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# The Economic Impact of Outfitted Hunting in Alberta

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## Glossary

**Capital expenses:** expenses incurred for fixed assets and equipment that last longer than one year including vehicles and ATVs, camping gear, and animals.

**Client:** refers to both hunting clients that use professional outfitted hunting services and their non-hunting companions.

**Client-days:** total number of days of service offered by outfitters to clients. For example, one outfitter providing services to two clients for seven days represents 14 client-days.

**Client additional expenditures:** expenditures for goods and services purchased in Alberta by hunting clients and their non-hunting companions that are not included in an outfitted hunting package.

**Final goods and services:** goods or services purchased by end users which do not require any further inputs or processing before they are ready for consumption.

**Full-time equivalent (FTE):** the employment equivalent of one full-time position.

**Gross domestic product (GDP):** the market value of all goods and services produced within a country or region. Because the value of intermediate goods and services is included as an input in the value of final goods and services, GDP only accounts for final goods and services. In particular GDP does not measure both the value of intermediate goods and final goods and services in order to avoid double counting. This can be contrasted with Total Output, or Total Economic Activity (see Example).

**Intermediate goods and services (inputs):** Goods and services that are used as inputs in the production of final goods and services.

**Input-Output (I/O) model:** an economic model that captures the interdependence between intermediate goods and services (inputs) and final goods and services in the economy. The I/O model is used to understand the contribution of expenditures in one sector of the economy to GDP and total economic activity.

**Operating expenses:** expenses incurred in carrying out the day to day operations of outfitted hunting which include wages and salaries, guide fees, maintenance costs, food, alcohol, utilities, licences and permits, advertising, legal and accounting services, banking fees and interest on loans, office supplies, telecommunication charges, leases, repair and maintenance, insurance, fuel, and transportation services.

**Outfitter employment:** the total number of full time equivalent (FTE) positions employed by an outfitter, including cooks, guides, spotters and wranglers, and, if salary was paid, the outfitter.

**Total economic activity/Total output:** the monetary value of all goods and services produced in the economy including both final and intermediate outputs.

**Tax revenue:** federal (e.g., gasoline tax, excise tax and duties, air transportation tax, income tax), provincial (e.g., provincial gasoline tax, real property tax, motor vehicles licenses), and local (local real and personal tax, local business tax) tax revenues.

**Wages and salaries:** monetary compensation to employees including associated benefits and employer contributions.

## Executive summary

Alberta is a top destination for visitors from all over the world seeking a professionally guided hunting experience. For over 100 years, Alberta outfitters have hosted clients in search of big game – such as moose, elk and bear – as well as bird game. These clients bring revenue not only to the outfitting companies but to the communities they visit through purchases of things like meals, accommodation, and souvenirs. Often these small communities are in remote areas and outfitted hunting helps to sustain businesses that might not otherwise be viable.

In 2014 the Alberta Professional Outfitters Society (APOS) commissioned Alberta Innovates-Technology Futures (AITF) to conduct a study to measure the contribution of the outfitted hunting industry to Alberta's economy. The study collected data from APOS members about their operations and expenditures in the 2013 fiscal year. The survey was provided to all 466 APOS members and returned by 97 members, for a 21% response rate. With the assistance of Alberta Treasury Board and Finance's (ATBF's) provincial input-output (I/O) model, the 2013 expenditures made by both outfitters and their clients were used to derive the impacts of outfitted hunting on the Alberta's Gross Domestic Product (GDP) as well as the total value of economic activity (Total Output).

The key findings of the study are based on the responses of the 97 outfitters who completed the survey. The responses were used to construct the profile of a representative outfitter, and calculate the average number of clients served per outfitter and the total number of clients who visit Alberta for outfitted hunting. Highlights of the study are summarized below:

- In 2013, outfitted hunting in Alberta was estimated to serve 8,425 clients. Of these 7,255 clients were hunting clients and 1,170 clients were non-hunting companions. Based on the average length of trip reported by outfitters a total of 54,000 client-days were provided, with 81% of clients arriving from the United States, 4% from outside North America, 4% from the rest of Canada, and 11% from within Alberta. According to Table 3 (page 6), a large number of Alberta clients used outfitters for waterfowl and moose.
- The average reported revenue in 2013 was \$98,200 but the majority of outfitters (almost 69%) reported revenues below \$100,000. Compared to the previous five years, 2013 revenues were average or below average, while costs were average or above average. This suggests that compared to the last five years the provincial

economic impacts of outfitted hunting reported in this study are average or lower than average.

- Alberta's outfitted hunting industry created 460 full-time equivalent (FTE) positions. Of these, 341 FTEs were hired directly by outfitters. The other 119 FTEs were a result of increases in employment by businesses that supply inputs to outfitters, or additional final goods and services to their clients. Overall, outfitted hunting generated \$24.4 million in wages and salaries for the provincial economy.
- The total value of economic activity (Total Output) generated by outfitted hunting in 2013 was \$105 million. Of this, \$47 million represents contribution to final goods and services (GDP) – goods and services which require no further processing prior to consumption by outfitters and their clients – while the remaining \$58 million represents the value of intermediate goods and services (Intermediate Inputs) – these are goods and services that are purchased by businesses such as outfitters, restaurants, and hotels to create the final goods and services consumed by clients<sup>1</sup>.
- The I/O model calculated a multiplier effect for outfitted hunting of 2.6. This means that every dollar spent on outfitted hunting in 2013 led to a \$2.6 increase in GDP. This multiplier is relatively high compared to multipliers in some other sectors, including fishing, hunting, and trapping which has a multiplier of 1.4 and oil and gas extraction which has a multiplier of 1.4 (ATBF 2014).
- The contributions of different groups to the \$105 million in total output generated by outfitted hunting can be disaggregated as follows:
  - Outfitters versus Clients: 71% of total output is attributable to direct expenditures by outfitters, while the remaining 29% is attributable to additional client expenditures for goods and services not provided in the outfitted hunting package;
  - Visitor Origin: 91% of total output is attributable to visitors from outside Canada (Non-resident aliens), with 4% attributable to non-residents from the rest of Canada and 5% attributable to Albertans. Thus most (95%) of the revenues generated in this sector are new to the Alberta economy and would

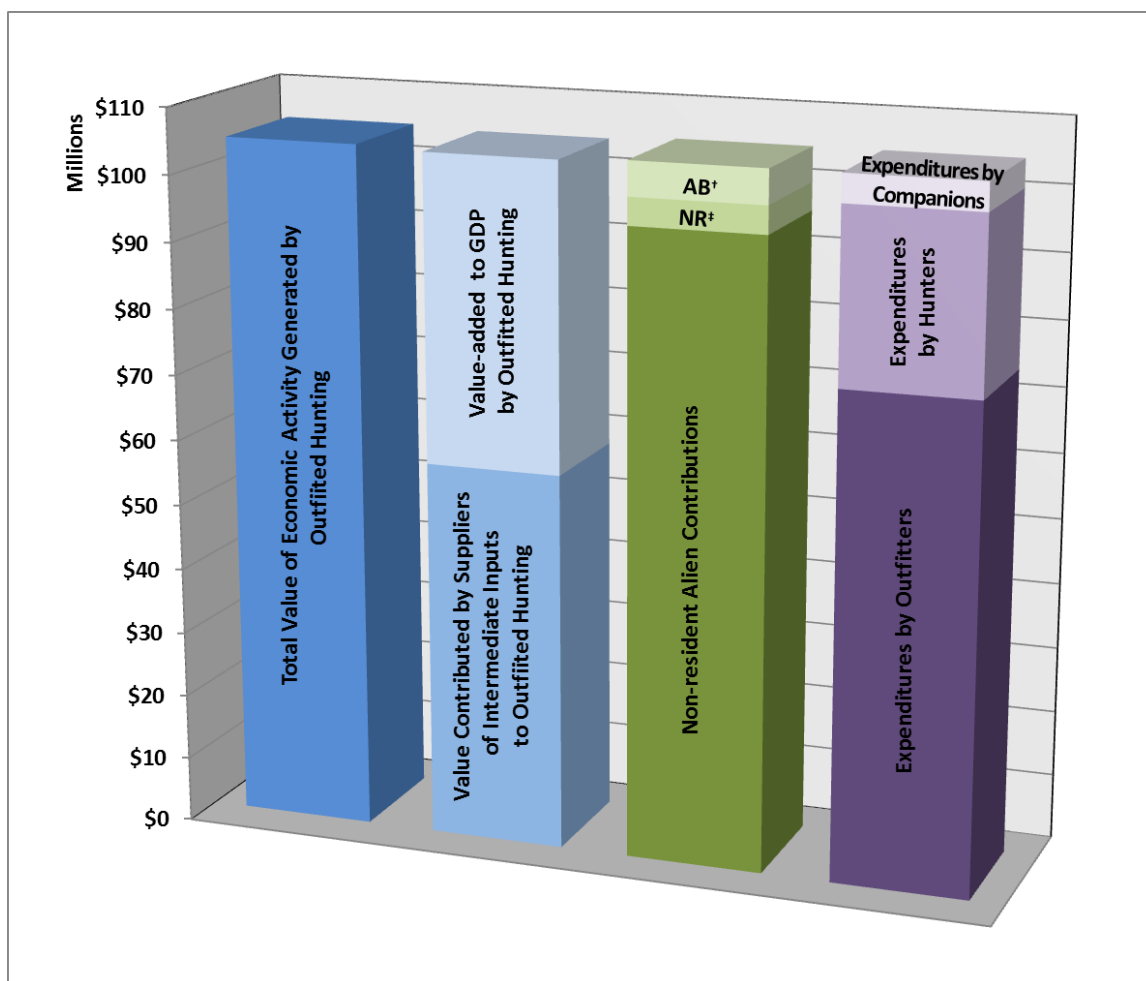
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<sup>1</sup> For an example and explanation of intermediate inputs, final goods and services, GDP, and Total Output please see Figure 2 in the Methodology section.

