

The Value of Ski Areas to the British Columbia Economy

Phase Two: All Alpine Ski Areas

Destination
British Columbia™



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I. Acknowledgements

The Value of Ski Areas to the British Columbia Economy study was a comprehensive summary of financial and visitor information for the Province's ski areas for the 2012/2013 season.

Funding for this study came from the Mountain Resorts Branch in the Ministry of Forests, Lands and Natural Resource Operations.

Destination British Columbia would like to gratefully acknowledge the following organizations that assisted with the project by providing financial/visitor information and the economic model analysis:

- Canada West Ski Areas Association
- Participating mountain resorts & ski areas
- EcoSign Mountain Resort Planners Ltd.
- Canadian Ski Council
- BC Stats

2. Executive Summary

Working with the Ministry of Forests, Lands and Natural Resource Operations (FLNRO) Mountain Resorts Branch (MRB) and the Canada West Ski Areas Association (CWSAA), the Research, Planning and Evaluation department of Destination British Columbia has led a study to determine the economic value of mountain resorts and ski areas to the province.

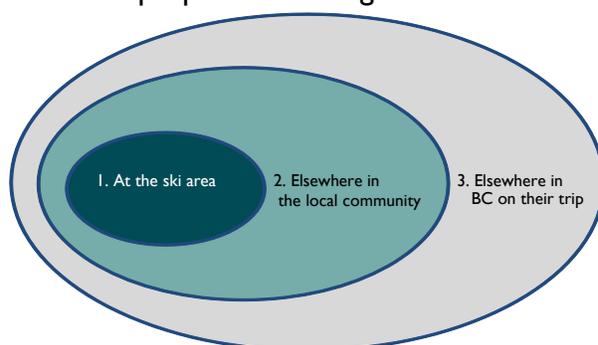
Due to the number and varying sizes of resorts, the project was separated into two phases. Phase One of the study included British Columbia's 13 destination Mountain Resorts and evaluated the 2007/2008 winter season. Phase Two included all alpine ski areas in British Columbia (46 ski areas) and evaluated the 2012/2013 season. The results of Phase Two are presented in this report.

In 2014, data from participating ski areas were collected and analyzed by Research, Planning and Evaluation. Fifteen of the 46 ski areas submitted financial and client¹ information for the 2012/2013 season (representing 69% of BC's skier visits). Estimates were used for the other 30 ski areas. BC Stats was commissioned to estimate the economic impact of the ski areas, using the aggregated data from the province's ski areas.

This report focuses on the operation (and impacts) of the ski areas. The impacts included in this analysis are:

- The operation of BC ski areas including spending and employment by the ski areas.
- Spending by visitors while on trips to/in BC for the purpose of visiting a ski area.

Economic impacts occur at the ski areas, elsewhere in the local community and elsewhere in British Columbia as visitors travel to and from ski areas.



This analysis does not include:

- Ski related impacts not associated with a visit to a ski area.
- Helicopter and snowcat skiing operations or other commercial ski guiding operations.

The economic impacts of ski areas in BC are summarized in Table I (page 5). The total spending related to the annual operations of all ski areas combined with the incremental visitor² spending

¹ "Client" refers to those who have directly used the ski areas and where information regarding the user (i.e. guest) has been collected by the ski areas.

² "Visitor" refers to any clients and their associated travel parties that may or may not have used the ski areas, where the ski area was the main motivation for the trip but some members of the visitor party may not have used the ski-area facilities.

for the 2012/2013 season amounted to over \$1.4 billion. From this \$1.4 billion in spending, the associated effects on the province are:

- Total output (revenue) of \$1.3 billion,
- Gross Domestic Product of \$972 million, and
- employment of 18,823 full-year equivalent³ jobs with wages of \$573 million.

For comparison purposes, the overall tourism revenue in British Columbia in 2013 was estimated to be \$13.9 billion; therefore, the ski areas represented approximately 9% of the total tourism revenues in 2013. In terms of Gross Domestic Product (GDP), the tourism industry generated \$7.3 billion in real GDP in 2013; with ski areas contributing approximately 13% to the total real tourism GDP in 2013.

Table I: Economic Impact Summary

Measure	Ski Area Operations	Incremental Visitor Spending	Total Economic Impact
Input (\$M)	548	878	1,426
Output (\$M)	354	953	1,307
GDP (\$M)	489	483	972
Wages (\$M)	243	330	573
Taxes (\$M)	72	115	187

Specifically, for each spending component:

1) Ski-Area Operations:

From the ski-areas' spending of \$548 million, the associated effects on supplier industries and induced expenditures are:

- Total output of \$354 million;
- gross domestic product of \$489 million;
- a total of 9,589 equivalent full-year jobs supported in the province, with wages, salaries and benefits of \$243 million; and
- taxes of \$72 million, including federal (\$35 million), provincial (\$25 million), and local (\$12 million) taxes.

2) Ski-Area Incremental Visitor Expenditures:

From the visitor spending of \$878 million, the associated effects on supplier industries and induced expenditures are:

- Total output of \$953 million;
- gross domestic product of \$483 million;
- a total of 9,235 equivalent full-year jobs supported in the province, with wages and salaries of \$330 million; and
- taxes of \$115 million, including federal (\$55 million), provincial (\$47 million), and local (\$14 million) taxes.

³ "Full-year equivalent" refers to the average number of employees throughout the year. This number is used in the economic model. The total peak number of people employed during the year will be higher.

3. Introduction

In 2004, the Province released the *British Columbia Resort Strategy and Action Plan* to support the growth of British Columbia's all-season resort industry. The goal of the Resort Strategy was to expand business opportunities, attract investment to existing and new resorts, grow the industry and create local jobs, while protecting the natural beauty of what British Columbia has to offer.⁴

Tourism in British Columbia continues to be an important economic contributor, generating nearly \$7.3 billion in real GDP⁵ in 2013; representing 6% of the province's total real GDP.⁶ In addition, the tourism industry is a recognized job creator for the province by employing 132,000 British Columbians⁷ accounting for approximately one in every 15 jobs in the province. Tourism in British Columbia is a year-round industry that impacts communities large and small throughout all regions of the province.

Ski areas are a valuable component of the tourism industry; they provide one of the most important motivating factors (to ski and/or snowboard) for travelling to and around British Columbia during the winter months, and in the summer provide a stunning backdrop for hiking, mountain biking and golfing. The ski areas in the province range in size and seasonality, from the world-renowned, all-season Whistler Blackcomb resort to the smaller community areas which host British Columbians, other Canadians and international tourists alike. There are 46 ski areas in the province that were included in this study; these include all downhill operations and commercial Nordic operations. It is important to note that this study does not include the helicopter and snowcat skiing operations in British Columbia.

Intuitively it is known that ski areas are an important contributor to the overall tourism industry in the province. In order to make informed decisions on land use and resort development proposals an economic evaluation of the British Columbia ski areas is needed to increase the understanding of decision-makers and for providing a quantifiable comparison for various land-use proposals.

⁴ Government of British Columbia. (2004). *British Columbia Resort Strategy and Action Plan*.

⁵ In 2007 dollars

⁶ Destination BC. (2015). *Value of Tourism in British Columbia*.

⁷ Destination BC. (2015). *Value of Tourism in British Columbia*.

4. Project Rationale

The Mountain Resorts Branch in the Ministry of Forests, Lands and Natural Resource Operations (FLNRO) is responsible for working with partners to provide timely decisions for new resort proposals, major expansions and other projects at existing resorts. The branch sets and administers policy for all-season resort development, implements the BC Resort Strategy, and works to contribute significantly to the increasing tourism revenues for the province.

The Canada West Ski Areas Association (CWSAA) is an important partner in the collaborative work performed by the Mountain Resorts Branch. The CWSAA represents the ski areas and helicopter and snowcat operations in British Columbia, the Yukon, Alberta, Saskatchewan, and Manitoba.⁸ The CWSAA works with the provincial government to protect and advance the interests of ski areas in Western Canada in terms of laws, regulations, and policy.⁹

A number of independent studies have been conducted by members of the CWSAA on the economic impact of products and services they provide, which have been instrumental in lobbying governments and communities for increased support. Economic impact studies are commonly used to provide a quantitative measure of the positive contribution made to the economic prosperity of the jurisdiction in question. A common desire to determine the combined economic impact of the British Columbia ski areas prompted the CWSAA and the provincial government to partner on quantifying the contribution of the ski areas to the province of British Columbia.

The Research, Planning and Evaluation department (Destination BC) was approached in April 2010 by the Mountain Resorts Branch to manage a study to determine the economic contribution of the ski areas to the province of British Columbia.

Due to the number and varying sizes of resorts and ski areas, the project was separated into two phases. Phase One included the 13 market-ready mountain resorts, and Phase Two included all 46 provincial ski areas, summarized in this report.

