

**THE ECONOMIC IMPACT OF RECREATIONAL SALTWATER FISHING
ON THE LOUISIANA ECONOMY**

By

**Loren C. Scott & Associates, Inc.
743 Woodview Court
Baton Rouge, LA 70810
225-751-1707
lorenscott@aol.com**

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I. Introduction

Few people appreciate the magnitude of the business that recreational saltwater fishing creates along Louisiana's southern coast. The purpose of this report is to document this important industry.

The "Direct Effect" of Recreational Saltwater Fishing

We will begin by examining the **direct** impact of this industry on the State's economy. The U.S. Fish and Wildlife Service (FWS), under the Department of the Interior, periodically conducts surveys of hunters, wildlife watchers, and anglers across the 50 states. The agency's most recent survey for Louisiana was in 2001, and results were published in **2001 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation: Louisiana** (revised March 2003). In Section II of this report, we will review the FWS survey findings for recreational saltwater fishing in Louisiana. (From this point on in the report, we will use the term "saltwater fishing" to refer only to recreational saltwater fishing, as opposed to commercial saltwater fishing.)

The "Multiplier Effect" of Saltwater Fishing

In Section III we will examine the **indirect** or **multiplier effects** of the spending that saltwater anglers pump into the Louisiana economy. To estimate the economic impact of saltwater fishing, think of the State economy as a large economic pond. Into this pond a rock will be dropped labeled "recreational saltwater fishing". This rock alone will make quite a splash, because of all the spending by these anglers, which will be documented in Section II.

However, when that rock hits the pond, it sends out ripples to the edge of the pond. This is the so-called “**multiplier effect**”. This occurs because when anglers spend money on, say rods and reels, at a sporting goods store, employees and owners of that store receive additional, new income. They will then spend this new money at restaurants, car dealerships, department stores, grocery stores, etc., creating new incomes at those establishments which will cause another round of new spending, etc., etc. This is the so-called multiplier effect of the angler’s spending.

To estimate these multiplier effects, we will use an **input/output (I/O) table** for Louisiana, constructed by the Bureau of Economic Analysis (BEA) in the U.S. Department of Commerce. The BEA is the same agency in federal government that generates real gross domestic product figures for the U.S. economy. Section IV will contain a summary and conclusions.

II. Direct Effects of Saltwater Fishing

The purpose of this section of our report is to examine different measures of the size and importance of saltwater fishing. We provide data on both the number of anglers and how much they spend on the sport.

The Number of Saltwater Anglers

Perhaps one of the best measures of how popular saltwater fishing is to anglers is the sheer number of persons engaged in the sport. Table 1 shows the number of saltwater anglers, days of participation, and number of trips in 2001 as documented by the FWS

survey. **In 2001, there were 504,000 anglers who engaged in saltwater fishing in Louisiana.** Of that number, 398,000 or 79% were Louisiana residents.

According to the data in the second column, it is apparent that many of these anglers fished more than one day a year. **Indeed the FWS survey indicates that in 2001 over 4.6 million days were spent saltwater fishing in Louisiana.** One reference point for the size of this number is it represents about one day of fishing for every resident of the State. Most of these must have been one-day trips, since the last column of Table 1 indicates that almost 4.1 million trips were taken to saltwater fish.

Table 1
Number of Saltwater Anglers, Days of Participation, and Number
Of Saltwater Trips in Louisiana: 2001

	Participants	Days of Participation	Trips
U.S. Residents	504,000	4,673,000	4,080,000
Louisiana Residents	398,000	4,227,000	3,823,000

Source: **2001 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation: Louisiana**, U.S. Department of the Interior, pp. 17 and 19.

The FWS survey also asked these anglers what types of saltwater fish they were especially trying to catch. Interestingly, of the 504,000 anglers in the State that year, 351,000 or nearly 70% said their main quarry was the red fish.

Expenditures by Saltwater Anglers

For our purpose, one of the most important questions asked of these anglers in the FWS was how much they spent on this sport in 2001. Table 2 illustrates these expenditures both in total and by specific category.