not have been generated otherwise. This is one of the reasons for the relatively high multiplier effect.

- The outfitted hunting industry contributed \$12.1 million in tax revenue which was collected by all three levels of government. Most of the tax revenue was generated by outfitters (\$8.4 million) and collected at federal level (\$8.0 million).

Figure 1 below shows the breakdown of total economic activity according to final and intermediate goods; client origin; and outfitter versus client expenditures.



† AB: Albertan Contributions; ‡ NR: Non-Resident Contributions

**Figure 1** Breakdown of total economic activity generated by outfitted hunting

## **Acknowledgements**

This study of the outfitted hunting industry in Alberta could not have occurred without the help of numerous individuals and organizations around the province. Alberta Innovates–Technology Futures would like to thank the Alberta Professional Outfitters Society members who assisted us in designing the survey and participated in the pilot test of the survey. We also thank the Alberta Treasury Board and Finance for their contribution to the economic analysis. Finally, we would like to thank the outfitters who completed the survey and the APOS members who encouraged outfitters to complete and submit their responses.



## Introduction

The purpose of this study is to understand the economic impact of the professional outfitted hunting industry in Alberta. Previous studies commissioned by the Alberta Professional Outfitters Society (APOS) have shown that the outfitted hunting industry is an important contributor to Alberta economy, attracting a significant number of visitors from outside of the province (Kubursi, 2003). A comprehensive and enhanced analysis was undertaken in 2014 to portray an updated image of the outfitted hunting industry in a changing provincial economy. The results of this study will provide information to policy makers and outfitters about the importance of outfitted hunting to the Alberta economy, as well as a better understanding of how outfitted hunting businesses operate.

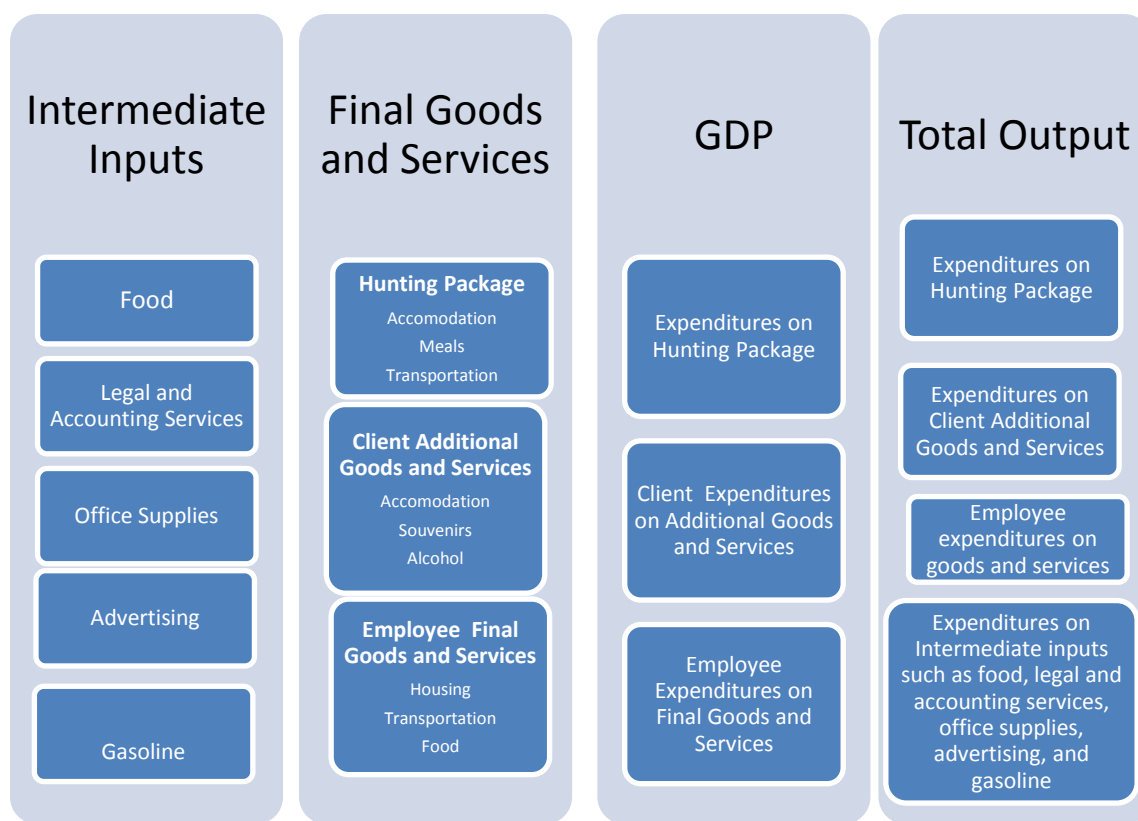
## Methodology

In 2014, Alberta Innovates Technology Futures (AITF) worked with APOS to develop a survey of expenditures by both outfitters and their clients on goods and services purchased for outfitted hunting trips. The survey also collected general information about the outfitters and their clients including place of origin, the number of client-days provided, and the types of packages offered. To avoid double counting, the survey was designed to capture only incremental expenditures specific to outfitted hunting and not other activities that owner-operators of outfitting businesses might undertake during the off-season.

The survey was sent by mail in July to all 466 APOS members, accompanied by a cover letter explaining the objectives of the study and ensuring confidentiality of the information collected. Outfitters had the option to complete an electronic version of the survey and submit it by email, or to fill out a hard copy and mail it in a pre-addressed and stamped envelope. Ninety-seven surveys were returned (13 electronically and 84 by regular mail) yielding a 21% response rate. The survey questions and responses are provided in the Appendix 1. The survey responses were used to develop a representative outfitting operation and a forecast of client days using weighting factors based on the total allocations reported versus actual allocations in 2013. For example, a total of 766 black bear allocations were reported by respondents, which is 68% of actual black bear allocations in 2013 even though only 21% of operators responded. Without weighting responses by allocations by species the number of client days for bear would be overestimated.

The total allocations of survey respondents were compared to actual allocations in order to determine appropriate weights to give respondents and correct for any bias in the results due to certain types of respondents being more willing to answer the survey. The expenditure data collected in the survey was run through the provincial economic Input/Output model used by Alberta Treasury Board and Finance (ATBF) to calculate the overall impact of outfitted hunting to Alberta's economy, including its contribution to Total Output and to Gross Domestic Product (GDP).

GDP is defined as the value of final goods and services in an economy and is a widely used measure of economic performance. In calculating GDP, goods and services are valued only at the point where they are sold into final consumption, either domestically, or for export. In order to avoid double counting GDP does not include the value of intermediate goods and services consumed during the production of final goods and services. This can be contrasted to Total Output which measures the impact of outfitted hunting on both intermediate inputs and final goods and services. Figure 2 below provides some examples and an explanation of the relationship between intermediate inputs, final goods and services, GDP and total output.



