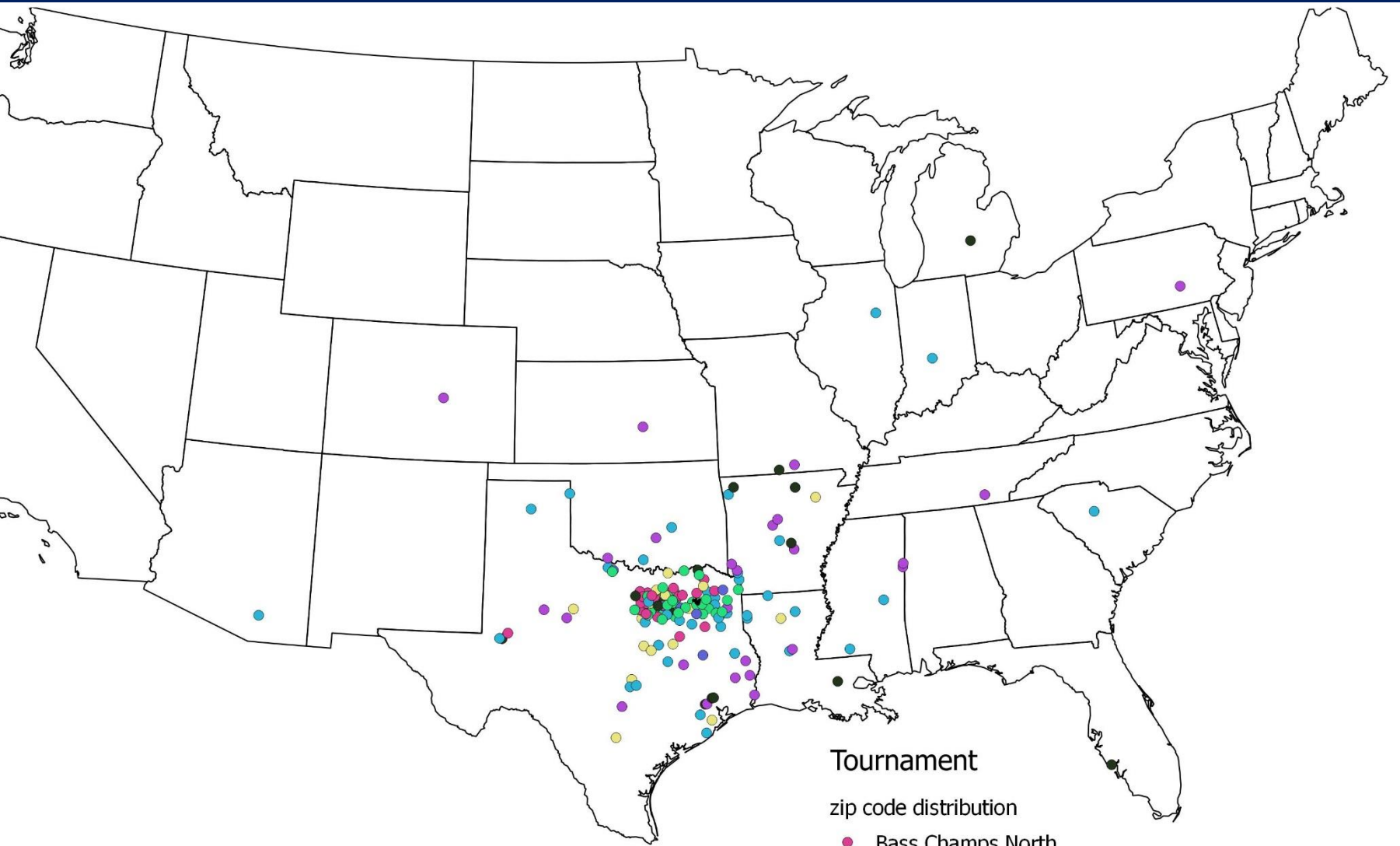
# 2014-2015 Angler Survey (Hunt and Parker)

- Out-of-state anglers: spent **\$904** (border states) and **\$1,308** (other states) per trip. Their trips averaged **3.59** and **5.25** days, respectively.
- Nonlocal Texans: spent **\$364** per trip with each trip lasting **2.04** days on average.

# 2015-2016 Tournament Survey (Bennett, Storey, and Driscoll)

Tournament	Average \$ spent per party
Mad Dog Moore	\$391.88
Sealy Big Bass Splash	\$1,058.96
Berkley Big Bass	\$446.14
Bass Champs North	\$374.23
Legend of Lake Fork	\$753.27
Skeeter Owner's	\$731.38
Catfish Classic	\$572.50

- 13% of tournament anglers lived locally (within 35 miles). 26% were local in Hunt and Parker's study.
- Tournament anglers trips lasted an average of **4.0** days.