In partnership with CWSAA, the Research, Planning and Evaluation department collected and compiled financial and client information from the ski areas to be entered into the BC Stats Input-Output model¹⁰. This report summarizes the economic impact results for the province's 46 ski areas for the 2012/2013 year.

Economic impact analyses are typically commissioned to demonstrate the importance of the sector or activity as an economic driver to stakeholders.

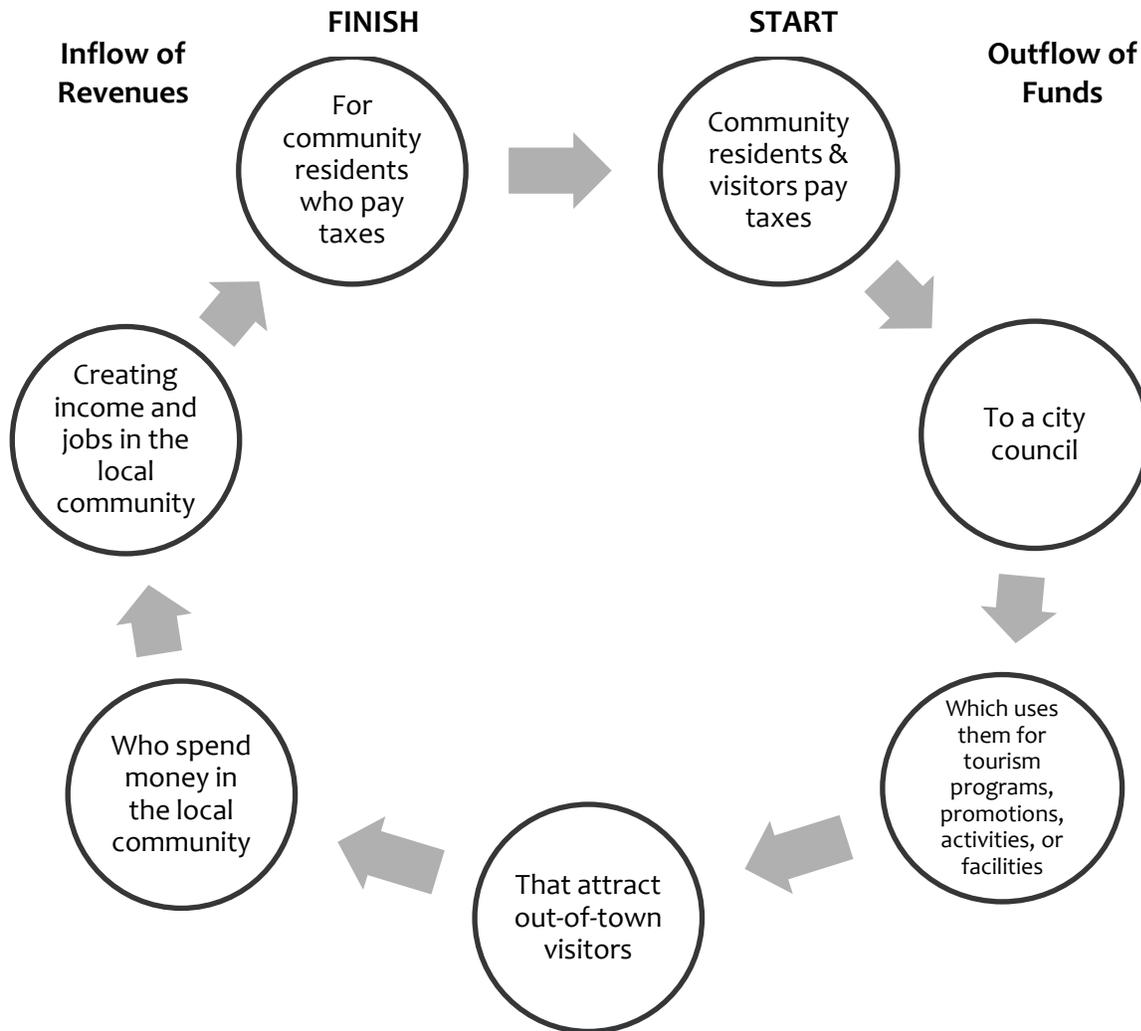
⁸ Canada West Ski Areas Association. (2012). (<http://www.cwsaa.org/>).

⁹ Canada West Ski Areas Association. (2012). (<http://www.cwsaa.org/>).

¹⁰ See Appendix 2 for an explanation of the Input-Output model.

Figure I summarizes a general understanding of why economic impact studies are commissioned.¹¹

Figure I: The Conceptual Rationale for Commissioning Economic Impact Studies



In 2002, the B.C. Helicopter & Snowcat Skiing Operators Association commissioned a study¹² to estimate the socio-economic benefits of their products and services in British Columbia. The study has been an instrumental piece for lobbying for the growth of their sector. Building on the knowledge and information from this important study, a need to determine the value of the ski areas to the province was identified as a priority by the ski industry in British Columbia.

¹¹ John L. Crompton. (2010). *Measuring the Economic Impact of Park and Recreation Services*. National Recreation and Park Association, Research Series.

¹² B.C. Helicopter & Snowcat Skiing Operators Association. (2002). *Socio-Economic Benefits of Helicopter & Snowcat Skiing in British Columbia*.

5. Study Objectives

To determine the “value” of any sector or activity, often emphasis is placed on economic value evaluation as it allows for quantitative comparisons. For the purposes of this project, determining the economic contribution of the ski areas was the primary objective. The results will provide valuable information for government and industry partners, including the CWSAA.

6. Scope of Analysis

Phase Two focuses on all ski areas in the province; for this phase the Research, Planning and Evaluation department:

- Reviewed tourism information provided by participating ski areas, provincial government, national and international traveller surveys, the Canadian Ski Council, and tourism destination marketing organizations.
- Collected financial, employment and client information from participating areas.
- Estimated the amount of tourism spending at the ski areas for the 2012/13 season.
- Estimated the amount of tourism spending by visitors to the ski areas outside the local community but within the province of British Columbia. This analysis only included those visitors whose primary motivation for travelling to/within British Columbia was to visit a ski area.
- Utilized the tourism spending and consolidated ski-area financial information with the BC Stats Input-Output Model to develop estimates of the economic impacts of the ski areas at the provincial level.

This report focuses on the operation (and impacts) of the ski areas. The impacts included in this analysis are:

- The operation of BC ski areas, including spending and employment by the ski areas.
- Spending by visitors while on trips to/in BC for the purpose of visiting a ski area.

This analysis does not include:

- The impacts of other businesses in the local communities where ski areas are located.
- Real estate in the local community or the controlled recreation area.
- Visitors travelling to the local community in which the ski area is located (e.g. for conferences).
- Ski-related retail spending not associated with a trip to a ski area.
- Helicopter and snowcat skiing operations or other commercial ski-guiding operations.