**Figure 2** Intermediate Inputs, Final Goods and Services, GDP and Total Output

Survey responses about expenditures by outfitters on intermediate inputs (including both operating and capital expenditures) are provided in Tables A.7 and A.8 in Appendix 1. These expenditures include (but are not limited to) goods and services such as food, office supplies, and gasoline. Examples from Table A.7 are listed in the first column of Figure 2. Final goods and services are those goods and services purchased for consumption which require no further processing or inputs. These include the hunting package itself (and all of the combined services it provides), as well as additional purchases by clients on final goods and services such as alcoholic beverages, groceries, restaurant meals, accommodation, entertainment and souvenirs, which are summarized in Table A.6. The expenditures by outfitters and their clients lead to multiplier effects in the economy. The wages and salaries paid to guides and staff employed directly by outfitters as well as in the businesses that support the outfitters put money in the pockets of Albertans. Some of this money is spent by Albertans on final goods and services such as housing, meals, and recreation, again leading to feedbacks to the businesses that support these sectors. In short, every dollar spent by outfitters and their clients circulates and recirculates through the economy, through demands for intermediate inputs, and additional expenditures by Albertans on consumer goods, leading to the multiplier effect. The final demands generated by outfitters, their clients, and Albertans are shown in the second column of Figure 2.

When measuring the contribution of outfitting to the Alberta economy, it is appropriate to use GDP which only counts the value of final goods and services. From an accounting perspective, the value of final goods and services includes the value of intermediate goods and services purchased by outfitters to supply the hunting package. For example, the value of an outfitted hunting package includes the cost of advertising, office supplies, legal and accounting services, etc. These costs are passed on to hunters through the price of the package. Therefore it would be double counting to include both the value of the outfitted hunting package as well as the value of the legal and accounting services in calculating the contribution of outfitted hunting packages to GDP. On the other hand, to focus only on final goods and services ignores important information and relationships in the economy, particularly with respect to which businesses benefit from outfitted hunting and how the money generated by outfitted hunting circulates throughout the economy. Total output, which is the value of all goods and services produced by the outfitted hunting industry, includes both inputs and final goods and services. Total output is useful for understanding how expenditures from outfitted hunting circulate through the economy. Columns 3 and 4 in Figure 2 compare what is counted in GDP and Total Output respectively.

I/O models are based on tables that describe the flow of goods and services between different sectors in the economy in the production of intermediate and final goods and services. This includes tracking wages and salaries and taxes paid to different levels of government. Together, the recirculation of each dollar spent through indirect and induced impacts lead to multiplier effects. The ATBF I/O model tracks the interdependencies between intermediate and final goods and services in the Alberta economy and provides a calculation of the impact of the outfitted hunting on GDP, Employment, Wages and Salaries, and Total Output, as well as a multiplier effect. The model is based on Statistics Canada data and reflects the structure of economy and industry linkages for year of 2010 (ATBF, 2014). All values in this report are adjusted by the consumer price index to reflect real values in 2014 dollars. The I/O model tracks direct, indirect and induced impacts.

## Results

### Profile of a typical outfitter operation

The completed survey responses were averaged in order to provide a profile of a representative outfitter's operations for 2013. Main characteristics are summarized below. Detailed survey responses are included in Appendix 1.

#### Client origin

Based on responses it is estimated that Alberta outfitters provided services to 8,425 clients, including both hunters (7,255 clients) and their non-hunting companions (1,170 clients). Most clients (81%) came from the United States compared to 11% from Alberta, 4% from outside of North America, and 4% from the rest of Canada<sup>1</sup>.

#### Services included in a typical outfitted hunting package

The typical package (reported by more than 80% of respondents) provided food and non-alcoholic beverages, accommodation, and guides. The typical big game package also included transportation from and to the airport, transportation during the hunt, and trophy preparation (Table 1).

**Table 1 Services included in hunting package**

Services	Big Game	Bird Game
Food, non-alcoholic beverages	>80%	>80%
Alcohol	<50%	<50%
Lodging/accommodation	>80%	>80%
Transportation – airport	>80%	50-80%

<sup>1</sup> See Table 3 below as well as Table A.2 in Appendix 1.

Transportation – hunt	>80%	50-80%
Guides	>80%	>80%
Firearms	<50%	<50%
Ammunition	<50%	50-80%
Meat processing	<50%	<50%
Trophy preparation	>80%	50-80%
Hunting licenses	50-80%	50-80%

Trophy preparation and transportation from and to the airport were included to a lesser extent (50%-70%) in bird game packages. Ammunition was included for between 50%-70% of bird game packages, but for less than half of big game packages. Alcoholic beverages, firearms, and meat processing were included in less than half (or not at all) of both bird and big game packages. Hunting licenses were provided in between 50-70% of bird game and gig game packages. Note that there were fewer responses from outfitters describing bird game packages than big game packages.

### Allocations held and used

Table 2 shows the total allocation of big game species and waterfowl privileges for all APOS members in 2013. Outfitters used about half of the allocations that they held, with the highest utilisation rate for bighorn sheep (75%), and the lowest for elk (42%).

**Table 2 Allocations held and used**

Big Game Species	Total Allocations held	Allocations used in 2013 (% from total allocation held)
Antelope	55	67%
Bighorn Sheep	88	75%
Black Bear	2,561	48%
Cougar	24	46%
Elk	467	42%
Moose	1,717	53%
Mule Deer	1,958	44%
Whitetail Deer	3,508	46%
Waterfowl Privileges	324	Not applicable

**Client-days provided, by origin of client and game species**

In 2013, outfitted hunting in Alberta was estimated to provide a total of 54,000 client-days (Table 3)<sup>1</sup>. Most clients (about 80%) arrived from United States. The client origin is also reflected in client-day distribution with 91% of client-days from clients outside of Canada ("Non-Resident Aliens" - NRA); 4% from Canadian clients residing outside of Alberta ("Non-Residents" - NR), and 5% from Albertans. The species utilized differ by client origin. Moose, waterfowl, and elk were utilized more by Alberta clients; black bear and mule deer were utilized more by NR clients; and whitetail deer, wolf, and coyote were utilized more by NRA clients. Bighorn sheep were utilized primarily by Albertans and other Canadian non-residents.

**Table 3 Clients served and client-days provided, by origin of client and game species**

C	Total	Alberta residents	Non-Residents	Non-Resident Aliens
<b>Clients - hunters</b>	<b>7,255</b>	<b>12%</b>	<b>3%</b>	<b>85%</b>
<b>Non-hunting companions</b>	<b>1,170</b>	<b>10%</b>	<b>5%</b>	<b>85%</b>
<b>Client-days</b>	<b>54,000*</b>	<b>5%</b>	<b>4%</b>	<b>91%</b>
<b>Total client-days provided per outfitter, by species</b>				
<b>Waterfowl</b>	5,015	25%	19%	8%
<b>Upland Birds</b>	790	3%	6%	1%
<b>Antelope</b>	105	0.4%	1%	0.2%
<b>Bighorn Sheep</b>	1,055	5%	6%	2%
<b>Black Bear</b>	8,580	11%	26%	16%
<b>Cougar</b>	Not available			
<b>Elk</b>	1,075	6%	5%	2%
<b>Moose</b>	8,536	34%	5%	15%
<b>Mule Deer</b>	5,590	7%	16%	10%
<b>Whitetail Deer</b>	12,940	8%	10%	26%
<b>Bison</b>	395	0%	0%	1%
<b>Wolf</b>	4,375	1%	4%	9%
<b>Coyote</b>	5,115	0.4%	3%	10%
<b>Total</b>		100%	100%	100%

\* note this number is rounded from 53,570

<sup>1</sup> Table 3 is constructed from Tables A.2 and A.3 in Appendix 1.

**Types of accommodation provided**

Usually, outfitters provide more than one type of accommodation to their clients. Home residence was the most common type of accommodation provided (30% of respondents), followed by a wilderness or tent camp (28% of respondents), and full service lodge (26% of respondents) (Figure 3).

