

# 2010 Arctic Winter Games

Grande Prairie, Alberta

March 2010

## Event Analysis And Economic Impact Study

### Submitted to

Recreation and Sport Development Division  
Alberta Tourism, Parks and Recreation

### Submitted by

Econometric Research Limited

*July 2011*

**Government  
of Alberta** ■



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## 1. INTRODUCTION

The purpose of an economic impact study conducted around a sport event is to quantify and qualify the current and residual economic value the event will impart on local, provincial and national landscapes.

The economic impact is identified and measured objectively as the change in an economy resulting from hosting an event through the direct, indirect, and induced impact of the operation, acquisition, development, programming and use of facilities and services.

An economic impact study provides a snapshot from evidence and information in assessing the projected value of the event which reflect economic activity and value added economic impacts that quantify the general benefits to the economy as well as to various levels of government.

The event analysis impact employs a more subjective approach and is identified and measured from the vantage point of capturing inputs from the value of participation of media, sponsors, information from volunteers, personal interviews and public documents from newspapers, websites, viral platforms and city archives.

## 2. ECONOMIC IMPACT STUDY HIGHLIGHTS

<p>This economic impact analysis has been prepared using the Sports Impact Model - Alberta (SIMA). The full study can be found on pages 12 through 32 of this document.</p>	
<p><b>Note: Grande Prairie and Regional Only Impacts are a subset of Province-wide Impacts.</b></p>	
<p>PROVINCE-WIDE IMPACTS</p> <ul style="list-style-type: none"> <li>• Direct visitor spending and event operations expenditures invested into the economy (province-wide) and attributed to hosting the 2010 Arctic Winter Games in Grande Prairie, Alberta were approximately <b>\$7.65 million</b> in 2010</li> <li>• These expenditures resulted in an economic impact value-added of <b>\$10.81 million</b> province-wide</li> <li>• A total of <b>208 person years</b> of employment were generated province-wide by expenditures attributed to the Games</li> <li>• Approximately <b>\$3.92 million</b> in total taxation revenues accrued to all three levels of government as a result of provincial-wide impacts. Of this:             <ul style="list-style-type: none"> <li>- \$2.72 million was to the federal government;</li> <li>- \$895,000 to the provincial government</li> <li>- \$307,000 to local governments province-wide</li> </ul> </li> </ul>	<p>GRANDE PRAIRIE AND REGIONAL ONLY IMPACTS</p> <ul style="list-style-type: none"> <li>• Direct visitor spending and event operations expenditures invested into the local and regional economy and attributed to hosting the 2010 Arctic Winter Games in Grande Prairie, Alberta were approximately <b>\$7.65 million</b></li> <li>• These expenditures resulted in an economic impact (value-added) of <b>\$7.29 million</b> in the Grande Prairie region</li> <li>• A total of <b>182 person years</b> of employment were generated in the Grande Prairie region by expenditures attributed to the Games</li> <li>• Approximately <b>\$2.70 million</b> in total taxation revenues accrued to all three levels of government as a result of Grande Prairie and Regional Only Impacts. Of this:             <ul style="list-style-type: none"> <li>- \$1.90 million to the federal government</li> <li>- \$594,000 to the provincial government</li> <li>- \$204,000 to local government</li> </ul> </li> </ul>
<p><i>Tax attribution definition is in the Definitions section on page 33.</i></p>	

## 2. Event Analysis

The goal of this event analysis is to examine event planning and operational practices, community volunteerism, sponsorships and fundraising, grant funding, and other elements of the event that indicate promising practices as well as recommendations which future event hosts may wish to consider.

### 2.A. ABOUT THE 2010 ARCTIC WINTER GAMES

The Arctic Winter Games is an international sport festival bringing together athletes from the Northwest Territories, Yukon, Nunavut, Alaska, Greenland, Russia, Nunavik, Northern Alberta and the indigenous people (Sami) of Norway and Finland.

This international multi-sport event and cultural celebration showcased close to 2,000 participants, including 370 athletes and coaches from Alberta, competing in 21 sports including sports indigenous to the north such as Arctic Games, Dene Games, Dog Mushing and Snowshoeing, as well as conventional sports like hockey, skiing and soccer.

Alberta athletes and coaches residing north of the 55<sup>th</sup> parallel have participated in these Games since 1986, with the Games having been hosted in Alberta twice previously; in Slave Lake in 1994 and the Regional Municipality of Wood Buffalo in 2004.

Team Alberta North completed the 2010 Arctic Winter Games on a solid note by finishing second overall in medals, behind Alaska, with 145 medals (43 gold, 56 silver and 46 bronze).

The theme of the 2010 Arctic Winter Games – **DREAM ACHIEVE INSPIRE** - reflects the true spirit of the northern games for all participants, from athletes and performers to volunteers and spectators.

The 2010 Arctic Winter Games logo design is stylized northern lights in the colours of the Arctic Winter Games.

These northern lights extend from the circular logo of the Arctic Winter Games International Committee, reaching out to northern communities to invite them to participate in the warmth of the south.

### 2.B. BACKGROUND OF GRANDE PRAIRIE

Located in the Peace Country of Alberta, Grande Prairie is known as the "Swan City" as it is situated in the middle of the Trumpeter Swan's major breeding area in Canada.

Originally settled by European fur traders around 1770, it was the Hudson's Bay Company who transformed it into a trading post in 1881.

Incorporated as a town by the province of Alberta in 1914, Grande Prairie developed a strong farming economy that was bolstered in 1947 by the discovery of oil and natural gas in Alberta and by 1958, the town of 7,600 people was formally incorporated as a city.

Dramatic change arrived in 1972 with the discovery of natural gas in the area and an accompanying population explosion to 24,000 people by the end of the 1970's, when the oil boom subsided.

By 2010, the worldwide economic downturn had slowed all leading economic indicators, but the decade as a whole proved fruitful for Grande Prairie. By 2008, the city population base exceeded 50,000 people with a special emphasis on youthful immigration. The city has come to service a market area in excess of 200,000 people living within a 200 km radius.

Acting as the metropolitan service centre hub for the Peace Region in Alberta, the integration of Grande Prairie's economy has diversified over time to now include agriculture, farming, forestry, oil and gas and a balance of recreational, sporting and cultural facilities.

Recreation, sport and cultural facility development and renovation have been a priority in recent years with an emphasis driven from the successful hosting of the Canada Games in 1995.

In addition to the more recent infrastructure projects such as the Crystal Centre, Coca-Cola Centre, the Montrose Cultural Centre, the Grande Prairie Regional College gymnasium improvement project and the Nordic Ski Centre, another jewel in the community's crown, the Aquatics and Wellness Multiplex, is set to be unveiled in 2011.

## 2.C. PERSPECTIVE FOR THE 2010 ARCTIC WINTER GAMES

The city of Grande Prairie committed a letter of intent to bid and subsequently made a formal bid application to host the Games in October, 2006 and was awarded the Games in January, 2007. In collaboration, the County of Grande Prairie acted in a significant supporting role for these Games.

The original pro-forma budget for the event was targeted at \$8.7 million and as the economy contracted, was subsequently revised to a budget of \$6.4 million. The delivery of the overall Games was not deterred by the smaller budget.

There has been a strong financial commitment to developing sport, recreation and cultural facilities over the decade as part of supporting Grande Prairie's long range forecasting<sup>1</sup> for continued long-term population growth and subsequent demand for facilities, services and programming.

Taking advantage of the available economic opportunities during the growth since the millennium and with the benefit of the immigration of a younger population, the diversity of the region's economy and resulting number of business activities have engaged and developed a highly trained and diversified work force. This active population base and established business infrastructure have been, and continue to be, able to respond to the needs of forestry (pulp, sawmill plant maintenance, and repair), agriculture (farm machinery, processing plants), oil and gas industries (oil and gas field servicing, gas plant construction, maintenance, and repair) and still make a continued commitment to encouraging tourism, recreation, sport and cultural events and activities.

Grande Prairie has seen its revenues increase<sup>2</sup> 77% between 2002 and 2008 from \$71,000,000 to \$125,400,000, as a result of its increasing population base, service area population and the accompanying infrastructure that has been built.

In a globally contracting environment, strength and stability to whether the storm shows in the unemployment rate<sup>3</sup> in March 2009 at 6.5%. The national average was 8% for March 2009.

Real gross domestic product (GDP)<sup>4</sup> advanced 0.6% in January 2010, for 5<sup>th</sup> consecutive monthly increase.

This consecutive GDP growth is a strong indicator of the rigour and vitality of Grande Prairie's economy. GDP is defined as the total net market value of all final goods and services produced in a given year such that it is the total of consumer, investment and municipal spending plus the value of exports less the value of imports.

Manufacturing and construction remained the community's strongest players followed by the wholesale trade. Retail sales, finance, insurance, transportation and the public sectors advanced slightly while real estate services, tourism, agriculture and forestry saw negative returns.

That said, Grande Prairie has not been immune to the recent downturn in the general economy, as it has revised its growth and spending priorities as it looks to cover a deficit in its 2010 budget and move forward with an updated strategic plan<sup>5</sup>.

While the last 2 years have presented difficulties, fiscal responsibility and stability have been maintained and present a sense of opportunity moving forward with a forecasted planned recovery targeted during 2011<sup>5</sup>.

## 2.D. FINANCIAL MANAGEMENT

### ***INVESTMENT IN SPORT AND CULTURAL FACILITIES AND OPERATIONS***

The master budget and plan developed by the Host Society for the Games was broken into a number of Divisions such as Volunteer, Marketing and Facilities with a Divisional approach in managing budgets and allocations while always under the required approved by the Host Society.

It was determined that any deficit experienced as a result of hosting the Games would be taken on as a liability to the City of Grande Prairie.

The financial statements were audited by BDO Canada LLP, Chartered Accountants.

### ***SPENDING BACKGROUND***

Spending was tied directly to meeting budget targets with purchasing policies in place. Each Division was challenged to be creative with their acquisition of supplies, equipment, etc. This included sourcing gifts-in-kind.

The General Manager reviewed all expenditures to ensure they followed budgets and procedures. Regular reporting was submitted for oversight to the General Manager of the Games with updates provided on a monthly basis to the Management Committee and Executive.

Based on respective Division budgets, a monthly tracking process of revenue generation, cash in the bank and expected sponsorship contributions as compared to actual and expected cash outlays was implemented closer to the start of the Games to better ensure a balanced budget.

Total expenses accounted for 94% of total revenues leaving a positive balance of \$367,519 to be distributed as part of the legacy agreement.

### ***OPERATIONAL EXPENSES***

The operational expenses of the games consisted primarily of office space and supplies which were provided as gifts-in-kind. Following the Games, remaining equipment and supplies of the Host Society were to be passed on to local not-for-profit community organizations or be returned to the donor.

Notable expenses from total expenses of \$6,037,549 from the financial statements were allocated as:

- 27% to administration
- 19% to marketing
- 15% to sport facilities
- 6% to cultural activities and ceremonies

### ***OPERATIONS REVENUES***

Notable revenues from total revenues of \$6,405,068 from the financial statements were allocated as:

- 39% in sponsorship and fundraising programs
- 25% from the Government of Alberta
- 20% in funding from municipalities
- 4% in gate admissions
- 4% in merchandising

Note that expenses and revenues were calculated and represented in a combination of traditional billing and income and as gifts-in-kind in all statements.