### Tournament

zip code distribution

- Bass Champs North
- Berkeley Big Bass
- Big Bass Splash
- Catfish
- Legend
- Mad Dog Moore
- Skeeter Owners

# Characteristics of Tournament Anglers

- Between 18% and 56% of tournament participants took a SEPARATE practice trip prior to the tournament.
- Practice trips averaged 3.2 days in duration.
- Primary trips to fish tournaments averaged 4 days in duration (~1.5 days longer than each tournament).
- 16% of those traveling to tournaments were NOT participants, (range = 7% to 28%). Participants brought spouses, children, or other family.
- 22% of those traveling for practice trips did not fish the tournament. This may have been higher than the actual tournaments trips because other anglers traveled along to fish.

# Characteristics of Tournament Anglers

- In 5 fish bag formats, 80-95% of anglers catch legal fish.
  - However, only about 50% of those anglers bring fish to the weigh-in
    - (even among anglers who caught a limit of 5 fish, only 50% of these anglers actually brought those fish to weigh-in)
- <0.5% of respondents reported a member of their group catching a fish >24"
- Just 11% of respondents commented that they were displeased with the 16-24" slot limit on Lake Fork. However, these statements were provided within open ended comments. We did not ask this question as part of our survey.

## Average Per Day expenditures for tournament anglers

	tournament trip	practice trip
Mad Dog Memorial	\$130.79	\$73.02
Berkley Big Bass	\$96.59	\$93.03
Sealy Big Bass Splash	\$128.07	\$126.61
Bass Champs North	\$125.43	\$78.92
Legend	\$155.61	\$82.31
Skeeter Owners	\$117.02	\$90.12
LFSA Catfish Classic	\$103.31	\$29.25

Tournament trips averaged between \$96 and \$155 per angler/per day

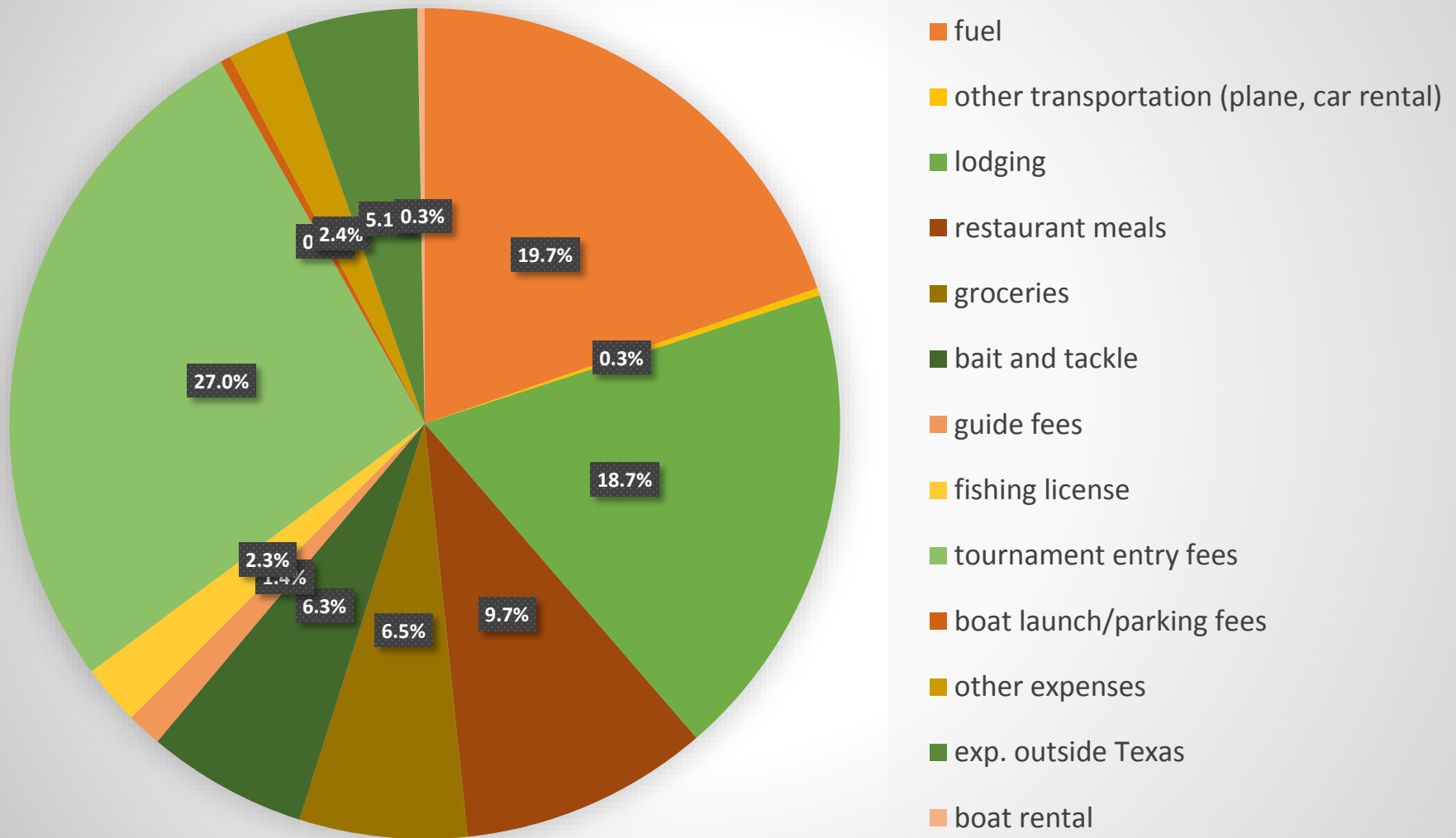
Practice trips averaged between \$30 and \$126 per angler/per day

