



Economic Impacts From Tennessee Valley Authority's Norris Reservoir's Shoreline Property Owners Recreational Expenditures

Norris Reservoir Facts: The reservoir, the largest on a tributary of the Tennessee River, extends 72 miles up the Clinch River and 56 miles up the Powell from Norris Dam. The reservoir is estimated to have 809 miles of shoreline with a water surface area of 33,840 acres. In a normal year, water variation is roughly 23 feet. Flood storage capacity is estimated at 1,112,982 acre-feet.

Approximately 1,596 Norris Reservoir shoreline property owners with dock permits were surveyed September through December in 2006. Approximately 39.1 percent (624) of the shoreline property owners were permanent residents; the remaining (972) were part-time. The annual mean expenditure for all fixed expenses was \$1,407.38 (Table 1). The top five mean fixed expenditures were watercraft purchases at \$5,424.54, followed by other expenses (\$3,202.65), dock/dock maintenance (\$3,084.09), boat repairs/service (\$465.14), and dock/marina fees (\$292.24). For annual variable expenses, the average mean expenditure across all categories was \$377.72 (Table 2). Likewise, for annual mean variable expenditures, the top five expenditures were food and beverage at \$1,449.68, followed by fishing supplies (\$1,377.23), fuel for watercraft (\$1,067.26), fuel for vehicles (\$1,003.67), and purchases of souvenirs/gifts (\$416.29).



This analysis employed an input-output model, IMPLAN, to measure the economic impacts from Norris Reservoir shoreline property owners.

Table 1. Annual Mean Fixed Expenditures from Norris Reservoir Shoreline Property Owners

Category	Average
<i>Annual Fixed Expenses</i>	
Watercraft Purchases	\$5,424.54
Other Expenses	\$3,202.65
Dock/Dock Maintenance	\$3,084.09
Boat Repairs/Service	\$465.14
Dock/Marina Fees	\$292.24
Private Land Access Fees	\$116.16
Vehicle Repairs/Service	\$41.53
Fishing License/Fees	\$23.07
Hunting License/Fees	\$16.98
<i>Overall Average</i>	<i>\$1,407.38</i>

Numerous communities and/or towns around the lake are impacted economically. Using survey data, annual multi-county (counties surrounding the reservoir) and state-wide economic impacts were conducted from property owners along the reservoir (Table 3). For the multi-county analysis, estimated direct and total impacts (economic activity) were \$29.8 million and \$59.9 million, respectively, as measured through total industry output. This impact financed over 780 jobs. Total value added was estimated at \$37.9 million. For the state model, total impacts were estimated at \$63.3 million of economic activity. Estimated total impacts for value added were \$39.5 million. Estimated total number of jobs was 787.

Multipliers measure the additional total industry output, employment, or total value added for an additional million dollars in economic activity. Total industry output (economic activity) multipliers ranged from 2.01 for the multi-county analysis and 2.12 for the state. For every dollar Norris Reservoir shoreline property owners spent, an additional \$1.01 was generated throughout the multi-county analysis or \$1.12 throughout the state. Likewise, employment multipliers ranged from 1.63 for the multi-county

Table 2. Annual Variable Fixed Expenditures from Norris Reservoir Shoreline Property Owners

Category	Average
<i>Annual Variable Expenses</i>	
Food & Beverages	\$1,449.68
Fishing Supplies	\$1,377.23
Fuel for Watercraft	\$1,067.26
Fuel for Vehicles	\$1,003.67
Souvenirs/Gifts	\$416.29
Retail Goods	\$275.87
Camping Supplies	\$141.40
Lodging Expenses	\$119.56
Hunting Supplies	\$62.50
Entertainment	\$41.17
Boat Rental Fees	\$37.26
Other Expenses	\$19.76
Guide/Outfitter Fees	\$19.43
Other Equipment Rentals	\$7.76
Horseback Riding	\$3.98
Tour Fees	\$0.72
<i>Overall Average</i>	\$377.72

analysis and 1.64 for the state. For every job created based on Norris Reservoir shoreline property owners expenditures, an additional .63 to .64 jobs are created in other industries throughout the state.

For indirect impacts, the top five industries impacted were real estate, management of companies and enterprises, banking, telecommunications, and wholesale trade. Likewise, for induced impacts, owner-occupied dwellings, state and local education, wholesale trade, real estate, and health care professionals (doctors, dentists, etc.) were the top five industries impacted.



Total Industry Output represents the estimated annual dollar value of production summed across all industries and is a measure of total economic activity. Employment represents the estimated number of total wage and salary employees (both full- and part-time), as well as self-employed. ***Total Value Added*** represents the estimated dollar value of wages and salaries including benefits, self-employed income, interests, rents, royalties, dividends, profits, plus excise and sales taxes.

Direct Impacts represent the estimated economic impacts of activities from Norris Reservoir shoreline property owners from the survey conducted. ***Total Impacts*** are the sum of direct impacts, plus the estimated economic impacts from businesses (i.e., restaurants, lodging, fuel, retail sales, etc.) providing goods and services (***Indirect Impacts***), and increased expenditures of new household income (***Induced Impacts***) as a result of shoreline property owners' activities.

Table 3. Annual Estimated Economic Impacts from Norris Reservoir Shoreline Property Owners

	Total Industry Output ^a		Employment		Total Value Added ^a	
	<i>Direct</i>	<i>Total</i>	<i>Direct</i>	<i>Total</i>	<i>Direct</i>	<i>Total</i>
	<i>(Million \$)</i>		<i>(Number)</i>		<i>(Million \$)</i>	
Multi-County ^b	\$29.8	\$59.9	480	782	\$19.6	\$37.9
State	\$29.8	\$63.3	480	787	\$19.7	\$39.5

^a2006 dollars; ^bMulti-County region includes Anderson, Blount, Campbell, Claiborne, Cocke, Grainger, Hamblen, Hancock, Jefferson, Knox, Loudon, Morgan, Roane, Scott, Sevier, and Union counties.

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