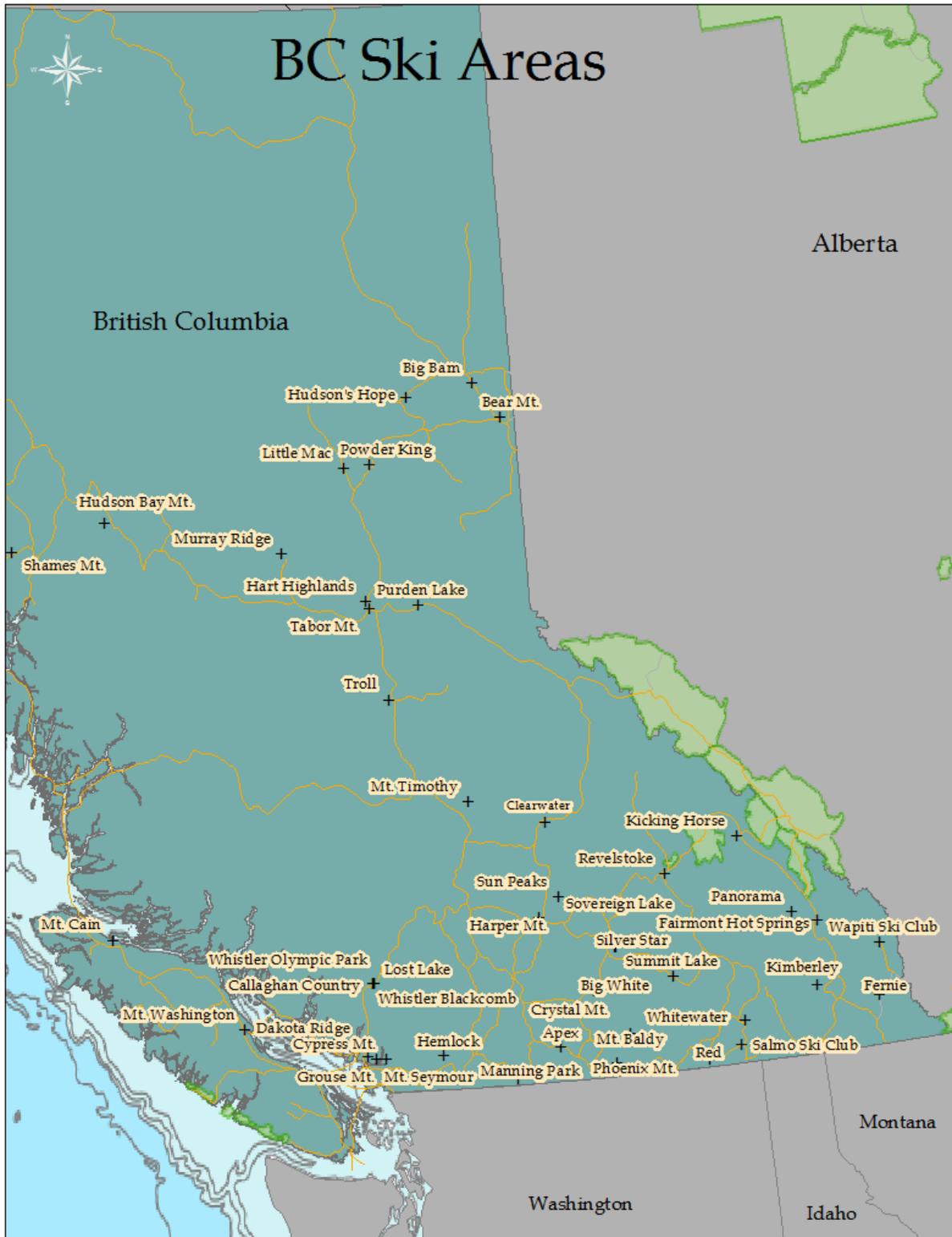
7. Description of Ski Areas

For the purpose of this study, ski areas include all alpine ski areas in British Columbia plus Nordic operations that are CWSAA members. The 46 ski areas included in this study are shown in Figure 2: BC Ski Areas (page 11). The focus of these operations is skiing in the winter, but may also include tubing and sightseeing. Summer operations are included where areas operate during the summer offering activities such as sightseeing, mountain biking and hiking. The ski-area revenue and visitor spending evaluated in this report only represents spending by parties that actually used the area facilities.

7.1 Ski Industry in British Columbia

British Columbia's diversity of ski product ranges from black-diamond steeps and chutes, to wide-open terrain and tree lines, with many areas having ski-in/ski-out accommodations. With the Vancouver 2010 Olympic and Paralympic Winter Games, British Columbia's skiing and snowboarding tourism products received unprecedented worldwide coverage.

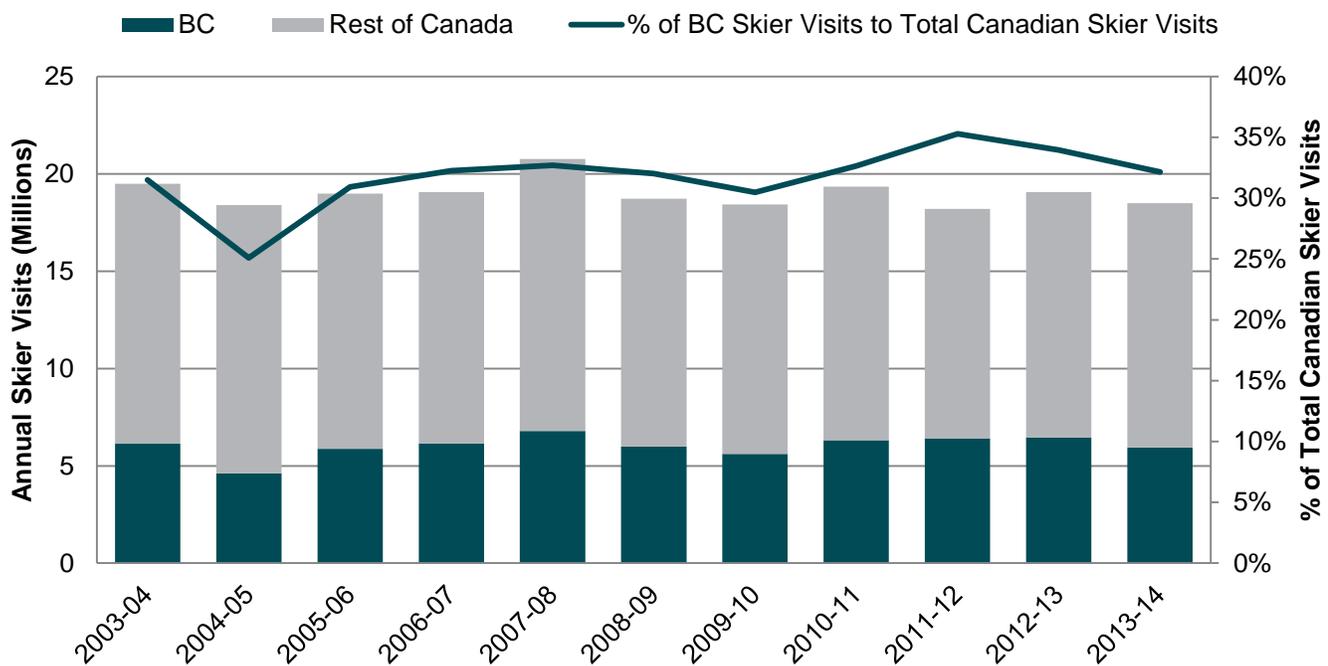
Figure 2: BC Ski Areas



7.2 Skier Visits

The common measure of use (i.e. visitation) in the ski industry is the “skier visit”, which represents one skier or snowboarder participating at an area for one day.¹³ Reviewing skier visits information for Canada and BC from 2003 to 2014 (Figure 3), it can be concluded that British Columbia plays a large role in the overall Canadian ski market. In 2012/2013 skier visits in British Columbia accounted for 34% of Canadian skier visits.¹⁴ Another unique quality of the British Columbia ski market is that almost one-third of skier visits (32%) are from international markets, compared to 11% in Alberta, and 5% in Quebec.¹⁵ International skier visits vary significantly with the value of the Canadian dollar.

Figure 3: 2003/2004 – 2013/2014 Skier Visits



Source: Canada West Ski Areas Association (2015)

¹³ Canadian Ski Council. (2011). *2010-2011 Canadian Skier and Snowboarder Facts and Stats*.

¹⁴ Canada West Ski areas Association (2015).

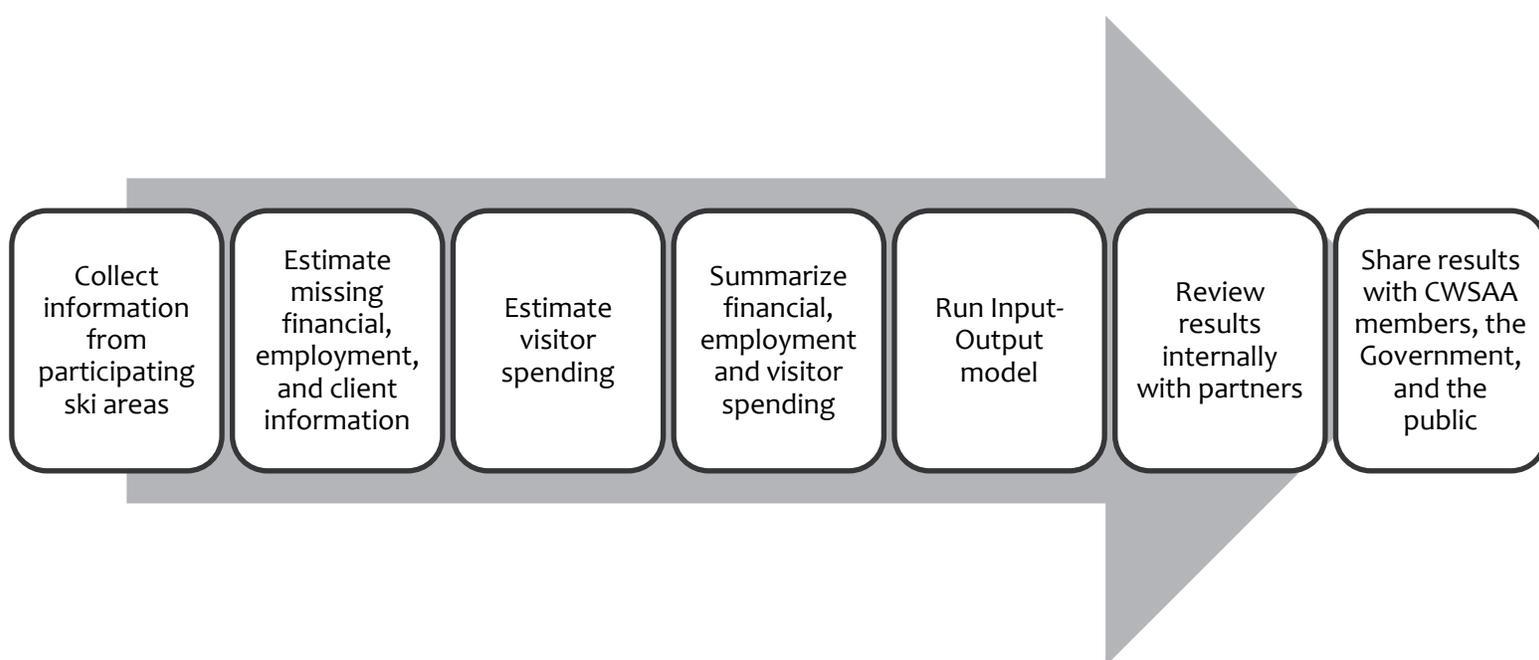
¹⁵ Canadian Ski Council. (2011). *2010-2011 Canadian Skier and Snowboarder Facts and Stats*.