#### ***FACILITY UPGRADES AND RENOVATIONS***

The existing local facility infrastructure held in its inventory the required facilities and venues to host the event with the current cash outlay by the city only required; 1) to purchase and replace equipment deemed to have exhausted its life cycle and; 2) update equipment to meet new technical standards of a sport or the cultural activity.

The Sport Facilities budget was used to fund the rent of sport and culture venues and pay for defined accommodations as well as to build trails, pay for the set-up, take-down and delivery of ATCO trailers, PA System rentals, temporary lighting, electrical, heating and fencing and to purchase accompanying building materials.

#### ***OTHER VENUES***

There were additional venues rented for the event that were not directly under the auspices of The City of Grande Prairie and The County of Grande Prairie. A majority of these venues were provided as gifts-in-kind through sponsorship agreements.

#### ***THE LOCAL ORGANIZING COMMITTEE AND THE CITY OF GRANDE PRAIRIE***

The Host Society was formed under the City of Grande Prairie. The City had representation on the Management and Executive Committees and an agreement was put in place that included the City provide its facilities and staff on a gifts-in-kind basis.

Some contributions by the city did not formally form a part of the Host Society's budgeting. For example, the city's Sign Shop provided staff time and resources that may not have been recorded as part of the Host Society's "Signage" budget.

The Host Society maintained regular communication and planning discussion meetings with the city and International Committee so that the requirements of hosting the event were met.

## **2.E. SPONSORSHIP AND FUNDRAISING**

The fundraising strategy, given the nearness to the 2010 Olympic and Paralympic Games in Vancouver, was to emulate the programming and style of the Olympic Games, but on a level and approach that was reflective of the peace river region.

Fundraising goals were effectively achieved using the budget of the 2008 Yellowknife Arctic Winter Games as a guideline. Eligible contributions included cash donations and gifts-in-kind goods and services.

The sponsorship committee was made up of one full-time staff managing 14 volunteers who acted as the sales force targeting 3 main groups; large corporations; service groups and rotary clubs; and past sponsors from similar events from a target focused around Grande Prairie and its service area

In an effort to engage smaller sponsor partners, indirect soliciting programs in addition to the website and email initiatives were put in place and there was also a program identified as “\$2,010 by 2010” put into action in 2007 to draw in supporters.

The Pursuit of Excellence Fund, the legacy fund born from the 1995 Canada Games, funded the sponsorship arm of the local organizing committee to help in giving it seed money to move forward the overall fundraising program.

It was felt that running a 3-year program, in advance of the start of the event, was too long to keep momentum, key players and volunteer numbers in place, except as the timeline would apply to government funding requests.

The success of the fundraising program required significant participation, inclusion and support from local solicitors, partners, vendors and suppliers.

## 2.F. GRANT FUNDING

From the period 2007 – 2010, approximately \$3.29 million in Federal, Provincial, Municipal and the City of Grande Prairie awarded grants to support the Games with consideration given to facilities, upgrades to smaller venues, equipment, programs and services.

## 2.G. MEDIA

The Marketing and Public Relations Committee had a mandate to; 1) ensure that every sporting event was covered by at least one of the mediums, viral, TV and/or radio mediums; 2) and market and promote the event for the purpose of branding Grande Prairie and helping to drive ticket sales and gate visitors.

There were 4 committees established consisting of advertising, online, ticketing and communications. These committees were overseen by one full-time manger and a compliment of 10 volunteers, a number of who had overlapping responsibilities.

Local and regional media agencies contributed an estimated \$100,000 of in-kind sponsorship to the overall event in the form of promotion, marketing, brand advertising and event results reporting.

Sport events and results, cultural happenings and human interest stories were represented by local, regional, provincial, national and even international agencies as all of the participating countries provided some form of reporting to their home countries.

Most of the sport and cultural events had an assigned ambassador whose role was to connect athletes and performers to various media opportunities in an effort to raise awareness and



promote the athlete and performer, their country and with a special emphasis on the Games and Grande Prairie.

## 2.H. VOLUNTEERS

While the full-time paid Games staff numbered 14 individuals in managerial, planning and execution capacities, a key driver to a delivering a successful event was carried out by the efforts and commitment of volunteers.

In this event, there were 3,064 formally organized volunteers from in-and-around Grande Prairie from the Local Organizing Committee to the street level contributions of event supporters at sport and cultural activities.

## 2.I. SPORT AND CULTURAL EVENTS

On the sport side, “Eddie The Eagle” visited Grande Prairie to launch himself in one of his self-styled ski jumps. The idea was to bring in familiarity with his history and relationship to Canada and Calgary dating back to his participation in the 1988 Games in Calgary.

On the cultural side, Colin James performed a fundraising concert to launch the arts and cultural theme of the event.

In addition to the athletes, each participating country brought cultural representatives and programs to share the music, art, fashions & food from their northern communities.

As host to these unique Games, Grande Prairie provided the forum to see this cultural exhibition exchange first-hand, while also having the opportunity to share the Northern Alberta culture.

Delivering the cultural aspect of the event required successful partnerships with the city partnered with other local sport, culture, rotary and community clubs, as well as with Grande Prairie Regional College. The opportunity to build relationships moving forward is a key strategy in branding the region as capable of hosting different events at many levels.

The City of Grande Prairie and its local area partners had 31 sport, recreation and cultural events scheduled to be hosted in the region for 2010, after the completion of the Games.

An example of key developing partners for the city and region was the participation in the Games of The Grande Prairie Regional College. They hosted sport and cultural events and showcased their major facility improvements, specifically the \$3 million dollar gymnasium renovation. This reflects the city and schools’ commitment to marketing itself as an event hosting venue as well as showing itself to prospective students. For 2010, GPRC had approximately 55 scheduled events.

## 2.J. COMMUNITY HEALTH & WELLNESS

With the new Aquatics and Wellness Multiplex opening in July 2011, a clear message regarding the expectations in hosting this event is to continue an overall community strategy of health and wellness through sport, recreation and cultural activities with the specific objectives to:

- Enhance community spirit and pride
- Create greater opportunities for community participation and enjoyment, with an emphasis on youth development

- Stimulate and encourage open and creative thinking
- Increase arts and culture understanding
- Provide increased occasions for socializing
- Contribute to the education and development of children
- Preserve community identity
- Increase connections and partnerships within the community by looking to break down actual and perceived roadblocks to community leaders
- Increasing participation rates in sport, recreation and cultural activities
- Help build a stronger community and families
- Continue to attract future tax revenues and workforce from local school graduates
- Lay the foundation for future fund-raising projects and support efforts in collaboration with key stakeholders and centers of influence

## 2.K. SPONSORSHIP AND VOLUNTEER RECRUITMENT CHALLENGES

The ability to recruit sponsors and volunteers was challenged and magnified by other major events being hosted within the same community just before, during and after the 2010 Arctic Winter Games.

The downturn in the economy had an effect and to a lesser degree, so did other smaller events held in the region.

## 2.L. PLANNED OPPORTUNITIES & CONSIDERATIONS

- **Information Technology Program – One Stop:** Grande Prairie is one of two Alberta municipalities (Canmore being the other) piloting an information technology program that supports an event oriented one-stop online-shopping for tourists to book accommodations, tickets, meals, car rental, etc.
- **Information Technology – Tablet and Kiosk survey tools:** Grande Prairie is implementing a second information technology program using PDA tablets in kiosks located around the city for the purposes of encouraging visitors to complete brief surveys with an eye to identifying and tracking tourism and relative ancillary study data.
- **Ticketing:** Provide a centralized ticket system that allows for tickets to also be sold and tracked for economic and socio-economic study purposes at each event site.
- **Coordinated Event Management/Planning:** A coordinated hosting strategy and/or centralized hosting organization (like “Edmonton Events International”) could improve and sustain event planning and management capacities and competencies in Grande Prairie and the surrounding region.
- **Longer Term Analysis:** A follow-up analysis on the impact of the event in 2, 3 and even 5 years may help to assess and describe the economic and event analysis impact of the event with respect to key indicators such as increases or decreases in events hosted, the size of events, the impact to the local retail community and post secondary school enrolment.

## 2.M. LEGACY PLANS

### **ASSET DISPOSAL**

After the Games, an asset disposal program was put in place.

1. All Games' assets were to be recorded on inventory control sheets listing the description of the asset and any directions for disposal from the donor.
2. All assets which were donated to the Host Society, with a condition to gift forward, were to be offered to all non-profit groups in the City and County of Grande Prairie.
3. All remaining assets were to be sold at the completion of the Games and any funds received deposited to the general bank account of the Host Society.
4. Any remaining merchandise and souvenirs were to be sold on a best efforts basis at a reduced price following the Games and funds received deposited to the general bank account of the Host Society.

### ***SURPLUS FUNDS***

After all liabilities and expenses are paid, surplus funds of \$367,519 are to be allocated; firstly, to repay the advance from the Pursuit of Excellence Fund as per the agreement; and second, a committee is formed to make decisions on final disbursements.

This disbursement committee was to consist of representatives from the City of Grande Prairie and the 2010 Arctic Winter Games Host Society.

### ***INDIRECT LEGACY BENEFITS***

There is a strong underlying desire and hope the event will benefit the city in ways that, at this time, are not being directly measured. Some of the informal objectives identified include:

- Half Pipe development
- Bringing the community together
- Increase the population base and college enrolment numbers
- Residual benefit of acquiring sport equipment (ie. wrestling mats, soccer and basketball related equipment, snow making machines, hockey goals)
- Facility upgrades support the community growth of sport and cultural events internally
- Hosting a greater number of events, attractions, meetings and convention travel

## **3. ECONOMIC IMPACT STUDY**

### **3.A. Impact Study: Introduction**

#### ***OVERVIEW***

Economic impact analysis is a useful mathematical tool capable of quantifying the patterns and magnitudes of interdependence among sectors and activities. It is predicated on two fundamental propositions.

First, regardless of the inherent value of primary activities such as recreation or tourism, to the extent that activity involves the use of scarce resources, they generate economic consequences that can be measured and compared.

Second, economic impacts are only partially captured by assessing direct expenditures. Inasmuch as the economy is a complex whole of interdependent and interacting activities, there

are some significant indirect and induced impacts associated with each direct expenditure. These indirect and induced impacts can often larger than the direct impacts.

### ***THE SIMA MODEL***

The impact model used here is a special “Sport” application of a generic model (SIMA: Alberta) developed by Econometric Research Limited. It is a unique model that captures the economic impact of sport-related expenditures at the local level (counties or economic regions) and the provincial level (Alberta).

The model is based on a novel technology that integrates input-output analysis and location theory. The system has already been applied to the study of The Economic Impact of Tourism in Alberta, The Economic Impact of West Edmonton Mall and several Alberta Economic Development and Tourism projects.

The model utilises a large set of economic and technical databases that are regularly published by Statistics Canada. A short list includes the inter-provincial input output tables, employment by sector, taxes by type of tax and the level of government collecting it, prices of products, energy used in physical and energy units, etc.

