

2002 Olympic Winter Games

Economic, Demographic and Fiscal Impacts

*State of Utah
Governor's Office of Planning and Budget
Demographic and Economic Analysis Section
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2002 Olympic Winter Games

The Economic, Demographic, and Fiscal Impacts

The Demographic and Economic Analysis Section of the Governor's Office of Planning and Budget (GOPB) has authored this study to provide the Governor, legislature, state agencies, local government, the organizing committee, and the public with credible estimates of the economic, demographic, and fiscal impacts of the 2002 Olympic Winter Games. This analysis is critical to state government for planning, budgeting, and policy making. Individuals outside of state government will also find it useful because of the far reaching impacts of such a mega-event.

The research is limited to strictly defined economic issues associated with Utah. Specifically, this study analyzes the additional output, income, employment, population, and government revenue and expenditure that is generated because of the injection of new money into the Utah economy. Other relevant issues are beyond the scope of this work.

This report is an update to an earlier report released in April 1998. Since 1998, the Olympic budget has been refined, improved estimates of direct state revenues and expenditures associated with the Games have been prepared, refinements to the input data and modeling tools have been made, and one more year of analysis has been added. This report incorporates these changes and as a result replaces all earlier estimates prepared by the GOPB. The state will continue to monitor the economic, demographic, and fiscal impacts and update and expand this work as necessary prior to and after the Games.

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Executive Summary

The 2002 Olympic Winter Games will generate a significant amount of employment, earnings, and output in the Utah economy prior to and during 2002. Analysts have estimated the economic, demographic, and fiscal impacts by analyzing the effect of new out-of-state money that enters the Utah economy as a result of the Games.

Economic, Demographic, and Fiscal Impacts

State economic, demographic, and financial models indicate that the Olympics will generate the following impacts from 1996 through 2003¹:

- **Output: \$4.5 billion in economic output or sales.**
This is the broadest measure of economic activity and includes all sales (both final and intermediate) that are estimated to occur because of the Games.
- **Employment: 35,000 job years of employment.²**
Since some people may be employed for a decade or more, while others will be employed for just a few months, it is difficult to characterize the number of jobs created. The measure of jobs used here is derived from the sum of jobs created in annual terms from 1996 through 2003. Olympic related jobs start in 1996 with less than 100, but increase steadily, reaching a yearly peak of 12,590 in 2001, and a monthly peak of 25,070 in February 2002. The sum of employment in all of these years is equivalent to 35,000 jobs lasting one year.

Olympic related employment is small compared to the size of the total economy. It is 0.2% of total jobs in the state in 1997 and peaks at 0.5% of total jobs in 2001. However, Olympic related jobs are an important source of new job growth. Olympic related jobs represent 5.1% of projected employment growth in 1998 and 33.4% of projected employment growth in 2001.
- **Earnings: \$1.5 billion in earnings to Utah workers.**
The people who are employed because of the Olympics will receive these earnings, which, in addition to wages and salaries, include health and retirement benefits and proprietor's income.
- **Net Revenue to State and Local Government: \$75.9 million.**
Net revenue is revenue less expenditure. The Olympics will generate gross state and local government tax revenue of approximately \$450.1 million, but will require an estimated \$374.2 million in additional expenditures because of services provided by state and local government. This leaves an estimated \$75.9 million in net revenue to state and local governments.

¹ These impacts are in 2000 dollars and include direct, indirect, and induced economic activity. In other words, the impacts include the direct effects of Olympic spending, such as expenditures by the Organizing Committee and visitors, and the secondary and tertiary spending that occurs as these initial expenditures are circulated within the economy.

² The actual estimate is 35,424. Throughout the rest of this report all figures are presented in an unrounded form. This is done to ensure internal consistency in the reporting of the figures, but should not imply strict precision.

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- **Net Revenue to State Government: \$55.5 million.**
The Olympics will generate an estimated \$330.2 million in state revenue including sales tax, income tax, departmental collections, and federal funds to the state. Corresponding to this growth in revenue will be economic and population growth which will require additional state services costing an estimated \$274.7 million. The net revenue gain to state government is estimated to be \$55.5 million.
 - **Net Revenue to Local Government: \$20.4 million.**
The Olympics will generate an estimated \$119.9 million in local revenue including additional property tax, sales tax, charges, indirect federal funds and redirected revenue from Salt Lake Organizing Committee to the Utah Olympic Public Safety Command. Local expenditures associated with an expanded economy and population plus direct expenditures for the Games are estimated to be \$99.5 million, leaving a net revenue gain to local government of \$20.4 million.
 - **Visitors: Net increase of 50,000 visitors per day during the Games.**
The Wasatch Front typically has around 20,000 out-of-state visitors per day in the winter months. During the Olympics, 70,000 visitors per day are expected. Therefore, the net increase because of the Olympics is estimated to be 50,000 visitors per day. Net visitor spending is estimated at \$116.6 million, after accounting for out-of-state leakages and displacement effects.
 - **Population: 17,000 peak population increase in Utah during 2001.**
Olympic related jobs will expand the population in the years leading up to and during 2002. Once the Olympic related jobs end, many of the people who held these jobs will eventually leave the state. This out-migration offsets the population increases that occurred prior to the Games.

This population dynamic is best illustrated by considering the population impact of host broadcasters. Prior to the Games, NBC will relocate many highly specialized, professional employees to arrange for the television production of the Games. After the Games, these broadcasters will remove their equipment and move on to their next project. The end result is a migration of people into the state prior to the Games and an out-migration of these same people after the Games. The migration behavior of construction workers, athletes, business professionals, and temporary tourism vendors will be much the same.

In terms of the state's total population, the Olympic related population impact is small. Olympic related population represents 0.1% of the population in 1997 and increases to 1.4% during the Games. However, Olympic related population growth represents a significant portion of new population growth in the year before and during the Games. An estimated 44.9% of the new population growth in 2001 is expected to occur because of the Olympics. This impact declines to zero within a year of the Games.