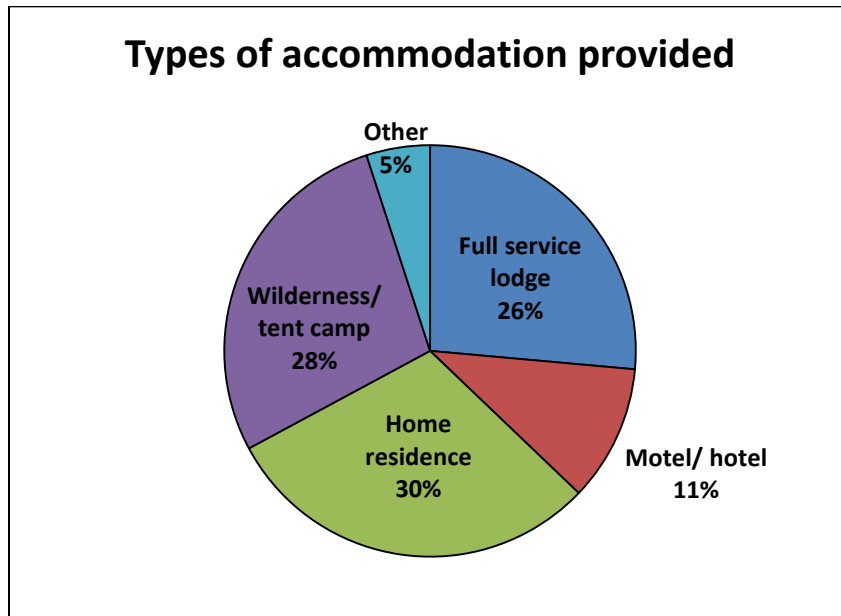


Figure 3 Type of accommodation provided

## Financial data reported by outfitters

### Revenues

The average revenue reported per outfitter was \$98,200. Figure 4 shows the distribution of revenues across outfitters. The average revenue reported is higher than the median due to a small number of outfitters with high revenues. The majority of outfitters (almost 69%) reported revenues below \$100,000 and 50% of outfitters reported revenues below \$50,000 including 9% who reported no revenues at all in 2013. About 7% of respondents reported revenues over \$300,000.

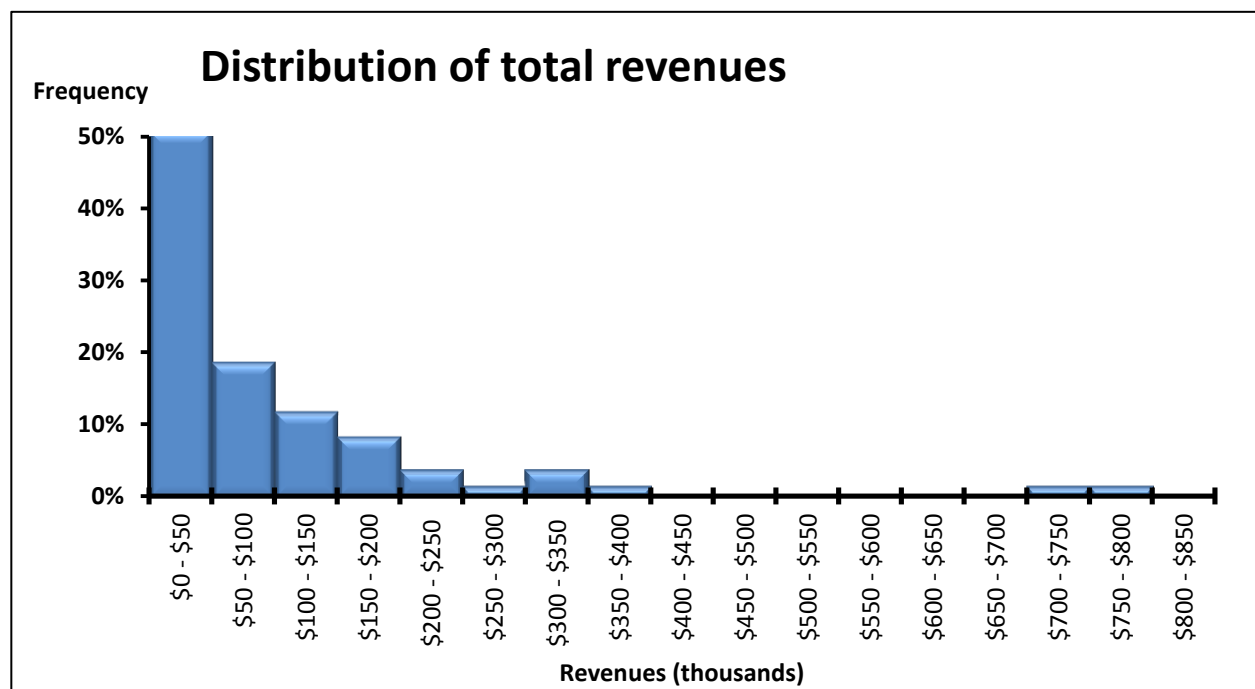


Figure 4 Distribution of total revenues across outfitters



### Operating expenses

Operating expenses averaged \$60,400 across respondents. Figure 5 shows the distribution of operating expenses by expense category. The largest expenditures were for wages and salaries, licenses and permits, and gasoline/diesel. These top three operating expenses totalled approximately \$26,000 or about 43% of all operating expenses.

