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**2009 Allie MacDonald Specialized Skills Summer
Hockey School**

Economic Impact Assessment

The following report presents the economic impact of the 2009 Allie MacDonald Specialized Skills Summer Hockey School, hosted in Antigonish, Nova Scotia in two sessions – from August 2 – 7, and from August 8 – 13, 2009, as generated by the Sport Tourism Economic Assessment Model.

Economic Impact Assessment Funding Partners

The Antigonish Regional Development Authority would like to recognize the following financial supporters:

Nova Scotia Economic and Rural Development



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Table of Contents

1.0 Background.....4

2.0 Methodology/Survey Results.....5

3.0 Operational Expenditures.....7

4.0 Economic Impact Results.....8

5.0 Conclusion.....10

Appendix 1: Economic Impact Methodology – STEAM.....11

Appendix 2: Glossary of Terms used by STEAM.....13

Appendix 3: Allie MacDonald Specialized Skills Summer Hockey School Survey.....15

1.0 Background

The Allie MacDonald Specialized Skills Summer Hockey School is a tradition that has spanned over 20 years. From the early years of the Hockey School, this annual event has grown significantly in size, popularity and has earned a reputation that is known throughout the continent. Visitors came to Antigonish from far and wide for this. Visitors to Antigonish for the hockey school came from across Canada (Quebec and Atlantic Provinces), and the United States (North Carolina, Massachusetts, and New Hampshire).

Spectators played a large role in the overall economic impact in which the hockey school had on the community. The hockey school drew over 602 unique spectators throughout the two week period. Some of the families who participated in the annual hockey school selected their vacation timing and location around those particulars of the Hockey School. Spectator expenditures, combined with the organizers expenditures produced considerable economic benefits within the community of Antigonish and for Nova Scotia as a whole. Within the next section (two), you will find details of the survey that was conducted in order to gain insight into the number of visitors and the impact in which they had on the local economy. Section three provides a window into the operational expenditures and revenues of the hosting organization, as these figures also have a major effect on the overall economic impact on Antigonish. Section four provides the STEAM¹ results of the collective expenditures from both the organizer's operational expenditures and the visitor's expenditures. Section five wraps up the assessment with a review of the assessment's results. The appendices consist of supplementary information regarding the economic impact model, a glossary of terms used throughout the document, and a copy of the survey used to gather the information required to complete the economic impact assessment.

¹The Canadian Sport Tourism Alliance's **Sport Tourism Economic Assessment Model (STEAM)** was used to produce the economic impact estimates outlined throughout this assessment. STEAM was officially launched in 2002. It is a model that includes survey results from the event visitors and the budget/capital expenditures of event organizers in efforts of completing an economic impact assessment.

2.0 Methodology/Survey Results

The background information that was gathered on the participants and spectators of the 2009 Allie MacDonald Specialized Skills Summer Hockey School was collected by conducting face-to-face surveys. The surveys were designed in such a way that would depict where the subject was coming from, if they were staying in commercial accommodations and if so – how many nights, and specific information regarding their party. The specific design of the survey was based on the online STEAM Model and the information required in successfully completing this model. A copy of the survey used to carry out this assessment can be found in Appendix 3.

Survey Results

There were 602 unique spectators and 355 unique participants for the two weeks of the Allie MacDonald Specialized Skills Summer Hockey School.

To ensure the quality of the data presented, a sample size calculator² was used to calculate the appropriate sample size required to ensure accurate representation of the population within the results. The sample size of 235 spectators (602 total spectators) yields a statistically significant confidence interval of +/- 5.0%, and a 95% confidence level. We obtained survey results from 297 spectators, therefore exceeding our targeted number of survey responses. The sample size of 168 participants (355 total participants) yields a statistically significant confidence interval of +/- 5.5%, and a 95% confidence level. We obtained survey results from 175 participants, therefore once again exceeding our targeted number of survey responses.

As represented in **Figure 2.1**, 12% of total participants were local to Antigonish (Antigonish Town and County)³. Total visitor origin is clearly outlined in **Figure 2.2**.

Of the 602 total spectators, 297 were surveyed. A total of 67% of visiting spectators chose to stay overnight. Those visiting spectators who chose to commute back and forth daily represented 33% of the total spectator population. Visiting spectator countries of origin included the USA and Canada, with 8% coming from the USA and the remaining 92% coming from within Canada. Of the visiting Canadian spectators, 3% travelled from outside of the province of Nova Scotia and 97% from within. Of those visiting spectators who chose to stay the night in Antigonish, the average overnight length of stay was 4.1 nights per session (the Hockey School ran for two sessions). For those visiting spectators who chose to commute daily, the average number of day trips taken by each spectator was 5.0 per session.

