

# THE ECONOMIC IMPACTS OF THE GAULEY RIVER FESTIVAL 2007

Submitted to



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## THE GAULEY FESTIVAL

Most whitewater boaters know about the Gauley Festival. It has been held since 1983 and tens of thousands of whitewater boaters have attended at least once. Each year, for 6 weeks in the Fall, the Army Corps of Engineers releases about 2500 cfs of river flow from the Summersville Dam to create some of the best whitewater in the eastern United States. As a result, the Gauley River is one of the most well known whitewater boating rivers in the world. During one of those weekends American Whitewater hosts a major festival. The Gauley Festival is AW's largest fund raiser. It is supported by major corporations and includes three days of boating, music, camping, auctions, gear sales, film showings, paddling clinics, and all around fun. It is arguably the largest and most renowned river festival in the United States. In 2007, AW estimated over 3500 attended the party.

Although it is evident that thousands of people are importing dollars into the local economy, no one has ever measured how much. Until now, it hasn't been fully understood how the festival contributes to local economy through the purchase of goods and services, by supporting jobs, and the degree to which those imported dollars stay in the local economy and for how long. To answer these questions, American Whitewater hired the consulting firm Crane Associates from Burlington, Vermont.

## METHODS

Economic impact (EI) is determined by measuring and multiplying together the following 4 factors: the number of visitors (V); the average spending per visit (S.ave/visit); the capture rate (CR); and the economic multiplier (EM).

$$EI = V \times S.\text{ave}/\text{visit} \times CR \times EM$$

Visitation (V) and average spending (S.ave/visit) was estimated through a survey of Gauley Festival attendees at the 2007 Gauley Festival between September 20th and 22nd. Festival participants were directed to a web site and asked complete an on-line survey between September 22nd and December 31st, 2007. No incentive to complete the survey was provided. The surveys were administered on-line and the computer settings prohibited multiple entries by respondents with any of the same contact information (name, address email, phone number) and/or the same computer IP address. Gaming the system in an attempt to strategically bias the results would have required entering false contact information and logging on with a different computer. Observations of the data revealed no indication of strategic responses.

There were 267 completed survey responses. If the total population of the festival was the estimated 3500 people then the survey results have a confidence level of 95% with a confidence interval of +/- 5.7%. This means, for example, that if 80% of the respondents answered "yes" to a question, we can be 95% sure that if we asked the same questions to the entire population of 3500 participants that between 74.3% and 85.7% would also answer "yes."



Festival attendees browse the latest in outdoor equipment at one of the many vendors at the festival.

People attending the festival made up a good representative cross section of whitewater river boaters. The river flows allow people from all skill levels to participate. There were rafters, kayakers, and canoeists, guided trips and private boaters. There were events for competitors and just plain fun.

Capture rate (CR) is the proportion of visitor spending that is “captured” in the local economy and the economic multipliers (EM) refer to the amount of imported dollars that are circulated in the local economy before leaking out. The capture rate and economic multipliers are both derived from regional input-output models and cross-checked with other relevant studies. Input-output analysis enables analysts to estimate the direct and indirect economic activity stimulated in the region’s economy that is derived from employment activity, wage payments, and capital expenditures. The input-output model used for this study is IMPLAN Professional 2.0 developed by the MIG group in Minnesota and first used by the US Forest Service. IMPLAN builds its data from top to bottom. National data serve as control totals for state data. In turn, state data serve as control totals for county data. The primary sources of employment and earnings data are the US Bureau of Labor and Statistics and the US Bureau of Economic Analysis. IMPLAN has been tested and compared to two other common I/O models (RIMS II and REMI) and is now widely recognized as an accurate and acceptable tool to measure direct, indirect and induced economic impacts.



