

**QUESNEL 2000
BC WINTER GAMES
ECONOMIC IMPACT
ASSESSMENT**

prepared for:

BC Games Society

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SUMMARY OF FINDINGS

- The Quesnel 2000 BC Winter Games created direct economic impact in Quesnel of nearly 1.1 million dollars. Over two-thirds of this impact was created by the spending of Games participants, while Games Society organizers contributed one-third.
- Direct spending within these two categories was as follows:

Spending by participants	\$784,000
Spending by organizers	<u>\$306,000</u>
Total	\$1,090,000

- Direct spending by the participants was as follows:

Athletes/Competitors	\$208,000
Spectators	\$315,000
Volunteers	<u>\$261,000</u>
Total	\$784,000

- Direct spending in Quesnel by Games organizers was as follows:

Quesnel 2000 BC Winter Games	\$284,000
BC Games Society	<u>\$21,000</u>
Total	\$306,000

- Spending by Games participants occurred over the three to four days of the Games during the last week of February 2000. Spending by the Games organizers occurred over a longer period of time - prior to, during, and after the Games.
- The demand survey technique used to measure the economic impact of the Quesnel 2000 Games has provided a defensible analysis process. Based on the survey sample sizes, the results are considered accurate to within +/- 6% for the participant survey, +/-7% for the spectator survey, and +/-9% for volunteers.
- The survey of hotels/motels produced accurate and timely information on accommodation revenues. Pro-rating these accommodation receipts produced an estimate of total economic impact from a supply perspective. The similar estimates of economic impact created by these two techniques provide a reasonable level of comfort in the validity of the results.
- It is noted that the analysis focused entirely on direct spending. This direct spending would have triggered additional indirect and induced effects. These impacts were not measured but would have increased the overall economic impact slightly.

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1.0 INTRODUCTION

1.1 BACKGROUND

Quesnel hosted the 2000 BC Winter Games from February 24 to 27, 2000. The Games took place from Friday to Sunday, and included 23 events held in 21 separate venues. Due to the size of the event, several activities utilized sports venues in the surrounding communities of Prince George, Williams Lake and Lac La Hache. The Games involved over 2,100 participants from the eight provincial sport zones. Quesnel provided over 2,800 local volunteers who assisted in the administration of the Games. Numerous businesses and agencies in the community also donated a great deal of in-kind support to the Games.

Hosting the BC Games produces a surge of economic activity in the host community. Spending by the local Games Society and by BC Games - but mainly by participants, spectators and volunteers - creates this impact. The BC Games Society, was interested in quantifying the economic impact created by the Games, as one measure of the Game's success. The Economic Planning Group was retained to conduct the analysis.

1.2 OBJECTIVES

The purpose of this study was to estimate the economic impact of the Quesnel 2000 BC Winter Games on the community of Quesnel. Economic impact was measured by calculating direct spending in the local area. Impacts were estimated by local spending of the:

- Quesnel 2000 BC Winter Games Society
- BC Games Society
- Athletes/Participants/Competitors
- Spectators
- Volunteers

1.3 METHODOLOGY

Three methods were used to collect economic impact information. The first two methods were based on estimating **expenditures**, while the third method was based on estimating **revenues**. Both the spending estimates are additive to create a spending total. The revenue estimate stands alone and was used to test the validity of the survey techniques. Theoretically, the combined spending of the participants, spectators and volunteers should equal the revenue generated by the businesses that benefited from this consumer spending. The three techniques are described below.

- **Participant Spending**

This spending analysis technique involved collecting information on individuals within the three participant categories who spent money in the community as a result of their involvement in the Games. These individuals included the competitors, spectators and volunteers. A sample of individuals from each of these categories was interviewed about their Games related spending.

The manager of the Quesnel and District Chamber of Commerce undertook interviewer recruiting. A total of 23 volunteer interviewers from three different organizations conducted the interviews. The individuals came from the Seniors Centre (5), the Rodeo Club (5), and Miss Quesnel contestants (9), plus four persons unaffiliated with an organization.

The interviewers were assembled on the Saturday of the Games where the purpose of the analysis was explained and the questionnaires reviewed. Instructions were also provided on respondent selection and interviewing procedures. Each person was also given clipboards and questionnaires to record the interview results for a sample of participants, spectators and volunteers.

Due to the number of sports that were taking place outside Quesnel, questionnaire and survey instructions were sent with the venue hosts to the non-local venues.

Completed questionnaires were collected and edited. The spectator turnover ratios were calculated and the sport zones coded. Each questionnaire was numbered and the information entered into *SurveyIt*, a survey analysis software package. Frequency distributions and averages were produced for each question for each of the three categories of respondents.

- **Games Society Spending**

This category involved recording the local expenditures made by the two organizing societies involved with the Games - the Quesnel 2000 BC Winter Games Society and the BC Games Society. This procedure was designed to capture all local spending by these administrative bodies, related to hosting the Games. These figures were accessed from the society representatives using a March 31/00 cut-off date. In cases where spending occurred outside the Quesnel area (such as purchases of materials from outside suppliers), these amounts were not included.