Of the 355 total participants, 175 were surveyed. Visiting participants that chose to stay overnight in Antigonish represented 62% of the total participant population, and those visiting participants who chose the daily commute represented 38% of the total participant population. There were nine participants from the USA, with the remainder hailing from Canada. Of the visiting Canadian participants, 1.2% was from out of province, with the remaining 98.8% from within Nova Scotia. For those visiting participants who chose to stay overnight in Antigonish, the average overnight length of stay was 5.1 nights per session, with 83% of visiting overnight participants staying in commercial

² For more information please visit <http://www.surveysystem.com/sscalc.htm>.

³ Figure as quoted from Allie MacDonald Specialized Skills Inc

accommodations. For those visiting participants who chose to commute daily to the Hockey School, the average number of day trips taken by each participant was 5.9 per session.

One significant finding was that a substantial number of visiting participants and spectators opted not to stay overnight and made day trips each day to the Allie MacDonald Specialized Skills Hockey School, as shown in **Figure 2.3**.

Figure 2.1

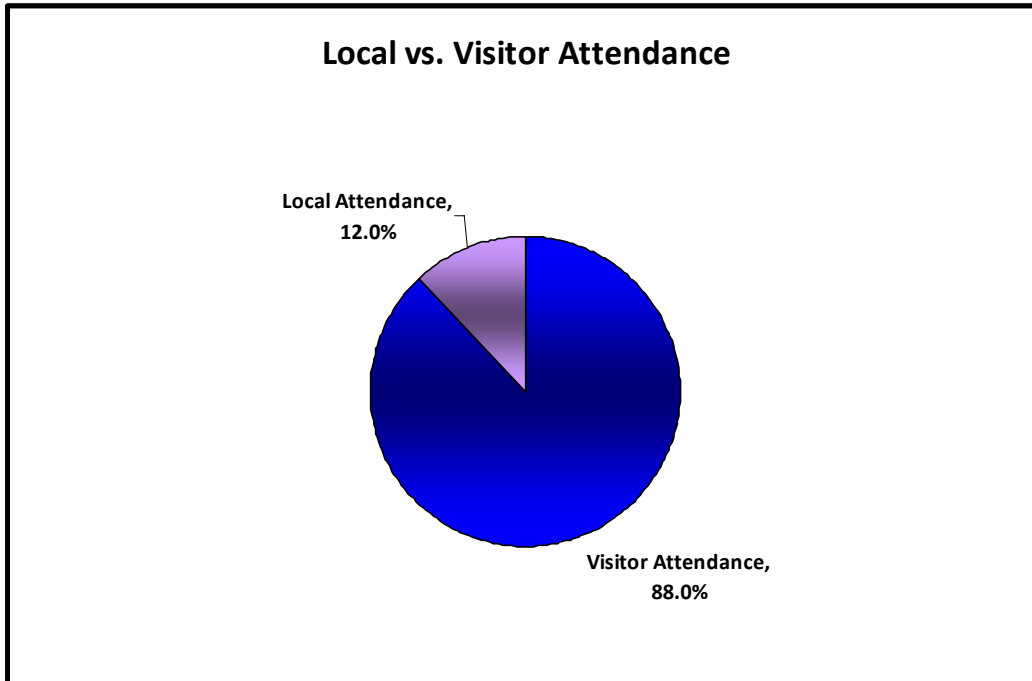


Figure 2.2

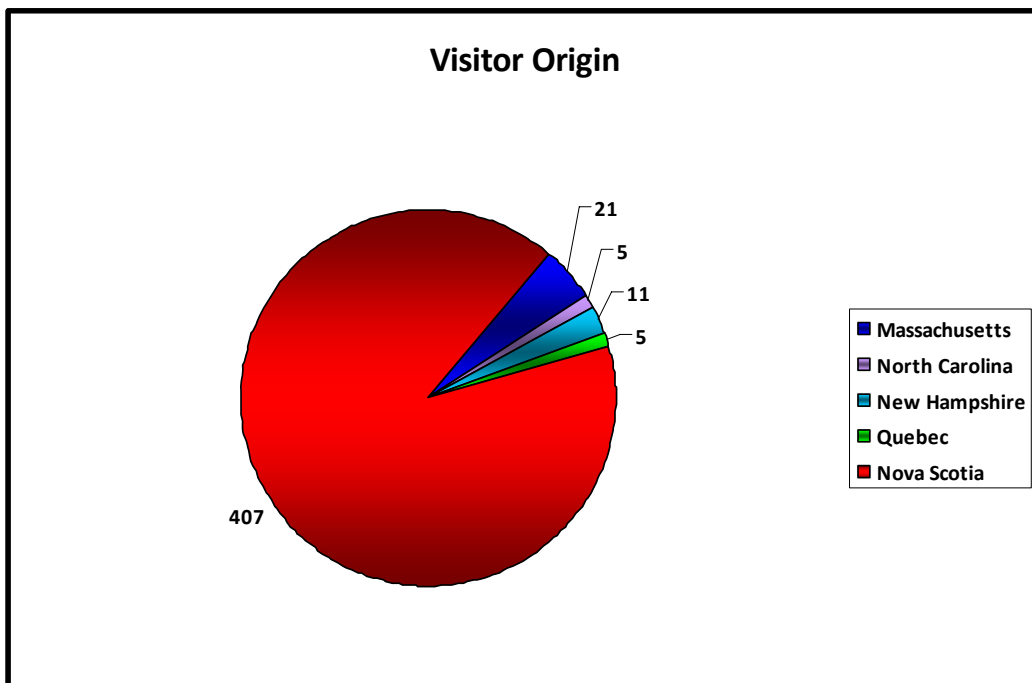
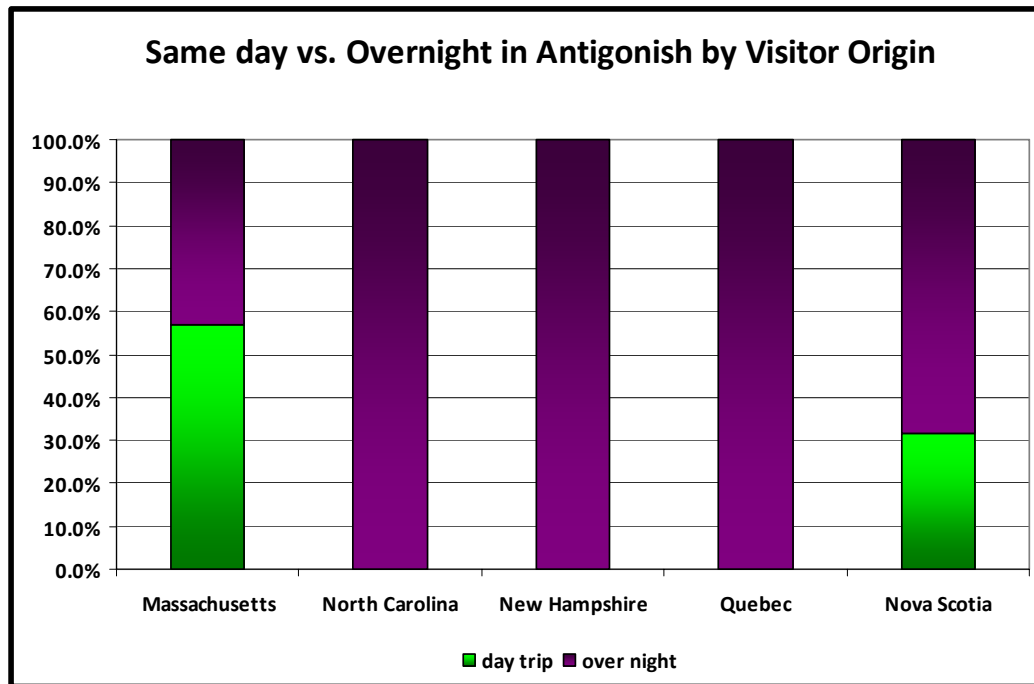


Figure 2.3



3.0 Operational Expenditures

Allie MacDonald Specialized Skills Inc invests on a continuous basis in efforts of generating a yearly event that lives up to the impeccable track record in which they have created. These investments consist of expenditures involved with the organization and the operating costs of the two week Summer Hockey School. Spending for the 2009 Summer Hockey School by the organizers totalled \$85,444. This amount covered many items inclusive of, but not limited to: salaries, advertising, professional services, insurance, ice rental, and communications.