Economic, Demographic, and Fiscal Impacts in Utah

2002 Olympic Winter Games

1996 through 2003

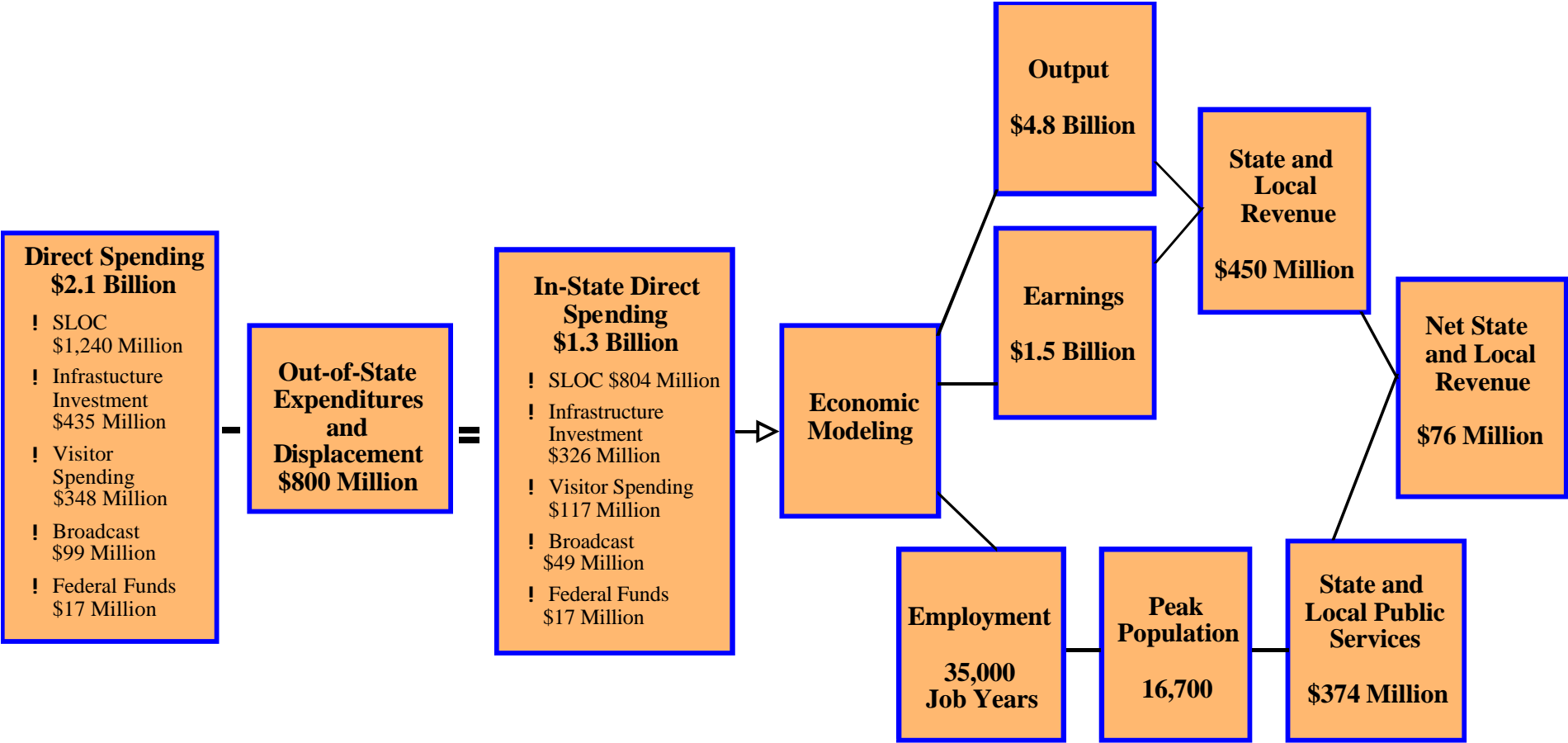


Table 1: Summary Impacts from the Olympic Games

| | |
|-----------------------------------------------------|-----------|
| Spending | |
| Direct Spending (Thousands of 2000 Dollars) | 2,139,327 |
| Direct Instate Spending (Thousands of 2000 Dollars) | 1,313,748 |
| Economic and Demographic | |
| Output (Thousands of 2000 Dollars) | 4,483,515 |
| Earnings (Thousands of 2000 Dollars) | 1,544,203 |
| Employment (Job Years) | 35,424 |
| Population (2001 Peak) | 16,661 |
| Fiscal | |
| State Revenue (Thousands of 2000 Dollars) | 330,199 |
| State Expenditure (Thousands of 2000 Dollars) | 274,722 |
| State Net Revenue (Thousands of 2000 Dollars) | 55,477 |
| Local Revenue (Thousands of 2000 Dollars) | 119,928 |
| Local Expenditure (Thousands of 2000 Dollars) | 99,466 |
| Local Net Revenue (Thousands of 2000 Dollars) | 20,462 |
| Combined Revenue (Thousands of 2000 Dollars) | 450,127 |
| Combined Expenditure (Thousands of 2000 Dollars) | 374,188 |
| Combined Net Revenue (Thousands of 2000 Dollars) | 75,939 |
| Visitors Per Day | |
| Visitors Per Day (Total) | 70,000 |
| Visitors Per Day (Net) | 50,000 |
| Net Visitor Spending (Thousands of 2000 Dollars) | 116,571 |

Source: Governor's Office of Planning and Budget

I. Introduction

The Governor's Office of Planning and Budget has prepared this analysis as part of a more than decade-long commitment to understanding the potential economic issues and impacts associated with the Olympic Winter Games. This legacy of involvement includes research that started with the original 1985 Olympic feasibility study.

Research by the Governor's Office of Planning and Budget on the impacts of the Olympic Winter Games was last published in April 1998. This work has now been revised. The main differences between the 1998 research and the present analysis are (1) the data used in the analysis have been refined as the underlying issues have become better understood; (2) the Governor's Office of Planning and Budget has developed a broader and more integrated approach to its economic, demographic and fiscal modeling; (3) one more year has been added to the analysis; and (4) significantly improved estimates of the transportation, public health, and safety costs associated with the Games have been developed.

The research in this report is limited to a consideration of the additional output, income, employment, population and government revenue and expenditure that is generated because of the injection of new money into the economy. Other relevant issues are beyond the scope of this report. Specifically, this research does not evaluate the environmental and social impacts; quantify the long term impacts on the community and economy (including the tourism industry); estimate in a more precise fashion the direct costs outside of the Salt Lake Organizing Committee's budget of providing public services; or capture the myriad of new spending in the Utah economy that could have an Olympics connection.

II. Estimated Impacts of the 2002 Olympic Winter Games

Modeling Framework

To estimate the impacts resulting from the 2002 Olympic Winter Games, the Governor's Office of Planning and Budget (GOPB) used the Utah State and Local Government Fiscal Impact Model (FIM). The FIM captures the interaction between the economy, the population, and government revenue and expenditure. The basic idea is that the Olympics will generate new spending in the economy. This spending creates additional output, income and employment. The expansion of employment opportunities results in a larger resident population. This population, in turn, needs public services that require additional government expenditure. Likewise, the additional income these people earn generates additional government revenue. This is the same methodology and model that is used by state government to evaluate other projects and policies.

Olympic Related Sources of Spending

GOPB identified the following sources of estimated Olympic related spending:¹

- Salt Lake Olympic Organizing Committee (SLOC): \$1,240 million
- Infrastructure investment: \$435 million
- Visitor spending during the Olympic Games: \$348 million
- International Sports Broadcasting (ISB) expenditures to broadcast the Games: \$99 million
- Direct federal funds to state government for Olympics operations: \$17 million

While there are certainly other sources of Olympic related spending, this analysis is limited to an examination of these five.

The total amount of spending directly related to the Olympics is estimated to be approximately \$2.1 billion. Only \$1.3 billion, however, actually impacts the Utah economy because of the leakages that occur. The term leakage is used to describe the fact that although a good or service may be purchased in-state, some of the value is produced out-of-state. In this sense, some of SLOC's spending leaks out of Utah's economy. Further, employees of SLOC and the other entities involved with the Olympics spend only about 80% of their income in Utah. The remainder goes for non-consumption related purposes such as taxes and saving which do not immediately impact the Utah economy. Finally, 10% of SLOC's budget comes from sources within Utah and therefore is not considered to generate an economic impact. Table 2 provides these direct Olympic related spending estimates by source and industry by year. Most of this spending will occur during 2001 and 2002 though significant amounts will be spent between 1997 and 2000.

¹ All spending estimates are in inflation-adjusted 2000 dollars. SLOC's budget is \$1.3 billion in non-inflation adjusted dollars, and is current as of November 2000. It is based on a detailed examination of what is required to host each Olympic event. Adjusting the budget for inflation and excluding ISB's contract brings the \$1.3 billion to \$1.2 billion in 2000 dollars.

In order to have an economic impact, Olympic related spending must originate from outside sources. Spending that originates from in-state sources is considered a redistribution of economic activity. Table 2 presents externally financed in-state spending by source. Only \$804.4 million, or about 65%, of SLOC's budget is estimated to be both externally financed and spent in-state. Of the \$435 million spent on infrastructure investment \$326 million will be spent in-state. Of the \$348 million Olympics visitors are estimated to spend in connection with their attendance at the Games, \$117 million will be spent in-state. ISB's broadcast operations will cost \$99 million, of which \$49 million is estimated to be spent in-state.

The following five sections document the major assumptions used to develop Table 2.

SLOC Budget.² SLOC's current budget is a detailed analysis of what it will cost to host the various events at specific venue sites. Table 3 itemizes the adjustments to the budget required to analyze its economic impact beginning with the core Olympic budget of \$1.313 billion. A portion of the Olympic match budget (\$74.0 million) is added to derive SLOC expenditures which impact the Utah economy prior to adjustments and leakages. The total budget is \$1.4 billion before adjusting for the impact analysis. After adjustments, \$804.4 million of SLOC's budget will impact the Utah economy.

- In current dollars, \$99.0 million of SLOC's budget will be for purposes related to the Winter Sports Park. Of this \$99.0 million, \$59.0 million will go to repay the sales tax

diversion used to build the Park, and \$40.0 million will establish a legacy fund to operate the Park.³

- In current dollars, \$205.4 million will be spent on goods and services provided by out of state suppliers.
- After considering the \$99.0 million sales tax diversion and legacy fund payment and the \$205.4 million spent out of state, SLOC will spend almost \$1.1 billion in state, not for the Sports Park. Ten percent of this amount, or \$108.3 million, will come from sources inside Utah.
- The budget from external sources spent in Utah is \$974.2 million in current dollars. Adjusting this figure for inflation, the budget is \$943.1 million in 2000 dollars.
- In previous analyses, host broadcast spending has been treated as a separate category of spending from the SLOC budget. To remain consistent with the previous approach, SLOC's contract with ISB is removed from the SLOC budget. In inflation adjusted 2000 dollars, the ISB contract is \$98.8 million.
- A certain portion of the goods and services SLOC purchases from Utah based suppliers is created outside Utah. Office equipment and air travel are examples. The amount created outside Utah is \$39.9 million.