According to the FWS survey, **saltwater anglers spent \$278,745,000---over a quarter of a billion dollars---on their sport in Louisiana in 2001.** That represents about **\$553 per angler per year.** Is \$278.7 million a big number? By way of reference,

total spending in Louisiana’s textile mills products sector in 2001 was \$275 million, and in the State’s electronic and other electrical equipment sector the comparable number was \$244 million (www.bea.doc.gov/bea/region/gsp).

Table 2
Total Expenditures by Saltwater Anglers in Louisiana: 2001

Expenditure:	Amount	Amount Per Angler
Total:	\$278,745,000	\$553
Food & Lodging	75,311,000	149
Transportation	38,662,000	77
Other Trip Costs	108,134,000	215
Equipment	56,638,000	112

Source: **2001 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation: Louisiana**, U.S. Department of the Interior, p. 27.

Of the \$278.7 million total, just over \$75 million was spent on food and lodging and just over \$38.6 million was spent on transportation. The largest expenditure item---\$108.1 million---was in the category of “other trip costs”. This category includes such items as bait, ice, heating and cooking fuel, fees for guides, public and private land use, and boating costs. That last item is the largest one within the “other trip costs” category and includes such things as fees for launching, mooring, storage, maintenance, insurance and pumpout and for fuel.

Finally, the survey indicated that saltwater anglers spent over \$56.6 million on “equipment”---a broad category that includes boats, rods, reels, lines, bait boxes, campers, 4X4s, electronic fishing devices, magazines and books, and membership dues and contributions. Obviously, there are a lot of firms that depend on spending by saltwater anglers for their livelihoods.

There is another important point that should be mentioned about saltwater angler expenditures. Anyone familiar with this industry as it exists in South Louisiana knows

that it is not uncommon for anglers to build a “camp” near their fishing sites. These camps are often significant dwellings. The economic impact of constructing these dwellings does not appear to be included in the FWS surveys. Constructing these second homes alone provides a nice economic stimulus to that region. In addition, these second homes are not eligible for the homestead exemption from property taxes, so property taxes on them provide a healthy revenue source to local governments in the saltwater regions. Unfortunately, time and lack of funding prevented us from measuring this important economic factor.

III. Multiplier Effects of Saltwater Fishing

To determine the total impact---both the direct and multiplier effects---of saltwater fishing on the Louisiana economy, we plugged the expenditure data in Table 2 into an I/O table for the Louisiana economy. This I/O table makes it possible to estimate the impact of saltwater fishing on (1) business sales, (2) household earnings, (3) jobs, (4) state revenue collections, and (5) local government tax collections.

Impact on Business Sales

Table 3 provides I/O table estimates of the impact of saltwater fishing on business sales in the State. According to this table, **saltwater fishing activity created \$527.7 million in sales at Louisiana businesses in 2001.**

Table 3 also provides data on which firms in the State enjoy the greatest increases in sales due to saltwater fishing. Not surprisingly, firms in **retail trade** enjoyed the largest boost from the industry with \$185.5 million in sales tied to saltwater fishing. This

would be the sector that contains the sporting goods stores, gasoline stations, bait shops, etc., that cater to the anglers. Retailers are followed on the list by eating and drinking places with \$70.2 million in fishing-related sales.

Table 3
Louisiana Sales Attributable to Saltwater Fishing

Industry	Sales (\$Millions)
Retail Trades	\$185.5
Eating and Drinking Places	\$70.2
Transportation	\$50.4
Real Estate	\$35.8
Health Services	\$21.8
Business Services	\$20.1
Hotels and Recreational Services	\$19.6
Wholesale Trade	\$15.7
Miscellaneous Services	\$14.0
Electric, Gas, and Sanitary Services	\$13.8
Depository Institutions and Brokerages	\$12.2
Food and Kindred Products	\$12.0
Chemicals and Allied Products	\$9.2
Communications	\$9.1
Construction	\$7.6
Total	\$527.7

Note: This table was constructed using the BEA Input-Output tables, which provide the impact for 38 industrial sectors. Our table includes only those sectors with over \$7.5 million in Louisiana sales attributable to saltwater fishing, while the total includes all 38 sectors.

In excess of \$20 million a piece in sales accrued to firms in transportation, real estate, health services, and business services. Over \$12 million in sales went to firms in the hotel, wholesale trade, miscellaneous services, utilities, banks, and food processing firms. Creating over one-half billion in sales for Louisiana businesses like these confirms this is an important industry in Louisiana.