### **3.B. Impact Study: Methodology**

While other approaches may choose to suspend concern about alternative uses of funds or about the negative (substitution) effects associated with crowding out other expenditures, the methodology in this report does not.

This is why the input data used here were specifically derived to reflect exclusively the incremental expenditures of the Games and their visitors. The input data were all adjusted to net out expenditures that would otherwise be made in the economy in their absence.

We did so by concentrating on the expenditures of visitors who spend “new” money in the economy. For example, all visitors from outside Grande Prairie create incremental tourism impact in Grande Prairie. Other Alberta visitors do not create incremental impacts in Alberta. The only visitor expenditures that are incremental to both levels of economic geography (Grande Prairie, Alberta) are those made by other Canadian, US and international visitors.

### **3.C. Impact Study: Summary Findings**

#### **PROVINCE-WIDE IMPACT**

- Direct visitor and operations expenditures attributed to hosting the 2010 Arctic Winter Games in Grande Prairie, Alberta were approximately \$7.65 million in 2010;
- These expenditures resulted in an economic impact (value-added) of \$10.81 million province-wide;
- A total of 208 person years of employment were generated province-wide by expenditures attributed to the Arctic Games;
- Approximately \$3.92 million in total taxation revenues accrued to all three levels of government. Of this, \$2.7 million was collected by the federal government, \$895,000 went to the provincial government and \$307,000 to local\* governments province-wide.

## **GRANDE PRAIRIE AND REGIONAL IMPACT**

- Direct visitor and operations expenditures attributed to hosting the 2010 Arctic Winter Games in Grande Prairie, Alberta were approximately \$7.65 million;
- These expenditures resulted in an economic impact (value-added) of \$7.29 million in the Grande Prairie region;
- A total of 182 person years of employment were generated in the Grande Prairie region by expenditures attributed to the Arctic Games;
- Approximately \$2.7 million in total taxation revenues accrued to all three levels of government as a result of Grande Prairie and Regional Only Impacts. Of this, \$1.9 million was collected by the federal government; \$594,000 went to the provincial government and \$204,000 to local\* government.

\* see definition of local tax impacts on page 33.

### 3.D. IMPACT STUDY: ASSUMPTIONS, FACTS AND INFORMATION

#### ***TOTAL VISITORS AND TICKET SALES ESTIMATE***

Tickets purchased through an online mechanism provided data on the geographic identity of the purchaser while walk-up ticket sales did not track the geographic identity of the purchasers.

Walk-up ticket sales were allocated to one of the five geographic identities below projecting their distribution against the known geographic identities from the online ticket purchases:

1. Alberta residents (not-including Grade Prairie residents)
2. Alberta residents (including Grade Prairie residents)
3. Canadian residents (not including Alberta residents)
4. USA residents
5. International residents (not including USA residents)

#### ***Notes:***

- SIMA inputs accounted for the difference in residents of Grande Prairie and Alberta.
- Ticket prices differences were averaged as it relates to SIMA data inputs.
- 2008 Financial data used for indicators are provided by Statistics Canada, Travel Survey of Residents of Canada and the International Travel Survey
- Average expenditures are based on Alberta North & TDR statistics provided by Alberta Tourism

#### ***LENGTH OF STAY ESTIMATE***

The length of the event was 7 days. Based on visitor data collected, it was estimated that 40% of spectators were from Grande Prairie and the surrounding area. For the purposes of this analysis, it was assumed that this group did not stay overnight.

Additionally, it was assumed that there was some loss in overnight stays due to shortened days and alternative forms of accommodation like billeting and relatives. Projected across the entire visitor data, this translates to an estimated average 4-nights length of stay.

#### ***EXCLUSION OF ATHLETE COSTS FROM STUDY***

The athlete expenditures were not tracked or gathered for this analysis and were therefore not counted into this economic analysis.

The vast majority of their expenses were covered and managed centrally by the host society and/or their team managers. While it is recognized that athlete expenditures could be assumed as incremental to this event, the data gathering of this information was not feasible when this study was undertaken.

Further, it should be noted that their accommodations were at local schools and their food was provided through the host society athlete food services systems. It is therefore important to recognize the estimated economic impacts projected in this report are exclusive of any incremental benefit of the athletes' costs.

***VOLUNTEER EXPENDITURES EXCLUDED FROM STUDY***

The expenditures of the 3,064 volunteers that supported this event were not tracked or gathered for this analysis.

It is assumed that a significant majority of the volunteers were area residents and therefore they would not overnight at paid accommodations and their regular spending patterns would not have changed significantly. Subsequently, volunteer participation numbers are not used in the calculation of visitor spending.

***OPERATIONAL EXPENDITURES***

Expenditures of the host society were calculated into this economic impact analysis.

***CAPITAL EXPENDITURES***

No capital projects were found to be incremental to this event and therefore none were included in this analysis.

**3.E. IMPACT STUDY: INPUTS**

From Table 1, operational expenditures are significant in that they are larger than visitors' expenditures. Wages and Salaries dominate the list of operational expenditures with a total of about \$1.6 million in (Administration) and almost \$2 million spent on marketing, advertising and promotional materials. The total operational expenditures add up to about \$6.04 million.

Total revenues were approximately \$6.4 million leaving a net income surplus of \$367,519 to be distributed back to the area partner municipalities.

**Table 1**  
**Operational Expenditure Inputs and Net Income Surplus**  
 (2010 Dollars)

<b>Expenses</b>	
Administration	\$1,604,652
Care and Comfort	\$1,081,512
Communications	\$254,918
Culture & Ceremonies	\$361,065
Fundraising	\$127,752
Marketing	\$1,158,411
Sports Facilities	\$910,089
Sports Technical	\$219,080

Volunteers	\$320,070
<b>Total Expenses</b>	<b>\$6,037,549</b>
<b>Total Revenues</b>	<b>\$6,405,068</b>
<b>Net Surplus Income</b>	<b>\$367,519</b>

More than 12,603 tickets were sold both online and on-site. Data was not tracked to identify visitors of tickets sold on-site. However, due to the nature of the different ticket packages sold, it was possible to verify that 4,799 unique visitors purchased tickets for the medal rounds. Where it was possible to identify the origin of the visitors, the largest share came from Alberta outside Grande Prairie. For Super Passes, this ratio was over 49.7%, for Day Passes it exceeded 47.3%, and for the Medal Round it exceeded 61.8%. Visitors from outside Alberta represented 10.3%, 29% and 5.6%, respectively. Visitors from the US represented a small share but still accounted for 12.4% of Super Passes, about 10% of Day Passes and 9% of Medal Round. There were a few tickets sold to international visitors.

It is estimated by the local organizing committee that there were more than 2,000 athletes, coaches and officials present for the week. This group was not counted in the study and they may have spent money in the region but this information was not tracked and is therefore not included in this impact assessment.

Volunteers were not included into our calculations. According to the information provided by the local organizing volunteer committee, there were 3,064 volunteers. Most of them came from Grande Prairie and the region and who would have had to purchase tickets to events they attended outside of any event they may have volunteered at.

The impact calculations factored out expenditures made by Grande Prairie and region residents. This money is considered to represent re-circulation and not “new money” into the region.

In Table 2, we present the visitor expenditures on standard tourism expenditure categories in both 2008 and 2010 prices. The original data was supplied in 2008 prices by Alberta Tourism, Parks and Recreation using ITS and CTS surveys conducted by Statistics Canada. This data was converted to 2010 prices using Alberta CPI data. The visitor expenditures are segregated by origin of visitor.

**Table 2**  
**Visitors' Expenditures**

	<b>Alberta Residents</b>	<b>Other Canadians</b>	<b>U.S. Visitors</b>	<b>International Visitors</b>	<b>Total</b>
<b>2008 Prices</b>					
Retail/Other	\$42,910	\$59,989	\$36,958	\$1,470	\$141,326
Recreation/Entertainment	\$13,413	\$8,548	\$27,506	\$368	\$49,836
Public/Local Transportation	\$31,738	\$60,119	\$11,169	\$966	\$103,992
Private Vehicle/Rental	\$136,004	\$76,797	\$144,723	\$759	\$358,284
Food & Beverage	\$97,374	\$70,395	\$82,608	\$2,200	\$252,576
Accommodation	\$65,808	\$38,016	\$224,202	\$1,698	\$329,724
Total	\$387,247	\$313,865	\$527,164	\$7,462	\$1,235,739
<b>2010 Prices</b>					
Retail/Other	\$43,382	\$60,649	\$37,364	\$1,486	\$142,881
Recreation/Entertainment	\$13,561	\$8,642	\$27,808	\$373	\$50,384
Public/Local Transportation	\$32,088	\$60,781	\$11,291	\$976	\$105,136
Private Vehicle/Rental	\$137,500	\$77,642	\$146,315	\$768	\$362,225
Food & Beverage	\$98,445	\$71,169	\$83,516	\$2,224	\$255,354
Accommodation	\$66,532	\$38,434	\$226,668	\$1,717	\$333,351
Total	\$391,508	\$317,317	\$532,962	\$7,544	\$1,249,331

**3.F. IMPACT STUDY: PROVINCE WIDE IMPACTS**

Visitors from outside Grande Prairie collectively spent \$1.25 million on food, accommodation, travel, retail and entertainment in Grande Prairie during the Games. These expenditures represent “new” money that would not have been spent in Grande Prairie if these Games were not held there. In addition, a total of about \$6.41 million was spent on operations. These expenditures add up to \$7.65 million.

The province wide income impacts of these expenditures are naturally higher than those in Grande Prairie as the Alberta economy is more able to sustain these expenditures. We estimated the income impacts in Alberta to be \$10.81 million.

This represents a significant, but temporary, increase in Alberta’s annual Gross Provincial Income (GPI). Wages and salaries in Alberta were augmented by about \$7.5 million and employment was increased by 208 person years on account of these expenditures (see Table 3 and figures 1 and 2).

The three levels of government collected substantial revenues on these impacts. The Federal government alone realized tax revenues of over \$2.72 million, whereas the provincial government collected a total of over \$895,000. The Local governments in Alberta received over \$307,417 from these impacts.

**PROVINCE-WIDE ECONOMIC IMPACTS**

Tax revenues accrued to all three levels of Government:

Federal Government = \$2.7 Million;

Government of Alberta = \$895,000; and

Local Governments in Alberta = \$307,417



Imports from other countries exceeded that of imports from other provinces. Imports from other provinces amounted to \$1.16 million, whereas imports from other countries amounted to \$1.32 million.

The economic impacts of operational expenditures dominated the incremental tourism expenditures impacts in absolute magnitudes, but not in terms of impacts per dollar of expenditure.