- **Supply Analysis**

A third technique was used to validate the survey expenditure data. This process involved a survey of hotels and motels, to determine the number of room nights rented to people involved with the Games (i.e., competitors, family members, or other spectators). The information on room nights, and average room rates, was tabulated to produce a total room revenue figure. Based on tourism industry norms, this accommodation revenue was used to estimate total expenditures on other travel related services (i.e., restaurant meals, entertainment, recreation, transportation, etc.).

2.0 PARTICIPANT EXPENDITURES

2.1 ANALYSIS METHOD

The number of persons participating in the Games was obtained from the Games organizers. The total spending was estimated by interviewing a sample of these participants and asking them about their Games related expenditures. About half of the surveys were completed at the athletes Food Centre given that all participants were in this facility twice each day. Interviewers were also stationed at most venues. A total of 268 questionnaires were completed, representing 12% of the participants.

Average spending was calculated from this participant survey sample. To get total spending, the average figure was multiplied by the total number of participants. A total of 2,145 individuals participated in the Games. The distribution of participants by sport is tabulated in Table 2-1. A listing of the number of participants by sport zone is tabulated in Table 2-2.

Table 2-1
List of Sports Participants and Venues

Sport/Activity	Athletes	Others	Venue Location
Badminton	77	27	Quesnel Secondary and Riverview
Biathlon	36	17	Hallis Lake
Bowling	40	19	Quesnel Bowling Lanes
Curling	64	31	Quesnel Curling Club
Fencing	24	16	Parkland Elementary
Figure Skating	82	32	Quesnel Twin Arena
Gymnastics	80	35	Quesnel Twin Arena
Hockey - Boys	144	43	Quesnel Twin Arena and Cariboo Memorial
Hockey - Girls	136	41	Quesnel Twin Arena and Cariboo Memorial
Judo	67	25	Lakeview Elementary
Karate	76	35	Maple Drive Junior Secondary
Netball	79	26	Quesnel Secondary
Ringette	105	25	Quesnel Twin Arenas
Skiing – Alpine	69	24	Troll Ski Resort
Skiing – Cross Country	59	16	Hallis Lake
Skiing - Disabled	18	8	Troll Ski Resort
Skiing – Freestyle	57	15	Troll Ski Resort
Speed Skating	88	30	Lac La Hache
Squash	32	15	Prince George
Swimming	165	21	Quesnel Recreation Centre
Table Tennis	32	13	Dragon Lake Elementary
Weightlifting	36	13	Baker Elementary
Wheelchair Basketball	33	16	Barlow Creek Elementary
Totals	1601	544	2145

Source: Quesnel 2000 BC Winter Games Society (March 16/00)

**Table 2-2
Number of Participants by Sport Zone**

Event	Zone									Total
	0	1	2	3	4	5	6	7	8	
Badminton	11	12	12	12	12	12	12	9	12	104
Biathlon	2	5	5	8	8	2	7	7	9	53
Bowling	3	7	7	7	7	7	7	7	7	59
Curling	10	11	10	11	11	10	11	10	11	95
Fencing	3	2	6	6	0	6	6	5	6	40
Figure Skating	15	12	12	15	14	11	12	11	12	114
Gymnastics	20	14	9	14	13	14	14	5	12	115
Hockey - Female	17	20	20	20	20	20	20	20	20	177
Hockey - Male	19	21	21	21	21	21	21	21	21	187
Judo	13	12	15	15	7	5	15	0	10	92
Karate	19	0	17	15	15	9	16	8	12	111
Netball	13	12	10	11	11	12	12	12	12	105
Ringette	5	0	18	18	18	18	18	17	18	130
Freestyle Skiing	3	10	12	12	8	11	0	4	12	72
Alpine Skiing	10	14	14	13	8	14	28	9	9	119
X C Skiing	3	12	13	1	0	7	14	11	14	75
Speed skating	18	11	13	25	12	14	3	7	15	118
Squash	4	0	6	9	8	6	7	0	7	47
Swimming	4	6	34	22	14	19	32	22	33	186
Table Tennis	9	3	5	6	7	6	5	2	2	45
Weightlifting	8	0	8	8	4	6	9	0	8	51
W/C Basketball	5	0	5	7	7	9	0	0	16	49
Total	213	184	272	276	225	239	269	187	278	2145

Source: Quesnel 2000 BC Winter Games Society

Notes:

1. Participants include athletes, coaches, managers, officials and chaperones.
2. Totals include all categories for each event (i.e. Special Olympics, masters, etc.), except where tallied separately for the larger events (i.e., hockey).
3. Total participants included 1601 competitors, 210 coaches, 44 managers, 215 officials, and 75 chaperones.
4. Zone 0 refers to Officials (not attached to individuals zones).