Pillow Rock Rapid on the Upper Gauley River

## SURVEY RESULTS

The average Gauley Festival attendee is 36 years old, has completed a 4 year undergraduate education, and is male. Boater households earning \$45,000 - \$60,000 make up the largest income group at 17.3% of survey respondents. However, over 22% of boater households earn over \$100,000 annually. A majority of all boater households (52%) earn over \$60,000 annually.

Gauley Festival participants are loyal paddlers. They go boating on average 57 times per year. Approximately 11 of those trips involve overnight stays. They travel an average of four hours one-way to go paddling.

While they travel an average of 4 hours for a boating trip, the Gauley Festival drew participants from as far away as the pacific coast states. A review of participant’s zip codes showed that a majority came from the neighboring states of North Carolina, Virginia, Maryland, Kentucky, and Tennessee. Approximately 50% of the participants came from within a 4 hour drive while the other half came from farther away. Only 8.2% of the participants came from West Virginia which means that the Gauley Festival imports a vast majority of its revenue from outside the state.

PLEASE CHOOSE THE RESPONSE THAT MOST CLOSELY MATCHES YOUR HOUSEHOLD INCOME	
ANSWER OPTIONS	RESPONSE PERCENT
< \$15,000	9.5%
\$15,000 - \$30,000	10.8%
\$30,001 - \$45,000	10.8%
\$45,001 - \$60,000	17.3%
\$60,001 - \$75,000	8.2%
\$75,001 - \$90,000	10.4%
\$90,001 - \$105,000	10.0%
\$105,001 - \$120,000	6.9%
>\$120,000	16.0%



STATE OF RESIDENCE FOR GAULEY FESTIVAL PARTICIPANTS											
STATE	#	%	STATE	#	%	STATE	#	%	STATE	#	%
MA	1	0.4%	WV	19	8.2%	KY	23	10.0%	TX	2	0.9%
CT	2	0.9%	NC	37	16.0%	OH	8	3.5%	CO	2	0.9%
NY	4	1.7%	SC	5	2.2%	IN	6	2.6%	UT	1	0.4%
PA	6	2.6%	GA	15	6.5%	MI	2	0.9%	CA	2	0.9%
DC	6	2.6%	FL	1	0.4%	WI	2	0.9%	OR	2	0.9%
MD	24	10.4%	AL	4	1.7%	IL	4	1.7%	WA	1	0.4%
VA	37	16.0%	TN	14	6.1%	MO	1	0.4%	Total	231	100%

The average length of stay at the festival was 2 and a half nights. Participants took another day, on average, to travel one-way to the festival.

HOW MANY NIGHTS DID YOU STAY AT THE GAULEY FESTIVAL?		HOW MANY NIGHTS DID YOU SPEND TRAVELING ROUND TRIP?	
ANSWER OPTIONS	RESPONSE AVERAGE	ANSWER OPTIONS	RESPONSE AVERAGE
Enter number of nights	2.41	Enter number of total nights traveling	2.03

Festival participants spent, on average, \$317 per person during their trip. This is the average per person amount spent within 45 miles of the festival location. For the purposes of the analysis the local economy is defined as Nicholas County, in which Summersville is the county seat. Additional expenses were made outside the county but within the State of West Virginia. An additional average per person spending of \$96 dollars, or another 30%, is made within the state but outside the county.



Cars from near and far funnel in Nicholas County Veterans Memorial Park for the weekend's festivities.

The largest expense category was transportation. Accommodations, restaurant purchases, and food purchased in a market are the next largest categories. Total direct spending is the summation of all survey responses in all spending categories. This amounts to \$74,587. The average per person spending is the total divided by the number of respondents for this question (235). To determine direct spending by all festival participants, \$317 is multiplied by the number of participants (3,500). Total direct spending in the local economy generated by the Gauley Festival in 2007 was \$1,110,870 (\$317 x 3,500). Total direct spending is not the economic impact of the festival. While participants imported 1.1 million into the local economy, a certain percentage of this money “leaks out” as vendors and merchants purchase items to sell. For example when a boater buys a tank of gas, a percentage of that purchase is retained in the local economy to pay the clerk operating the store while another percentage goes to corporate headquarters and eventually back to the refineries from where the gasoline came. The percentage retained or leaked out is different for each spending category. A locally owned and operated bed and breakfast for example will retain a larger percentage than a gas station.