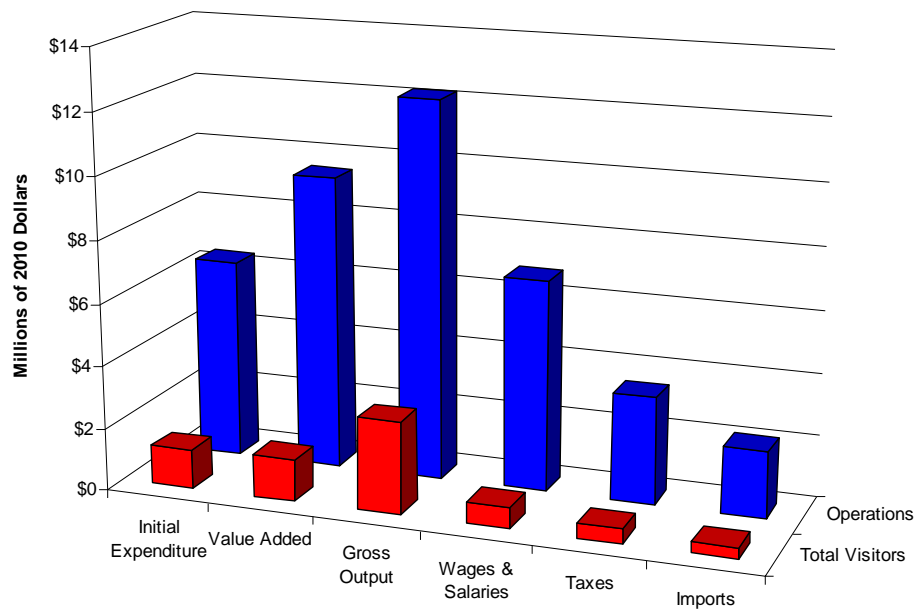
The impact efficiencies (as measured by the multipliers) are only higher for operational expenditures impacts on income, but lower multipliers than those associated with incremental tourism expenditures are noted for gross output and employment. Almost without exception, the two types of expenditures have higher indirect and induced impacts than the direct impacts (see Table 3 and Figure 1).

**Table 3**  
**Province Wide Economic Impacts of the 2010 Arctic Winter Games**  
(2010 Dollars)

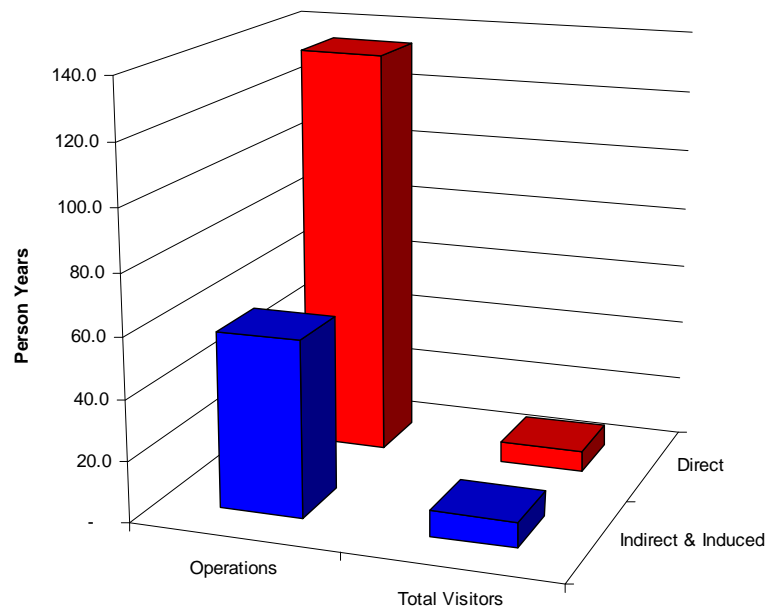
	Operations	Visitors' Expenditures					Total
		Alb Residents	Other Canada	U.S.	International	Total Visitors	
<b>Initial Expenditure</b>	\$6,405,068	\$391,508	\$317,317	\$532,962	\$7,544	\$1,249,331	\$7,654,399
<b>Value Added</b>							
Direct	\$4,451,324	\$131,213	\$119,993	\$186,404	\$2,803	\$440,413	\$4,891,737
Indirect & Induced	\$5,007,827	\$284,092	\$228,803	\$389,886	\$5,418	\$908,199	\$5,916,026
Total	\$9,459,151	\$415,305	\$348,796	\$576,290	\$8,221	\$1,348,612	\$10,807,763
Multiplier	1.48	1.06	1.10	1.08	1.09	1.08	1.41
<b>Gross Output</b>							
Direct	\$6,405,068	\$391,508	\$317,317	\$532,962	\$7,544	\$1,249,331	\$7,654,399
Indirect & Induced	\$5,762,171	\$538,811	\$431,922	\$737,285	\$10,683	\$1,718,701	\$7,480,872
Total	\$12,167,239	\$930,319	\$749,239	\$1,270,247	\$18,227	\$2,968,032	\$15,135,271
Multiplier	1.90	2.38	2.36	2.38	2.42	2.38	1.98
<b>Wages &amp; Salaries</b>							
Direct	\$3,945,114	\$71,961	\$70,841	\$112,155	\$1,798	\$256,755	\$4,201,869
Indirect & Induced	\$2,849,954	\$134,217	\$113,955	\$194,062	\$2,885	\$445,119	\$3,295,073
Total	\$6,795,068	\$206,178	\$184,796	\$306,217	\$4,683	\$701,874	\$7,496,942
<b>Employment</b>							
Direct	134.6	1.7	1.5	3.6	-	6.8	141.4
Indirect & Induced	57.9	2.5	2.1	3.6	0.1	8.3	66.2
Total	192.5	4.2	3.6	7.2	0.1	15.1	207.6
Multiplier	1.43	2.47	2.40	2.00	N/A	2.22	1.47
<b>Taxes</b>							
Federal	\$2,406,883	\$95,129	\$81,626	\$135,220	\$1,960	\$313,935	\$2,720,818
Provincial	\$774,971	\$34,539	\$29,426	\$55,331	\$733	\$120,029	\$895,000
Local	\$266,189	\$11,864	\$10,107	\$19,005	\$252	\$41,228	\$307,417
Total	\$3,448,043	\$141,532	\$121,159	\$209,556	\$2,944	\$475,191	\$3,923,234
<b>Imports</b>							
From Other Provinces	\$1,021,543	\$41,503	\$35,157	\$59,992	\$907	\$137,559	\$1,159,102
From Other Countries	\$1,114,048	\$62,351	\$50,868	\$88,707	\$1,363	\$203,289	\$1,317,337
Total	\$2,135,591	\$103,854	\$86,025	\$148,699	\$2,270	\$340,848	\$2,476,439

Source: Econometric Research Limited

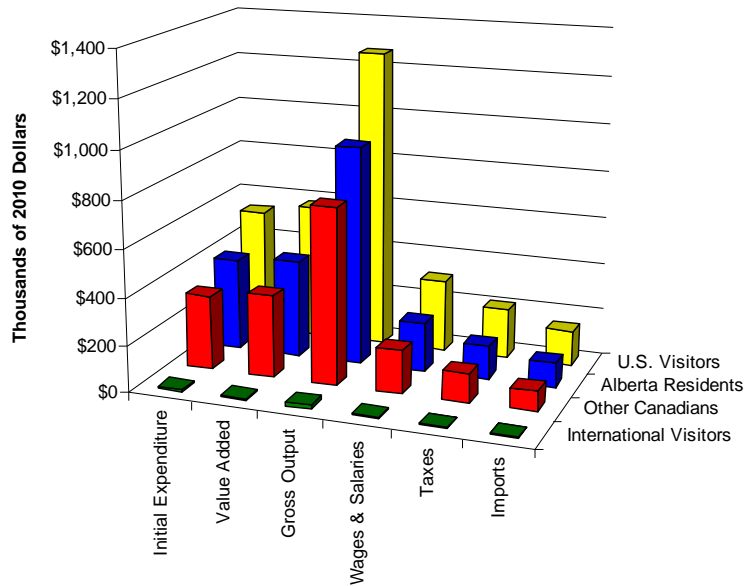
**Figure 1**  
**Province Wide Economic Impacts of the 2010 Arctic Winter Games**



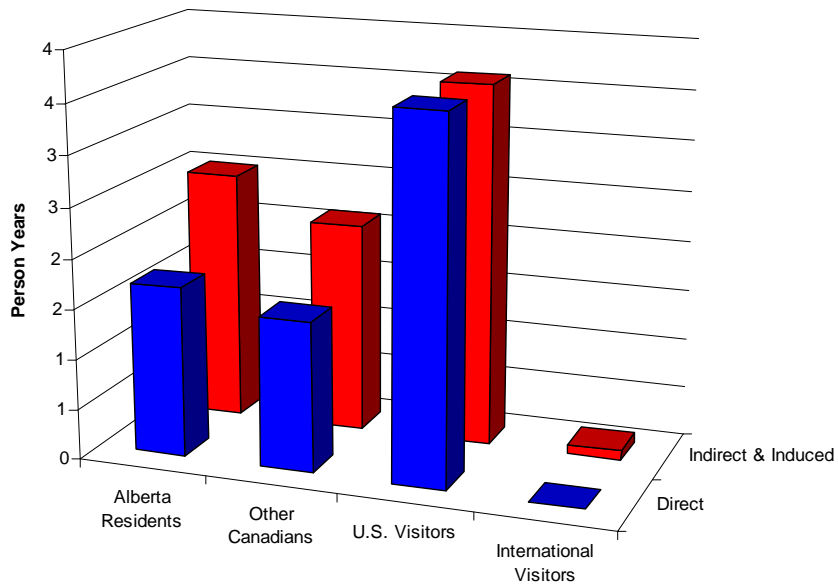
**Figure 2**  
**Province Wide Employment Impacts of the 2010 Arctic Winter Games**



**Figure 3**  
**Province Wide Economic Impacts of the 2010 Arctic Winter Games**  
**Visitors' Expenditures**



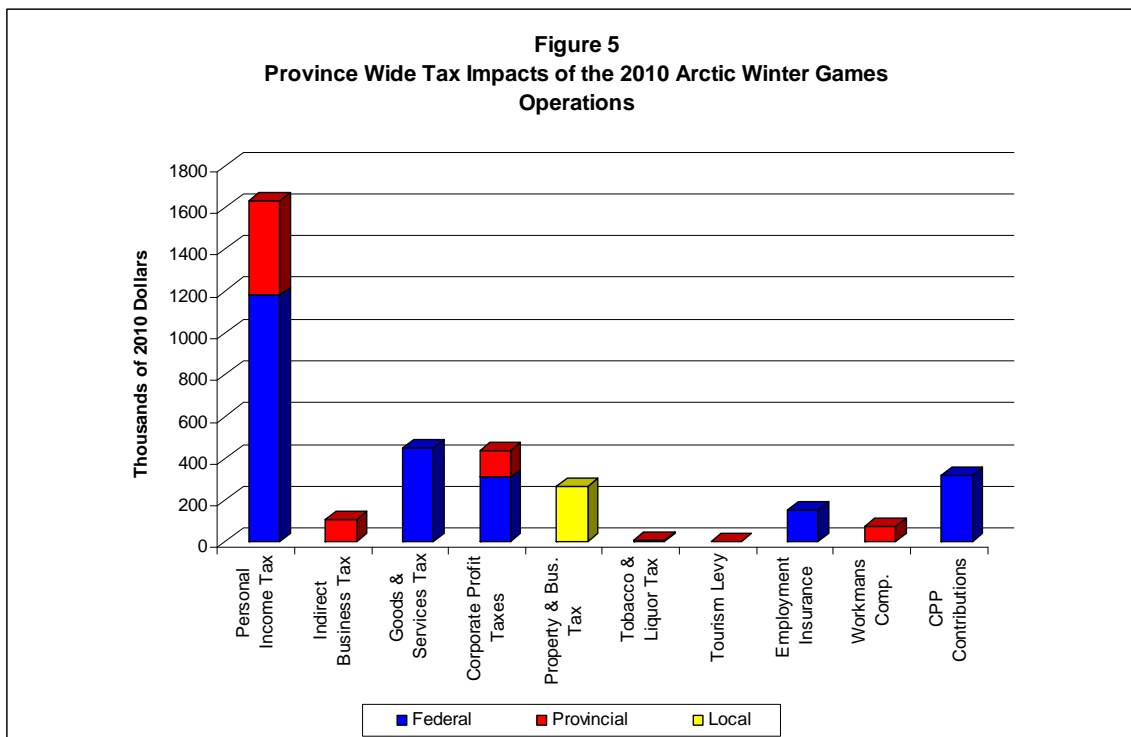
**Figure 4**  
**Province Wide Employment Impacts of the 2010 Arctic Winter Games**  
**Visitors' Expenditures**