4.0 Economic Impact Results

The collective spending of the 957 spectators and participants, plus the revenues and expenditures of the organizers (Allie MacDonald Specialized Skills Inc) as a result of hosting the annual Hockey School surpassed \$415,000. This \$415,000 then generated an estimated \$850,000 in economic activity for the Province of NS, of which approximately \$600,000 occurred in Antigonish. This spending supported approximately \$250,000 in wages and salaries for the Province of NS through the support of 46 jobs, of which 44 were in Antigonish⁴. The total net economic activity (GDP) produced by the summer hockey school was \$432,157 for the Province of NS, with \$293,432 of that amount occurring within Antigonish.

Both the Province of NS and the Municipalities of Antigonish will see the benefits of the significant tax revenues generated by the annual hockey school, which totalled \$155,099. The hockey school supported tax revenues for all three governmental levels. Federal Government tax revenues were in the amount of \$71,177 and Provincial Government tax revenues were in the amount of \$68,865. Municipal Government tax revenues were in the amount of \$15,058.

⁴ Jobs accounted for throughout this study pertain to the number of jobs, vs. full time equivalent (FTE: two people working half time would represent two jobs or one FTE).

Table 4.1 Total Economic Impact

	Total Nova Scotia	Local Area Antigonish	Rest of Nova Scotia
Initial Expenditure	\$415,998	\$415,998	\$0
Gross Domestic Product			
Direct Impact	\$173,715	\$173,715	\$0
Indirect Impact	\$158,199	\$76,809	\$81,390
Induced Impact	\$100,243	\$42,908	\$57,335
Total Impact	\$432,157	\$293,432	\$138,725
Industry Output			
Direct & Indirect	\$635,684	\$512,696	\$122,989
Induced Impact	\$212,818	\$91,023	\$121,795
Total Impact	\$848,503	\$603,719	\$244,784
Wages & Salaries			
Direct Impact	\$100,144	\$100,144	\$0
Indirect Impact	\$88,451	\$41,629	\$46,822
Induced Impact	\$60,985	\$26,601	\$34,384
Total Impact	\$249,580	\$168,373	\$81,206
Employment (Full-year jobs)			
Direct Impact ⁵	41.8	41.8	-
Indirect Impact	2.3	1.1	1.1
Induced Impact	1.8	1.1	0.7
Total Impact	45.9	44.0	1.9
Total Taxes			
Federal	\$71,177	\$48,440	\$22,737
Provincial	\$68,865	\$49,219	\$19,645
Municipal	\$15,058	\$11,505	\$3,552
Total Impact	\$155,099	\$109,164	\$45,935

⁵ Direct employment impact can be measured in extra shifts or overtime for existing workers instead of new employment.

5.0 Conclusion

The Allie MacDonald Hockey School, which took place from August 2 – 13 2009, was a success by all means. The hockey school brings together an assortment of youth representing various ages, skill levels and regions to one centralized location – Antigonish. Participants were given the opportunity to exhibit their talents and more importantly build upon the skill set they have previously developed. More than 950 spectators and participants attended the Hockey School, and as a result of their attendance, the economic activity within the community of Antigonish was increased by \$285,276. Operational expenditures and revenues of Allie MacDonald Specialized Skills Inc. brought the economic activity increase from \$285,276 to \$415,998. This increase resulted in a net increase in economic activity of \$432,157 throughout the province of Nova Scotia, of which \$293,432 occurred in Antigonish. The total industry output (gross economic activity) upheld by the event was \$848,503, which supported \$249,580 in wages and salaries throughout Nova Scotia. In Antigonish, 44 jobs and \$168,373 in wages and salaries were supported by the event.

Appendix 1. Economic Impact Methodology – Sport Tourism Economic Assessment Model⁶

Background

Briefly, the purpose of STEAM is to calculate both the provincial and regional economic impacts of sport tourism. The economic impacts are calculated on the basis of capital and operating expenditures on goods, services and employee salaries, and on the basis of tourist spending within a designated tourism sector. The elements used to measure the economic impacts are Gross Domestic Product (GDP), Employment, Taxes, Industry Output and Imports. STEAM measures the direct, indirect & induced effects for each of these elements.