Zone	Area	Zone	Area
1	Kootenays	5	Vancouver - Squamish
2	Thompson-Okanagan	6	Vancouver Island - Central Coast
3	Fraser Valley	7	North West
4	Fraser River - Delta	8	Cariboo - North East

2.2 PARTICIPANT CHARACTERISTICS

- Over nine out of ten participants interviewed (91%), were from outside Quesnel, and the distribution of the participants - and the number and percent interviewed - was as follows:

**Table 2-3
Participants Interviewed by Sport Zone**

Zone	Name	Number Interviewed	% of Total Interviewed	Total Participants
1	Kootenays	31	12%	184
2	Thompson-Okanagan	32	12%	272
3	Fraser Valley	53	20%	276
4	Fraser River - Delta	30	11%	225
5	Vancouver - Squamish	20	8%	239
6	Vancouver Island –Central Coast	24	9%	269
7	North West	27	10%	187
8	Cariboo – North East	33	12%	278
	Other/No Response	18	7%	
Total		268	100%	2145

Source: Quesnel 2000 BC Games Society and EPG survey results

- Participants from most events were interviewed (20 of the 23 venues). Table 2-4 depicts the distribution of persons interviewed by sport.

**Table 2-4
Participants Interviewed by Event**

Sport/Activity	Number Interviewed	Participants
Badminton	24	77
Biathlon	2	36
Bowling	21	40
Curling	23	64
Fencing	0	24
Figure Skating	6	82
Gymnastics	10	80
Hockey - Boys	13	144
Hockey - Girls	0	136
Judo	19	67
Karate	3	76

Netball	24	79
Ringette	26	105
Skiing – Alpine	0	69
Skiing – Cross Country	15	59
Skiing - Disabled	1	18
Skiing – Freestyle	0	57
Speed Skating	15	88
Squash	4	32
Swimming	29	165
Table Tennis	10	32
Weightlifting	1	36
Wheelchair Basketball	4	33
No Response	18	
Totals	268	1601

Source: EPG survey results

- Most persons interviewed (78%), were taking part in the Games as competitors, although 12% were coaches, 3% were officials, and 7% were chaperones.
- Most participants (97%) were staying in Quesnel for the entire duration of the Games (i.e., either 3 or 4 days). The average length of stay was 3.8 days. (Although the Games officially lasted three days, most competitors arrived the day before the Games began.) It is noted that the athletes competing in events out of town, all ate and overnighted in Quesnel. Consequently, their expenditures are assumed to be mainly Quesnel based.
- Nearly all respondents (96%) said they attended the Opening Ceremonies. A large number, but a somewhat fewer 81%, were planning to attend the Closing Ceremonies.
- Just over half of participants (45%), had friends or relatives come to the event to watch them. The average number of spectating friends and relatives per participant was 2.06. It is noted that many of these spectators were watching more than one competitor, so the participant related totals are not additive. Distribution of the number of spectators watching friends and relatives compete is as follows:

– None	56%
– 1 spectator	7%
– 2 spectators	14%
– 3 spectators	3%
– 4 - 5 spectators	9%
– 6 - 9 spectators	4%
– 10 or more spectators	7%

3.0 SPECTATOR EXPENDITURES

3.1 ANALYSIS METHOD

To calculate spectator spending, the total number of spectators was multiplied by the average spending per spectator. Average spending was obtained from interviews with a sample of spectators. (A total of 181 spectators were interviewed at 17 venues.) Table 3-1 illustrates the number of spectators interviewed by venue.

Table 3-1
Spectators Interviewed by Venue

Sport/Activity	Spectators Interviewed	Total Participants
Badminton	1	77
Biathlon	1	36
Bowling	0	40
Curling	15	64
Fencing	0	24
Figure Skating	14	82
Gymnastics	15	80
Hockey - Boys	2	144
Hockey - Girls	0	136
Judo	15	67
Karate	11	76
Netball	8	79
Ringette	19	105
Skiing - Alpine	8	69
Skiing - Cross Country	0	59
Skiing - Disabled	0	18
Skiing - Freestyle	3	57
Speed Skating	18	88
Squash	2	32
Swimming	7	165
Table Tennis	1	32
Weightlifting	0	36
Wheelchair Basketball	11	33
No Response	30	
Totals	181	1601

Source: EPG survey results

Since tickets are not sold for events, and attendance counts are not taken, a method is needed to calculate the total number of spectators. This spectator count needs to estimate the number of unique individuals so as to avoid double counting persons who attended more than one event. Two methods have been employed. One approach uses a spectator turnover ratio. The other method uses information on the proportion of spectators who came to watch friends or relatives.

3.1.1 Spectator Turn-over Ratio Approach

The total number of spectators is the quotient of the peak number of spectators at each venue divided by the spectator turnover ratio. This is represented by the formula:

Number of Unique Spectators = Peak Number of Spectators / Spectator Turn-Over Ratio

where: **Spectator Turnover Ratio = No. of different events / No. of days**

The peak number of spectators at each venue was determined by periodic counts over the course of the Games. Input to this peak at-one-time spectator count estimate was also provided by the venue hosts and sport chairpersons. It is noted that this figure represented the number of dedicated spectators and not athletes who were watching other competitors. The figure is designed to represent the at-one-time peak attendance.