² A number of Olympic facilities, such as the Olympic Village and Rice-Eccles Stadium at the University of Utah and the hockey arena in West Valley City will cost substantially more than SLOC has budgeted. The difference between the SLOC budget figures for these facilities and their final cost is assumed to be a redistribution of internal spending. In other words, if these facilities were not built, the part of their cost funded from sources other than SLOC would have been spent in Utah in other ways. Therefore, only the SLOC funded portion of these facilities impacts the Utah economy.

³ The \$59 million is the original investment of Utah tax dollars to build Olympic facilities. This money is repaid to state and local government and is not a net increase to the Utah economy. Because the \$40 million Legacy Fund is tied to the sales tax repayment, it is not considered to impact the economy. In the sense that the \$59 million is a cash investment in the Olympics, the \$40 million is the cash return on the investment. Consequently, the \$40 million is like any other interest the state earns and does not impact the economy.

Olympic Related Infrastructure Investment. The Olympic Games will accelerate the development of projects that would normally occur after the Games. It will also encourage new investment that would otherwise not occur. Both of these result in a large amount of construction before 2002. Major expansions of lodging facilities, ski resorts, and transportation systems will be completed prior to the Games. Some of this infrastructure investment would have occurred regardless of the Olympics, though likely after 2002.

With 80 percent occupancy in the mid-1990s, for example, the lodging industry along the Wasatch Front warranted additional hotel construction. A study of Salt Lake area lodging capacity by Hire and Associates estimated about 6,000 additional lodging rooms will be built between 1996 and 2001. Most of these additional rooms have already been built. Further, little additional lodging construction is foreseen for the years immediately after the Olympics. Similar acceleration effects occur for other types of infrastructure.

While infrastructure is not built exclusively for visitors attending a three week event such as the Olympics, the prominence of the Games can impact the timing of construction. The experience of influential visitors during the Games combined with the impression of the millions of people watching on television around the world will increase visitation to Utah to some extent. Because of this exposure, it is likely some of the hotel construction taking place during the 1996 to 2002 period is accelerated from the post-Olympic period. In other words, without the Olympics, only a portion of the hotel construction taking place between 1996 and 2002 would have been undertaken. The remainder would have occurred sometime after 2002.

In addition to hotels, a variety of other infrastructure investments will be affected by the Olympics. Public facilities, such as various highways and transit systems, and private facilities, such as ski resorts, will be influenced by the Olympics. Some projects, such as Olympics venues and access roads are built specifically for the Olympics. In other cases, only the timing of the infrastructure investment is impacted. The end result is more economic activity from 1996 to 2002 than would otherwise occur. As presented in Table 2, and detailed in Table 4, GOPB estimates public and private sector infrastructure investment to total \$435.0 million between 1996 and 2002. (Table 4 presents a total of \$433.3 million, which is current dollars. Table 2 presents a total of 435.0 million in inflation adjusted 2000 dollars. The difference between the two tables is purely inflation.) Of the \$435.0 million, \$326.3 million is estimated to be spent in-state. The timing of the construction is based on individual project schedules.

Visitor Spending During the Olympic Games.

SLOC estimates there will be at least 70,000 visitors on any given day during the Games. Since the Wasatch Front typically has about 20,000 out-of-state visitors skiing and involved in other activities during this period, the net increase in visitation will be around 50,000.⁴ The net increase in spending associated with these visitors is \$116.6 million (see the discussion about the derivation of visitor spending in a later section). If anecdotes from Nagano are to be believed, however, certain segments of Utah's tourism sector could experience less business during February 2002 than if the Olympics were held elsewhere. This phenomenon is called displacement. Tourism industry officials are acutely aware of the potential for displacement and are already working hard to mitigate its effects. In many respects, GOPB's analysis of visitor spending during the Games, and visitor spending displaced because of the Games, can be characterized as a hard

⁴ Precise estimates of destination skier visits by week during the ski season are not available. Without considering the impact of the Olympics on visitation, GOPB forecasts 3.8 million skier visits during 2002, of which 2.1 million will be made by destination skiers. Dividing these 2.1 million annual destination skier visits by 120 ski days during the season, yields almost 18,000 destination skiers per day, on average. This 18,000 average is adjusted up to 20,000 to account for the fact that the President's day weekend, one of the busiest of the season, occurs during the Olympics.

look at what Utah's tourism sector can anticipate before, during, and after February 2002.

Atlanta and Calgary. Atlanta and Calgary provide considerable insight to possible displacement during the Olympics. The results for these two host cities suggest there will be little if any aggregate displacement of economic activity resulting from the 2002 Olympic Winter Games, but specific industries and locations could experience short term declines in business.

As Figure 1 demonstrates, hotel occupancy was down during the period around the 1996 Summer Games. From 71 percent in 1995, occupancy declined 3 percentage points to 68 percent in 1996. Though occupancy was down, room revenue actually increased almost 20 percent, from \$1.1 billion in 1995 to \$1.3 billion in 1996. Further, except for October and December, room revenue was up in every month of 1996 relative to 1995. Tourism officials anticipate the largest amount of Olympic related displacement of travel business in the month just prior to the Games. But in Atlanta, even during the month of June, just prior to the Games in July and August, room revenue was up slightly relative to 1995. Finally, Atlanta's tourism sector reverted to normal during 1997 as Figure 2 depicts. Monthly room rents were up in the range of 5 to 10 percent relative to 1995.

When considering the parallels between Atlanta and Salt Lake, it is important to understand exactly what the Atlanta data mean. Although the Olympics appeared to displace little travel business in the aggregate, anecdotes indicate many lodging properties experienced substantially less business than normal during the months just before, and just after the Games. A partial explanation for the aggregate result depicted in Figure 2 is that a relatively few well situated, very large, hotels were able to take advantage of the particular dynamics leading up to the Games while a large number of fairly small lodging businesses, which were poorly situated could not. Because of this possibility, it is important for the lodging industry to coordinate their activities with SLOC.

Calgary's experience reinforces the notion that individual businesses and industries could see less business during 2002 than normal. Figure 3 compares Calgary's 1987 skier visits with 1988; both years were bad snow years. Thus, the main explanation for the differences in visitation observed in Figure 3 appears to be the Olympics. For the year as a whole, skier visits were down almost 20 percent in the 1988 Olympics year relative to 1987.

Visitor Spending Calculation. The visitor spending estimate presented in Table 2 and detailed in Table 5 results from the 1999-00 Skier Survey conducted by Wikstrom and Associates, information from SLOC, the Atlanta and Calgary data, and assumptions by GOPB. In Table 5, the total number of visitor days anticipated during the Games is almost 1.2 million, while the total amount these visitors are estimated to spend is estimated to be \$348.3 million, thus the spending per visitor day is \$293. As described below, however, only \$116.6 million of the \$348.3 million is estimated to impact Utah's economy. The most important items underlying Table 5 are as follows:

- **Lodging Expenditures.** SLOC estimates Olympic visitors who pay for lodging will pay about \$205 per night during the Games.
- **Adjustments for Ski and Lodging Expenditures.** Based on the Wikstrom and Associates spending estimates, and SLOC's estimate of lodging, visitors who pay for lodging are estimated to spend \$395 per day, while those who do not pay for lodging are estimated to spend \$190 per day. These estimates include air fare that averages \$56 for each day of the visitor's entire stay.
- **Gross Visitor Expenditures.** Based on Atlanta's experience, SLOC estimates 35,000 visitors will pay for lodging and 35,000 will stay in existing residences. Combining this information with the per day spending estimates and the 17 day duration of the Games implies Olympics visitors will spend a total of \$348 million during the Games.

- **Adjustment for Out-of-State Leakages.** Considering the out-of-state portion of the goods visitors buy results in the in-state spending estimate of \$231.4 million, as presented in Table 5. Air fare accounts for much of the difference between gross spending and adjusted spending.
- **Displaced Visitor Spending.** In order to develop a worst case estimate of displaced spending, GOPB assumed the pattern of skier visits to Utah resorts in 2002 would resemble Calgary's experience in 1988. In addition, all the displaced skiers are assumed to be non-residents. Without considering the Olympics, GOPB forecasts 3.8 million skier visits during 2002. If almost 20 percent of these visits are displaced by the Olympics, and all the displaced visits would have been made by destination skiers, there will be almost 700,000 fewer destination skier visits in 2002 than could be expected if the Olympics were being held elsewhere. Since the results in Atlanta suggest room rents were not displaced because of the Olympics, only the skiing related expenditures associated with these 700,000 skier visits have been displaced in this analysis. In addition, since there would normally be 20,000 visitors on any given day during the Games, all of their spending is displaced. The total amount of displaced spending is \$114.8 million.
- **Net Visitor Expenditures.** Subtracting the displaced spending of \$114.8 million from the \$231.4 million implies the net increase in visitor spending resulting from the Games will be \$116.6 million, as presented in Table 2 and detailed in Table 5.