8. Methodology

After initial discussions with the Mountain Resorts Branch and the CWSAA in April 2010, Phase One of the project was formally introduced to the 13 destination mountain resorts at the CWSAA Spring AGM on May 4, 2010. Following the meeting, all 13 mountain resorts agreed to participate and signed a letter of confidentiality ensuring all information was to be kept anonymous and would only be presented when aggregated with the other mountain resorts. Phase Two continued on the work of Phase One, with the inclusion of all ski areas regardless of size or market readiness status. Similarly, a confidentiality agreement was signed to ensure data from individual ski areas would remain confidential.

Figure 4 below summarizes the process that was followed to collect and summarize information from the ski areas that was used to enter into an Input-Output model.

Figure 4: Process (Phases One & Two)



8.1 Collecting Information

An extensive review of existing information and tools used by the CWSAA, government, and the Canadian Ski Council (CSC) was undertaken to identify existing information that could be used in the project and to develop a data collection tool to capture additional information from the ski areas needed to fulfill the objectives of the study. Phase Two ski areas received the data collection tool in March 2013.

To ensure anonymity, all data provided to Destination BC was stripped of ski-area name information.

The data collection tool focused on three main areas, which included information on:

- 1) Financials
- 2) Employment
- 3) Clients

Financial Information

On an annual basis, participating CWSAA members provide their past season's financial information to EcoSign Mountain Resort Planners Ltd. following a standard template.

As CWSAA members are familiar with the EcoSign template, a similar format was included in the data collection tool. In addition, a section asking questions about components of the financial template was included for use in the modelling process. This section included further detail on winter and summer revenue and expense categories, "Other" categories, proportions of food vs. beverage revenues, etc.

Employment Information

Similar to the financial information, employment information is summarized on the EcoSign survey by the ski areas. Anonymized summaries of ski-area employment were provided to Destination BC based on the EcoSign survey. Monthly employment counts were averaged to derive a full-year equivalent employment value for use in the Input-Output model.

Client Information

In addition to the ski-areas' operational information (financials and employment), another component of the economic value of the ski areas to the province is the spending by visitors during their visit to the ski areas and during their travels within British Columbia.

To estimate visitor spending of clients (and their travel parties) whose trips to and within British Columbia were motivated by British Columbia ski areas, information on visitation and visitor characteristics (e.g. market of origin, expenditures, length of stay, etc.) was needed.

In order to analyze the skier visit information and to estimate visitor spending, a series of questions were included in the data collection tool to collect client information. This included questions about the percentage of local residents, day visitors and overnight visitors for winter and summer visits, as well as more detailed information regarding overnight visitors. Overnight visitor questions included market of origin, length of stay, trip expenditures and accommodation information. In cases where client surveys are not conducted by the ski areas, individual ski areas were asked to provide estimates for overnight visitor characteristics.

8.2 Estimating Missing Information

Of the 46 ski areas in the province, 15 ski areas completed the data collection tool provided by Research, Planning and Evaluation. The 15 participating areas represented 69% of provincial skier visits for the 2012/2013 season; therefore providing a good sample to use as a basis for estimates of the non-participating ski areas.

In order to estimate missing information (financial, employment, and client), the data collected from participating ski areas were combined with information from other data sources.

For the financial and employment information, estimates of non-participating ski areas were derived from proportions of skier visits and using information provided by the 15 participating ski areas, factoring in allowances for similar regional and size characteristics and input from CWSAA.

Estimates of visitor characteristics such as origin and visit duration were derived based on regional and size characteristics of participating ski areas and applied to non-participating areas' skier visits.

8.3 Limitations of Collected Information

The following limitations need to be kept in mind when interpreting and using the results of this study:

- The accuracy of the estimated economic impact is dependent upon the accuracy of the data provided by the ski areas and other data used in the analysis.
- While the ski areas that participated in the survey represent a large proportion (69%) of total skier visits, they represent only 33% of the ski areas in the province.
- Unique financial or visitor spending characteristics that occur at non-participating ski areas may not have been captured in the data from the 15 participating ski areas.
- The model results are only relevant for the 2012/2013 season. The results should not be applied to any other time frame.
- The model focuses on the operation (and impacts) of the ski areas and does not include the impacts of other businesses, real estate, visitors, etc. travelling to the local community in which the ski area is located.

9. Ski Areas Economic Contribution to the Province¹⁶

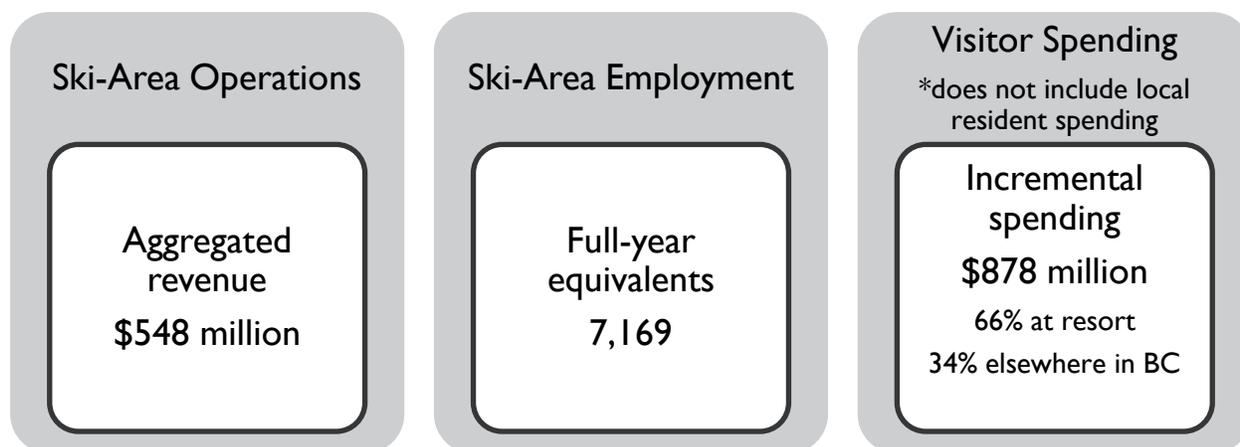
A number of models exist to determine the economic value of a particular product, service, and/or industry; Input-Output models are among the most frequently used. The Input-Output model factors in the “inputs” (i.e. the goods and services used in the production process) to determine the “outputs” (i.e. the economic value of these goods and services).

For the purposes of this project, the BC Stats Input-Output model was used to determine the value of the ski areas to the British Columbia economy. This particular model was selected as it is the most frequently used model to estimate provincial economic impacts, including the overall value of the British Columbia tourism industry. For additional information regarding the BC Stats Input-Output model, please refer to Appendices 1 and 2.

9.1 Summary of Model Inputs

Using the BC Stats Input-Output model (BCIOM), the aggregated financial, employment, and client information for the 46 ski areas’ 2012/2013 season (Figure 5) was entered into the model as two separate components; Ski-Area Operations and Incremental Visitor Expenditures.

Figure 5: Economic Model Inputs



Input: Ski-Area Operations

Summarized in Table 2 (page 17), of the \$548 million in total revenues for the 46 ski areas, \$514 million was either spent on goods, services, and labour used by the ski areas, or represented profits earned by the ski-area owners. Another \$34 million represented depreciation and amortization expenditures. Depreciation and amortization of capital equipment is viewed as part of operating surplus in the calculation of GDP (depreciation is a measure of the value of the services provided by capital equipment in a given year, in the same way that labour income is a measure of the value of services provided by labour). Therefore these costs were treated as part of the direct GDP associated with the activities of the ski areas.