The spectator turnover ratio is intended to eliminate double counting (i.e., counting the same person at more than one event). This ratio was determined by asking spectators about the number of events they were watching and the number of days they were at the Games. The turnover ratio became the quotient of the number of events (different sports) attended divided by the number of days at the Games. By definition, this index must be equal to or greater than one.

The turnover ratio, generated from the sample of spectators interviewed, was applied to the sum of the peak spectator count for each venue. This approach produced an estimate of the total number of unique spectators who attended events at the Quesnel 2000 Games.

3.1.2 Participant Induced Spectator Approach

The total number of spectators at the Games can also be defined as the number who came to watch friends and relatives, plus those who did not. This relationship is represented by the formula:

Total Spectators = Participant Induced + Non-Participant Induced

The participant induced spectators can be calculated from information contained in the Spectator and Participant questionnaires. Question 6 on the Spectator questionnaire records the number of persons who attended the Games to watch their friends or relatives compete.

Question 6 of the Participant survey indicates the number of persons who came to watch them compete. Multiplying the average number of spectators per participant times the registered number of participants, and dividing by the average number of participants per spectator equals the number of Participant Induced Spectators.

The ratio of the number of participant induced (yes to questions 6) versus non-participant induced spectators (no to question 6) is known. Applying these ratios against the estimated number of Participant Induced Spectators allows the total number of spectators to be calculated.

3.2 SPECTATOR COUNTS

- The peak number of spectators who attended each venue is illustrated below.

Table 3-2
Peak Spectator Counts by Venue

Sport/Activity	Total Participants	Peak Number of Spectators
Badminton	77	90
Biathlon	36	60
Bowling	40	20
Curling	64	100
Fencing	24	80
Figure Skating	82	750
Gymnastics	80	500
Hockey - Boys	144	900
Hockey - Girls	136	750
Judo	67	120
Karate	76	200
Netball	79	300
Ringette	105	100
Skiing - Alpine	69	100
Skiing - Cross Country	59	50
Skiing - Disabled	18	Included in Alpine
Skiing - Freestyle	57	Included in Alpine
Speed Skating	88	250
Squash	32	10
Swimming	165	200
Table Tennis	32	20
Weightlifting	36	200
Wheelchair Basketball	33	100
Totals	1,601	4,900

Source: Quesnel 2000 BC Winter Games Society for participants, plus personal counts and estimates by venue chairmen for spectators.

- The total peak spectator count was 4,900. The calculated spectator turnover ratio was 1.50, or expressed differently, each spectator attended 1.5 different events. Consequently, the total number of unique individual spectators was estimated to be 3,266 (i.e., $4900 / 1.5 = 3266$).

- The participant induced spectator count procedure produced a slightly lower estimate of 3,166, comprised of 1,773 participant induced and 1,393 non-spectator induced spectators. This total was based on the following information:
 - 2.06 spectators per participant (Question 6 - Participant Survey)
 - 1.86 participants per spectator (Question 6 - Spectator Survey)
 - 56% of spectators were participant induced (Question 6 - Spectator Survey)

where the number of participant induced spectators is:

$$(2.06) (1601) / 1.86 = 1773$$

and, the number of non-participant induced spectators is:

participant induced is 56% or 1,773,
 non-participant induced is 44% or 1,393, therefore
 100% (participant plus non-participant induced spectators) = 3,166

3.3 SPECTATOR CHARACTERISTICS

- Two-thirds of spectators interviewed (over 65%), were from Quesnel.
- The non-local spectators interviewed came from seven of the eight BC sport zones, as described below.

**Table 3-3
Spectators Interviewed by Sport Zone**

Zone	Description	Spectators	Percent
1	Kootenays	2	1%
2	Thompson-Okanagan	13	7%
3	Fraser Valley	9	5%
4	Fraser River - Delta	0	0%
5	Vancouver - Squamish	6	3%
6	Vancouver Island - Central Coast	6	3%
7	North West	3	2%
8	Cariboo - North East	139	77%
Other	Other/No Response	3	2%
Total		181	100%

- The Games were the main reason that nearly all (92%) of the non-local spectators visited Quesnel.
- One half of the spectators (56%), were attending the Games for three days, and 22% were attending the Games for two days. The average length of stay in Quesnel was 2.9 days. The distribution of length of stay was as follows:

– 1 day	15%
– 2 days	25%
– 3 days	27%
– 4 days +	32%

- More than half the spectators attended the Opening Ceremonies (57%), and the Closing Ceremonies (54%).
- More than half the spectators (56%), were attending the Games to watch a friend or relative compete. The average number of persons they were watching was 3.4 persons.
- The average size of the spectator parties was 3.63 persons. The distribution of spectator party size is as follows:

– 1 spectator	12%
– 2 spectators	32%
– 3 spectators	17%
– 4 spectators	25%
– 5+ spectators	4%

3.4 SPECTATOR EXPENDITURES

- Most spectators (86%) spent money on goods and/or services while attending the Games. The following chart indicates the distribution of per person spending on a variety of categories.