The Gauley Festival offers live music for all with a variety of music from traditional bluegrass to alternative rock.

DIRECT SPENDING BY GAULEY FESTIVAL PARTICIPANTS WITHIN 45 MILES OR 1 HOUR DRIVE OF SUMMERSVILLE, WV			
ANSWER OPTIONS	RESPONSE AVERAGE	RESPONSE TOTAL	RESPONSE COUNT
Transportation <i>(fuel, oil, rental car, repairs etc)</i>	67.25	\$15,334.00	228
Accommodations	49.01	\$10,586.00	216
Food Purchased in a market	30.97	\$6,597.00	213
Restaurant purchases <i>(food and drink)</i>	44.97	\$10,343.00	230
Non-alcoholic drinks	7.96	\$1,624.00	204
Alcoholic drinks	26.05	\$5,522.00	212
Local specialty foods and souvenirs	15.39	\$2,939.00	191
Local arts and crafts	7.32	\$1,281.00	175
Entrance Fees	16.52	\$3,635.00	220
Equipment Rental	5.68	\$1,005.00	177
Equipment Purchases	64.8	\$12,506.00	193
Consumable Supplies	7.52	\$1,377.00	183
Other	10.56	\$1,838.00	174
		Answered question	235
		Skipped question	32
Direct Spending in 2.4 days		\$74,587.00	
Average Direct Spending per person		\$317.39	

**ECONOMIC IMPACTS**

This analysis measures Income, Employment and Total Industrial Output (TIO). Output is the market value of all goods and services produced as a result of the Gauley Festival. Output is a “value added” concept. Value added contributions to the local economy are measured by the net increase between the value from the purchases made by businesses and the value of the goods and services sold to the festival participants. “Total Income” is measured by the increased employees’ wages and income to proprietors. Employment measures the number of full and part-time jobs created and or retained in the local economy as attributed to the increased economic activity.

For each of these outputs there are direct, indirect and induced impacts. Direct impacts are measured by what goods and services are purchased as a result of visitation to the Gauley Festival. For example, a festival participant comes into the local economy and buys ice and soda at the local general store. The indirect impacts are measured by the goods and services bought by suppliers so that their businesses can sell to the visitors. For example, the general store owner buys 200 cases of canned drinks and 1500 pounds of ice from local distributors in preparation for the expected surge in sales. Induced impacts are measured by additional household spending that would not have otherwise occurred but for visitation to the Gauley Festival. In other words, the wages a merchant receives from festival related purchases is spent again on other goods and services in the region such as piano lessons for his kids or a haircut. Although this spending is not imported into the local economy, it is “induced” by spending from the festival and ends up supporting local jobs unrelated to the festival.



In addition to the music, films from whitewater expeditions across the globe are premiered at the river festival.

For every 1.1 million dollars spent in the local economy by Gauley Festival participants, there is \$858,000 of good and services produced. In other words, for every dollar spent, .77 cents is retained in the economy. The Gauley Festival is responsible for generating \$858,000 of economic activity, producing \$281,000 in wages to local employees and business owners, and supporting 19 jobs.