ISB Spending to Broadcast the Olympics. Based on SLOC's budget, ISB is estimated to spend about \$98.8 million to broadcast the Games, of which \$49.4 million will be spent in Utah, as presented in Table 2. ISB's spending is estimated to increase yearly from \$1.0 million in 1997 to \$17.4 million in 2001. Reflecting the fact that most of ISB's activities in

2002 will occur before March, its budget falls to 13.1 million during 2002.

Direct Federal Funds to State Government for Olympics Operations. Utah state government will receive about \$17.1 million in federal grants designed to assist the State in hosting the Olympics. Most of this funding is for public health and safety planning prior to the Games and staffing during the Games.

Economic, Demographic and Fiscal Impacts

Thus far, the discussion of the Olympics has focused on the spending directly related in some fashion to hosting the Games. This spending is known as a direct impact.

The total impact of the Olympics includes what are known as indirect and induced impacts, in addition to the direct impact. Indirect impacts involve the purchasing and hiring done by the suppliers used by those directly involved with Olympic related activities. In addition, indirect impacts include the activities of the suppliers' suppliers, and so on.

Induced impacts involve the consumer purchases made by those who are either directly or indirectly employed because of the Olympics. The initial consumer spending of those directly or indirectly employed because of the Olympics generates further employment that generates further consumer spending, and so on. The induced impact includes all these cascading rounds of consumer spending.

Economic impacts include output, employment and income, which is referred to as employee earnings. Output, employment and earnings result from the various rounds of spending described previously. These economic impacts generate demographic and fiscal impacts. The expansion of the economy above what would have been the case without the Olympics results in an expanded population. Basically, the population is larger because of the employees and their families. These additional people pay various taxes and fees with their income that results in additional state and local government revenue. However, these people also require various public

services that results in additional state and local government expenditure.

As depicted in Figure 4, output and employment rise steadily from small levels in 1996 to a peak during 2001 and drop off during 2002.

A summary of the various impacts expected to occur between 1996 and 2003 is as follows:

- **Output.** Output peaks at \$1.6 billion during 2001 and totals \$4.5 billion for the 1996 to 2003 period.
- **Employment.** Employment peaks at 25,070 (for the month of February 2002) during the Games, while total job years of employment will be 35,424 for the 1996 to 2003 period. Direct, indirect, and induced Olympic related employment is estimated to be 0.9% of projected total employment in Utah during 2001, and 33.4% of employment growth during that year.
- **Earnings.** Earned income peaks at \$539.1 million during 2001, and total \$1.5 billion for the 1996 to 2003 period.
- **Population.** Additional population will peak at 16,661 during 2001, but decline to zero during 2003. An estimated 44.9% of the new population growth in 2001 is expected to occur because of the Olympics.
- **Net Revenue to State and Local Government.** Net revenue to state and local government is estimated to be \$75.9 million.

A more detailed discussion of each of these impacts follows.

Output. Output is a measure of the dollar value of all the transactions comprising economic activity. Total gross output, as it is known, includes output delivered to both intermediate and final demand, or, all the intermediate transactions necessary to complete a final sale, as well as the final sale. In this sense,

output incorporates a large amount of double counting. Not only is the value of a good or service counted at the point of final sale, but the value of all the components, the value of their components, and so on, are added to the final sale value to arrive at the amount of output required to provide the final good or service.

Output impacts by sector resulting from the Olympics are presented in Table 6. Total output is \$4.5 billion from 1996 through 2003. Output is anticipated to grow steadily from approximately \$11.8 million in 1996 to almost \$1.6 billion during 2001, before falling off to \$917.6 million during 2002. The largest output impacts are in the services sector, which includes SLOC's activities. Construction has the next largest impact because of hotel acceleration, transportation and Olympic facilities constructed by SLOC. The other sectors with major output impacts - manufacturing; transportation and public utilities; trade; and finance, insurance and real estate - all provide goods and services used in Olympic related activities.

Employment. Employment impacts by sector resulting from the Olympics are presented in Table 7. The total employment impact is estimated to be 35,424 job years. Employment grows steadily from 1,148 in 1997 to 25,070 during the February 2002. Employment almost doubles from 7,317 during 2000 to 12,590 during 2001, and doubles again during the Games, before falling off to an average of 6,409 for 2002.

For the purpose of relating Olympics' impacts to the overall size of Utah's economy, Table 7 also includes GOPB projections of total statewide employment and employment growth.⁵ Direct, indirect, and induced Olympic related employment relative to total employment increases steadily from 0.1% in 1997 to 0.9% in 2001, before falling to 0.5% in 2002. Since the Olympics are a component of the state's economic growth, it is interesting to also compare Olympic related employment to projected employment growth. The Olympics represent 5.1% of projected employment growth in 1998. The Games' importance

increases steadily to 33.4% of projected employment growth during 2001, before declining to 0.9% in 2003.

The distribution of employment impacts closely patterns the distribution of output impacts. The largest employment impacts are in the services sector, which includes SLOC employees, followed by trade and construction. Finance, insurance, and real estate and government each have about 3,000 jobs; transportation & public utilities has about 2,000 jobs; but the other sectors don't have significant employment.

Earned Income. Earnings impacts resulting from the Olympics are presented in Table 8. Earnings, which include wages and benefits as well as non-corporate business profits, are anticipated to grow steadily from approximately \$46.7 million during 1997 to \$539.1 million during 2001, and fall to about \$317.1 million during 2002. The total amount of income earned by people between 1996 and 2003 because of the Olympics is estimated to be \$1.5 billion.

With average earnings of \$43,600, Olympic related jobs are relatively high paying. The \$43,600 Olympics average exceeds the estimated 2000 state average earnings of \$31,800 by almost 40 percent. The main reason the Olympics average pay is so high is because a large amount of business is generated in the high paying construction and business services industries.

The distribution of earnings by sector mirrors the distribution of output and employment. About half of the \$1.5 billion earnings total (\$691.3 million), is received by service sector workers. \$240.5 million in earnings is generated in the construction sector, \$172.8 million in finance, insurance and real estate and \$157 million in trade. The other sectors are small by comparison.

Population. Population impacts by age group resulting from the Olympics are presented in Table 9.

These impacts are estimated based on the historical relationship between job growth and population growth. The idea is that people either migrate into the state to take advantage of expanding employment opportunities or do not migrate out of the state because of the job opportunities that the Olympics provides. Although many of the jobs created because of the Olympics will be filled by residents, when these residents vacate jobs, the vacated jobs may be filled by in-migrants or those who might have migrated out but for the better job prospects.

In demographic research, it is conventional to estimate annual population impacts as of July 1st in a given year. For the years from 1996 to 2003, the estimated impacts in Table 9 are based on the relationship between job growth and the July 1st resident population by age group. For special events such as the Olympics, however, it is desirable to estimate population impacts on a monthly basis around the time of the event. Thus, impacts for January 1st, February 1st, and March 1st 2002 are presented in Table 9. To the extent that these estimates exceed the estimates for 2001, the excess can be viewed as non-residents temporarily living in Utah to work at Olympic related activities. GOPB estimates the population impact resulting from the Olympics will decline to zero after the Games are over. In other words, the people and their families who came to the state to help put on the Games will leave afterwards.

This finding is perhaps best illustrated by considering the population impact of broadcasters. Prior to the Games, NBC will relocate several hundred highly specialized, professional employees to arrange for the television production of the Games. After the Games these broadcasters will remove their equipment and move on to another project. The end result is a migration of people into the state prior to the Games and an out-migration of these same people after the Games.

⁵ The Governor's Office of Planning and Budget projects employment as part of the state's official demographic and economic model system. For more information see www.governor.state.ut.us/dea.

Table 9 also includes GOPB's projected statewide population and the growth in population. The people and their families who are residing in the state to help with Olympic related activities are estimated to be 0.1% of the population, or 1,572 people, in 1997, but increase to 1.4% of the population, or 31,695, during February 2002, the period of the Games. As a share of projected growth, the Olympic related population increases from 3.4% in 1997 to 44.95% in 2001.

Fiscal. Government revenues and expenditures have both been estimated. These estimates are described here in terms of net revenue impacts (which are government revenues less expenditures); budgeted direct revenues and costs (which includes estimated costs of providing services during the games as well as federally funded transportation projects that benefit the Games built by state government); total revenue (which includes direct revenue plus revenue derived from indirect activity such as income taxes paid from the salaries of SLOC workers); and expenditures (which include direct and indirect government costs associated with hosting the Games). These impacts are presented in Tables 10 through 12.