¹⁶ BC Stats. (2015). *BC Input-Output Model Report*. (Summarized interpretation provided by BC Stats).

The ski-area financial information was coded to BCIOM categories. In many cases (e.g., labour or insurance costs) there was a direct correspondence between the BCIOM categories and the survey information. However, in some instances it was necessary to allocate the survey data to BCIOM categories. For example, general and administrative costs were allocated to representative BCIOM commodities using information from the model.

Table 2: Summary of Input Data – Ski-Area Operations

Summary of Input Data, All Ski-Area Operations	
(values in \$000)	
Phase Two data is based on the 2012-2013 winter season	Phase 2 (All ski areas)
Cost of goods sold:	49,747
Food and bar	20,546
Retail store	23,015
Rental shop	3,214
Other	2,973
Other direct costs	107,507
General/Admin	65,266
Other direct costs	51,732
Miscellaneous common expenses	-9,491
Other common expenses	40,361
Marketing	19,399
Insurance – Property	2,305
Insurance – Liability	3,435
Land use fees – Public	5,164
Land use fees – Private	0
Taxes – Property	4,890
Taxes – Other taxes	207
Snowmaking	2,595
Snow removal	2,366
Property operation	8,072
Profits (gross margin plus operating profit/loss)	138,561
Interest charges	36,987
Direct labour	112,584
Supplementary labour income	19,915
Expenditures on goods, services & labour	513,735
Plus: Depreciation & amortization	33,837
Total expenditures (equals total revenues including concession income)	547,572

Input: Incremental Visitor Expenditures

In addition to the operating costs of the ski areas, the estimate of incremental spending by tourists visiting the ski areas was used as an input. This was used to determine the economic impact associated with visitor expenditures.

Incremental expenditures, summarized in Table 3, include spending by visitors who travelled to/in BC to visit the ski areas. These expenditures represent additional spending on goods and services in BC that would not otherwise have occurred. Incremental spending by ski-area visitors was estimated at \$878 million.

Total spending by visitors was allocated to model categories based on average spending patterns of tourists travelling to BC (this information is available in the BCIOM tables). These expenditures include a wide variety of goods and services, such as accommodation, transportation, food and beverage services, as well as items typically purchased by tourists (e.g., clothing or souvenirs).

The incremental expenditure estimates used in this analysis exclude spending at the ski areas. Only ancillary expenditures were included. Spending by tourists on ski-area activities is already reflected in the revenues of these ski areas, so the economic impact associated with that spending is captured in the results for the ski areas.

Table 3: Summary of Expenditures

Summary of Expenditures: At Ski Areas/Local Community & Elsewhere in BC			
(values in \$000)			
Market (visitor origin)	Local Community Total	Extra BC Total	Market Total
British Columbia	269,115	38,595	307,710
Alberta	47,834	21,680	69,514
Ontario	31,939	24,373	56,312
Rest of Canada	23,189	17,757	40,946
US	96,407	111,199	207,607
Overseas	90,440	104,273	194,713
Overall	559,986	317,877	877,863

Key Assumptions

The wage component of the labour cost estimate is assumed to include pre-tax wages, salaries and supplementary income (e.g., the employer's share of contributions to EI or CPP). The model's estimates of income tax revenues are calculated by estimating income taxes associated with a given wage. For the calculation of induced effects, it is assumed that 80% of workers' earnings will be used to purchase goods and services in the province (the remaining 20% goes to taxes, other payroll deductions, and savings).

It is assumed that a social safety net is in place, and that workers hired to work on the project previously had some income from EI or other safety net programs (note: the social safety net assumption only affects the estimate of worker spending, which is the induced effect associated with the project).

All of the tax revenue impacts have been calculated based on the current tax structure, which assumes a PST of 7% is applied to items subject to the tax.

Employment estimates are generated by the model based on the wage bill and average earnings in each affected industry. They should not be confused with FTE counts. The model estimates represent average jobs in an industry. In some industries, most workers are employed full time, but in others (e.g., accommodation and food services) the typical work week is usually shorter.

9.2 Summary of Model Results

The two model components, Ski-Area Operations and Incremental Visitor Expenditures are summarized separately and are then combined to provide an overall summary of the economic value of all ski areas in the province for the 2012/2013 season.

Output: Ski-Area Operations

The results of the Input-Output analysis for the ski-area operations are summarized in Tables 4, 5, and 6 (pages 21 to 23).

Of the \$548 million in total expenditures of the ski areas, an estimated \$43 million was used to purchase goods and services imported from other countries and provinces, or removed from inventories. Total spending on goods and services was estimated at \$505 million. This includes just over \$306 million in wages, salaries, benefits and operating surplus (including depreciation of capital equipment), as well as \$15 million spent on commodity taxes (net of subsidies). The direct supply of \$184 million represents total spending by the ski areas on goods and services produced by BC industries.

The direct contribution to BC's GDP (measured at basic prices) resulting from the operation of the ski areas is estimated at \$316 million.

Another \$173 million of GDP is generated in industries supplying goods and services used (directly or indirectly) by ski areas or in those industries benefitting from re-spending by workers.

Direct employment at ski areas (including full-time and part-time workers) is 7,169, with another 1,978 jobs in supplier industries and 442 jobs resulting from spending by workers.

Tax revenues include commodity and income taxes. Revenues generated directly by the ski areas are estimated at \$30 million. Another \$34 million in tax revenues are generated by the activities of supplier industries, and \$8 million in tax revenues are the result of spending by workers.

Table 4: Economic Impact – Ski-Area Operations

Total Impact, Including Operations, Supplier Industry & Induced Effects					
	Direct	Other suppliers	Total indirect*	Induced**	Total impact
Total project expenditures, operations (\$M)	548				
Supplier industry & induced impacts (\$M)	184	108	291	63	354
GDP at basic prices (\$M)					489
Operations***	316				316
Supplier industry & induced impacts	82	52	134	39	173
Employment (#)****					9,589
Operations	7,169				7,169
Supplier industry & induced impacts	1,274	704	1,978	442	2,420
Employment (FTES)					7,610
Operations	5,425				5,425
Supplier industry & induced impacts	1,122	663	1,785	400	2,185
Household income (\$M)					243
Operations	134				134
Supplier industry & induced impacts	53	34	87	22	109
Average annual wage (\$ per employee)					
Operations	18,668				
Supplier industry & induced impacts	41,345	48,630	43,940	50,675	45,165
Tax revenue (\$M)					72
Operations	30				30
Supplier industry & induced impacts	21	12	34	8	42

* The total indirect impact is the sum of the effect on direct suppliers and other supplier industries.

** Assumes a social safety net is in place. Includes effects generated by project spending and activities of supplier industries.

*** Project expenditure data may not include all components of GDP (e.g., operating surplus).

**** Employment estimates are based on average annual wages in 2011. Includes total employment over the life of the project.

Table 5: Allocation of Project Expenditures – Ski-Area Operations

Allocation of Project Expenditures: Ski-Area Operations				
Total operations expenditures (\$M)				547.6
<i>Minus leakages:</i>				
<i>imports from other countries</i>				22.6
<i>imports from other provinces</i>				19.9
<i>other leakages (e.g. withdrawals from inventory)</i>				0.4
<i>Equals:</i>				
Expenditures on goods & services (including labour and profits) produced in BC (\$M)				504.7
<i>Of which:</i>				
<i>Wages, benefits, unincorporated business income and operating surplus (\$M)</i>				306.2
<i>Taxes on products net of subsidies (\$M)</i>				4.9
<i>Taxes on factors of production net of subsidies (\$M)</i>				10.1
Direct BC supply (\$M)				184
<i>(the change in BC supplier industry output associated with operations)</i>				
Project employment during operations (#)				7,169
Household income included in operations (\$M)				133.8
Tax revenue derived from direct project expenditures ski-area operations				
	Federal	Provincial	Local	Total
Total, all sources	14.214	9.625	6.562	30.400
Taxes on products (\$M)*	0.000	0.000	0.000	0.000
Taxes on factors of production (\$M)	0.073	3.420	6.562	10.054
Personal income taxes (\$M)	2.110	0.712		2.822
Corporate income taxes (\$M)	12.031	5.493		17.525
<i>(income taxes paid on worker's wages and returns to capital reported in project expenditure)</i>				

*Small differences between this figure and the value for taxes on products net of subsidies reported in the allocation of project expenditure are due to rounding and/or the inclusion of net taxes paid on some goods purchased by subcontractors which are not reflected in the indirect & induced impacts given in the following table.