**Table 4**  
**Province Wide Tax Impacts of the 2010 Arctic Winter Games**  
**Operations**  
(2010 Dollars)

	<b>Federal</b>	<b>Provincial</b>	<b>Local</b>	<b>Total</b>
Personal Income Tax	\$1,180,163	\$452,349	\$0	\$1,632,512
Indirect Business Tax	\$0	\$109,991	\$0	\$109,991
Goods & Services Tax	\$448,943	\$0	\$0	\$448,943
Corporate Profit Taxes	\$308,672	\$128,824	\$0	\$437,496
Property & Bus. Tax	\$0	\$0	\$266,189	\$266,189
Tobacco & Liquor Tax	\$0	\$9,029	\$0	\$9,029
Tourism Levy	\$0	\$0	\$0	\$0
Employment Insurance	\$152,453	\$0	\$0	\$152,453
Workmans Comp.	\$0	\$74,778	\$0	\$74,778
CPP Contributions	\$316,652	\$0	\$0	\$316,652
<b>Total</b>	<b>\$2,406,883</b>	<b>\$774,971</b>	<b>\$266,189</b>	<b>\$3,448,043</b>

Source: Econometric Research Limited



**Table 5**  
**Province Wide Tax Impacts of the 2010 Arctic Winter Games**  
**Visitors' Expenditures - Alberta Residents**  
(2010 Dollars)

	<b>Federal</b>	<b>Provincial</b>	<b>Local</b>	<b>Total</b>
Personal Income Tax	\$37,606	\$14,414	\$0	\$52,020
Indirect Business Tax	\$0	\$4,591	\$0	\$4,591
Goods & Services Tax	\$18,345	\$0	\$0	\$18,345
Corporate Profit Taxes	\$24,230	\$10,113	\$0	\$34,343
Property & Bus. Tax	\$0	\$0	\$11,864	\$11,864
Tobacco & Liquor Tax	\$0	\$377	\$0	\$377
Tourism Levy	\$0	\$2,661	\$0	\$2,661
Employment Insurance	\$4,858	\$0	\$0	\$4,858
Workmans Comp.	\$0	\$2,383	\$0	\$2,383
CPP Contributions	\$10,090	\$0	\$0	\$10,090
<b>Total</b>	<b>\$95,129</b>	<b>\$34,539</b>	<b>\$11,864</b>	<b>\$141,532</b>

Source: Econometric Research Limited

**Table 6**  
**Province Wide Tax Impacts of the 2010 Arctic Winter Games**  
**Visitors' Expenditures - Other Canadians**  
(2010 Dollars)

	<b>Federal</b>	<b>Provincial</b>	<b>Local</b>	<b>Total</b>
Personal Income Tax	\$33,707	\$12,920	\$0	\$46,627
Indirect Business Tax	\$0	\$4,531	\$0	\$4,531
Goods & Services Tax	\$15,519	\$0	\$0	\$15,519
Corporate Profit Taxes	\$19,002	\$7,930	\$0	\$26,932
Property & Bus. Tax	\$0	\$0	\$10,107	\$10,107
Tobacco & Liquor Tax	\$0	\$372	\$0	\$372
Tourism Levy	\$0	\$1,537	\$0	\$1,537
Employment Insurance	\$4,354	\$0	\$0	\$4,354
Workmans Comp.	\$0	\$2,136	\$0	\$2,136
CPP Contributions	\$9,044	\$0	\$0	\$9,044
<b>Total</b>	<b>\$81,626</b>	<b>\$29,426</b>	<b>\$10,107</b>	<b>\$121,159</b>

Source: Econometric Research Limited

**Table 7**  
**Province Wide Tax Impacts of the 2010 Arctic Winter Games**  
**Visitors' Expenditures - U.S. Visitors**  
(2010 Dollars)

	<b>Federal</b>	<b>Provincial</b>	<b>Local</b>	<b>Total</b>
Personal Income Tax	\$55,853	\$21,408	\$0	\$77,261
Indirect Business Tax	\$0	\$7,632	\$0	\$7,632
Goods & Services Tax	\$25,874	\$0	\$0	\$25,874
Corporate Profit Taxes	\$31,292	\$13,059	\$0	\$44,351
Property & Bus. Tax	\$0	\$0	\$19,005	\$19,005
Tobacco & Liquor Tax	\$0	\$626	\$0	\$626
Tourism Levy	\$0	\$9,067	\$0	\$9,067
Employment Insurance	\$7,215	\$0	\$0	\$7,215
Workmans Comp.	\$0	\$3,539	\$0	\$3,539
CPP Contributions	\$14,986	\$0	\$0	\$14,986
<b>Total</b>	<b>\$135,220</b>	<b>\$55,331</b>	<b>\$19,005</b>	<b>\$209,556</b>

Source: Econometric Research Limited

**Table 8**  
**Province Wide Tax Impacts of the 2010 Arctic Winter Games**  
**Visitors' Expenditures - International Visitors**  
(2010 Dollars)

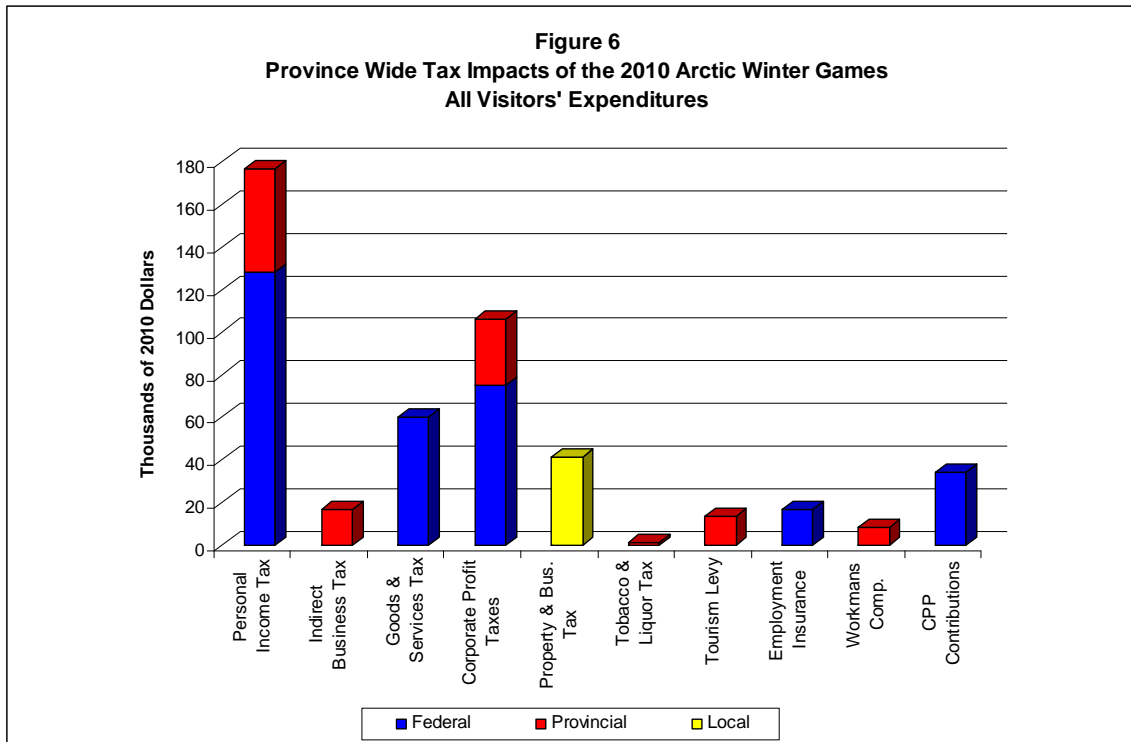
	<b>Federal</b>	<b>Provincial</b>	<b>Local</b>	<b>Total</b>
Personal Income Tax	\$854	\$328	\$0	\$1,182
Indirect Business Tax	\$0	\$103	\$0	\$103
Goods & Services Tax	\$356	\$0	\$0	\$356
Corporate Profit Taxes	\$410	\$171	\$0	\$581
Property & Bus. Tax	\$0	\$0	\$252	\$252
Tobacco & Liquor Tax	\$0	\$8	\$0	\$8
Tourism Levy	\$0	\$69	\$0	\$69
Employment Insurance	\$110	\$0	\$0	\$110
Workmans Comp.	\$0	\$54	\$0	\$54
CPP Contributions	\$229	\$0	\$0	\$229
<b>Total</b>	<b>\$1,960</b>	<b>\$733</b>	<b>\$252</b>	<b>\$2,944</b>

Source: Econometric Research Limited

**Table 9**  
**Province Wide Tax Impacts of the 2010 Arctic Winter Games**  
**Visitors' Expenditures - All Visitors**  
(2010 Dollars)

	<b>Federal</b>	<b>Provincial</b>	<b>Local</b>	<b>Total</b>
Personal Income Tax	\$128,020	\$49,070	\$0	\$177,090
Indirect Business Tax	\$0	\$16,857	\$0	\$16,857
Goods & Services Tax	\$60,094	\$0	\$0	\$60,094
Corporate Profit Taxes	\$74,934	\$31,273	\$0	\$106,207
Property & Bus. Tax	\$0	\$0	\$41,228	\$41,228
Tobacco & Liquor Tax	\$0	\$1,383	\$0	\$1,383
Tourism Levy	\$0	\$13,334	\$0	\$13,334
Employment Insurance	\$16,537	\$0	\$0	\$16,537
Workmans Comp.	\$0	\$8,112	\$0	\$8,112
CPP Contributions	\$34,349	\$0	\$0	\$34,349
<b>Total</b>	<b>\$313,935</b>	<b>\$120,029</b>	<b>\$41,228</b>	<b>\$475,191</b>

Source: Econometric Research Limited



### 3.G. IMPACT STUDY: IMPACTS IN GRANDE PRAIRIE AND REGION

The non-local visitors collectively spent over \$1.25 million on food, accommodation and travel in Grande Prairie during the Games. These expenditures represent monetary flows that would not have been spent in Grande Prairie if these Games were not held there.

In addition, a total of \$6.41 million was spent on operations. These expenditures add up to \$7.65 million and are credited with sustaining significant, but temporary, streams of economic impacts (see Table 10).