Net Revenue Impacts. GOPB estimates net revenue to state and local government will be \$75.9 million. Net revenue to state government alone is estimated to be \$55.5 million. Net revenue to local government alone is estimated to be \$20.4 million.

Sources of revenue include sales (including state and local, resort, tourism, car rental, and transient room taxes), income (both personal and corporate), property, and fuel taxes, as well as service charges and other revenue sources. Expenditures are estimated using a state and local cost model that considers government expenditures on a per capita and per student basis, as well as other factors. Expenditures for growth in higher education, public education, transportation, public safety, corrections, human services, health, water, sewer and other state, local, and special district services are all included. In addition, expenditures for public health and safety during the games and selected transportation projects of specific use during the Games have been included.

Direct Budgeted Impacts. Direct budgeted impacts include state expenditure as identified in the *Annual Report of the State Olympic Officer, November 2000*. These expenditures include \$162.5 million (\$164.1 million in current dollars); Olympics-targeted federal funds, \$145.8 million; and SLOC's payment to the Utah Olympic Public Safety Command, \$14.5 million (\$15.0 million in current dollars). The State Olympic Officer's report details the sources and uses of funds devoted by state government to providing transportation infrastructure directly beneficial to hosting the Games and to providing for public health and safety during the Games. Local government costs for providing services during the Games have not been precisely detailed for all entities. It has been agreed SLOC will make \$15.0 million (in current dollars) available to the Utah Olympic Public Safety Command so it can reimburse local governments for service costs.

Total Revenue. State and local revenue is estimated to increase annually and steadily from about \$9.3 million in 1997 to a peak of \$147.3 million in 2001 and \$106.2 million in 2002. By far the largest source of state and local government revenue is direct federal funding for transportation, followed by the sales tax, income taxes, property taxes and indirect federal funds. While Olympic visitors during the three week period of the Games will pay substantial amounts of sales tax, almost three-fourths of the sales tax is generated during the five years before the Games are held. Indirect federal funds include ongoing federal programs that tend to grow with the size of a state's economy. These funds do not include the direct Olympics related federal funding for transportation.

Expenditure. State and local expenditure increases annually and steadily from \$7.8 million in 1996 to over \$135.8 million in 2001, before falling off sharply to \$60.0 million during 2002. Direct expenditure to host the Games are \$177.0 million, or 47.3% of the \$374.2 million total, general government expenditures - items such as public health and safety, criminal justice, transportation, and the like - are \$118.8 million, or 31.8%. Not surprisingly, the cost of educating students who are in Utah because of the

economic expansion created by Games preparations is small relative to the total.

It is important to note that these expenditure estimates include the normal expenditures required to provide public services for the additional people in the Wasatch Front area from 1996 through 2003 because of the Olympics. In essence, these estimates measure the public sector costs of the growth associated with the Olympics. Estimated on a per capita or per student basis, the expenditure estimates include: state public and higher education, state general government, local public education, city and county general government and special districts.

Table 2
Externally Financed Direct Olympics In-State Spending by Source and Industry
(Thousands of 2000 Dollars)

| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | In-State Total | In and Out of State Total |
|----------------------------------------------|--------------|---------------|---------------|----------------|----------------|----------------|----------------|---------------|-------------------|------------------------------|
| By Source of Spending: | | | | | | | | | | |
| SLOC | 3,387 | 16,643 | 39,557 | 92,133 | 147,286 | 344,907 | 150,250 | 10,242 | 804,405 | 1,240,093 |
| ISB (Host Broadcasting) | 0 | 1,047 | 2,540 | 5,915 | 9,456 | 17,343 | 13,125 | 0 | 49,426 | 98,852 |
| Infrastructure Investment | 0 | 20,524 | 38,162 | 81,038 | 97,478 | 89,080 | 0 | 0 | 326,281 | 435,041 |
| Visitors | 0 | 0 | 0 | 0 | 0 | 0 | 116,571 | 0 | 116,571 | 348,276 |
| Federal Funds to State Government Operations | 0 | 0 | 585 | 2,183 | 2,682 | 5,858 | 5,618 | 139 | 17,064 | 17,064 |
| Total | 3,387 | 38,214 | 80,844 | 181,269 | 256,902 | 457,187 | 285,564 | 10,381 | 1,313,748 | 2,139,327 |
| By Selling Industry: | | | | | | | | | | |
| Agriculture | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mining | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Construction | 527 | 25,267 | 49,667 | 107,834 | 140,315 | 199,327 | 31,685 | 0 | 554,622 | |
| Manufacturing | 77 | 689 | 1,672 | 3,895 | 6,227 | 15,742 | 4,321 | 560 | 33,183 | |
| Transportation, Communications and Utilities | 201 | 1,808 | 4,385 | 10,212 | 16,326 | 33,752 | 48,648 | 1,468 | 116,799 | |
| Trade | 57 | 509 | 1,235 | 2,878 | 4,600 | 10,598 | 57,062 | 414 | 77,352 | |
| Finance, Insurance and Real Estate | 96 | 866 | 2,101 | 4,893 | 7,823 | 14,347 | 10,858 | 703 | 41,688 | |
| Services | 636 | 5,721 | 13,878 | 32,323 | 51,673 | 127,574 | 89,540 | 4,646 | 325,990 | |
| SLOC Employee Compensation | 1,794 | 3,353 | 7,320 | 17,050 | 27,257 | 49,989 | 37,833 | 2,451 | 147,048 | |
| State Government | 0 | 0 | 585 | 2,183 | 2,682 | 5,858 | 5,618 | 139 | 17,064 | |
| Total | 3,387 | 38,214 | 80,844 | 181,269 | 256,902 | 457,187 | 285,564 | 10,381 | 1,313,748 | |

Sources: Governor's Office of Planning and Budget; Salt Lake Organizing Committee

Table 3
SLOC Budget As It Impacts the Utah Economy

| | |
|-------------------------------------------------------------------------------|----------------------|
| Core Olympic Budget (Current Dollars) (1) | 1,312,845,312 |
| Plus: | |
| Portion of Olympic Match Budget (Current Dollars) (2) | 74,000,000 |
| Gross Economic Impact Budget (Current Dollars) (3) | 1,386,845,312 |
| Less: | |
| Sales Tax Repayment (Current Dollars) | -59,000,000 |
| Legacy Endowment | -40,000,000 |
| Spent Outside Utah (Current Dollars) | -205,378,741 |
| Spent Inside Utah, not for Sales Tax Repayment or Endowment (Current Dollars) | 1,082,466,571 |
| Less: | |
| Budget from Utah Sources (Current Dollars) | -108,246,657 |
| Budget from External Sources Spent in Utah (Current Dollars) | 974,219,914 |
| Budget from External Sources Spent in Utah (Inflation Adjusted 2000 Dollars) | 943,124,249 |
| Less: | |
| Host Broadcast Contract with ISB (Inflation Adjusted 2000 Dollars) | 98,852,353 |
| Leakage (Inflation Adjusted 2000 Dollars) | 39,866,884 |
| Budget Impact on Utah Economy (Inflation Adjusted 2000 Dollars) | 804,405,011 |
| Note: | |
| Budget (Inflation Adjusted 2000 Dollars) | 1,338,945,130 |
| Less: | |
| Host Broadcast Contract with ISB (Inflation Adjusted 2000 Dollars) | 98,852,353 |
| Total SLOC Spending (Inflation Adjusted 2000 Dollars) | 1,240,092,776 |

(1) The core budget represents the scope of work necessary to put on successful games and is funded through SLOC's general revenue budget.

(2) The match budget includes pass through expenses (ie. hotel accommodations) and enhancements which are beneficial to the Games but outside the scope of the core budget.

(3) The gross economic impact budget represents the portion of SLOC's expenditures which impact the Utah economy before leakages.