Table 6: Indirect and Induced Impacts of Ski-Area Operations

Indirect & Induced Impacts Resulting from Operations Expenditures					
	Direct suppliers	Other suppliers	Total indirect impact (all suppliers)	Induced impact**	Total indirect & induced impacts
Output (\$M)	184	108	291	63	354
GDP at basic prices* (\$M)	82	52	134	39	173
Employment (#)*	1,274	704	1,978	442	2,420
FTEs (#)	1,122	663	1,785	400	2,185
Household income (\$M)	53	34	87	22	109
Total tax revenue (\$M)	21.237	12.452	33.690	7.953	41.642
Federal (\$M)	11.034	6.416	17.450	3.416	20.866
<i>Personal income tax</i>	8.104	5.827	13.932	3.009	16.941
<i>Corporation income tax</i>	2.323	0.924	3.247	0.673	3.919
<i>Net taxes on products</i>	0.607	-0.335	0.272	-0.266	0.005
Provincial (\$M)	7.570	4.798	12.368	3.017	15.385
<i>Personal income tax</i>	4.108	2.954	7.062	1.525	8.587
<i>Corporation income tax</i>	1.021	0.427	1.447	0.300	1.748
<i>Net taxes on products</i>	2.441	1.418	3.859	1.191	5.050
Local (\$M)	2.633	1.238	3.871	1.520	5.391

* Includes wages, benefits, unincorporated business income, operating surplus and net taxes on factors of production.

** Assumes a social safety net is in place. Includes effects generated by project spending and activities of supplier industries.

Output: Incremental Visitor Expenditures

The results of the Input-Output analysis for incremental visitor spending are summarized in Tables 7, 8, and 9 (pages 25 to 27).

Incremental visitor expenditures associated with ski areas are estimated at \$878 million. Of this total, an estimated \$191 million is used to purchase products imported from other provinces and countries, or removed from inventories. Incremental visitor spending on goods and services produced in BC is estimated at \$687 million, including \$103 million in commodity taxes. The direct BC supply (the change in BC supplier industry output resulting from incremental visitor spending) is \$584 million.

Because tourist expenditures represent final purchases of goods and services, there are no direct jobs associated with these expenditures. All of the GDP and employment generated by visitor spending originates in supplier industries, including those directly selling goods and services used by tourists, those further back in the supply chain, and those benefitting from spending by workers (the induced impact).

Industries that sell goods and services directly to tourists provide 7,006 jobs to British Columbians and contribute \$296 million to the province's GDP. Another 1,584 jobs and \$130 million in GDP are generated in industries further back in the supply chain. Spending by workers contributes another \$57 million in GDP and supports 645 jobs in the province.

Tax revenues associated with supplier industry activities are estimated at \$103 million, with another \$12 million in taxes generated as a result of spending by workers.

Table 7: Economic Impact – Incremental Visitor Spending

Total Impact, Including Incremental Visitor Spending, Supplier Industry & Induced Effects					
	Direct	Other suppliers	Total indirect*	Induced**	Total impact
Total project expenditures, Incremental Visitor Spending (\$M)	878				
Supplier industry & induced impacts (\$M)	584	277	861	91	953
GDP at basic prices (\$M)					483
Incremental Visitor Spending***					
Supplier industry & induced impacts	296	130	426	57	483
Employment (#)****					9,234
Incremental Visitor Spending					
Supplier industry & induced impacts	7,006	1,584	8,590	645	9,234
Employment (FTES)					8,345
Incremental Visitor Spending					
Supplier industry & induced impacts	6,250	1,511	7,762	584	8,345
Household income (\$M)					330
Incremental Visitor Spending					
Supplier industry & induced impacts	217	80	297	33	330
Average annual wage (\$ per employee)					
Incremental Visitor Spending					
Supplier industry & induced impacts	30,970	50,520	34,570	50,675	35,695
Tax revenue (\$M)					115
Incremental Visitor Spending					
Supplier industry & induced impacts	70	33	103	12	115

* The total indirect impact is the sum of the effect on direct suppliers and other supplier industries.

** Assumes a social safety net is in place. Includes effects generated by project spending and activities of supplier industries.

*** Project expenditure data may not include all components of GDP (e.g., operating surplus).

**** Employment estimates are based on average annual wages in 2011. Includes total employment over the life of the project.

Table 8: Allocation of Project Expenditures – Incremental Visitor Spending

Allocation of Project Expenditures: Incremental Visitor Spending				
Total incremental visitor spending expenditures (\$M)				877.9
<i>minus leakages:</i>				
<i>imports from other countries</i>				78.7
<i>imports from other provinces</i>				107.4
<i>other leakages (e.g. withdrawals from inventory)</i>				4.7
<i>Equals:</i>				
Expenditures on goods & services (including labour and profits) produced in BC (\$M)				687.1
<i>Of which:</i>				
<i>Wages, benefits, unincorporated business income and operating surplus (\$M)</i>				0.0
<i>Taxes on products net of subsidies (\$M)</i>				103.2
<i>Taxes on factors of production net of subsidies (\$M)</i>				0.0
Direct BC supply (\$M)				584
<i>(the change in BC supplier industry output associated with incremental visitor spending)</i>				
Project employment included in incremental visitor spending (#)				0
Household income included in incremental visitor spending (\$M)				0.0
Other tax revenue derived from direct project expenditures incremental visitor spending				
	Federal	Provincial	Local	Total
Total, all sources	0.000	0.000	0.000	0.000
Taxes on products (\$M)*	0.000	0.000	0.000	0.000
Taxes on factors of production (\$M)	0.000	0.000	0.000	0.000
Personal income taxes (\$M)	0.000	0.000		0.000
Corporate income taxes (\$M)	0.000	0.000		0.000
<i>(income taxes paid on worker's wages and returns to capital reported in project expenditure)</i>				

*Small differences between this figure and the value for taxes on products net of subsidies reported in the allocation of project expenditure are due to rounding and/or the inclusion of net taxes paid on some goods purchased by subcontractors which are not reflected in the indirect & induced impacts given below.

Table 9: Indirect and Induced Impacts of Incremental Visitor Spending

Indirect & Induced Impacts Resulting from Incremental Visitor Spending					
	Direct suppliers	Other suppliers	Total indirect impact (all suppliers)	Induced impact**	Total indirect & induced impacts
Output (\$M)	584	277	861	91	953
GDP at basic prices* (\$M)	296	130	426	57	483
Employment (#)*	7,006	1,584	8,590	645	9,234
FTEs (#)	6,250	1,511	7,762	584	8,345
Household income (\$M)	217	80	297	33	330
Total tax revenue (\$M)	70.332	32.892	103.223	11.608	114.831
Federal (\$M)	32.696	16.921	49.617	4.986	54.603
<i>Personal income tax</i>	<i>28.614</i>	<i>13.624</i>	<i>42.238</i>	<i>4.393</i>	<i>46.631</i>
<i>Corporation income tax</i>	<i>5.440</i>	<i>3.437</i>	<i>8.877</i>	<i>0.982</i>	<i>9.859</i>
<i>Net taxes on products</i>	<i>-1.358</i>	<i>-0.140</i>	<i>-1.498</i>	<i>-0.389</i>	<i>-1.887</i>
Provincial (\$M)	29.856	12.290	42.146	4.404	46.549
<i>Personal income tax</i>	<i>14.504</i>	<i>6.906</i>	<i>21.410</i>	<i>2.227</i>	<i>23.637</i>
<i>Corporation income tax</i>	<i>2.438</i>	<i>1.555</i>	<i>3.993</i>	<i>0.438</i>	<i>4.431</i>
<i>Net taxes on products</i>	<i>12.914</i>	<i>3.829</i>	<i>16.743</i>	<i>1.739</i>	<i>18.481</i>
Local (\$M)	7.780	3.681	11.461	2.219	13.679

* Includes wages, benefits, unincorporated business income, operating surplus and net taxes on factors of production.

** Assumes a social safety net is in place. Includes effects generated by project spending and activities of supplier industries.

Overall Value of Ski Areas in British Columbia

The direct supplier industry impacts, together with the portion of the activities of ski areas that is tourist-related, are calculated in a way that is consistent with the estimates of tourism revenue, GDP and employment for the province as a whole. Therefore, it should be possible to combine these values and compare them to published measures of the size of the tourism sector.

However, ski-area revenues that originate from spending by locals using the ski-area facilities would not be part of overall tourism GDP. A measure of the total impact of the ski areas (including operation of the ski areas as well as incremental visitor spending) indicates how much the total economy is affected by these activities.

The total spending related to the annual operations of the ski areas combined with the incremental visitor spending for the 2012/2013 season amounted to over \$1.4 billion. From this \$1.4 billion in spending, the associated effects on the province are (Figure 6):

- Total output (revenue) of \$1.3 billion,
- gross domestic product of \$972.3 million, and
- employment of 18,823 equivalent full-year jobs with wages of \$572.8 million.