Technical Description of the Impact Methodology used by STEAM

STEAM and many other impact studies are based on input-output techniques. Input-output models involve the use of coefficients that are based on economic or business linkages. These linkages trace how tourist expenditures or business operations filter through the economy. In turn, the coefficients applied are then used to quantify how tourism related activity in a particular region generates employment, taxes, income, etc. The input-output approach indicates not only the direct and indirect impact of tourism, but can also indicate the induced effect resulting from the re-spending of wages and salaries generated.

All impacts generated by the model are given at the direct impact stage (i.e. the "front line" businesses impacted by tourism expenditures), indirect impact stage (i.e. those industries which supply commodities and/or services to the "front line" businesses) and the induced impact stage (induced consumption attributable to the wages and salaries generated from both the direct and indirect impact). In this sense, the model is closed with respect to wages. Imports are also determined within the model, so the model is closed with respect to imports. Additional exports are not assumed with the induced impact. Another assumption of the model, which leads to more conservative impacts, is that not all commodities and/or services purchased are assumed to have at least one stage of production within the province. This assumption is crucial for souvenirs, gasoline and other commodities. Taxes and employment are key economic considerations. However, as these concepts fall outside of the System of National Account Provincial input/output tables, their impacts must be calculated separately. Current tax and employment data for each region is used to econometrically estimate a series of coefficients and rates. These coefficients and/or rates are then applied to measures determined within the input-output framework of the model, yielding the final tax and employment figures.

⁶ The "Economic Impact Methodology of STEAM" has been quoted in its entirety from the Canadian Sport Tourism Alliance's STEAM User's Guide. The guide can be found at: http://www.canadiansporttourism.com/app/DocRepository/1/Products/STEAM_Users_Guide_2.pdf

Regional (Sub-Provincial) Impact Methodology

The method used to simulate interprovincial commodity flows and ultimately regional impacts follows directly from regional economic principles. The principle is referred to as the "gravity model". Basically the "gravity model" states that the required commodity (& service) inputs will be "recruited" in a manner that takes into consideration economies of scale (i.e. production costs), transportation costs and the availability of specific industries. Economies of scale (i.e. lower production costs) are positively correlated with input demand while greater transportation costs are negatively correlated with input demand. Fulfilling that demand from other provincial regions is contingent on the fact that the specific industry does actually exist. An advantage of using the "gravity model" to simulate interprovincial commodity flows is that as the industrial composition of the labour force changes, or as new industries appear for the first time in specific regions, the share of production between the various sub-provincial regions also changes.

By following this principle of the gravity model, all sub-provincial regions of a province are assigned a coefficient for their relative economies of scale in each industry (using the latest industry labour force measures) as well as a coefficient to represent the transportation cost involved to get each industry's output to the designated market. One variation on the "gravity model" principle involves the estimation of "relative trade distances" by incorporating different "weights" for different modes of transport. Once these coefficients are generated for all regions and over all industries, a measure of sensitivity (mostly relative to price, but in the case of service industries also to a "local preference criteria") is then applied to all commodities. Another variation on the strict "gravity model" approach is that the measure of sensitivity is adjusted by varying the distance exponent (which in the basic "gravity model" is 2) based on the commodity or service required. The variation in distance exponents revolve, principally, around two research hypotheses: (1) the greater the proportion of total shipments from the largest producer (or shipper), the lower the exponent, and (2) the greater the proportion of total flow which is local (intra-regional), the higher the exponent.

Appendix 2: Glossary of Terms Used by STEAM⁷

Initial Expenditure - This figure indicates the amount of initial expenditures or revenue used in the analysis. This heading indicates not only the total magnitude of the spending but also the region in which it was spent (thus establishing the "impact" region).

Direct Impact - Relates ONLY to the impact on "front-line" businesses. These are businesses that initially receive the operating revenue or tourist expenditures for the project under analysis. From a business perspective, this impact is limited only to that particular business or group of businesses involved. From a tourist spending perspective, this can include all businesses such as hotels, restaurants, retail stores, transportation carriers, attraction facilities and so forth.

Indirect Impact - Refers to the impacts resulting from all intermediate rounds of production in the supply of goods and services to industry sectors identified in the direct impact phase. An example of this would be the supply and production of bed sheets to a hotel.

Induced Impact - These impacts are generated as a result of spending by employees (in the form of consumer spending) and businesses (in the form of investment) that benefited either directly or indirectly from the initial expenditures under analysis. An example of induced consumer spending would be the impacts generated by hotel employees on typical consumer items such as groceries, shoes, cameras, etc. An example of induced business investment would be the impacts generated by the spending of retained earnings, attributable to the expenditures under analysis, on machinery and equipment.