The total income impacts of these expenditures are estimated to be about \$7.29 million. This represents a significant, but temporary, increase in Grande Prairie's annual Gross Income in 2010. Wages and salaries in Grande Prairie were augmented by over \$5.73 million and employment was increased by 182 person years on account of these expenditures (see Table 10 and figures 7 and 8).

#### **GRANDE PRAIRIE AND REGIONAL ONLY ECONOMIC IMPACTS**

More than 182 Person Years of Employment and  
\$7.29 Million in Income Was Generated by the Operational and Visitor's Expenditures  
Associated with  
the Arctic Winter Games in the Grande Prairie region in 2010

The three levels of government collected substantial revenues on these Grande Prairie and Regional only impacts. The Federal government alone realised tax revenues of over \$1.9 million, whereas the provincial government collected a total of \$594,000. The Local government in Grande Prairie received over \$204,000 from these impacts.

#### **GRANDE PRAIRIE AND REGIONAL ONLY ECONOMIC IMPACTS**

Revenues accrued to all three levels of Government:

Federal Government = \$1.90 Million;

Government of Alberta = \$594,000; and

Local Governments in Alberta = \$204,000

Imports from other countries to sustain the Games and the visitor expenditures in Grande Prairie exceeded that of imports from other provinces. Imports from other provinces were about \$810,000, whereas imports from other countries amounted to about \$870,000.

The economic impacts of operational expenditures dominated the incremental tourism expenditures' impacts in absolute magnitudes.



The income impact efficiencies (as measured by the income multiplier) are higher for operational expenditures. This is not true for the employment multipliers where tourism expenditures support a higher employment multiplier than operational expenditures. Almost without exception, the three types of expenditures have higher direct impacts than the indirect and induced impacts. (see Table 10 and Figure 9).

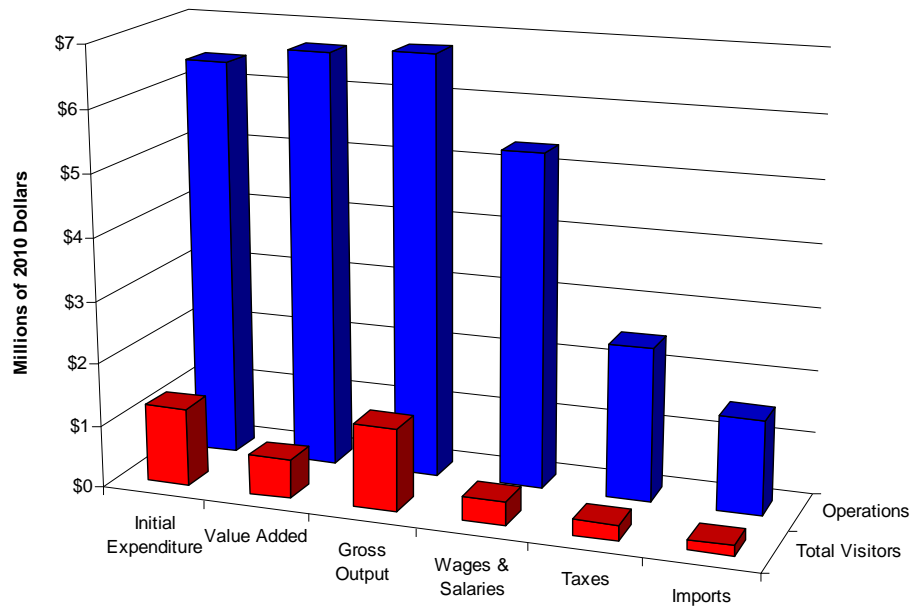
The direct effective wage is highest for expenditures from Other Canadians, with about \$47,227, and lowest for operational expenditures with \$29,310. The average direct effective wage is \$29,716.

**Table 10**  
**Economic Impacts in Grande Prairie of the 2010 Arctic Winter Games**  
(2010 Dollars)

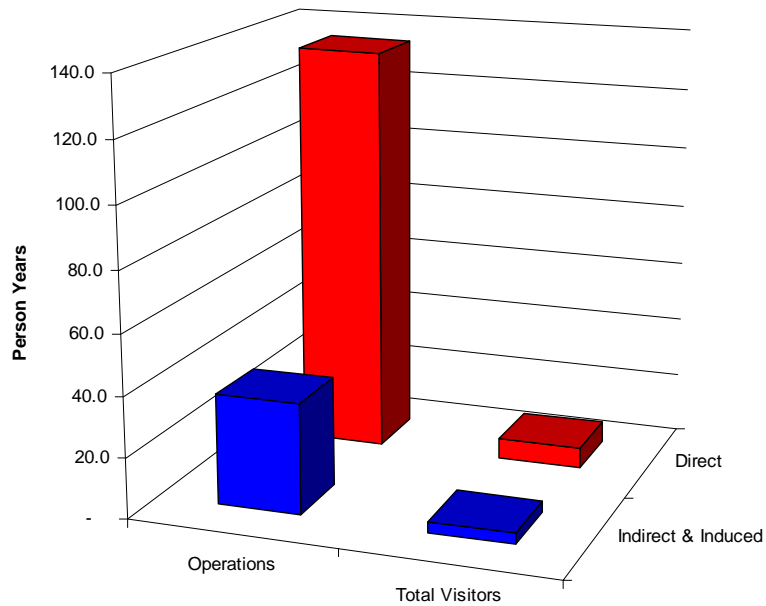
	Operations	Visitors' Expenditures					Total
		Alb Residents	Other Canada	U.S.	International	Total Visitors	
<b>Initial Expenditure</b>	\$6,405,068	\$391,508	\$317,317	\$532,962	\$7,544	\$1,249,331	\$7,654,399
<b>Value Added</b>							
Direct	\$4,451,324	\$131,213	\$119,993	\$186,404	\$2,803	\$440,413	\$4,891,737
Indirect & Induced	\$2,219,491	\$42,026	\$55,785	\$80,023	\$1,576	\$179,410	\$2,398,901
Total	\$6,670,815	\$173,239	\$175,778	\$266,427	\$4,379	\$619,823	\$7,290,638
Multiplier	1.04	0.44	0.55	0.50	0.58	0.50	0.95
<b>Gross Output</b>							
Direct	\$6,405,068	\$391,508	\$317,317	\$532,962	\$7,544	\$1,249,331	\$7,654,399
Indirect & Induced	\$355,966	\$26,563	\$21,529	\$30,765	\$1,305	\$80,162	\$436,128
Total	\$6,761,034	\$418,071	\$338,846	\$563,727	\$8,849	\$1,329,493	\$8,090,527
Multiplier	1.06	1.07	1.07	1.06	1.17	1.06	1.06
<b>Wages &amp; Salaries</b>							
Direct	\$3,945,114	\$71,961	\$70,841	\$112,155	\$1,798	\$256,755	\$4,201,869
Indirect & Induced	\$1,396,804	\$33,237	\$39,353	\$58,800	\$1,059	\$132,449	\$1,529,253
Total	\$5,341,918	\$105,198	\$110,194	\$170,955	\$2,857	\$389,204	\$5,731,122
<b>Employment</b>							
Direct	134.6	1.7	1.5	3.6	-	6.8	141.4
Indirect & Induced	36.5	1.0	1.0	1.5	0.1	3.6	40.1
Total	171.1	2.7	2.5	5.1	0.1	10.4	181.5
Multiplier	1.27	1.59	1.67	1.42	N/A	1.53	1.28
<b>Taxes</b>							
Federal	\$1,746,062	\$42,712	\$43,839	\$67,159	\$1,106	\$154,816	\$1,900,878
Provincial	\$526,727	\$17,465	\$16,971	\$32,408	\$457	\$67,301	\$594,028
Local	\$180,922	\$5,999	\$5,829	\$11,132	\$157	\$23,117	\$204,039
Total	\$2,453,711	\$66,176	\$66,639	\$110,700	\$1,720	\$245,235	\$2,698,946
<b>Imports</b>							
From Other Provinces	\$742,236	\$18,363	\$18,044	\$30,559	\$484	\$67,450	\$809,686
From Other Countries	\$772,444	\$26,310	\$24,496	\$44,808	\$682	\$96,296	\$868,740
Total	\$1,514,680	\$44,673	\$42,540	\$75,367	\$1,166	\$163,746	\$1,678,426

Source: Econometric Research Limited

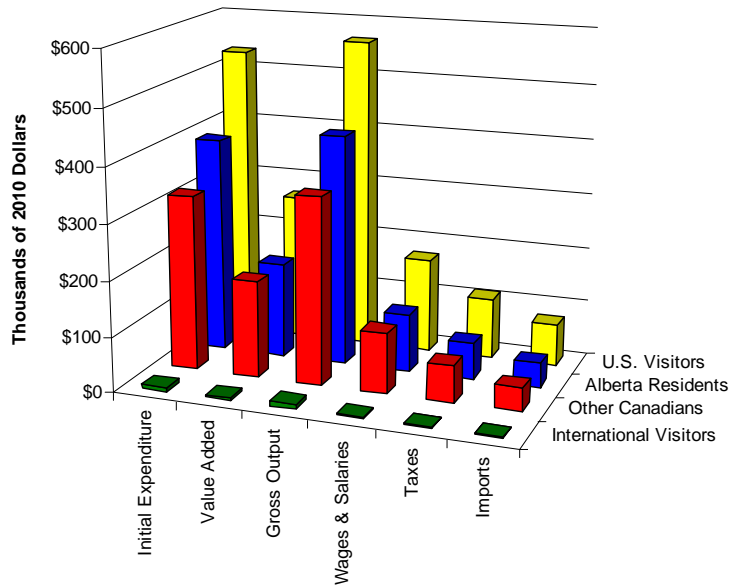
**Figure 7**  
**Economic Impacts in Grande Prairie of the 2010 Arctic Winter Games**



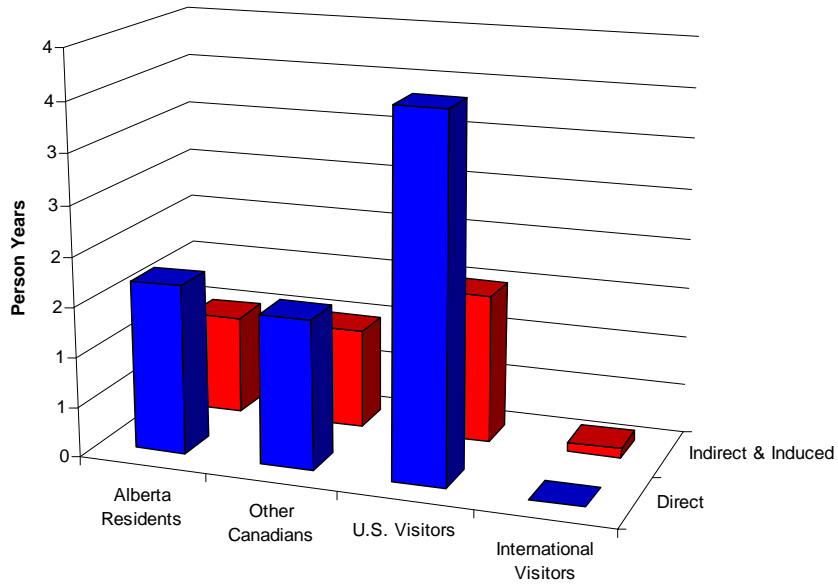
**Figure 8**  
**Employment Impacts in Grande Prairie of the 2010 Arctic Winter Games**