**Table 3-5
Spectator Expenditures by Category**

Category	Percentage by Expenditure Group												Avg. Exp.
	\$0	\$1-10	\$11-20	\$21-30	\$31-40	\$41-50	\$51-60	\$61-70	\$71-80	\$81-90	\$91-100	\$101+	
Accom.	82.7	0.0	0.0	0.0	3.6	1.8	0.0	2.4	1.8	0.6	0.6	6.5	\$16.96
Automobile	46.4	22.6	12.5	4.2	7.1	3.0	1.2	0.0	0.6	0.0	1.2	1.2	\$13.42
Concession	38.1	42.3	12.5	2.4	1.2	1.8	0.0	1.2	0.0	0.0	0.0	0.6	\$7.77
Gifts	60.7	6.5	4.2	4.8	6.0	6.5	0.6	1.8	2.4	0.0	3.6	3.0	\$20.17
Local Trans.	98.8	0.6	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0.21
Groceries	76.2	8.9	4.2	3.6	0.6	4.8	0.6	0.0	0.0	0.0	1.2	1.2	\$6.47
Restaurant	51.2	7.7	10.1	8.3	4.2	5.4	2.4	0.6	4.2	0.0	3.6	2.4	\$20.83
Rec./Ent.	89.3	4.8	3.0	1.2	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	\$2.05
Shopping	86.3	1.2	2.4	3.6	0.6	1.8	0.6	1.8	1.2	0.0	0.6	0.0	\$5.67
Other	91.1	4.8	1.2	0.6	0.0	1.2	0.0	0.0	0.0	0.0	0.0	1.2	\$3.7
Total	14.0	12.8	8.1	5.2	3.5	5.2	3.5	1.2	2.3	2.3	4.7	37.2	\$97.97

Source: Interviews with 181 Games spectators

Notes:

1. Figures are row percentages (i.e., they add to 100% horizontally).
2. Numbers in the Average Expenditure column are the average dollar amounts spent in each expenditure category.

- Spectators attending the Games had an average expenditure of **\$97.97** during their stay in Quesnel. This figure is based on the following averages of locals and non-locals:

-	Average spending by non-local residents	\$177.61
-	Average spending by local residents	\$54.21

- Applying the average expenditures to the total number of spectators results in a spectator spending total of **\$315,000** (i.e., \$97.97 x 3216). This is based on the average of the two spectator counts, as follows:

-	Spectator Turn-Over Technique	3,266
-	Participant Induced Technique	<u>3,166</u>
		6,432/2 = 3,216 (approx.)

4.0 VOLUNTEER EXPENDITURES

4.1 ANALYSIS METHOD

As with the participants and spectators, volunteers were asked about their Games participation and related spending. A total of 2,800 volunteers assisted with administration of the Games (Source: BC Winter Games Society, estimate of volunteers actually assigned out of the registered total of 3,050). Approximately 5% or 126 were interviewed at a variety of venues.

Volunteers were asked about the volunteer category in which they were working, the number of days they would be volunteering, whether they had any friends or relatives attending the Games, and their spending. Average spending per person was multiplied by the total number of volunteers to estimate total spending by all volunteers.

4.2 VOLUNTEER CHARACTERISTICS

Volunteers were involved in the Games in a number of different capacities. The distribution of persons interviewed is as follows:

Table 4-1
Volunteers Interviewed by Category

Category	Number	Percent
Accommodation	8	6%
Administration	1	1%
Ceremonies	12	10%
Communications	0	0%
Cultural Services/Events	3	2%
Food Services	41	33%
Friends of the Games	1	1%
Medical	2	2%
Promotion	2	2%
Protocol	23	18%
Registrations and Results	1	1%
Security	18	14%
Sports	23	18%
Transportation	4	3%
Volunteers	3	2%
Others	9	7%
No Response	1	1%
Total	152	121%

Note: 126 individual volunteers were interviewed with several in multiple categories.

- More than half the volunteers were working at the Games for four days or more, while the average duration was 2.5 days. The distribution was as follows:
 - one day 14%
 - two days 12%
 - three days 18%
 - four + days 57%
- One-third (34%) was a friend or relative of a Games participant.

4.3 VOLUNTEER EXPENDITURES

- Most volunteers (over 90%) bought some goods and/or services while assisting with the Games. Table 4-3 illustrates the distribution of expenditures in percentages, by category.