For comparison purposes, the overall tourism revenue in British Columbia in 2013 was estimated to be \$13.9 billion; therefore, the ski areas represented approximately 9% of the total tourism revenues in 2013. In terms of Gross Domestic Product (GDP), the tourism industry generated \$7.3 billion in real GDP in 2013; with ski areas contributing approximately 13% to the total real tourism GDP in 2013.¹⁷

Figure 6: Combined Economic Impact – All BC Ski Areas

a) Ski-Area Operations (Input - \$548 million)	b) Incremental Visitor Spending (Input - \$878 million)	Combined (a + b)
<ul style="list-style-type: none"> • Output (revenue) – \$354 million • GDP – \$489 million • Employment – 9,589 equivalent full-year jobs, wages of \$243 million 	<ul style="list-style-type: none"> • Output (revenue) – \$953 million • GDP – \$483 million • Employment – 9,234 equivalent full-year jobs, wages of \$330 million 	<ul style="list-style-type: none"> • Output (revenue) – \$1.3 billion • GDP – \$972 million • Employment – 18,823 equivalent full-year jobs, wages of \$573 million

¹⁷ Use caution: The calculation of Tourism GDP does not include spending by locals; spending at ski areas by locals cannot be separated from revenue totals and is therefore included in this analysis.

10. Conclusions

Phase Two of *The Value of Ski Areas to the British Columbia Economy* is completed; over \$1.4 billion in spending (Ski-Area Operations plus Incremental Visitor Spending) in the 2012/2013 season equates to a total economic contribution of \$1.3 billion in revenue and \$972 million in GDP by all ski areas to the province of British Columbia.

Although a conservative estimate, it provides a reliable indicator that can be used by CWSAA and the Mountain Resorts Branch as to the importance of the sector to the provincial economy. The economic value of the ski and mountain resort industry can be used as a baseline measure to evaluate growth. This analysis can be supplemented with other activities that are part of the mountain resort industry (e.g. helicopter and snowcat skiing, accommodation builds, etc.).

This report provides a high-level summary of the methods used in determining the economic value of the ski areas to the province; if further information is needed please contact Ryan Staley, Research, Planning and Evaluation (ryan.staley@DestinationBC.ca).

Appendix I: Input-Output Model Interpretation

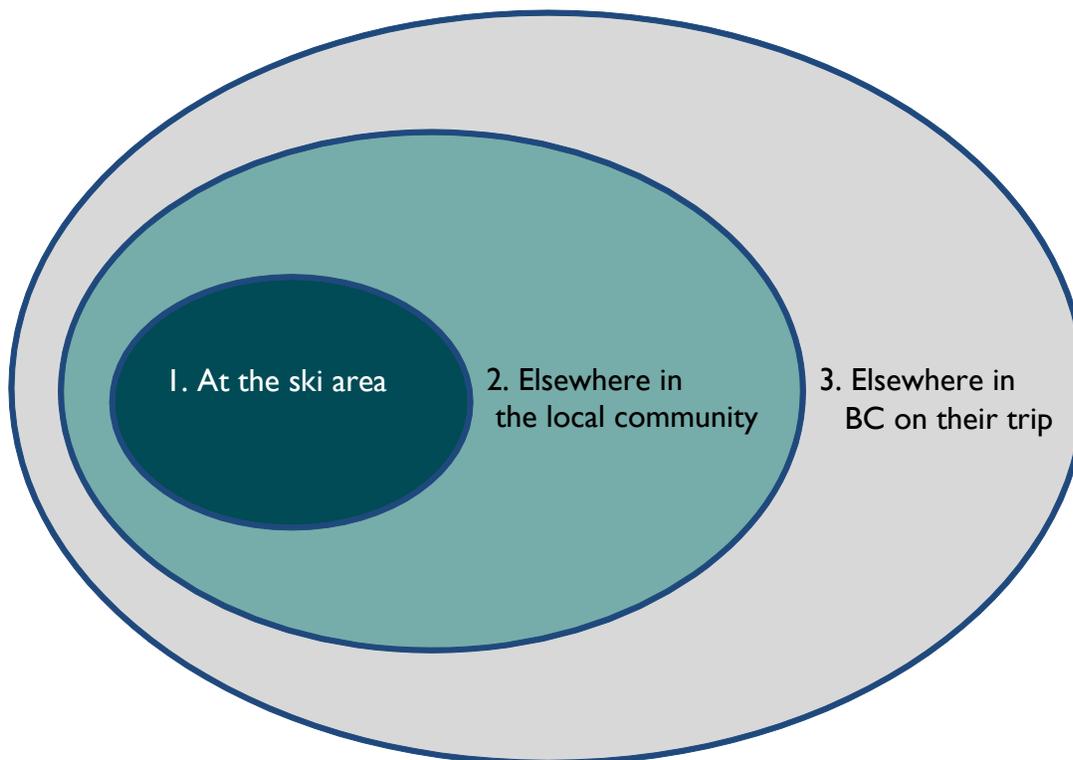
Types of Economic Impacts

Three different types of impacts are reported in a typical Input-Output analysis¹⁸:

- 1) **Direct Impacts:** measures the impact on BC industries supplying goods and services directly used by the project.
- 2) **Indirect Impacts:** measures the impact on BC industries that are further back in the supply chain. The indirect impact is cumulative and includes transactions going all the way back to the beginning of the supply chain.
- 3) **Induced Impacts:** measures the effect that spending by workers (those employed by the project or by direct and indirect supplier industries) has on the economy.

The three different impact types reported from the Input-Output model occur in various geographic locations in the province in relation to ski areas (Figure 7). Specifically, economic impacts occur at the ski areas, elsewhere in the local community, and elsewhere in British Columbia.

Figure 7: Economic Impacts of Ski Area Visitors in British Columbia



¹⁸ BC Stats (2015).

In regards to the three types of economic impacts of ski areas, below is a high-level summary of where these impacts occur in relation to the goods and services provided by ski areas:

- 1) Direct Impacts: The value of businesses that sell final goods and services to (final) customers (e.g. Ski areas selling lift tickets to clients).
 - a) At the ski area property:
 - Revenue is generated by the spending of clients, which is often spent on labour, purchasing inputs, taxes, insurance, rent, etc. by the ski areas.
 - Collected through financial information provided by ski areas.
 - b) Elsewhere in local community or British Columbia:
 - Visitor expenditure information can be estimated through surveys but it is impractical to analyze the financial statements of all businesses where money is spent during visitors' trips.
 - Collected through visitor expenditure information from ski areas and other data sources.
- 2) Indirect Impacts: the value of suppliers to businesses producing the final goods and services (e.g. a company selling fuel to a ski area).
 - a) At the ski area property:
 - Expenditures determined on inputs identified by the direct economic impacts found through the Input-Output model.
 - b) Elsewhere in local community or British Columbia:
 - Estimated from visitor expenditures combined with the first round of the Input-Output model (from direct economic impacts).
- 3) Induced Impacts: The value of firms selling goods and services to employees spending wages earned working for the ski areas. This type of impact is not often estimated or reported.

How Economic Impacts are Measured¹⁹

Output, GDP, employment and tax revenues are the key measures used to assess the economic impacts associated with a project. In order to properly interpret the results of a British Columbia Input-Output Model (BCIOM) analysis, some background information about what these measures represent and how they are calculated may be helpful. A brief explanation of terms and concepts follows.

Output is simply a measure of the total value of production associated with a project. In an **industry-based** analysis, output is equal to the value of goods and services produced by the British Columbia industry or industries that are affected by a specific project. In an **expenditure-based** analysis, it can be measured as the total dollar amount of all spending on **goods and services produced in British Columbia**. It should be noted that purchases of goods and services produced outside the province do not directly affect British Columbia businesses, so these expenditures are explicitly excluded from the analysis. This is usually the main reason why the direct impact on British Columbia industries is less than initial project expenditures.

Gross Domestic Product (GDP) is a measure of the value added (the unduplicated total value of goods and services) to the British Columbia economy by current productive activities attributable to the project. It includes **household income** (wages, salaries and benefits, as well as income earned by proprietors of unincorporated businesses) from current productive activities as well as profits and other income earned by corporations. Only activities that occur within the province are included in GDP.

Employment estimates generated by the model are derived from estimated wage costs using information on average annual wages in an industry. They are not full-time equivalent (FTE) measures. Instead, they reflect the wages paid and hours spent on the job by a typical worker in an industry. For an industry where most employees work full time, the numbers will be very similar to FTE counts. However, in an industry where part-time work is more common, the job counts will be quite different from FTEs.

Government tax revenue estimates generated by the model include income taxes as well as commodity taxes. *Provincial and federal tax revenues include federal and provincial personal and corporation income taxes.* Also included are PST, GST and other *commodity* taxes such as gas taxes, liquor and lottery taxes and profits, air transportation taxes, duties and excise taxes. Property tax revenues are not included in the estimates. *Municipal tax revenues* are primarily related to accommodation taxes.

