



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

Mountain Group Reservoirs Facts: The group consists of Blue Ridge, Chatuge, Fontana, Hiwassee, Nottely, and Parksville reservoirs. As a group, the lakes have over 544,000 kilowatts of generating capacity. Chatuge has the lowest rated generating capacity at 10,000 kilowatts while Fontana has the highest — close to 294 thousand kilowatts. Flood storage capacity for all the lakes combined is over 912 thousand acre-feet.

Approximately 2,014 Mountain Group Reservoirs shoreline property owners with dock permits were surveyed May through August 2007. Approximately 32.5 percent (655) of the shoreline property owners were permanent residents; the remaining two-thirds (1,359) were part-time. The annual mean expenditure for all fixed expenses was \$962.07 (Table 1). The top five mean fixed expenditures were watercraft purchases at \$4,126.29, followed by dock/dock maintenance (\$2,615.92), boat repairs/service (\$460.27), vehicle repair/service (\$153.15), and dock/marina fees (\$140.02). For annual variable expenses, the average mean expenditure across all categories was \$293.94 (Table 2). Likewise, for annual mean variable expenditures, the top five expenditures were food and beverage at \$1,958.81, followed by fuel for watercraft (\$733.91), fuel for vehicles (\$544.18), other expenses (\$467.36), and purchases of retail goods (\$458.34).



This analysis employed an input-output model, IMPLAN, to measure the economic impacts from Mountain Group Reservoirs shoreline property owners. Numerous communities and/or towns around the lakes are impacted economically. Using survey data, annual multi-county (counties surrounding the reservoirs) economic impacts were conducted from property owners along the reservoirs (Table 3). The estimated direct and total impacts (economic activity) were \$24.9 million and \$43.3 million, respectively, as measured through total industry output. This impact financed more than 540 jobs. Total value added was estimated at \$27.0 million. For the state model, total impacts were estimated at \$52.6 million of economic activity. Estimated total impacts for value added were \$32.4 million. Estimated total number of jobs was ??.

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 1.74 for the multi-county analysis and 2.11 for the state. For every dollar Mountain Group Reservoirs shoreline property owners spent, an additional \$0.74 was generated throughout the multi-county analysis or \$1.11 throughout the state. Likewise, employment multipliers ranged from 1.57 for the multi-county analysis and 1.79 for the state. For every job created based on Mountain Group Reservoirs shoreline property

Table 1. Annual Mean Fixed Expenditures from Mountain Group Reservoirs Shoreline Property Owners

Category	Average
<i>Annual Fixed Expenses</i>	
Watercraft Purchases	\$4,126.29
Dock/Dock Maintenance	\$2,615.92
Boat Repairs/Service	\$460.27
Vehicle Repairs/Service	\$153.15
Dock/Marina Fees	\$140.02
Fishing License/Fees	\$73.76
Private Land Access Fees	\$68.87
Hunting License/Fees	\$58.24
<i>Overall Average</i>	\$962.07

Table 2. Annual Mean Variable Expenditures from Mountain Group Reservoirs Shoreline Property Owners

Category	Average
<u>Annual Variable Expenses</u>	
Food & Beverages	\$1,958.81
Fuel for Watercraft	\$733.91
Fuel for Vehicles	\$544.18
Other Expenses	\$467.36
Retails Goods	\$458.34
Entertainment	\$156.83
Fishing Supplies	\$108.87
Souvenirs/Gifts	\$79.89
Lodging Expenses	\$59.36
Hunting Supplies	\$29.85
Camping Supplies	\$25.03
Guide/Outfitter Fees	\$21.67
Other Equipment Rentals	\$19.85
Boat Rental Fees	\$18.60
Horseback Riding	\$16.54
Tour Fees	\$3.89
<u>Overall Average</u>	\$293.94

owners expenditures, an additional .57 to .79 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, newspaper publishers, and maintenance/repair of nonresidential buildings. Likewise, for induced impacts, owner-occupied dwellings, state and local education, real estate, food services and drinking places, and state and local non-education 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 Mountain Group Reservoirs shoreline property owners from the surveys 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 1. Annual Estimated Economic Impacts from the Mountain Group Reservoirs Shoreline Property Owners

	Total Industry Output ^a		Employment		Total Value Added ^a	
	Direct	Total	Direct	Total	Direct	Total
	(Million \$)		(Number)		(Million \$)	
Multi-County ^b	\$24.9	\$43.3	345	542	\$15.6	\$27.0
State	\$24.9	\$52.6	345	617	\$16.0	\$32.4

^a2007 dollars; ^bMulti-County region includes Blount, Monroe, and Polk counties in Tennessee; Cherokee, Clay, Graham, Macon, and Swain counties in North Carolina; and Fannin, Rabun, Towns, and Union counties in Georgia.

AIM-AG/AGRI-Industry Modeling & Analysis Group: (Dr. Burton English, Dr. Kim Jensen, and Mr. Jamey Menard), Department of Agricultural Economics, The University of Tennessee Institute of Agriculture. For more information concerning AIM-AG, please contact the group at 865/974-7231 or visit the web site at <http://web.utk.edu/~aimag/>. Data generated for this report from IMPLAN pro, Minnesota IMPLAN Group, 2006. Surveys conducted by the Human Dimensions Research Lab: (Dr. Mark Fly, Becky Stephens, April Griffin, Susan Schexnayder, and Katie Percy), Department of Forestry, Wildlife, and Fisheries, The University of Tennessee Institute of Agriculture.