Impact on Household Earnings

Some part of the new sales at firms listed in Table 3 will end up in the paychecks of Louisiana workers. The I/O table can generate estimates of the new household earnings that are generated for Louisiana citizens by saltwater fishing activity. These household earnings estimates are provided in Table 4.

Table 4
Louisiana Earnings Attributable to Saltwater Fishing

Industry	Earnings (\$Millions)
Retail Trade	\$69.0
Eating and Drinking Places	\$22.0
Transportation	\$18.7
Health Services	\$10.7
Business Services	\$9.1
Hotels and Recreational Services	\$7.0
Wholesale Trade	\$5.3
Miscellaneous Services	\$4.9
Depository Institutions and Brokerages	\$3.3
Construction	\$2.8
Communications	\$2.0
Electric, Gas, and Sanitary Services	\$1.9
Insurance	\$1.8
Food and Kindred Products	\$1.7
Real Estate	\$1.6
Personal Services	\$1.4
Printing and Publishing	\$1.1
Total	\$169.1

Note: This table was constructed using the BEA Input-Output tables, which provide the impact for 38 industrial sectors. Our table includes only those sectors with over a million dollars in Louisiana earnings attributable to saltwater fishing, while the total includes all 38 sectors.

Note that according to the I/O table, **saltwater fishing activities produced \$169.1 million in household earnings for Louisiana citizens in 2001.** Data in Table 4 reveal that workers in the retail trade sector were the largest beneficiaries of the largess, with \$69 million added to their paychecks. Workers in eating and drinking places won

the second highest slot with \$22 million in earnings. Transportation workers picked up \$18.7 million in earnings from the effects of saltwater fishing activities, and health services workers enjoyed a boost of \$10.7 million. As seen in Table 4, there were 14 other sectors in the Louisiana economy where State citizens' paychecks increased by over \$1 million due to the presence of the saltwater fishing industry.

Impact on Jobs

Another key measure of the saltwater fishing industry's economic impact is how many **jobs** in the State are tied to it. Table 5 provides an answer to that question.

Table 5
Louisiana Employment Attributable to Saltwater Fishing

Industry	Employment
Retail Trade	4,299
Eating and Drinking Places	1,885
Transportation	766
Hotels and Recreational Services	393
Business Services	321
Health Services	311
Miscellaneous Services	264
Wholesale Trade	154
Depository Institutions and Brokerages	114
Personal Services	106
Real Estate	101
Total	9,241

Note: This table was constructed using the BEA Input-Output tables, which provide the impact for 38 industrial sectors. Our table includes only those sectors with over 100 Louisiana jobs attributable to saltwater fishing, while the total includes all 38 sectors.

According to the I/O table, **there were 9,241 jobs in the Louisiana economy in 2001 whose presence can be traced back to the saltwater fishing industry.** Is this a large or small number of jobs? Perhaps a couple of reference points may be helpful:

- The largest employer in Louisiana's manufacturing sector is Northrup Grumman's Avondale Shipyard in New Orleans. That firm employs about 6,500 workers. (**2002 Directory of Louisiana's Manufacturers**, p.22).
- The latest issue (February 2004) of **Labor Market Information** produced by Louisiana's Department of Labor shows that in 25 of Louisiana's 64 parishes reported employment is less than 9,241 persons.

Clearly saltwater fishing is an important source of jobs for Louisiana citizens.

Data in Table 5 also indicate in which sectors those 9,241 jobs appeared in 2001. Consistent with the findings in Tables 3 and 4, most of the jobs---4,299---appeared in retail trade. However, eating and drinking places were also big gainers from the saltwater fishing effects, picking up 1,885 jobs. Another big winner was the transportation sector with 766 new jobs, followed by hotels (393 jobs), business services (321 jobs), health services (311 jobs), and miscellaneous services (264 jobs). More than 100 jobs each were created in firms in wholesale trade, banking, personal services, and real estate.

Impact on Taxes

Back in Table 4 we provided I/O table estimates of the impact of saltwater fishing on household earnings of Louisianans---a total of \$169.1 million. It is possible to use this number as a base from which to calculate how much tax revenue the State and local governments collect due to the presence of the saltwater fishing industry.