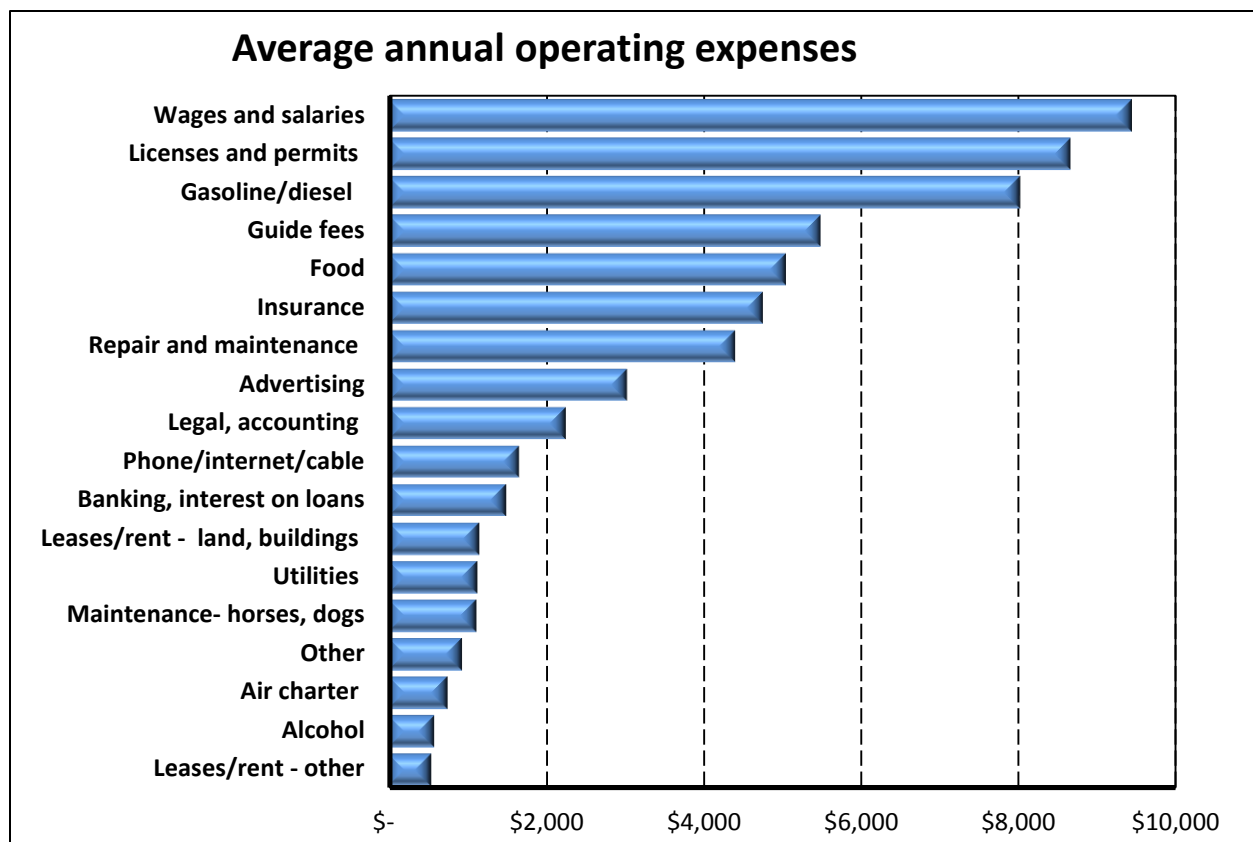


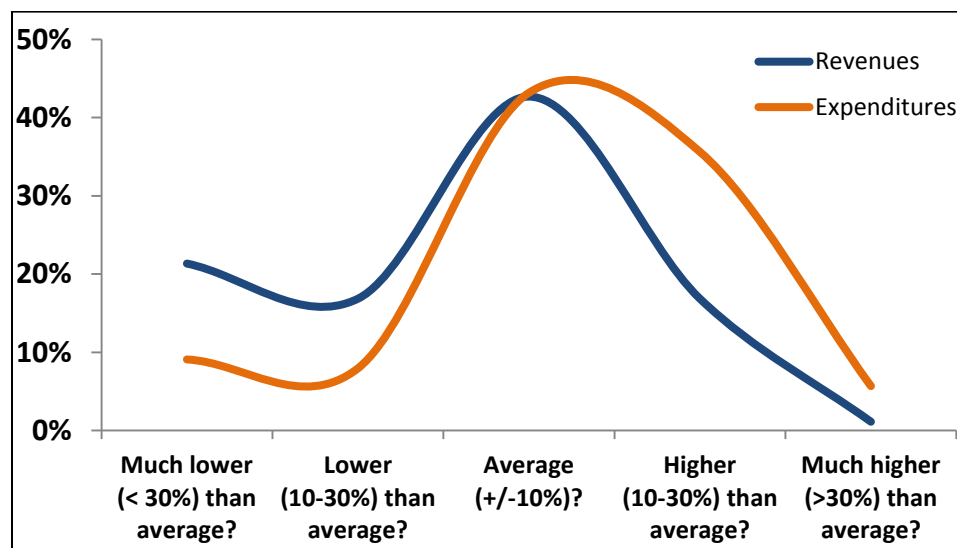
Figure 5 Average annual operating expenses

### Capital expenditures

Respondents reported capital expenses of \$23,000 on average. Capital expenses include expenses on equipment and machinery that lasts longer than one year including vehicles, ATVs, camping gear, and animals for outfitted hunting. Expenditures on vehicles represented 44% (\$10,400) of capital expenses. Expenditures for hunting equipment were \$3,200 and for special vehicles were \$5,100. The average lifespan of capital equipment was reported between 5 and 7 years (see Table A.8).

**Comparing revenues and costs in 2013 to the previous five years**

To determine whether 2013 was representative in terms of revenues and expenses, outfitters were asked to report on whether revenues and expenses were higher or lower than the previous 5-year average (see questions 8 and 15 in Appendix 1). The responses are summarized in Figure 6 below. Relative to the previous five year average, in 2013 outfitters experienced average or below average revenues, and average or above average costs. This would suggest average or lower than average profits in 2013.



**Figure 6** Revenues and expenditures in 2013 relative to last five-year average

### Outfitted clients - additional expenditures

Clients (both hunting clients and their non-hunting companions) spent money to purchase goods and services such as groceries, vehicle rentals, alcohol, and other items not included in the hunting package. They also provided additional income to employees through tips and gratuities. All of these additional expenditures have an impact on the Alberta economy. Outfitters were asked to provide estimates of additional expenditures by their clients (Table A.6). According to their responses clients spent an average of \$3,300 on additional goods and services not included in the outfitted hunting package (Figure 7). One third of these expenditures were on tips and gratuities, and hunting licenses and permits. Other important expenditures, representing approximately a third of client expenses, were for taxidermy, accommodation and shipping of trophies or meat.

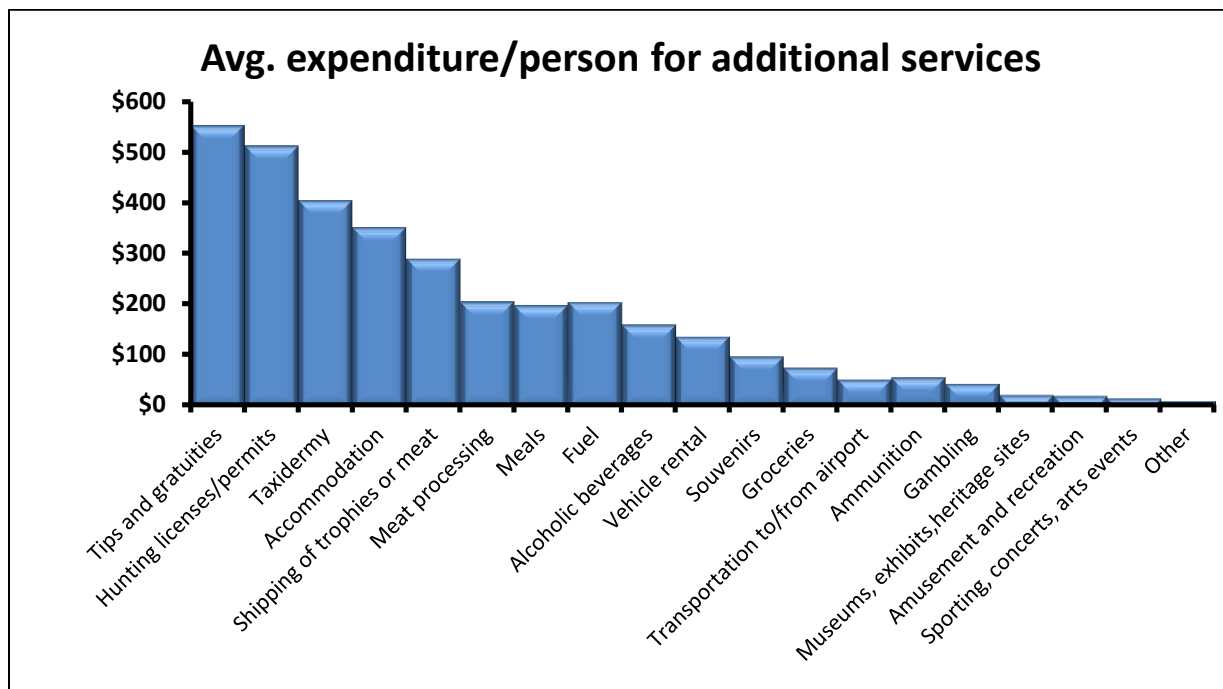


Figure 7 Client's average expenditure for additional services

### The economic impact of Alberta's outfitted hunting industry

Expenditures made by both outfitters and their clients have impacts that disseminate throughout the entire Alberta economy. The economic impact of outfitted hunting on Alberta's economy was estimated using ATBF's I/O model (ATBF, 2014). The I/O analysis tracks how a dollar spent on outfitted hunting circulates and recirculates within the economy, and contributes to economic indicators such as GDP, total output, employment, wages and salaries, and taxes paid to various levels of government.

The results of the I/O analysis are summarized below and in Table 4-6. A discussion on how the impacts found in this study compare to previous studies and studies in other jurisdictions is provided in Appendix 2. Highlights are presented below:

- The total value of economic activity generated by outfitted hunting in 2013 was \$105 million (\$74 million attributable to outfitter expenditures, and \$31 million attributable to client additional expenditures);
- The total contribution to GDP was \$46.5 million with \$33.1 million attributable to outfitter expenditures and \$13.4 million attributable to client additional expenditures;
- The value of intermediate goods and services supplied to outfitted hunting was \$58 million;
- 460 FTEs were created with total wages and salaries of \$24.4 million. Of these, 341 FTEs were created by outfitters, while the other 119 were created by suppliers and additional expenditures by clients;
- Total tax revenues, collected by all three levels of government, were \$12.1 million, with most of these (\$8.4 million) contributed directly by outfitters and their employees and collected at the federal level (\$8.0 million).

Table 4 shows the results of the I/O analysis for the outfitted hunting industry, while Tables 5 and 6 separate the results generated by outfitter expenditures and client additional expenditures.