**Table 4-3
Volunteer Expenditures by Category**

Category	Percentage by Expenditure Group												Avg. Exp.
	\$0	\$1-10	\$11-20	\$21-30	\$31-40	\$41-50	\$51-60	\$61-70	\$71-80	\$81-90	\$91-100	\$101+	
Accom.	96.6	0	0	0	0	0	0	0	0	0	0	0	\$9.09
Automobile	44.8	19.8	16.4	6.0	7.8	2.6	1.7	0	0	0	0	0	\$13.66
Concession	44.0	28.4	17.2	6.0	2.6	1.7	0	0	0	0	0	0	\$8.73
Gifts	62.9	4.3	6.0	4.3	4.3	1.7	2.6	1.7	0.9	1.7	5.2	4.3	\$22.08
Local Trans.	97.4	0.9	0.9	0	0	0	0	0	0	0	0	0.9	\$1.51
Groceries	82.8	1.7	6.9	0.9	0.9	3.4	0	0	0	0	0	3.4	\$7.21
Restaurant	49.1	5.2	16.4	7.8	5.2	6.9	2.6	0.9	0	0	3.4	2.6	\$21.68
Rec./Ent.	87.9	3.4	2.6	1.7	0.9	2.6	0	0	0	0	0.9	0	\$3.84
Shopping	92.2	0	3.4	0.9	0	1.7	0	0	0.9	0	0.9	0	\$3.36
Other	96.6	0.9	0	0.9	0	0	0	0	0	0	0.9	0.9	\$2.55
Total	5.2	15.5	7.8	7.8	9.5	5.2	7.8	3.4	4.3	1.7	2.6	29.3	\$93.18

Source: Survey of 126 volunteers.

Notes:

1. Figures are row percentages (i.e., they add to 100% horizontally).
2. Numbers in the Average Expenditure column are the average dollar amounts spent in each expenditure category.

- The average expenditure by each Volunteer over the duration of the Games was \$93.18.
- The total expenditure of the 2,800 volunteers was \$261,000 (i.e., \$93.18 x 2,800).

5.0 GAMES SOCIETY EXPENDITURES

5.1 QUESNEL 2000 BC WINTER GAMES SOCIETY

The Quesnel 2000 BC Winter Games Society was responsible for organizing and staging the Games.

The Society had a budget (provided by BC Games) of \$615,000 to host the Games. As to the end of March 2000, the society had spent between \$530,000 to \$550,000 of this budget. The spending of this money to purchase goods and services had an impact on the local economy since a significant proportion was spent in Quesnel. Preliminary estimates indicate that slightly more than 50% (approximately **\$285,000**) was spent locally. (This estimate of the proportion of expenditures that were made locally was provided by the Games Administration board chairperson.)

It is noted that a large portion of the money that was spent outside the community was for food and sporting equipment. Food purchases were to feed the 2,100 participants three meals a day for the duration of the Games. Expenditures in both of these categories were made directly with suppliers.

In addition to cash expenditures by the organizing society, a great deal of "in-kind" assistance was provided by local merchants, clubs, agencies and individuals.

5.2 BC GAMES SOCIETY

BC Games Society expenditures included travel costs of various society representatives to visit Quesnel as part of their assistance to the Games' organizers. Information supplied by BC Games representatives indicated several person-trips had been made to Quesnel, prior to and during the Games.

These trips generated local spending of **\$21,000**. (Source: BC Games)

6.0 SUPPLY ANALYSIS

6.1 ANALYSIS METHOD

Analysis of economic impact can be conducted using “supply” or “demand” surveys. The analysis described in the previous chapters is an illustration of a demand or consumer survey. It recorded the amount of money that was **spent** by various categories of individuals involved with the Games.

Another technique used to estimate economic impact is to determine the amount of revenue that was **received** by various businesses in Quesnel that supplied goods or services to persons participating in the Games. This is known as a supply survey.

Developing a supply survey to estimate Games related receipts has a number of design problems. These include:

- the large number and variety of businesses that could derive revenue from Game’s participants.
- the difficulty business operators would have in distinguishing Games participants from regular customers.
- the reluctance of many business operators in sharing revenue information.

In the same way that a sample survey was used to estimate participant spending, a sample of businesses can be used to estimate revenues generated by Games participant spending. The BC Games research technique developed in earlier Games is to conduct a survey of area hotels and motels to determine the number of incremental room nights that were sold as a result of the Games. Although this approach involves only one category of participant spending, commercial accommodation is a key component of traveller spending and can be used as a proxy for total spending. Using tourism industry spending norms, it is possible to estimate the total amount of revenue likely to have been generated by other sectors of the service sector as a result of the Games.

Using phone book and Chamber of Commerce listings, an inventory of hotels and motels was prepared. This included ten hotels and twelve motels of inns. On the final day of the Games (Sunday, February 27), personal interviews were conducted with the operators all area hotels and motels. Good cooperation was received from facility management, and estimates were provided of the number of room night sold to Games participants, by 16 of the 22 accommodation properties. This total was pro-rated in include the non-respondents and the area’s B&Bs.

6.2 REVENUE ESTIMATES

Accommodation operators were asked about the number of rooms rented to Games related participants and their average double occupancy rate. Total room-night rentals times the room rate equals the accommodation sector revenue. This total includes all Quesnel hotels/motels and B&Bs.