¹⁹ BC Stats (2015).

Which Measures Should Be Used to Evaluate Economic Impacts?²⁰

Output and GDP are both valid economic measures. However, there are some key differences between them that should be kept in mind when analyzing the results of an input-output analysis.

Output measures correspond to total spending or production, but may overstate the economic impact of a project because the value of a good or service is counted each time it changes hands.

If one is only looking at direct effects, output is a meaningful measure since it shows the total dollar value of industry production. However, there is a danger of double-counting when activities in industries further up the supply chain are also included. Output measures may overstate the indirect economic impact associated with a particular project since the activities of every industry that has contributed in some way to the creation of a final product are counted each time a good or service changes hands.

For example, when a construction company builds a house, the selling price of the house includes:

- The cost of the land on which it is built;
- the cost of inputs (lumber, shingles, cement, carpets, paint, hardware, plumbing fixtures, architectural services and so on) purchased and used by the builder; and
- the value of the work done by the construction company.

An **output-based impact measure** would include the entire selling price of the house (including all these imbedded costs) in the direct output of the construction industry. The value of architectural services included in the cost of the house would also be counted as an indirect output impact on the architectural services industry. The value of the lumber used would be counted as an indirect output impact on the wood industry, and going further back in the supply chain, the value of the logs used by the sawmill would be counted in the indirect output impact on the logging industry. In this example, the value of the logs used to produce the building materials is counted at least three times: once in the direct output impact and twice in the indirect output impacts on the sawmill and logging industries. In other words, the indirect output impact could be quite high simply because goods (or services) used in production have changed hands many times.

*Indirect output impacts provide useful information about the total amount of money that has changed hands as goods and services are transformed into final products. **GDP is a better measure of the economic impact since the value of the work done by each industry is attributed only to the producing industry and is counted only once.***

GDP is calculated by subtracting the cost of purchased goods, services and energy from the total value of an industry's output. As a result, the value of the work done by a producing industry is only counted once. In the construction example, the direct GDP impact would only include the value of the work done by the construction firm. The indirect impact on the sawmill industry would only include the value of the work done to transform the logs into lumber, and

²⁰ BC Stats (2015).

the indirect impact on the logging industry would be a measure of the value of the work done by the loggers. There is no double counting in GDP measures.

It should be noted that the relationship between GDP and output is a useful analytical measure since it shows the extent to which industries rely on labour and capital as opposed to material and service inputs in production. The analysis of economic impacts relies on this relationship, since output is more easily and directly measured than GDP. In fact, the starting point for most input-output analyses is a measure of the direct output associated with a project. From this, known relationships between output and other indicators such as GDP and employment can be used to estimate the economic impact associated with a specific project.

Interpreting the BCIOM Results²¹

This section defines some of the terms and concepts used in the report tables and explains how they are calculated. BCIOM model results are summarized in the tables attached to this report (Tables 4 through 9).

Variables that are calculated directly from information estimated by clients²²

Total project expenditure is usually provided by the client, and includes all direct expenditures associated with the project.

There are no jobs, GDP or output associated with the production of goods and services that are imported into the province. Therefore an estimate of the value of imported goods and services is deducted from project direct spending to determine the value of **project expenditure in BC**.

Estimates of wages, salaries and other components of GDP provided by the client are reported in **project direct GDP at basic prices**.

About Project Direct GDP Estimates

It should be noted that project direct GDP figures are derived from information provided by the client. These figures are usually project-specific, but they are not always based on complete information. For example, it is often possible to get good data on wages and salaries associated with a project or activity. Labour costs are the biggest component of GDP, but other variables which ought to be included in the estimate (such as investment income, operating surplus, or depreciation) are not always known. When the GDP figures generated by the BCIOM are based on partial information, they may understate the project's direct contribution to GDP.

Project-direct employment is derived based on the project's wage bill and estimates of average annual wages in the industry.

Household income is calculated based on project direct wages, benefits and mixed income.

²¹ BC Stats (2015).

²² "Client" refers to those who have contracted BC Stats to run the BCIOM (i.e. Destination BC).

Variables that are estimated using model information

Commodity taxes less subsidies is calculated using information on average sales and other tax rates associated with each good or service purchased by the project.

Project expenditure in BC is traced back to the producing industries in order to determine the **direct BC supply**. Because industries do not “produce” taxes, wages or other components of GDP, the direct BC supply only includes the value of goods and services produced by BC industries. Direct project spending on wages, salaries, operating surplus and taxes are excluded from this measure.

An estimate of **corporate and personal income taxes** associated with these project direct expenditures is calculated using information on average tax rates from the model.

BCIOM impact estimates

The model is shocked using the direct BC supply calculated from the information estimated by Research, Planning and Evaluation. This is used to determine the total economic impact of the project on the BC economy, which is reported in terms of direct, indirect and induced impacts.

The direct impact measures the change in economic activity required to satisfy the initial change in demand. The **direct output impact** is equal to the direct BC supply the change in the economic activity of the industries producing the goods and services purchased by the project.

The **direct GDP impact** is the GDP generated as a result of the activities of the industries that produce the goods and services used by the project.

The **direct employment impact** shows total employment in these industries, and the **direct household income impact** is a measure of the wages, salaries, benefits and other income earned by these workers.

The **direct tax revenue impact** includes personal, corporation, sales and other taxes generated as a result of the activities of the industries that supply the goods and services used by the project.

The allocation of tax revenues to federal, provincial and local governments is based on model averages.

Induced effects

The induced effect, which measures the impact associated with expenditures by workers, includes purchases of a variety of goods and services, including housing.

Appendix 2: Input-Output Model Background

Background on Input-Output Models and Analysis

Input-output analysis is based on statistical information about the flow of goods and services among various sectors of the economy. This information, presented in the form of tables, provides a comprehensive and detailed representation of the economy for a given year. An input-output model is essentially a database showing the relationship between commodity usage and industry output. It consists of three components:

- A table showing which commodities—both goods and services—are consumed by each industry in the process of production (the input matrix),
- a table showing which commodities are produced by each industry (the output matrix), and
- a table showing which commodities are available for consumption by final users (the final demand matrix).

These data are combined into a single model of the economy which can be solved to determine how much additional production is generated by a change in the demand for one or more commodities or by a change in the output of an industry. Changing the usage or production of a commodity or group of commodities is often referred to as shocking the model. The known relationship between goods and services in the economy is used to generate an estimate of the economic impact of such a change.

If a change in demand is met by increasing or decreasing imports from other jurisdictions, there is no net effect on domestic production. All of the benefits or costs associated with employment generation or loss, and other economic effects, will occur outside the region. Therefore, it is important to identify whether or not a change in the demand for a good or service is met inside or outside a region.

Assumptions and Caveats

From an Input-Output perspective, commodities made in BC have a much bigger impact than those imported into the province. The analysis presented here is based on using default import ratios for most commodities: i.e., assuming they are purchased locally, but allowing for the fact that they may have been manufactured elsewhere.

All tax data were generated using the model structure and are based on averages for an industry or commodity.

Economic modelling is an imprecise science, and the precision of the figures in the tables should not be taken as an indication of their accuracy.

The British Columbia Input-Output Model

The BCIOM can be viewed as a snapshot of the BC economy. It is derived from inter-provincial input-output tables developed by Statistics Canada and includes details on 727 commodities, 300 industries, 170 “final demand” categories, and a set of computer algorithms to do the calculations required for the solution of the model. It can be used to predict how an increase

or a decrease in demand for the products of one industry will have an impact on other industries and therefore on the entire economy.

Limitations and Caveats Associated with Input-Output Analysis

Input-output analysis is based on various assumptions about the economy and the inter-relationships between industries. These assumptions are listed below:

Input-output models are linear. They assume that a given change in the demand for a commodity or for the outputs of a given industry will translate into a proportional change in production.

Input-output models do not take into account the amount of time required for changes to happen. Economic adjustments resulting from a change in demand are assumed to happen immediately.

It is assumed that there are no capacity constraints and that an increase in the demand for labour will result in an increase in employment (rather than simply re-deploying workers).

It is assumed that consumers spend an average of 80% of their personal income on goods and services. The remaining 20% of personal income is consumed by taxes, or goes into savings.

The BCIOM is based on a “snapshot” of the BC economy in 2008. It is assumed that relationships between industries are relatively stable over time, so that the 2008 structure of the economy continues to be applicable today. However, it should be noted that employment estimates have been adjusted to reflect wage levels for the year of the expenditures in each case.

The BCIOM does not distinguish between regional effects. It will not, for example, differentiate between the economic impact of a plant located in one region of the province and a similar plant elsewhere in BC.