Table 4 Summary of total economic impacts of outfitted hunting industry (in \$ million)

	Direct Impacts	Indirect Impacts	Induced Impacts	I/O Model Totals
<b>Total economic impact</b>	\$50.4	\$44.5	\$9.8	<b>\$104.8</b>
<i>Intermediate Inputs</i>	\$30.0	\$23.7	\$3.9	<b>\$57.7</b>
<i>GDP</i>	\$20.0	\$20.7	\$5.9	<b>\$46.5</b>
<b>Wages and salaries</b>	\$9.6	\$12.2	\$2.5	<b>\$24.4</b>
<b>Employment</b>	414	230	50	695
<b>FTE Employment</b>	236	184	40	<b>460</b>
<b>Government Tax Revenues</b>	\$4.7	\$5.4	\$2.0	<b>\$12.1</b>
<i>Federal Government</i>	\$3.3	\$3.4	\$1.2	<i>\$8.0</i>
<i>Alberta Government</i>	\$1.1	\$1.6	\$0.6	<i>\$3.2</i>
<i>Local Governments</i>	\$0.4	\$0.4	\$0.2	<i>\$1.0</i>

Table 5 Summary of total economic impacts of outfitters expenditure (in \$ million)

	Direct Impacts	Indirect Impacts	Induced Impacts	I/O Model Totals
<b>Total economic impact</b>	\$33.5	\$33.2	\$7.4	<b>\$74.1</b>
<i>Intermediate Inputs</i>	\$20.3	\$17.3	\$3.0	<b>\$40.5</b>
<i>GDP</i>	\$12.9	\$15.9	\$4.4	<b>\$33.1</b>
<b>Wages and salaries</b>	\$4.7	\$9.6	\$1.9	<b>\$16.3</b>
<b>Employment</b>	325	189	37	551
<b>FTE Employment</b>	163	148	30	<b>341</b>
<b>Government Tax Revenues</b>	\$2.9	\$4.1	\$1.5	<b>\$8.4</b>
<i>Federal Government</i>	\$2.1	\$2.6	\$0.9	<i>\$5.6</i>
<i>Alberta Government</i>	\$0.6	\$1.1	\$0.4	<i>\$2.2</i>
<i>Local Governments</i>	\$0.3	\$0.3	\$0.2	<i>\$0.7</i>

Table 6 Summary of economic impacts of clients' additional expenditure

	Direct Impacts	Indirect Impacts	Induced Impacts	I/O Model Totals
<b>Total economic impact</b>	\$16.9	\$11.3	\$2.5	<b>\$30.7</b>
<i>Intermediate Inputs</i>	\$9.7	\$6.4	\$1.0	<b>\$17.2</b>
<i>GDP</i>	\$7.1	\$4.8	\$1.5	<b>\$13.4</b>
<b>Wages and salaries</b>	\$4.8	\$2.5	\$0.6	<b>\$8.1</b>
<b>Employment</b>	89	41	13	144
<b>FTE Employment</b>	73	36	10	<b>119</b>
<b>Government Tax Revenues</b>	\$1.8	\$1.3	\$0.6	<b>\$3.7</b>
<i>Federal Government</i>	\$1.2	\$0.8	\$0.4	<i>\$2.4</i>
<i>Alberta Government</i>	\$0.4	\$0.4	\$0.2	<i>\$1.1</i>
<i>Local Governments</i>	\$0.1	\$0.1	\$0.1	<i>\$0.3</i>

**Multiplier effects**

Many cost-benefit studies for proposals to build plants and pipelines, or projects such as arenas, consider multiplier effects. Multiplier effects arise when an increase in spending in one sector creates an increase in GDP greater than the initial expenditure. The multiplier effect occurs because if an arena is built, for example, it will employ workers to run the arena and manage events, as well as workers in other companies that supply the events, such as catering companies, and production companies. Some of the extra wages and salaries generated by building the arena are spent in Alberta which generates further increases in employment and GDP. Expenditures from outfitted hunting lead to the same kinds of effects through employment of guides, food preparation staff, and purchases from suppliers.

The multipliers for outfitted hunting generated by the ATBF I/O model are summarized in Table 7. The GDP multiplier for the outfitted hunting industry in 2013 was 2.6. Thus, each \$1 million spent on outfitted hunting packages is associated with \$2.6 million in GDP, \$3.4 million in wages and salaries, and \$2.2 million in total output. For comparison, \$1 million of expenditures for accommodation and food services is associated with \$1.6 million in GDP, \$1.3 million in wages and salaries, and \$1.6 million of total output. Every job created in outfitted hunting leads to 1.7 total jobs throughout the Alberta economy.

**Table 7** Calculated multipliers for the outfitted hunting industry

<b>Indicator</b>	<b>Multiplier</b>
GDP	2.571
Wages and Salaries	3.444
Employment	1.697
Total Output	2.212

A comparison of GDP multipliers calculated for outfitted hunting and multipliers for other sectors in the Alberta economy published by ATBF (2014) is provided in Table 8 below. One can see that outfitted hunting has a relatively high multiplier compared to similar sectors such as fishing, hunting and trapping, wineries, and even oil and gas extraction. Meat and animal food manufacturing, as well as crop and animal production have relatively high multipliers. One of the reasons for the high multiplier in outfitted hunting is that the revenues generated in the sector affect many small suppliers and remain primarily in Alberta, potentially in the hands of local business owners.

**Table 8 GDP multipliers for selected industries (ATBF, 2014)**

<b>Industry Title</b>	<b>GDP</b>
Outfitted Hunting	2.571
Crop and animal production	2.646
Forestry and logging	2.175
Fishing, hunting and trapping	1.425
Support activities for agriculture and forestry	1.791
Oil and gas extraction	1.382
Metal ore mining	1.602
Support activities for mining and oil and gas extraction	1.389
Electric power generation, transmission and distribution	1.456
Natural gas distribution, water, sewage and other systems	1.232
Residential building construction	1.779
Non-residential building construction	1.958
Transportation engineering construction	2.052
Oil and gas engineering construction	2.176
Electric power engineering construction	1.512
Communication engineering construction	2.194
Other engineering construction	1.778
Repair construction	1.773
Animal food manufacturing	2.735
Meat product manufacturing	3.557
Miscellaneous food manufacturing	2.374
Wineries and distilleries	1.270

## Conclusion

The outfitted hunting industry makes an important contribution to the Alberta economy, adding \$105 million to total output, \$58 million to GDP, and creating 460 FTE positions representing \$24.4 million in wages, salaries and benefits in the pockets of Albertans. In addition, outfitted hunting contributed \$12.1 million in taxes to all levels of government. Relative to some sectors, including oil and gas extraction, the multiplier is relatively high. Given the distribution of client-days based on origin, 91% of the value added to the Alberta economy is attributable to non-resident alien clients and an additional 4% to non-resident clients. Therefore, 95% of revenues from outfitted hunting represent new money being spent in Alberta by non-resident visitors. Most of the revenues generated by outfitted hunting remain in Alberta. By increasing the wages and salaries of Albertans, particularly in smaller isolated communities, the outfitted hunting industry is regionally significant and contributes to small businesses in the communities where it operates.

## References

- Alberta Treasury Board and Finance (ATBF). 2014. Alberta Economic Multipliers 2010. Government of Alberta.
- Henderson, J.E., Grado, S.C., and Munn, I.A. 2004. Economic Impact of Commercial Hunting Outfitters and Clientele. In Amacher, G.S., and Sullivan, J. (eds.) Proceedings of the 2003 Annual Southern Forest Economics Workers, pp: 397-402, Blacksburg, VA: Virginia Tech.
- Hull, J., Patterson, C., and Davidson, G. 2010. The Economics of the Outfitting Industry in Newfoundland and Labrador, Canada. In Matilainen, A., and Keskinarkaus, S. (eds.) The Economic of Hunting Tourism – Examples from Northern Areas. Report 64. Ruralia Institute, University of Helsinki, Finland.
- Kubursi, A. 2009. The Economic Benefits of Hunting and Fishing Activities in Alberta in 2008. Econometric Research Limited, Hunting for Tomorrow Foundation.
- Kubursi, A. 2003. The Economic Impact of Outfitted-Hunting in Alberta 2001. Econometric Research Limited, Alberta Professional Outfitters Society.
- Nickerson, N., Oschell, C., Rademaker, L., and Dvorak, R. 2007. Montana's Outfitting Industry: Economic Impact and Industry-Client Analysis. Research Report 2007-1. Institute for Tourism & Recreation Research. Missoula, MT.
- Saskatchewan Environment (Sask. Env.). 2006. Economic Evaluation of Saskatchewan's Outfitted Hunting and Fishing Industry. Prepared by Derek Murray Consulting Associates. Saskatchewan Environment. Regina, SK.
- Sun, X., Munn, I.A., Loden, E., Hussain, A., and Grado, S.C. 2006. Assessment of the Economic Importance of Mississippi Outfitters and Opportunities for Expansion. In Chang, S.J., and Dunn, M.A. (eds.) Proceedings of the 35th Annual Southern Forest Economics Workshop, pp.: 127-137, Baton Rouge, LA.