The analysis resulted in an accommodation revenue figure of **\$93,000**.

Tourism research figures in British Columbia reveal that accommodation spending typically represents approximately 18% of the total daily or trip expenditure. (Source: BC Visitors Study 1998). The 18% accommodation proportion is based on typical travel patterns where commercial accommodation is purchased by most travellers. The Games housed virtually all participants in area schools, reducing the amount that was spent on commercial accommodation. For analytical purposes, we have lowered the accommodation percentage by 50%, from 18% to 12% of total spending.

Other expenditures occur on such items as restaurant meals, entertainment, shopping, recreation and transportation. The BC Visitor Study distribution of these categories is as follows:

- Accommodation	18% (Used 12% in the calculations)
- Attractions and Events	6%
- Food and Beverage	34%
- Transportation	23%
- Souvenirs and Gifts	5%
- Outdoor Adventure/Attractions	4%
- Other	<u>10%</u>
	100%

Pro-rating the 12% accommodation figure produces a total Games related revenue figure of **\$775,000** (i.e., $93,000 / .12 = 775,000$). This supply survey figure is approximately 1% lower than the demand survey result of \$784,000.

7.0 CONCLUSIONS

The Quesnel 2000 BC Winter Games created direct economic impact in Quesnel of nearly 1.1 million dollars. Over two-thirds of this impact was created by the spending of Games participants, while one-third was contributed by Games Society organizers.

- Direct spending within these two categories was as follows:

Spending by participants	\$784,000
Spending by organizers	<u>\$306,000</u>
Total	\$1,090,000

- Direct spending by the participants was as follows:

Participants/Competitors	\$208,000
Spectators	\$315,000
Volunteers	<u>\$261,000</u>
Total	\$784,000

- Direct spending in Quesnel by Games organizers was as follows:

Quesnel 2000 BC Winter Games Society	\$285,000
BC Games Society	<u>\$21,000</u>
Total	\$306,000

Spending by Games participants occurred over the three to four days of the Games during the last week of February. Spending by the Games organizers occurred over a longer period of time - prior to, during, and after the Games.

The demand survey technique used to measure the economic impact of the Games provided a defensible analysis process. Based on the survey sample sizes, the results are considered accurate to within +/- 6% for the participant survey, +/-7% for the spectator survey, and +/-9% for volunteers.

The survey of hotels/motels produced accurate and timely information on accommodation revenues. Pro-rating these accommodation receipts has produced an estimate of total economic impact from a supply perspective. The similar estimates of economic impact created by these two techniques provide a reasonable level of comfort in the validity of the results.

It is noted that the analysis focused entirely on direct spending. Additional indirect and induced effects would have been triggered by this direct spending. These impacts were not measured but would have increased the overall economic impact slightly.

APPENDICES

A QUESTIONNAIRES

B INTERVIEWER INSTRUCTIONS

APPENDIX A

QUESTIONNAIRES

PARTICIPANT

SPECTATOR

VOLUNTEER

2000 BC WINTER GAMES

VOLUNTEER SURVEY

Activity _____	Location _____	Thur. <input type="checkbox"/>	Fri. <input type="checkbox"/>	Sat. <input type="checkbox"/>	[No. _____]
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1. In which volunteer capacity are you working?

- | | |
|--|---|
| Accommodation <input type="checkbox"/> | Promotions <input type="checkbox"/> |
| Administration <input type="checkbox"/> | Protocol <input type="checkbox"/> |
| Ceremonies <input type="checkbox"/> | Registration and Results <input type="checkbox"/> |
| Communications <input type="checkbox"/> | Security <input type="checkbox"/> |
| Cultural/Spec. Events <input type="checkbox"/> | Sports <input type="checkbox"/> |
| Food Services <input type="checkbox"/> | Transportation <input type="checkbox"/> |
| Friends of the Games <input type="checkbox"/> | Volunteers <input type="checkbox"/> |
| Medical <input type="checkbox"/> | Others _____ <input type="checkbox"/> |

2. How many days will you spend working at these Games? _____ days

3. Are you a friend or relative of any of the participants (athletes or officials), in the Games? Yes No

4. How much do you estimate you will spend during the Games on the following items?
(Please record only expenditures that you have made or will make as a result of the Games?)

Accommodation \$ _____	Groceries \$ _____
Automobile and Gas \$ _____	Restaurant Meals \$ _____
Concession \$ _____	Recreation/Entertainment \$ _____
Gifts and Souvenirs \$ _____	Retail Shopping \$ _____
Local Transportation \$ _____	Other _____ \$ _____
	Total \$ _____

Thank you for your assistance.

APPENDIX B

INTERVIEWER INSTRUCTIONS

2000 BRITISH COLUMBIA WINTER GAMES

ECONOMIC IMPACT SURVEY INTERVIEWER INSTRUCTIONS

Introduction and Background

Quesnel is hosting the 2000 BC Winter Games during the last weekend in February. The Games include 23 events and will likely have a participant total of approximately 2,000 persons. The event will also involve several hundred local volunteers, and several hundred spectators.