**Figure 9**  
**Economic Impacts in Grande Prairie of the 2010 Arctic Winter Games**  
**Visitors' Expenditures**



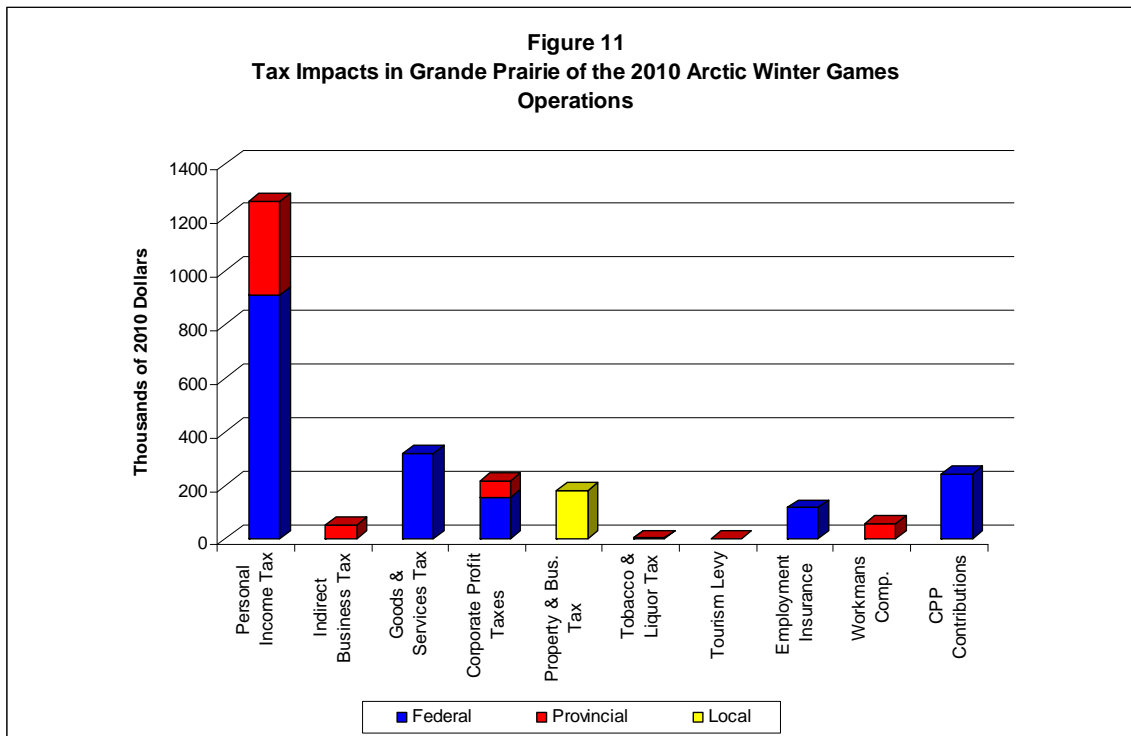
**Figure 10**  
**Employment Impacts in Grande Prairie of the 2010 Arctic Winter Games**  
**Visitors' Expenditures**



**Table 11**  
**Tax Impacts in Grande Prairie of the 2010 Arctic Winter Games**  
**Operations**  
(2010 Dollars)

	<b>Federal</b>	<b>Provincial</b>	<b>Local</b>	<b>Total</b>
Personal Income Tax	\$909,814	\$348,726	\$0	\$1,258,540
Indirect Business Tax	\$0	\$51,838	\$0	\$51,838
Goods & Services Tax	\$320,632	\$0	\$0	\$320,632
Corporate Profit Taxes	\$153,972	\$64,260	\$0	\$218,232
Property & Bus. Tax	\$0	\$0	\$180,922	\$180,922
Tobacco & Liquor Tax	\$0	\$4,255	\$0	\$4,255
Tourism Levy	\$0	\$0	\$0	\$0
Employment Insurance	\$117,530	\$0	\$0	\$117,530
Workers Compensation	\$0	\$57,648	\$0	\$57,648
CPP Contributions	\$244,114	\$0	\$0	\$244,114
<b>Total</b>	<b>\$1,746,062</b>	<b>\$526,727</b>	<b>\$180,922</b>	<b>\$2,453,711</b>

Source: Econometric Research Limited



**Table 12**  
**Tax Impacts in Grande Prairie of the 2010 Arctic Winter Games**  
**Visitors' Expenditures - Alberta Residents**  
(2010 Dollars)

	<b>Federal</b>	<b>Provincial</b>	<b>Local</b>	<b>Total</b>
Personal Income Tax	\$19,188	\$7,354	\$0	\$26,542
Indirect Business Tax	\$0	\$2,721	\$0	\$2,721
Goods & Services Tax	\$8,013	\$0	\$0	\$8,013
Corporate Profit Taxes	\$7,884	\$3,290	\$0	\$11,174
Property & Bus. Tax	\$0	\$0	\$5,999	\$5,999
Tobacco & Liquor Tax	\$0	\$223	\$0	\$223
Tourism Levy	\$0	\$2,661	\$0	\$2,661
Employment Insurance	\$2,479	\$0	\$0	\$2,479
Workmans Comp.	\$0	\$1,216	\$0	\$1,216
CPP Contributions	\$5,148	\$0	\$0	\$5,148
<b>Total</b>	<b>\$42,712</b>	<b>\$17,465</b>	<b>\$5,999</b>	<b>\$66,176</b>

Source: Econometric Research Limited

**Table 13**  
**Tax Impacts in Grande Prairie of the 2010 Arctic Winter Games**  
**Visitors' Expenditures - Other Canadians**  
(2010 Dollars)

	<b>Federal</b>	<b>Provincial</b>	<b>Local</b>	<b>Total</b>
Personal Income Tax	\$20,099	\$7,704	\$0	\$27,803
Indirect Business Tax	\$0	\$3,036	\$0	\$3,036
Goods & Services Tax	\$8,152	\$0	\$0	\$8,152
Corporate Profit Taxes	\$7,599	\$3,171	\$0	\$10,770
Property & Bus. Tax	\$0	\$0	\$5,829	\$5,829
Tobacco & Liquor Tax	\$0	\$249	\$0	\$249
Tourism Levy	\$0	\$1,537	\$0	\$1,537
Employment Insurance	\$2,596	\$0	\$0	\$2,596
Workmans Comp.	\$0	\$1,274	\$0	\$1,274
CPP Contributions	\$5,393	\$0	\$0	\$5,393
<b>Total</b>	<b>\$43,839</b>	<b>\$16,971</b>	<b>\$5,829</b>	<b>\$66,639</b>

Source: Econometric Research Limited

**Table 14**  
**Tax Impacts in Grande Prairie of the 2010 Arctic Winter Games**  
**Visitors' Expenditures - U.S. Visitors**  
(2010 Dollars)

	<b>Federal</b>	<b>Provincial</b>	<b>Local</b>	<b>Total</b>
Personal Income Tax	\$31,181	\$11,952	\$0	\$43,133
Indirect Business Tax	\$0	\$4,433	\$0	\$4,433
Goods & Services Tax	\$12,523	\$0	\$0	\$12,523
Corporate Profit Taxes	\$11,061	\$4,617	\$0	\$15,678
Property & Bus. Tax	\$0	\$0	\$11,132	\$11,132
Tobacco & Liquor Tax	\$0	\$364	\$0	\$364
Tourism Levy	\$0	\$9,067	\$0	\$9,067
Employment Insurance	\$4,028	\$0	\$0	\$4,028
Workmans Comp.	\$0	\$1,976	\$0	\$1,976
CPP Contributions	\$8,366	\$0	\$0	\$8,366
<b>Total</b>	<b>\$67,159</b>	<b>\$32,408</b>	<b>\$11,132</b>	<b>\$110,700</b>

Source: Econometric Research Limited

**Table 15**  
**Tax Impacts in Grande Prairie of the 2010 Arctic Winter Games**  
**Visitors' Expenditures - International Visitors**  
(2010 Dollars)

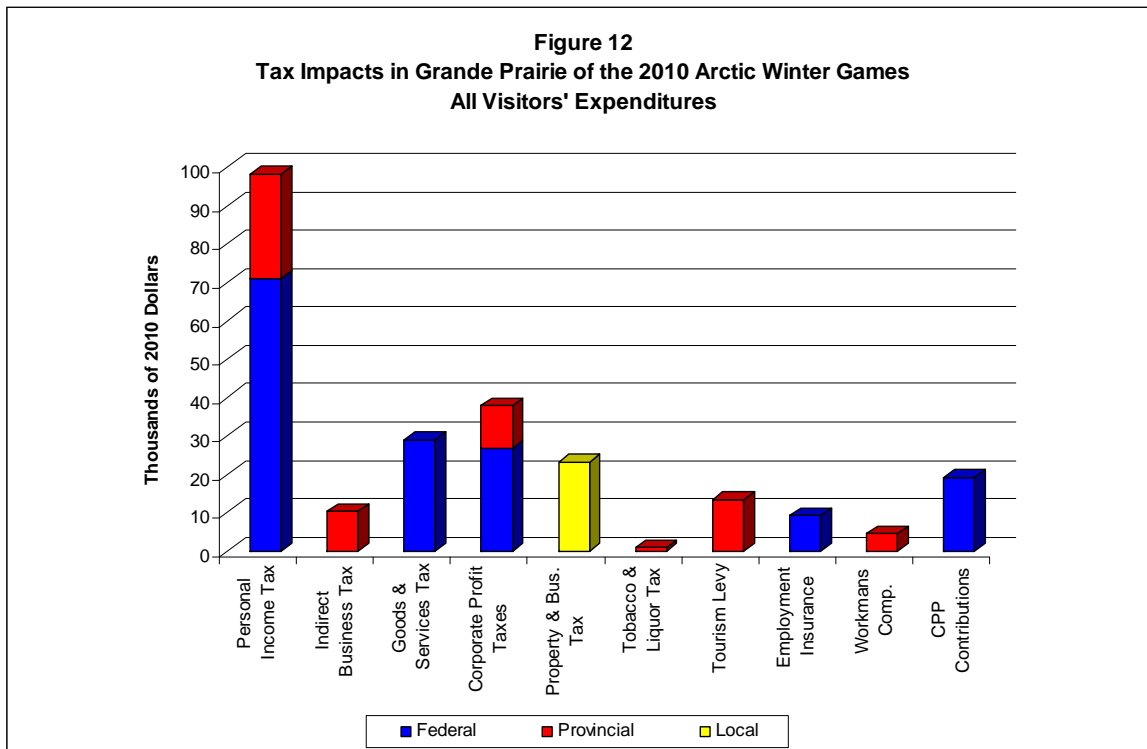
	<b>Federal</b>	<b>Provincial</b>	<b>Local</b>	<b>Total</b>
Personal Income Tax	\$521	\$200	\$0	\$721
Indirect Business Tax	\$0	\$75	\$0	\$75
Goods & Services Tax	\$202	\$0	\$0	\$202
Corporate Profit Taxes	\$176	\$74	\$0	\$250
Property & Bus. Tax	\$0	\$0	\$157	\$157
Tobacco & Liquor Tax	\$0	\$6	\$0	\$6
Tourism Levy	\$0	\$69	\$0	\$69
Employment Insurance	\$67	\$0	\$0	\$67
Workmans Comp.	\$0	\$33	\$0	\$33
CPP Contributions	\$140	\$0	\$0	\$140
<b>Total</b>	<b>\$1,106</b>	<b>\$457</b>	<b>\$157</b>	<b>\$1,720</b>