## Appendix 1 Survey results

### 1. What species do you hold allocations for? How many allocations did you use in 2013?

**Table A.1** Allocations held and used

Big Game Species	Allocations held		Allocations used in 2013
	% Outfitters reporting allocations	Reported by surveyed outfitters	Total used, % from Total held
Antelope	5%	11	45%
Bighorn Sheep	9%	34	68%
Black Bear	49%	766	49%
Cougar	0	-	0%
Elk	27%	152	30%
Moose	45%	403	56%
Mule Deer	57%	717	43%
Whitetail Deer	68%	966	58%
Waterfowl Privileges	21%	167	49%

### 2. How many **outfitted hunting clients** and **non-hunting companions** did you take in 2013? Please include clients for species for which no allocation is needed.

**Table A.2** Hunting clients and non-hunting companions: distribution by origin

Clients from:		Hunting Clients		Non-Hunting Companions	
		% from Total Hunting Clients	Reported by surveyed outfitters	% from Total Non-Hunting Companions	Reported by surveyed outfitters
Canada	Alberta	12%	210	10%	29
	Rest of Canada	3%	59	5%	16
Outside of Canada	United States	82%	1,501	76%	230
	Outside North America	3%	57	9%	26
Total		100%	1,827	100%	301

3. How many **client-days** did you sell in 2013? (1 client for 7 days = 7 client-days; include all days sold, even if the hunt ended before 7<sup>th</sup> day)

**Table A. 3** Client-days provided, by origin of client and game species

Species	Alberta (AB) residents		Non-Residents (NR)		Non-Resident Aliens (NRA)	
	% from AB total	Reported by surveyed outfitters	% from NR total	Reported by surveyed outfitters	% from NRA total	Reported by surveyed outfitters
<b>Waterfowl</b>	27%	180	19%	115	9%	1,153
<b>Upland Birds</b>	2%	13	4%	27	1%	113
<b>Antelope</b>	0%	2	1%	4	0%	14
<b>Bighorn Sheep</b>	7%	46	7%	45	2%	292
<b>Black Bear</b>	11%	75	26%	157	17%	2,174
<b>Cougar</b>	0%	-	0%	-	0%	-
<b>Elk</b>	7%	44	5%	30	2%	257
<b>Moose</b>	29%	194	4%	22	13%	1,702
<b>Mule Deer</b>	9%	58	20%	122	14%	1,800
<b>Whitetail Deer</b>	7%	50	9%	57	26%	3,266
<b>Bison</b>	None	-	None	-	1%	76
<b>Wolf</b>	1%	7	3%	16	7%	822
<b>Coyote</b>	0.3%	2	2%	14	8%	972
<b>Total</b>	<b>100%</b>	<b>671</b>	<b>100%</b>	<b>609</b>	<b>100%</b>	<b>12,641</b>

4. What best describes the type of accommodation that your company offers? (Check all that apply)

**Table A. 4** Type of accommodation provided

Type of accommodation	Responses (% from total)
Full service lodge	26%
Motel/ hotel	11%
Home residence	30%
Wilderness/ tent camp	28%
Other	5%
<b>Total</b>	<b>100%</b>

Other included: campus, bed and breakfast, mobile bunks, and cabins.

5. In 2013, what types of services were included in a typical outfitted hunting trip package purchased from your company? (Check all that apply)

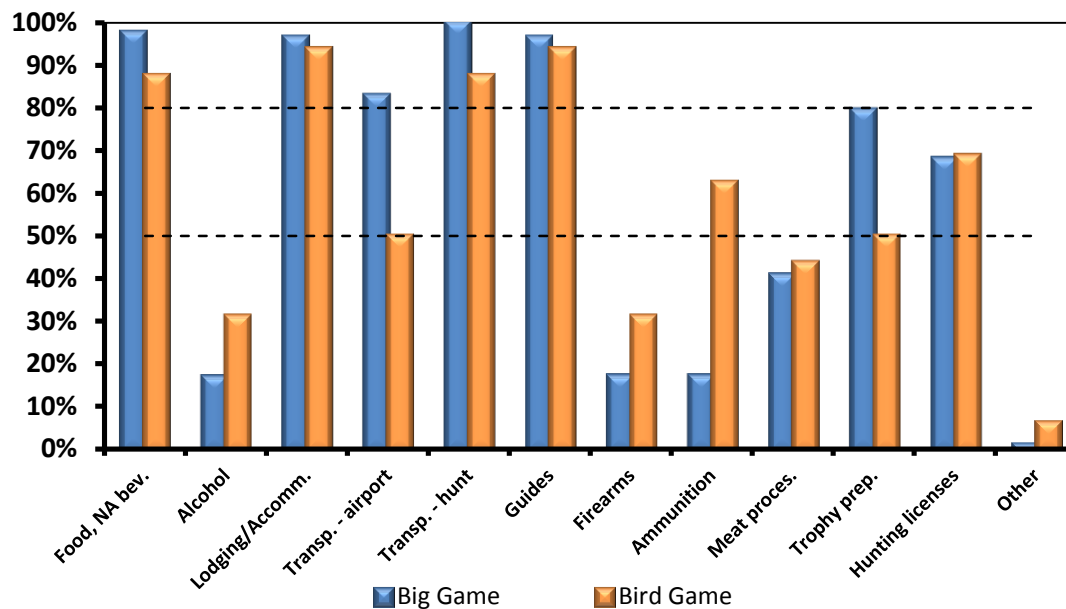


Figure A.1 Frequency of services included in the typical hunting package

6. For packages that **do NOT** include accommodation, what percentage of your clients used a campground for their accommodation in 2013?
- All surveyed outfitters reported 0% of clients using campground for packages that do not include accommodation.
7. Please provide **total revenues** from all sources for your outfitted hunting business in 2013. Please include revenues from hunts sold, leased allocations, and rental income from facilities and equipment.

Table A.5 Distribution of total revenues by outfitter

Revenue interval ('000)	\$0 - \$50	\$50 - \$100	\$100 - \$150	\$150 - \$200	\$200 - \$250	\$250 - \$300	\$300 - \$350	\$350 - \$400	\$400 - \$450	\$450 - \$500	\$500 - \$550	\$550 - \$600	\$600 - \$650	\$650 - \$700	\$700 - \$750	\$750 - \$800
# responses	44	16	10	7	3	1	3	1	-	-	-	-	-	-	1	1
% from total responses	51%	18%	11%	8%	3%	1%	3%	1%	0%	0%	0%	0%	0%	0%	1%	1%

8. What is your best estimate of your revenues in 2013 relative to the previous five years?

- About 80% of the surveyed outfitters reported average or below average revenues;
- About 18% reported revenues greater than previous five years average:
  - a. Much higher (>30%) than average? 1%;
  - b. Higher (10-30%) than average? 17%;
  - c. Average (+/-10%)? 43%;
  - d. Lower (10-30%) than average? 17%;
  - e. Much lower (< 30%) than average? 21%.

9. In order to calculate the total economic contribution of the outfitted hunting industry to Alberta it is important to understand what **additional** services are purchased by your hunting clients and their non-hunting companions **in Alberta**. Please ensure these expenses are not already included in the package offered by you. Please provide your best estimate of average **expenditure** per person. Place expenditures in one category only.

Table A. 6 Client's average expenditure for additional services

Service	Average per person
Accommodation	\$347
Meals	\$193
Groceries	\$70
Alcoholic beverages	\$154
Transportation to/from airport	\$46
Vehicle rental	\$131
Fuel	\$200
Hunting licenses/permits	\$508
Ammunition	\$51
Meat processing	\$200
Taxidermy	\$400
Shipping of trophies or meat	\$285
Tips and gratuities	\$548
Recreation and entertainment	
Sporting, concerts, other arts events	\$10
Museums, exhibits, other heritage sites	\$16
Amusement and recreation (e.g. golf, swimming, movies)	\$14
Gambling	\$38
Souvenirs	\$92
Other	\$4

Other included: hunting gear.