Sources: Governor's Office of Planning and Budget; Salt Lake Organizing Committee

Table 4: Public and Private Investment Beneficial to the 2002 Olympic Winter Games (Millions of Dollars)

| Project/Infrastructure Description | Total Cost | Federal Participation | SLOC Participation | Other (4) Participation | Externally Financed Spending Due to the Olympics | Non-SLOC Externally Financed Spending Due to the Olympics |
|---------------------------------------------------------|-------------------|-----------------------|--------------------|-------------------------|--------------------------------------------------|-----------------------------------------------------------|
| Venues: (1) | | | | | | |
| E-Center Hockey Arena | \$58.30 | -- | \$11.60 | \$46.70 | \$11.60 | \$0.00 |
| Delta Center Figure Skating | \$5.10 | -- | \$5.10 | \$0.00 | \$5.10 | \$0.00 |
| Oquirrh Park Speed Skating Oval | \$36.10 | -- | \$36.10 | \$0.00 | \$36.10 | \$0.00 |
| Utah Olympic Park | \$97.10 | -- | \$38.10 | \$59.00 | \$38.10 | \$0.00 |
| Soldier Hollow | \$31.20 | -- | \$19.70 | \$11.50 | \$19.70 | \$0.00 |
| Seven Peaks Ice Sheets (Provo) | \$12.80 | -- | \$12.10 | \$0.70 | \$12.10 | \$0.00 |
| Ogden Ice Sheet | \$5.90 | -- | \$3.10 | \$2.80 | \$3.10 | \$0.00 |
| Accord Practice Sheet | \$4.00 | -- | \$0.80 | \$3.20 | \$0.80 | \$0.00 |
| Steiner Center Ice Sheets | \$15.00 | -- | \$3.50 | \$11.50 | \$3.50 | \$0.00 |
| U of U Rice-Eccles Stadium | \$52.50 | -- | \$17.50 | \$35.00 | \$17.50 | \$0.00 |
| Medals Plaza | \$3.90 | -- | \$3.90 | \$0.00 | \$3.90 | \$0.00 |
| Subtotal | \$321.90 | \$0.00 | \$151.50 | \$170.40 | \$151.50 | \$0.00 |
| Housing: | | | | | | |
| U of U Olympics Village Phase I & 2 | \$120.10 | -- | \$31.60 | \$88.50 | \$31.60 | \$0.00 |
| Camp Williams Army Reserve Facilities | \$12.70 | \$12.70 | \$0.00 | -- | \$12.70 | \$12.70 |
| Media Housing | \$11.00 | \$2.00 | \$0.50 | \$8.50 | \$2.50 | \$2.00 |
| Subtotal | \$143.80 | \$14.70 | \$32.10 | \$97.00 | \$46.80 | \$14.70 |
| Transportation: (2) | | | | | | |
| I-15 Reconstruction | \$1,590.00 | \$380.00 | -- | \$1,210.00 | -- | -- |
| Light Rail North/South Line | \$312.50 | \$241.30 | -- | \$71.20 | -- | -- |
| Light Rail U of U Line | \$118.50 | \$84.60 | -- | \$33.90 | -- | -- |
| Intelligent Transportation System | \$31.60 | \$27.00 | -- | \$4.60 | \$7.00 | \$7.00 |
| Snowbasin/Trappers Loop Road | \$15.80 | \$15.80 | -- | \$0.00 | \$15.80 | \$15.80 |
| Soldier Hollow Access Road | \$10.00 | \$9.40 | -- | \$0.60 | \$9.40 | \$9.40 |
| Winter Sports Park Road | \$4.40 | \$3.00 | -- | \$1.40 | \$3.00 | \$3.00 |
| Temporary Park and Ride Lots | \$36.00 | \$30.80 | -- | \$5.20 | \$30.80 | \$30.80 |
| Permanent Park and Ride Lots | \$6.90 | \$5.50 | -- | \$1.40 | \$5.50 | \$5.50 |
| Bus Maintenance Facility | \$5.80 | \$4.60 | -- | \$1.20 | \$4.60 | \$4.60 |
| SR248 Reconstruction | \$8.30 | \$7.70 | -- | \$0.60 | \$7.20 | \$7.20 |
| I-80 Silver Creek & Kimball Junction | \$52.00 | \$49.00 | -- | \$3.00 | \$49.00 | \$49.00 |
| US89 & I-84 (Corina Drive) Interchange | \$24.80 | \$4.20 | -- | \$20.60 | \$2.00 | \$2.00 |
| SR173 Railroad Bridge | \$5.20 | \$0.00 | -- | \$5.20 | \$0.00 | \$0.00 |
| I-215 & 3500 South Interchange | \$1.90 | \$1.70 | -- | \$0.20 | \$1.60 | \$1.60 |
| Venue Loading/Unloading | \$11.40 | \$11.00 | -- | \$0.40 | \$11.00 | \$11.00 |
| Transportation Studies | \$6.80 | \$6.80 | -- | \$0.00 | \$6.80 | \$6.80 |
| Park City Infrastructure Improvements | \$11.40 | \$9.50 | -- | \$1.90 | \$9.50 | \$9.50 |
| Subtotal | \$2,253.30 | \$891.90 | \$0.00 | \$1,361.40 | \$163.20 | \$163.20 |
| Hotels: | | | | | | |
| Hotel Monaco | \$32.00 | -- | -- | \$32.00 | Unknown | Unknown |
| Marriott Hotel | \$50.00 | -- | -- | \$50.00 | Unknown | Unknown |
| Little America | \$185.00 | -- | -- | \$185.00 | Unknown | Unknown |
| Stein Erikson Lodge | \$30.00 | -- | -- | \$30.00 | Unknown | Unknown |
| Subtotal | \$297.00 | \$0.00 | \$0.00 | \$297.00 | \$0.00 | \$0.00 |
| Resort Additions, Expansions, or Lease Fees: (3) | | | | | | |
| Snowbasin Facilities | \$123.70 | -- | \$23.70 | \$100.00 | \$42.90 | \$19.20 |
| Snowbird Expansion | \$5.00 | -- | -- | \$5.00 | \$2.10 | \$2.10 |
| Park City Expansion | \$166.30 | -- | \$16.30 | \$150.00 | \$64.40 | \$48.10 |
| The Canyons Phase 1 Hotel, Lifts & Village | \$202.00 | -- | -- | \$202.00 | \$86.70 | \$86.70 |
| Deer Valley (Deer Crest) Resort | \$117.80 | -- | \$17.80 | \$100.00 | \$42.90 | \$25.10 |
| Brighton Resort | \$2.00 | -- | -- | \$2.00 | \$0.90 | \$0.90 |
| Solitude Resort | \$100.00 | -- | -- | \$100.00 | \$42.90 | \$42.90 |
| Zermatt Swiss Resort | \$40.00 | -- | -- | \$40.00 | \$17.20 | \$17.20 |
| Subtotal | \$756.80 | \$0.00 | \$57.80 | \$699.00 | \$300.00 | \$242.20 |
| Miscellaneous: | | | | | | |
| Telecommunications and UCAN | \$177.30 | \$6.00 | -- | \$171.30 | \$6.00 | \$6.00 |
| Forest Service Funds | \$10.50 | \$10.50 | -- | \$- | \$5.00 | \$5.00 |
| Soldier Hollow Water/Sewer | \$11.90 | \$2.20 | \$1.40 | \$8.30 | \$3.60 | \$2.20 |
| Salt Palace Expansion | \$47.00 | -- | \$4.60 | \$42.40 | \$4.60 | \$0.00 |
| Alf Engen Museum | \$10.00 | -- | -- | \$10.00 | -- | \$0.00 |
| Subtotal | \$256.70 | \$18.70 | \$6.00 | \$232.00 | \$19.20 | \$13.20 |
| TOTAL | \$4,029.50 | \$925.30 | \$247.40 | \$2,856.80 | \$680.70 | \$433.30 |

(1) Venue costs were estimated by the Salt Lake Organizing Committee and include lease fees, permanent construction and temporary build out.

(2) Federal funding for transportation projects was estimated by considering past and projected future federal participation. The Olympic-related portion of federal funds was estimated by examining formula, appropriated and granted funds. These estimates were made by GOPB in consultation with the SLOC transportation program director, UDOT, USDOT, and Park City. In addition to these capital funds, \$39.9 million in estimated operating costs are projected to be fully paid for by the federal government. The total Intelligent Transportation System cost is \$112 million; but, \$80.4 million is already included in the \$1,590 million listed above for I-15 Expansion.

(3) According to the Utah Ski Association, between \$300-\$500 million was invested in Utah's ski resorts directly as a result of the Olympics. A conservative assumption of \$300 million was used in the above table and prorated among resorts for accounting purposes. SLOC expenditures at the resorts include lease fees and temporary construction for temporary seating, camera platforms, spectator pathways, wax cabins, and other temporary facilities.

(4) Other participation includes a mix of state and local government and private monies. With the exception of a portion of the ski area expenditures and the \$59 million sales tax diversion for Olympic facilities, these monies went to projects which are beneficial to hosting the Games, but are not expenditures because of the Games. Long term investments in transportation infrastructure, hotels, sporting arenas, and recreation facilities are not made exclusively for a 17-day event. Except for a portion of the ski area expenditures, none of these monies are included in the economic impact calculations.