Officials in Louisiana's Legislative Fiscal Office have estimated that for every new dollar of earnings created in Louisiana, 5.6 cents ends up in the State treasury in the form of sales taxes, income taxes, gasoline taxes, corporate income taxes, fees, etc. Thus, by multiplying this 5.6% figure times the \$169.1 million in household earnings, **we**

derive an estimate of total State revenue collections attributable to saltwater fishing of \$9,469,900. By way of reference, the State collects about \$10 million from its natural gas franchise and auto rental excise taxes combined.

Secondly, Dr. James Richardson of LSU's Public Administration Institute has estimated that for every new dollar of earnings created in a region, 4.4 cents in new monies flow into the coffers of **local governments**. Multiplying this 4.4% figure times the \$169.1 million in household earnings, **we derive an estimate of local government revenues attributable to saltwater fishing of \$7,440,400.**

IV. Summary & Conclusions

We have used data from the **2001 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation: Louisiana** (revised March 2003) conducted by the U.S. Fish and Wildlife Service to estimate the impact of recreational saltwater fishing on the Louisiana economy. Our findings can be summarized as follows:

- In 2001, **there were 504,000 anglers who engaged in saltwater fishing in Louisiana.** Of that number, 398,000 or 79% were Louisiana residents.
- Of the 504,000 anglers in the State in 2001, 351,000 or nearly 70% said their **main quarry was the red fish.**
- In 2001, **Over 4.6 million days were spent saltwater fishing in Louisiana.** Most of these were one-day trips, since almost 4.1 million trips were taken to saltwater fish.

- Saltwater anglers **spent \$278,745,000---over a quarter of a billion dollars---**on their sport in Louisiana in 2001. This represents about \$533 per angler annually.

Using an input/output table for the Louisiana economy, we were able to estimate both the direct and multiplier effects of spending by saltwater anglers. Results from the I/O table reveal:

- Saltwater fishing activity **created \$527.7 million in sales at Louisiana businesses** in 2001. Firms in **retail trade** enjoyed the largest boost from the industry with \$185.5 million in sales tied to saltwater fishing.
- Saltwater fishing activities **produced \$169.1 million in household earnings for Louisiana citizens** in 2001. Workers in the retail trade sector were the largest beneficiaries of the largess, with \$69 million added to their paychecks. Workers in eating and drinking places won the second highest slot with \$22 million in earnings.
- **There were 9,241 jobs in the Louisiana economy in 2001** whose presence can be traced back to the saltwater fishing industry. This number is larger than employment in 25 of Louisiana's 64 parishes. Louisiana's largest manufacturing employer---Avondale Shipyards---employs 6,500 workers.
- **A total of \$9,469,900 in State revenue collections** are traceable to saltwater fishing. This is approximately equal to the amount the State collects from its natural gas franchise and auto rental excise taxes combined.
- We estimate that **\$7,440,400 in local government revenues** can be traced to saltwater fishing.

Short Biographical Sketch

Dr. Loren C. Scott

Dr. Scott is the President of Loren C. Scott & Associates, Inc., an economic consulting firm whose clients include such large national firms as BellSouth, Bank One, ExxonMobil, and a diversity of others such as Mid-Continent Oil and Gas Association, Placid Oil Refinery, the Louisiana Chemical Association, Lake Charles Memorial Hospital, the Louisiana Judicial Compensation Commission, and the Coushatta Indian Tribe. His career started at Louisiana State University in 1969 where he spent the next 33 years, rising through the ranks from assistant professor to the prestigious Freeport McMoran Endowed Chair of Economics and the Director of the Division of Economic Development and Forecasting. Over the thirteen-year period from 1983-96, he was the chairman of the Economics Department at LSU. During that time, the Department's ranking among the 3,000 economics departments in the U.S. rose from 101st to 38th. He is presently Professor Emeritus at LSU and continues to teach in the Executive MBA and LSU Executive Programs. He received 7 awards at LSU for outstanding classroom teaching. Dr. Scott is co-developer of the Louisiana econometric (e-con-o-met'-rick) model, a model used for providing annual forecasts of the Louisiana economy, which are released each September. He has been a co-investigator on over \$1 million in grant research at LSU and is the author of over 75 articles and technical reports. He gives 50-70 speeches a year on the state of the economy.