10. Please provide **operating expenses** incurred by your outfitted hunting business for 2013. Please only include costs associated with outfitted hunting and not associated with other aspects of your business. Please do not include any expenses already accounted for by clients and their non-hunting companions in Question 9. Place costs in one category only.

**Table A. 7      Operating expenses**

Cost category	Average per outfitter
Wages and salaries (include benefits and employer contrib.)	\$9,416
Guide fees	\$5,463
Maintenance costs (feed, veterinary) for horses and dogs	\$1,086
Food	\$5,020
Alcohol	\$551
Utilities (water, electricity, natural gas)	\$1,096
Licenses and permits including allocation or privilege renewals	\$8,638
Advertising (printing, trade shows, television, magazines, web, other)	\$2,999
Legal and accounting services	\$2,220
Banking fee/charges and interest on loans	\$1,462
Office supplies	\$495
Phone/internet/cable charges	\$1,631
Leases/rent on land and buildings not including lease to own	\$1,121
Leases/rent other	\$510
Repair and maintenance (vehicles, equipment, or facilities)	\$4,376
Insurance (liability, vehicle, property)	\$4,725
Gasoline/diesel	\$7,994
Air charter services	\$719
Other	\$902

Other included: accommodations, hunters airline tickets, storage, donations, meetings, miscellaneous supplies.

11. We would like to know what you spend each year on purchases for capital equipment such as vehicles and ATVs, camping gear, and animals. Please provide your best estimate of your **average annual expenditure on capital equipment** over the last 5 years (2009-2013) as well as the **number of years** the equipment typically is expected to last. Please do not include any expenses already accounted for in Question 10.

**Table A.8 Capital equipment expenditures**

Capital equipment	% outfitters reporting capital expenditures	Average annual expenditure (\$/year)	Average number of years in use (# years)
Vehicles (trucks, cars)	65%	\$10,400	5
Horses and dogs, for outfitted hunting only	21%	\$1,100	8 ½
Hunting equipment (firearms, archery, optics, tree stands, decoys, etc.)	76%	\$3,200	6 ½
Boating equipment (boats, motors, trailers, hitches, etc.)	31%	\$2,100	7 ½
Camping equipment (tents, stoves, utensils, cots, etc.)	47%	\$1,350	6 ½
Special vehicles (ATVs, snowmobiles, etc.)	63%	\$5,100	6
Other	3%	500	3

Other included: horse trailer, cam trailer.

12. Indicate the **total number of people employed** (including cooks, guides, and wranglers) in 2013. If you pay yourself a salary, please include yourself in this answer.

- The surveyed outfitters reported 404 people employed.

13. Indicate the **total number of weeks** of employment provided in 2013.

- The surveyed outfitters reported providing 1,044 weeks of employment.

*14. Of the total number of weeks of employment provided in Question 13, please provide your best estimate of how many were for people who were not Alberta residents?*

- The surveyed outfitters reported providing 299 weeks of employment for non-Alberta residents.

*15. What is your best estimate of your expenditures in 2013 relative to the previous five years?*

- About 84% of the surveyed outfitters reported average or above average expenditures; 41% reported costs above average; 17% reported lower costs:

a. Much higher (>30%) than average?	6%
b. Higher (10-30%) than average?	36%
c. Average (+/-10%)?	43%
d. Lower (10-30%) than average?	8%
e. Much lower (< 30%) than average?	9%

*16. Did you receive any Government funding exclusive of agricultural grants in 2013 (e.g., Travel Alberta Marketing Support or other provincial or federal grants or rebates)?*

- Only one outfitter reported receiving any Government funding exclusive of agricultural grants.

## Appendix 2 Comparison with other studies

Table A.9 shows how findings from this study compare to other studies, completed in Alberta and elsewhere. Although every effort was made to isolate values referring strictly to outfitted hunting, direct comparison of these values should be made with caution.

**Table A.9 Comparison of outfitted hunting studies**

Indicator	APOS 2014 survey	Comparison to other areas and studies		
	Value	Value <sup>1</sup>	Study area	Reference
<b>Number of outfitters</b>	466	421 670 153 998 367	Alberta Saskatchewan Nfld. and Labrador <sup>2</sup> Montana <sup>3</sup> Wyoming	Kubursi, 2003 Sask. Env., 2006 Hull et al., 2010 Nickerson et al., 2007 Nickerson et al., 2007
<b>Total clients</b>	8,425 (7,255 hunting, 1,170 non-hunting)	19,500 10,900 5,700	Montana Saskatchewan Nfld. and Labrador	Nickerson et al., 2007 Sask. Env., 2006 Hull et al., 2010
<b>Total client-days</b>	53,560	96,560	Montana	Nickerson et al., 2007
<b>Revenues per outfitter below \$100,000 (\$2001)</b>	74%	75% 85%	Alberta Mississippi	Kubursi, 2003 Sun et al., 2006
<b>Clients from US and outside North America</b>	85%	85% 86% 94% 81%	Alberta British Columbia Saskatchewan Nfld. and Labrador	Kubursi, 2003 Hull et al., 2010 Sask. Env., 2006 Hull et al., 2010
<b>Typical big game package</b>	Food and NA beverages, lodging/ accommodation, transportation, guides, trophy preparation	Food, lodging, transportation, guides, game processing	Mississippi	Sun et al., 2006
<b>Gross output</b> - Direct - Indirect and Induced - Total	\$51 million \$54 million \$105 million	\$52 million \$59 million \$110 million \$72 million \$33 million	Alberta  Montana (total) Mississippi (total)	Kubursi, 2003  Nickerson et al., 2007 Henderson et al., 2004
<b>GDP</b>	\$47 million	\$31 million	Saskatchewan	Sask. Env., 2006

<sup>1</sup> Estimates reported in other studies were converted to CAN\$2014 using historic exchange rate conversions (for conversion from US\$ to CAN\$) and CPI-all items index (for Canadian studies).

<sup>2</sup> Outfitting in Newfoundland and Labrador also includes fishing activities.

<sup>3</sup> Includes non-hunting outfitters (i.e., fishing, horseback trips, rafting, hiking, etc.).



Indicator	APOS 2014 survey	Comparison to other areas and studies		
	Value	Value <sup>1</sup>	Study area	Reference
<b>Wages and salaries</b>			Alberta	Kubursi, 2003
- Direct	\$9.6 million	\$21 million		
- Indirect and Induced	\$14.7 million	\$18 million		
- Total	\$24.4 million	\$39 million		
<b>Full Time Equivalent employment</b>			Alberta	Kubursi, 2003
- Direct	236	582		
- Indirect and Induced	224	530		
- Total	460	1,182		
		743	Saskatchewan (total)	Sask. Env., 2006
<b>Government revenues</b>			Alberta	Kubursi, 2003
- Federal	\$8.0 million	\$14 million		
- Provincial	\$3.2 million	\$7 million		
- Local	\$1.0 million	\$3 million		
- Total	\$12.1 million	\$24 million		

It is difficult to make direct comparisons with previous studies undertaken in Alberta (Kubursi, 2003; 2009) which do not report on the contribution of outfitted hunting to GDP. These studies used an independent I/O model rather than the ATBF I/O model. In addition, the Kubursi (2009) examined the impact of the entire hunting industry in Alberta, without separating out the impacts of outfitted hunting. Compared to Kubursi (2003) there are mixed trends in the indicators. While total output is about the same, other indicators such as employment and taxes decreased substantially.

Relative to other jurisdictions the value added of the outfitted hunting industry is high. For example, the Montana outfitted hunting industry generated about a lower total output (\$72 million) by serving more clients (19,500 clients for a total of 96,560 client-days). Outfitted hunting generated more GDP in Alberta (\$58 million) than in Saskatchewan (\$31 million) while serving a lower number of clients (8,425 in Alberta, 10,900 in Saskatchewan). Alberta generated fewer FTE positions (460 in Alberta, 743 in Saskatchewan) (Table A.9). Differences in these indicators could be due to differences in inflation between the jurisdictions, as well as differences in the types of goods and services provided in a typical outfitted hunting package.