Table 5
Estimated Olympic Visitor Spending
(In 2000 Dollars)

| | |
|--------------------------------------------------|----------------|
| Net Ticket Capacity | 1,600,000 |
| Percent of Tickets Sold to Visitors | 84% |
| Public Tickets Sold to Visitors | 1,350,000 |
| Tickets Purchased per Visitor Day | 1.1 |
| Visitor Days | 1,190,000 |
| Number of Days during Olympics | 17 |
| Visitors per Day during Olympics | 70,000 |
| Net Increase in Visitors per Day during Olympics | 50,000 |
| Average Length of Stay (1) | 7.7 nights |
| Number of Visitors (1) | 230,000 |
| Spending per Visitor Day | \$ 292.67 |
| Total Visitor Spending | \$ 348,275,582 |
| Less: | |
| Portion Created Outside Utah | \$ 116,857,338 |
| Total In-State Visitor Spending | \$ 231,418,245 |
| Less: | |
| Displaced In-State Visitor Spending | \$ 114,846,955 |
| Net In-State Visitor Spending | \$ 116,571,290 |

(1) Data regarding the average length of stay and number of visitors are not used in this analysis to calculate visitor spending. They are included here to help with data coordination and were estimated by the Utah Travel Council based on this work and actual data from Calgary, Nagano, and Atlanta.

Sources: Governor's Office of Planning and Budget; Salt Lake Organizing Committee

Table 6
Output Impacts Resulting from the 2002 Olympic Winter Games
(Thousands of 2000 Dollars)

| Industry | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | Total |
|-----------------------------------|---------------|----------------|----------------|----------------|----------------|------------------|----------------|---------------|------------------|
| Agriculture | 5 | 203 | 485 | 992 | 1,421 | 2,309 | 1,118 | 43 | 6,576 |
| Mining | 22 | 520 | 1,238 | 2,505 | 3,252 | 5,845 | 2,058 | 84 | 15,524 |
| Construction | 634 | 31,239 | 61,091 | 133,072 | 171,703 | 231,609 | 50,611 | 1,196 | 681,154 |
| Manufacturing | 346 | 13,930 | 31,377 | 65,657 | 86,734 | 137,168 | 55,476 | 2,318 | 393,006 |
| Transportation & Public Utilities | 370 | 7,434 | 15,101 | 33,864 | 49,384 | 86,026 | 107,900 | 1,747 | 301,827 |
| Trade | 707 | 10,532 | 22,239 | 48,992 | 68,117 | 117,321 | 116,344 | 2,832 | 387,083 |
| Finance, Insurance & Real Estate | 2,019 | 29,503 | 63,214 | 142,906 | 204,765 | 368,668 | 198,609 | 7,726 | 1,017,410 |
| Services | 7,425 | 37,599 | 81,777 | 186,132 | 279,286 | 536,936 | 335,890 | 15,258 | 1,480,303 |
| Government | 283 | 5,342 | 11,760 | 27,079 | 37,512 | 67,151 | 49,572 | 1,934 | 200,633 |
| Total | 11,811 | 136,302 | 288,283 | 641,198 | 902,174 | 1,553,033 | 917,577 | 33,138 | 4,483,515 |

Source: Governor's Office of Planning and Budget

Table 7
Employment Impacts Resulting from the 2002 Olympic Winter Games

| Industry | Average Annual by Year | | | | | | | | By Month 2002 | | | Total Job-Years of Employment |
|----------------------------------------------------|------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---------------|--------|-------|-------------------------------------|
| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | Jan | Feb | Mar | |
| Agriculture | 0 | 9 | 20 | 41 | 59 | 96 | 36 | 2 | 102 | 153 | 51 | 263 |
| Mining | 0 | 3 | 7 | 14 | 18 | 32 | 8 | 0 | 25 | 37 | 12 | 83 |
| Construction | 5 | 268 | 523 | 1,140 | 1,470 | 1,977 | 327 | 10 | 894 | 1,341 | 447 | 5,721 |
| Manufacturing | 3 | 79 | 162 | 353 | 479 | 779 | 234 | 11 | 639 | 959 | 320 | 2,099 |
| Transportation & Public Utilities | 2 | 44 | 91 | 204 | 293 | 504 | 659 | 10 | 1,800 | 2,700 | 900 | 1,807 |
| Trade | 11 | 184 | 385 | 852 | 1,187 | 2,053 | 1,893 | 52 | 5,178 | 7,767 | 2,589 | 6,617 |
| Finance, Insurance & Real Estate | 5 | 96 | 203 | 451 | 643 | 1,139 | 496 | 25 | 1,355 | 2,033 | 678 | 3,057 |
| Services | 46 | 381 | 808 | 1,771 | 2,588 | 4,978 | 2,186 | 111 | 3,859 | 7,737 | 3,877 | 12,869 |
| Government | 5 | 85 | 184 | 416 | 581 | 1,033 | 571 | 34 | 1,562 | 2,343 | 781 | 2,909 |
| Olympics-related Total | 78 | 1,148 | 2,383 | 5,243 | 7,317 | 12,590 | 6,409 | 256 | 15,415 | 25,070 | 9,655 | 35,424 |
| State Total Employment | 1,188,635 | 1,236,540 | 1,283,149 | 1,319,531 | 1,353,792 | 1,391,464 | 1,411,762 | 1,440,368 | | | | |
| State Employment Growth | | 47,905 | 46,609 | 36,382 | 34,261 | 37,672 | 20,298 | 28,606 | | | | |
| Olympics as a Percent of State Total Employment | 0.0% | 0.1% | 0.2% | 0.4% | 0.5% | 0.9% | 0.5% | 0.0% | | | | |
| State Employment Growth | | 2.4% | 5.1% | 14.4% | 21.4% | 33.4% | 31.6% | 0.9% | | | | |

Source: Governor's Office of Planning and Budget

Table 8
Earnings Impacts Resulting from the 2002 Olympic Winter Games
(Thousands of 2000 Dollars)

| Industry | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | Total |
|-----------------------------------|--------------|---------------|---------------|----------------|----------------|----------------|----------------|---------------|------------------|
| Agriculture | 3 | 121 | 275 | 578 | 820 | 1,337 | 668 | 26 | 3,829 |
| Mining | 6 | 143 | 345 | 690 | 884 | 1,563 | 549 | 22 | 4,201 |
| Construction | 220 | 11,047 | 21,598 | 47,037 | 60,657 | 81,585 | 17,924 | 431 | 240,499 |
| Manufacturing | 87 | 2,985 | 6,147 | 13,363 | 17,980 | 28,936 | 11,367 | 408 | 81,275 |
| Transportation & Public Utilities | 102 | 1,976 | 3,981 | 9,010 | 13,063 | 22,472 | 31,806 | 437 | 82,847 |
| Trade | 298 | 4,381 | 9,239 | 20,385 | 28,324 | 48,738 | 44,615 | 1,181 | 157,162 |
| Finance, Insurance & Real Estate | 292 | 5,105 | 10,825 | 24,072 | 34,333 | 61,063 | 35,815 | 1,335 | 172,839 |
| Services | 2,848 | 17,989 | 39,082 | 88,731 | 132,066 | 256,612 | 147,352 | 6,650 | 691,330 |
| Government | 175 | 3,010 | 6,538 | 14,799 | 20,676 | 36,812 | 27,011 | 1,200 | 110,220 |
| Total | 4,032 | 46,757 | 98,029 | 218,665 | 308,803 | 539,119 | 317,108 | 11,690 | 1,544,203 |