The existence of the Games will have significant economic impact on the Quesnel area, based on spending - by the local Games Societies, by BC Games, and particularly by athletes, spectators and volunteers. Periodically in the past, BC Games and the host communities have conducted surveys to estimate the local economic effects of the Games.

Objectives

The overall purpose of the project is to analyze and calculate the economic impact of the Winter Games on the Quesnel area. Economic impact will be measured by direct spending in the local area. Impacts will be estimated by the local spending of the:

- Prince Rupert Host Society
- BC Games
- **athletes/participants**
- **spectators**
- **volunteers**

The survey you are involved with focuses on the latter three categories.

Questionnaires

Spending by participants, spectators and volunteers are the focus of this project. Separate questionnaires have been prepared for each of these categories. Each is one page in length, and can be completed in from two to five minutes.

The intent of these forms is to conduct a sample survey, which will provide information on total spending generated by the Games. Efficient interviews and accurate completion of the questionnaires are crucial to completing this survey effectively.

Sample Sizes

The following numbers of questionnaires are targeted for the three categories:

- Participants 200 - 300
- Spectators 150 - 200
- Volunteers 100 - 150

Sports/Activities and Venues

The following sports/activities are included in these Games, with estimated participation and venue locations.

Sport/Activity	Athletes	Others	Venue Location
Badminton	77	27	Quesnel Secondary and Riverview
Biathlon	36	17	Hallis Lake
Bowling	40	19	Quesnel Bowling Lanes
Curling	64	31	Quesnel Curling Club
Fencing	24	16	Parkland Elementary
Figure Skating*	82	32	Quesnel Twin Arena
Gymnastics	80	35	Quesnel Twin Arena
Hockey - Boys	144	43	Quesnel Twin Arena and Cariboo Memorial
Hockey - Girls	136	41	Quesnel Twin Arena and Cariboo Memorial
Judo	67	25	Lakeview Elementary
Karate	76	35	Maple Drive Junior Secondary
Netball	79	26	Quesnel Secondary
Ringette	105	25	Quesnel Twin Arenas
Skiing - Alpine	69	24	Troll Ski Resort
Skiing - Cross Country	59	16	Hallis Lake
Skiing - Disabled	18	8	Troll Ski Resort
Skiing - Freestyle	57	15	Troll Ski Resort
Speed Skating*	88	30	Lac La Hache
Squash	32	15	Prince George
Swimming	165	21	Quesnel Recreation Centre
Table Tennis	32	13	Dragon Lake Elementary
Weightlifting	36	13	Baker Elementary
Wheelchair Basketball	33	16	Barlow Creek Elementary
Totals	1601	544	2145

Notes:

1. Others column includes coaches, managers, officials and chaperones
2. The source for the information was the Quesnel 2000 Games Society (March 16/00)
3. * Includes Special Olympics as follows:

Figure Skating	5 athletes	2 coaches
Speed Skating	12 athletes	4 coaches

Interview Stints

Interviews of a sample of spectators, participants and volunteers should be completed at most venues. The key focus will be on the more popular sports and the most convenient venues. Scheduling has been based on a questionnaire completion rate of 5 to 8 per hour.

Respondent Selection

It is important that the survey be as random as possible so the sample can accurately reflect the total number of attendees. However, actual respondent selection will depend on the number of people at the venue and their agreement to participate.

In busy venues, locate yourself in an area away from the actual event. In less busy venues, approach persons until the venue quota is complete. Attempt to approach a mix of males and females, and persons of different ages.

Interview Procedures

Participation in the survey is voluntary and each individual survey response will be anonymous. Approach a selected respondent, introduce yourself and the survey project, and ask if they would be willing to answer a few questions about their visit to the Games. The following is the introduction that should be used.

Good morning/afternoon. My name is _____. We are conducting a survey for the 2000 Winter Games. Would you mind answering a few questions?

Go through the questionnaire asking each question. The questions with small boxes () should be checked as applicable, while a question with a line (_____) requires a written response. When the interview is over, thank the person for their assistance and go on to the next respondent.

Questionnaire Drop Off

Put the completed questionnaires from your interview stint in an envelope, and drop them off at the Sandman Hotel (to the attention of David Hall).

ACTIVITY SURVEY STINT SIGN-UP SHEET

Sport/Activity			
Badminton			
Biathlon			
Bowling			
Curling			
Fencing			
Figure Skating*			
Gymnastics			
Hockey - Boys			
Hockey - Girls			
Judo			
Karate			
Netball			
Ringette			
Skiing – Alpine			
Skiing – Cross Country			
Skiing - Disabled			
Skiing – Freestyle			
Speed Skating*			
Squash			
Swimming			
Table Tennis			
Weightlifting			
Wheelchair Basketball			

Notes:

1. Try to complete 6 to 8 interviews per hour.
2. Try for a mix of participants (50%), spectators (35%), and volunteers (15%).