Source: Econometric Research Limited

**Table 16**  
**Tax Impacts in Grande Prairie of the 2010 Arctic Winter Games**  
**Visitors' Expenditures - All Visitors**  
(2010 Dollars)

	<b>Federal</b>	<b>Provincial</b>	<b>Local</b>	<b>Total</b>
Personal Income Tax	\$70,989	\$27,210	\$0	\$98,199
Indirect Business Tax	\$0	\$10,265	\$0	\$10,265
Goods & Services Tax	\$28,890	\$0	\$0	\$28,890
Corporate Profit Taxes	\$26,720	\$11,152	\$0	\$37,872
Property & Bus. Tax	\$0	\$0	\$23,117	\$23,117
Tobacco & Liquor Tax	\$0	\$842	\$0	\$842
Tourism Levy	\$0	\$13,334	\$0	\$13,334
Employment Insurance	\$9,170	\$0	\$0	\$9,170
Workmans Comp.	\$0	\$4,499	\$0	\$4,499
CPP Contributions	\$19,047	\$0	\$0	\$19,047
<b>Total</b>	<b>\$154,816</b>	<b>\$67,301</b>	<b>\$23,117</b>	<b>\$245,235</b>

Source: Econometric Research Limited



### 3.H. IMPACT STUDY: CONCLUSIONS

The economic impacts of incremental tourism and operational expenditures were estimated separately and collectively to identify the total impacts of the Arctic Winter Games in Grande Prairie on the local, provincial and national economies.

The following key impact results were identified:

- Collectively, visitors spent about \$1.25 million on food, accommodation and travel in Grande Prairie in 2010. It is hard to believe that some of these tourists did not extend their length of stay in order to visit other parts of Alberta and Canada. We have not included these expenditures. In many respects our estimates of the impacts are very conservative.
- The organisers spent collectively about \$6.41 million on operations to sustain the Games.
- The total economic impacts of these expenditures are estimated to have exceeded \$10.8 million in Alberta, of which Grande Prairie sustained \$7.29 million.
- Wages and salaries in Alberta were augmented temporarily by about \$7.50 million, of which \$5.7 million were in Grande Prairie.
- A total of 208 person years of employment were associated with these expenditures in Alberta, of which 182 were in Grande Prairie.
- The three levels of government derived substantial revenues on the Province-wide impacts. The Federal government alone derived tax revenues of over \$2.72 million, whereas the provincial governments derived a total of \$895,000 million. The local governments in Canada collected \$307,000 thousand on these impacts.
- The economic impacts are spread over the entire regions and sectors of the Alberta economy. There is hardly a sector or a region in Alberta that does not receive some economic impacts from the expenditures associated with the Games. It is also true that Grande Prairie retains the largest share of these impacts, and the services' related sectors generate the largest employment impacts.
- These quantitative impacts may not reflect fully the economic impacts of the Games on Grande Prairie, Alberta or Canada. Many volunteers contributed their time to the success of the Games. Businesses from different parts of Canada contributed products and services. There is no question that the promotion of Canada, Alberta and Grande Prairie received is worth thousands of dollars that we did not factor into our analysis.



### 3.1. IMPACT STUDY: DISCLAIMER

The following outlines considerations attached to the approach and findings of this analysis:

#### **A. General Assumptions**

- A best-efforts basis has been employed to ensure estimates in this report are conservative in nature in order to avoid overstating results.
- Impact benefits are not always expressed in monetary terms. As an example, social and cultural benefits and costs are often not easily measured and in these cases, our objective is to establish the nature and extent of benefits as they may be realized locally through narrative means.
- The impact results are based on data compiled from a variety of sources and are therefore not strictly statistically reliable and subject to a small margin of error.
- The simulation model applied in this study may create a theoretical picture of the future of the local economy through the application of a series of assumptions, which may or may not hold true over time.

#### **B. The substitution effect**

To the extent that attendees at an event spend their money on that event instead of on other activities in the local economy, the event results in reallocation of expenditures in the economy, rather than in a real net increase in economic activity.

#### **C. The crowd out effect**

A recreational or sporting event may already occur in a popular tourist destination. If a host city's hotels and restaurants normally tend to be at or near capacity during the period in which an event takes place, it may supplant, and not supplement, the regular economy.

#### **D. The path of money spent**

If money spent by attendees reaches community businesses that are national in chains, their profits during the event may not further the local economy as the money may more quickly flow out of the local economy to the owners of the businesses, wherever they may be domiciled and therefore reduce the multiplier.

#### **E. Non-economic costs**

Negative impacts and new costs associated with traffic congestion, vandalism, environmental degradation and disruption of resident's lifestyles are not measured.

#### **F. Conflict of Interest**

The services of third parties have been engaged in parts of the study. The relationship of these parties to Alberta Tourism, Parks and Recreation include both arm's length and non-arm length contributors.

### ***G. Limitation of Liability***

Alberta Tourism, Parks and Recreation collects data and information on a best efforts basis and makes reasonable efforts to place accurate information within this document. Alberta Tourism, Parks and Recreation shall not be liable for any loss or damage (direct, indirect, punitive, actual, consequential, incidental, special, exempt or otherwise) resulting from any use of, or inability to use, this document and the information contained herein or resulting from any errors or omissions in this document, regardless of the basis upon which liability is claimed. This includes damages for negligence or gross negligence.

### ***H. Freedom of Information and Protection of Privacy Act (FOIP Act)***

Alberta Tourism, Parks and Recreation shall collect, use, disclose, manage and secure personal information in accordance with the Alberta Personal Information Protection Act (PIPA).

The FOIP Act applies to any information that the Association provides to Alberta Tourism, Parks and Recreation. This information may be disclosed in response to an access request under the FOIP Act, subject to any applicable exceptions to disclosure under the Act.

The collection of personal information is collected under the authority of section 33(c) of the FOIP Act and is protected by the privacy provisions of the Act. If you have any questions about the collection of this information, please contact Alberta Tourism, Parks and Recreation.

## **4. Definitions**

A dollar spent by a new visitor to Grande Prairie to attend the Arctic Games circulates and re-circulates within the economy, multiplying the effects of the original expenditures on overall economic activity. This process is referred to as the economic **multiplier effect**. It operates at several levels:

The initial expenditures of the visitors on food, beverage and accommodations are generally referred to as the **initial (direct) effects**.

Subsequent purchases by suppliers of materials and services to sustain the original and derivative expenditures are called the **indirect effects**. These indirect effects are the ripple effect of additional rounds of re-circulating the initial visitor's spending.

**Induced effects** are the increase in employment and household income that result from the economic activity fueled by the direct and indirect effects and **emerge when workers in the sectors, stimulated by initial and indirect expenditures, spend their additional incomes on consumer goods and services including such things as household expenditures.**

**Multipliers** – These are summary measures that represent the division of the total impacts (direct, indirect and induced) by the initial expenditures. For example, the income multiplier associated with incremental tourism expenditures is calculated by dividing the total income (value added) impact by the initial incremental tourism expenditures. The only exception is that of the employment multiplier where total employment is divided by direct employment in order to preserve the common units.

Some of the key terms and definitions are presented below to assist the reader in interpreting the results of the economic impact analysis:

**Initial expenditures** – This figure indicates the amount of expenditures directly made by the administrators running the Games or by the visitors. It is these expenditures that drive the results.

**Value Added (Gross Provincial Income)** – This figure represents net output generated by the initial expenditures in the community, province or nation. It is typically the sum of wages, rent, interest and profits in addition to indirect business taxes and depreciation minus subsidies.

**Employment** – This refers to the total person years generated by the Games' impacts.

**Taxes** – Our impact system generates a large number of taxes (income taxes, GST, liquor and tobacco taxes, room tax, etc.) each of which is linked with the level of government receiving it. For example, the Federal government receives the proceeds from the GST tax, the Provincial government receives the room tax; whereas the calculation of local taxes are not necessarily the amount of money received directly by the local government. Impacts are generated in the economy on account of the expenditures of sport events (incomes, jobs, etc). These incomes translate into higher property values. This linkage is based on a statistical relationship between income and property values. Given a mill rate this implicit value increase occasioned by the impacts of sport related events and activities is translated into additional property and business taxes. Our calculations of these local taxes are, therefore, predominantly based on the indirect and induced impacts.

**Imports** – These represent the goods and services acquired from outside the province to sustain the activities of the Games and the expenditures of their visitors. They essentially represent leakages from the province.

## 5. References

<sup>1</sup> City of Grande Prairie, Population and Employment Forecast 2007 to 2057 prepared by Applications Management Consulting Ltd.  
<http://www.cityofgp.com/NR/rdonlyres/844274DB-6CE3-40B6-8A6B-AB1E2E9D152A/0/PopulationandEmploymentForecastfinalreport08.pdf>

<sup>2</sup> Grande Prairie Finance Documents  
<http://www.cityofgp.com/citygov/annrep/default.htm?fromNav=&item=>

<sup>3</sup> Statistics Canada <http://www.statcan.gc.ca/subjects-sujets/labour-travail/lfs-epa/lfs-epa-eng.htm>

<sup>4</sup> Statistics Canada <http://www.statcan.gc.ca/daily-quotidien/100331/dq100331a-eng.htm>

<sup>5</sup> City of Grande Prairie 2009 – 2011 Economic Development Strategic Plan  
<http://investgrandeprairie.ca/wp-content/uploads/2009/11/economic-development-strategic-plan-2009-2011.pdf>

## 6. REPORT PARTICIPANTS

The direct and indirect participants and interviewees in conducting and completing the economic impact study and event analysis of the 2010 Arctic Winter Games in Grande Prairie included, but were not limited to, the following individuals and organizations:

- The Alberta Sport, Recreation, Parks and Wildlife Foundation
- The Government of Alberta's Ministry of Tourism, Parks and Recreation
- Dr. Atif Kubursi, Econometric Research Limited
- Francois Fournier, General Manager of the 2010 Arctic Winter Games
- Debbie Reid, President of the Host Society of the 2010 Arctic Winter Games
- Linda Side, Director of Sponsorship and Fundraising for the 2010 Arctic Winter Games
- Karen Podmore, Office and Box Office Manager, The Crystal Centre
- Joanne Balance, Director of Marketing and Public Relations for the 2010 Arctic Winter Games
- Don Blonke, Director of Finance for the 2010 Arctic Winter Games
- Emilia Hovorka, Executive Director of the Grande Prairie Regional Tourism Association
- City of Grande Prairie and Archives
- Interviews with volunteers, spectators, administrators and athletes