Date	Tournament	Total Direct Expenditures (primary trip)	Total Expenditures (minus entry fees)	Practice Trips	Total Direct Expenditures
9/12/2015	Mad Dog Moore	132,288.00	86,712.14	35,160.29	121,872.42
9/18/2015	Sealy Big Bass Splash	1,796,526.41	1,366,811.18	358,695.37	1,725,506.56
10/17/2015	Berkley Big Bass	535,982.38	345,540.10	88,570.37	434,110.46
2/27/2016	Bass Champs North	231,795.47	140,120.03	71,612.46	211,732.49
5/13/2016	Legend of Lake Fork	1,256,367.44	924,259.44	74,592.92	998,852.36
6/9/2016	Skeeter Owner's	1,341,861.67	1,073,123.55	434,642.00	1,507,765.55
6/25/2016	Catfish Classic	72,901.56	53,178.23	32,865.88	86,044.11
					\$5,085,883.96

Total direct expenditures was calculated as the estimated amount participants spent During both the primary tournament trip and practice trips minus tournament entry fees.



## Trip expenditures of Lake Fork Tournament Anglers



Tournament entry fees comprised the largest portion (27%) of overall angler expenditures, followed by fuel and lodging.

# Considerations

- Average direct expenditures per tournament hour was \$25.59
  - 422,529 hours of tournament effort in 2015/2016 = \$10,563,225
  - Practice trips would add another ~4 mil
- ~ 67 large, organized fishing tournaments were identified in 2014/2015 (not including bass club or other small events).
- While we estimated the expenditures of 7 of the largest tournament events at Lake Fork, the overall economic impact of all events held at Lake Fork annually likely exceeds non-tournament angling.

# Considerations

- Total annual angling effort at Sam Rayburn was 3.0 hours/acre in 2014/2015.
  - Fishing effort at Lake Fork was 32.04 hours/acre in 2015/2016.
- 52% of anglers indicated that they try to avoid fishing during fishing tournaments at Lake Fork (Hunt and Parker) .
- 4% suggested that too many tournaments occur on Lake Fork in open ended comments.

# Sources

- Hunt, K. M., and C. R. Parker. In Prep. A Social and Economic Study of the Lake Fork Reservoir Recreational Fishery. Human Dimensions and Conservation Law Enforcement Laboratory Technical Report #HDCLEL 155. Forest and Wildlife Research Center. Mississippi State, MS. 50p.
- Driscoll, Todd, Jeremy Leitz, and Randy Myers. 2010. Annual economic value of tournament and non-tournament angling at Sam Rayburn Reservoir. Texas Parks and Wildlife Department, Inland Fisheries Division.

# Acknowledgements

- **Wood County Industrial Commission**
- **Lake Fork Sportsman's Association (Carolyn West)**
- **Bass Champs**
- **Skeeter Boats**
- **Sealy Outdoors**
- **Lieutenant J. M. Holmes**
- **TPWD's Todd Robinson, Corey Clouse, John Moczygemba, Monte Brown, and Kurt Felix**
- **All Survey Respondents**