Gross Domestic Product (GDP) - This figure represents the total value of production of goods and services in the economy resulting from the initial expenditure under analysis (valued at market prices).

NOTE: The multiplier (A), Total/Initial, represents the total (direct, indirect and induced) impact on GDP for every dollar of direct GDP. This is a measure of the level of spin-off activity generated as a result of a particular project. For instance if this multiplier is 1.5 then this implies that for every dollar of GDP directly generated by "front-line" tourism businesses an additional \$0.50 of GDP is generated in spin-off activity (e.g. suppliers).

The multiplier (B), Total/\$ Expenditure, represent the total (direct, indirect and induced) impact on GDP for every dollar of expenditure (or revenue from a business perspective). This is a measure of how effective project related expenditures translate into GDP for the province (or region). Depending upon the level of expenditures, this multiplier ultimately determines the overall level of net economic activity associated with the project. To take an example, if this multiplier is 1.0, this means that for every dollar of expenditure, one dollar of total GDP is generated. The magnitude of this multiplier is influenced by the level of withdrawals, or imports, necessary to sustain both production and final demand requirements. The less capable a region or province is at fulfilling all necessary production and final demand requirements, all things being equal, the lower the eventual economic impact will be.

⁷ The "Glossary of Terms Used by STEAM" has been quoted in its entirety from the Canadian Sport Tourism Alliance's STEAM User's Guide. The guide can be found at: http://www.canadiansporttourism.com/app/DocRepository/1/Products/STEAM_Users_Guide_2.pdf

GDP (at factor cost) - This figure represents the total value of production of goods and services produced by industries resulting from the factors of production. The distinction to GDP (at market prices) is that GDP (at factor cost) is less by the amount of indirect taxes plus subsidies.

Wages & Salaries - This figure represents the amount of wages and salaries generated by the initial expenditure. This information is broken down by the direct, indirect and induced impacts.

Employment - Depending upon the selection of employment units (person-years or equivalent full-year jobs) these figures represent the employment generated by the initial expenditure. These figures distinguish between the direct, indirect and induced impact. “Equivalent Full-Year Jobs”, if selected, include both part-time and full-time work in ratios consistent with the specific industries.

NOTE: The multiplier (B) is analogous to Multiplier (B) described earlier with the exception being that employment values are represented per \$1,000,000 of spending rather than per dollar of spending. This is done to alleviate the problem of comparing very small numbers that would be generated using the traditional notion of a multiplier (i.e. employment per dollar of initial expenditure).

Industry Output - These figures represent the direct & indirect and total impact (including induced impacts) on industry output generated by the initial tourism expenditure. It should be noted that the industry output measure represents the **sum** total of all economic activity that has taken place and consequently involve double counting on the part of the intermediate production phase. Since the Gross Domestic Product (GDP) figure includes only the **net** total of all economic activity (i.e. considers only the value added), the industry output measure will always exceed or at least equal the value of GDP.

Taxes - These figures represent the amount of taxes contributed to municipal, provincial and federal levels of government relating to the project under analysis. This information is broken down by the direct, indirect and induced impacts.

Imports - These figures indicate the direct, indirect and induced final demand and intermediate production requirements for imports both outside the province and internationally.

Appendix 3: 2009 Allie MacDonald Specialized Skills Summer Hockey School Survey

1. Where are you from?
2. Will you be spending the night in Antigonish?
3. How many nights?
4. How many nights will be spent in commercial accommodations?
5. If not staying the night, how many day trips will you be making?
6. # of people travelling in your party
7. # of those people participating?
8. # of those people who are spectators?
9. of your total party size how many are:
 - under 19
 - 19 – 44
 - 45 and over

Disclaimer: The results of this economic impact analysis are intended to act as a guide and are not considered definitive of the actual events. All projections should be considered an event's potential economic impact. The projections are based on standardized spending estimates that may or may not reflect that of the highlighted event's attendees. In addition, the projections are based on the organizer's data regarding attendance, composition and characteristics. These forecasts are subject to uncertainty and evolving future events, therefore actual results may vary from forecasted results. Additionally, these forecasts only recognize the economic benefits of the event, and do not consider any displacement or substitution costs that may occur as a result of hosting the event.