ECONOMIC IMPACTS OF \$ 1,110,870 OF DIRECT SPENDING IN THE LOCAL ECONOMY OF SUMMERSVILLE, WV GENERATED BY THE GAULEY FESTIVAL 2007. (3,500 PARTICIPANTS)				
	DIRECT	INDIRECT	INDUCED	TOTAL
Labor Income	\$227,087	\$26,368	\$27,842	\$281,297
Employment	16.4	1.2	1.4	19
Output	\$669,768	\$90,400	\$98,605	\$858,773

Since the festival is held every year and the number of participants varies each year, the input/output model was used to run different scenarios. In 2006, festival coordinators estimated there were 5,000 people at the event. Earlier years likely had less people. A total of five scenarios were run through the model. Each scenario had a different number of participants but the spending was assumed to be the same as in 2007. The year 2007 had 3,500 participants, so the scenarios increased and decreased from there by increments of 1,000. The number of participants ranged from 1,500 to 5,500. A festival of 1,500 participants who spent the same average amount per person as in 2007 would contribute \$368,000 to the local economy, support 8 jobs and produce \$120,000 in wages and income for local employees and business owners. A festival of 5,500 participants would generate 1.3 million dollars in economic activity, support 30 jobs and produce \$442,000 in wages and income. Again, this measures only the economic impact to the local economy. Scenarios for various participant levels are as follows:

<b>ECONOMIC IMPACTS OF THE GAULEY FESTIVAL USING FIVE DIFFERENT PARTICIPANT SCENARIOS</b>				
<b>N = 1,500</b>	<b>DIRECT</b>	<b>INDIRECT</b>	<b>INDUCED</b>	<b>TOTAL</b>
<b>LABOR INCOME</b>	\$97,323	\$11,301	\$11,932	\$120,556
<b>EMPLOYMENT</b>	7	0.5	0.6	8.1
<b>OUTPUT</b>	\$287,043	\$38,743	\$42,259	\$368,045
<b>N = 2,500</b>	<b>DIRECT</b>	<b>INDIRECT</b>	<b>INDUCED</b>	<b>TOTAL</b>
<b>LABOR INCOME</b>	\$162,205	\$18,835	\$19,887	\$200,927
<b>EMPLOYMENT</b>	11.7	0.9	1	13.6
<b>OUTPUT</b>	\$478,406	\$64,571	\$70,432	\$613,409
<b>N = 3,500</b>	<b>DIRECT</b>	<b>INDIRECT</b>	<b>INDUCED</b>	<b>TOTAL</b>
<b>LABOR INCOME</b>	\$227,087	\$26,368	\$27,842	\$281,297
<b>EMPLOYMENT</b>	16.4	1.2	1.4	19
<b>OUTPUT</b>	\$669,768	\$90,400	\$98,605	\$858,773
<b>N = 4,500</b>	<b>DIRECT</b>	<b>INDIRECT</b>	<b>INDUCED</b>	<b>TOTAL</b>
<b>LABOR INCOME</b>	\$291,970	\$33,902	\$35,797	\$361,669
<b>EMPLOYMENT</b>	21.1	1.6	1.8	24.5
<b>OUTPUT</b>	\$861,130	\$116,228	\$126,778	\$1,104,136
<b>N = 5,500</b>	<b>DIRECT</b>	<b>INDIRECT</b>	<b>INDUCED</b>	<b>TOTAL</b>
<b>LABOR INCOME</b>	\$356,852	\$41,436	\$43,752	\$442,040
<b>EMPLOYMENT</b>	25.8	1.9	2.2	29.9
<b>OUTPUT</b>	\$1,052,493	\$142,056	\$154,951	\$1,349,500

The Gauley Festival provides a boost to the local economic region of Nicholas County. Approximately 85% of the total spending in the county is imported from further away. The State of West Virginia, outside of Nicholas County, also receives an additional 30% of economic activity that would not have otherwise been spent but for the Gauley Festival. Additional impacts that are not measured are the spending activities generated by visitation to the Gauley River outside of the festival days. The Gauley boating season is six weeks long. It is unknown at this time how many total visitors come into the region during these six weeks to visit the river and how much they spend. However, it is a safe bet that the Gauley Festival represents a fraction of the total spending and visitation generated during the entire 6 week season. This is a classic example of how a local economy benefits from a balanced use of its natural resources.