Source: Governor's Office of Planning and Budget

Table 9
Population Impacts Resulting from the 2002 Olympic Winter Games

| Age Group | July 1 of the Year | | | | | | | | By Month 2002 | | |
|--------------------------|--------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---------------|-----------|-----------|
| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | Jan 1st | Feb 1st | Mar 1st |
| 00-04 | 8 | 152 | 333 | 741 | 1,097 | 1,887 | 499 | 26 | 3,154 | 3,154 | 1,577 |
| 05-17 | 19 | 330 | 672 | 1,430 | 1,974 | 3,319 | 755 | 62 | 4,774 | 4,774 | 2,387 |
| 18-29 | 28 | 469 | 943 | 2,038 | 2,702 | 4,547 | 863 | 91 | 5,456 | 8,184 | 2,728 |
| 30-39 | 22 | 303 | 616 | 1,336 | 1,890 | 3,233 | 806 | 72 | 5,092 | 7,638 | 2,546 |
| 40-49 | 14 | 177 | 373 | 824 | 1,170 | 2,013 | 488 | 46 | 3,086 | 4,629 | 1,543 |
| 50-59 | 5 | 70 | 150 | 346 | 500 | 887 | 212 | 16 | 1,338 | 2,007 | 669 |
| 60-64 | 2 | 23 | 45 | 100 | 140 | 245 | 55 | 7 | 350 | 525 | 175 |
| 65+ | 5 | 48 | 99 | 223 | 308 | 530 | 124 | 16 | 784 | 784 | 392 |
| Olympics-related Total | 103 | 1,572 | 3,231 | 7,038 | 9,781 | 16,661 | 3,802 | 337 | 24,034 | 31,695 | 12,017 |
| State Total Population | 2,002,398 | 2,048,749 | 2,082,471 | 2,121,033 | 2,150,205 | 2,187,276 | 2,216,175 | 2,254,500 | 2,235,338 | 2,238,531 | 2,241,725 |
| State Population Growth | | 46,351 | 33,722 | 38,562 | 29,172 | 37,071 | 28,899 | 38,325 | | | |
| Olympics as a Percent of | | | | | | | | | | | |
| State Total Population | 0.0% | 0.1% | 0.2% | 0.3% | 0.5% | 0.8% | 0.2% | 0.0% | 1.1% | 1.4% | 0.5% |
| State Population Growth | | 3.4% | 9.6% | 18.3% | 33.5% | 44.9% | 13.2% | 0.9% | | | |

Source: Governor's Office of Planning and Budget

Table 10
Estimated State and Local Government Fiscal Impacts
(Thousands of 2000 Dollars)

| Impact | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | Total |
|---------------------------------|------------|--------------|---------------|---------------|----------------|----------------|----------------|--------------|----------------|
| Revenue: | | | | | | | | | |
| Sales Tax | 194 | 2,774 | 5,697 | 12,607 | 17,395 | 28,367 | 29,473 | 515 | 97,022 |
| Income Tax | 180 | 2,088 | 4,377 | 9,763 | 13,788 | 24,071 | 14,159 | 522 | 68,948 |
| Property Tax | 114 | 1,317 | 2,761 | 6,160 | 8,699 | 11,308 | 6,871 | 329 | 37,559 |
| Indirect Federal Funds | 49 | 729 | 1,500 | 3,262 | 4,537 | 7,737 | 2,238 | 156 | 20,207 |
| Direct Funding for Olympics | 0 | 340 | 1,347 | 19,668 | 46,122 | 52,763 | 39,853 | 200 | 160,293 |
| Other | 173 | 2,001 | 4,196 | 9,360 | 13,218 | 23,076 | 13,573 | 500 | 66,098 |
| Total | 709 | 9,249 | 19,878 | 60,820 | 103,759 | 147,323 | 106,167 | 2,222 | 450,127 |
| Expenditure | | | | | | | | | |
| Direct Expenditure for Olympics | 0 | 379 | 1,502 | 21,930 | 51,426 | 58,830 | 42,766 | 223 | 177,056 |
| General | 288 | 4,395 | 9,033 | 19,677 | 27,346 | 46,582 | 10,631 | 941 | 118,894 |
| Public Education | 125 | 2,165 | 4,409 | 9,382 | 12,951 | 21,776 | 4,955 | 407 | 56,170 |
| Higher Education | 53 | 886 | 1,781 | 3,850 | 5,104 | 8,590 | 1,631 | 173 | 22,068 |
| Total | 466 | 7,825 | 16,726 | 54,839 | 96,828 | 135,778 | 59,982 | 1,744 | 374,188 |
| Net Revenue | 243 | 1,424 | 3,152 | 5,980 | 6,930 | 11,546 | 46,185 | 479 | 75,939 |

Note: Direct funding for the Olympics includes federal funding for state government and SLOC's \$15 million (current dollars) payment to the Olympic Command available to re-imburse local government for the cost of services specifically provided to assist with hosting the Games. After adjusting for inflation, the \$15 million is \$14.5 million.

Source: Governor's Office of Planning and Budget

Table 11
Estimated State Government Fiscal Impacts
(Thousands of 2000 Dollars)

| Impact | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | Total |
|-------------------------------------|------------|--------------|---------------|---------------|---------------|----------------|---------------|--------------|----------------|
| Revenue: | | | | | | | | | |
| Sales Tax | 159 | 2,242 | 4,612 | 10,212 | 14,116 | 23,146 | 19,485 | 415 | 74,386 |
| Income Tax | 180 | 2,088 | 4,377 | 9,763 | 13,788 | 24,071 | 14,159 | 522 | 68,948 |
| Corporate Income Tax | 20 | 228 | 478 | 1,067 | 1,507 | 2,630 | 1,547 | 57 | 7,534 |
| Departmental Collections | 21 | 249 | 521 | 1,163 | 1,643 | 2,868 | 1,687 | 62 | 8,214 |
| Indirect Federal Funds | 39 | 614 | 1,259 | 2,726 | 3,779 | 6,415 | 1,460 | 127 | 16,420 |
| Direct Federal Funding for Olympics | 0 | 340 | 1,347 | 19,668 | 46,122 | 52,763 | 25,333 | 200 | 145,774 |
| Other | 23 | 270 | 567 | 1,264 | 1,785 | 3,116 | 1,833 | 68 | 8,925 |
| Total | 443 | 6,031 | 13,161 | 45,862 | 82,739 | 115,009 | 65,504 | 1,450 | 330,199 |
| Expenditure | | | | | | | | | |
| Direct Expenditure for Olympics | 0 | 379 | 1,502 | 21,930 | 51,426 | 58,830 | 28,246 | 223 | 162,537 |
| General | 110 | 1,674 | 3,440 | 7,493 | 10,413 | 17,737 | 4,048 | 358 | 45,272 |
| Public Education | 100 | 1,729 | 3,520 | 7,490 | 10,340 | 17,385 | 3,956 | 325 | 44,845 |
| Higher Education | 53 | 886 | 1,781 | 3,850 | 5,104 | 8,590 | 1,631 | 173 | 22,068 |
| Total | 262 | 4,667 | 10,243 | 40,763 | 77,283 | 102,543 | 37,881 | 1,079 | 274,722 |
| Net Revenue | 181 | 1,364 | 2,918 | 5,099 | 5,455 | 12,466 | 27,623 | 372 | 55,477 |

Source: Governor's Office of Planning and Budget

Table 12
Estimated Local Government Fiscal Impacts
(Thousands of 2000 Dollars)

| Impact | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | Total |
|-------------------------------------|------------|--------------|--------------|---------------|---------------|---------------|---------------|------------|----------------|
| Revenue: | | | | | | | | | |
| Property Tax | 114 | 1,317 | 2,761 | 6,160 | 8,699 | 11,308 | 6,871 | 329 | 37,559 |
| Sales Tax | 34 | 532 | 1,085 | 2,395 | 3,280 | 5,221 | 9,988 | 100 | 22,636 |
| Other Taxes | 18 | 214 | 448 | 1,000 | 1,412 | 2,464 | 1,449 | 53 | 7,058 |
| Charges | 90 | 1,041 | 2,182 | 4,867 | 6,873 | 11,999 | 7,058 | 260 | 34,368 |
| Indirect Federal Funds (1) | 10 | 115 | 240 | 536 | 757 | 1,322 | 778 | 29 | 3,787 |
| SLOC Payment | 0 | 0 | 0 | 0 | 0 | 0 | 14,519 | 0 | 14,519 |
| Total | 266 | 3,218 | 6,717 | 14,957 | 21,020 | 32,315 | 40,664 | 772 | 119,928 |
| Expenditure | | | | | | | | | |
| Direct Expenditure for Olympics (1) | 0 | 0 | 0 | 0 | 0 | 0 | 14,519 | 0 | 14,519 |
| County | 57 | 871 | 1,790 | 3,899 | 5,419 | 9,231 | 2,107 | 186 | 23,560 |
| City | 105 | 1,603 | 3,295 | 7,177 | 9,974 | 16,990 | 3,877 | 343 | 43,364 |
| Special District | 16 | 248 | 509 | 1,108 | 1,540 | 2,624 | 599 | 53 | 6,697 |
| School District | 25 | 437 | 889 | 1,892 | 2,611 | 4,391 | 999 | 82 | 11,326 |
| Total | 203 | 3,158 | 6,483 | 14,076 | 19,545 | 33,235 | 22,101 | 665 | 99,466 |
| Net Revenue | 63 | 60 | 234 | 881 | 1,475 | -920 | 18,563 | 107 | 20,462 |

(1) Transferred from the Salt Lake Organizing Committee to the Utah Olympic Public Safety Command to pay for overtime, equipment, and uniforms.

Source: Governor's Office of Planning and Budget

Figure 1
Atlanta's Lodging Industry and the 1996 Summer Olympic Games

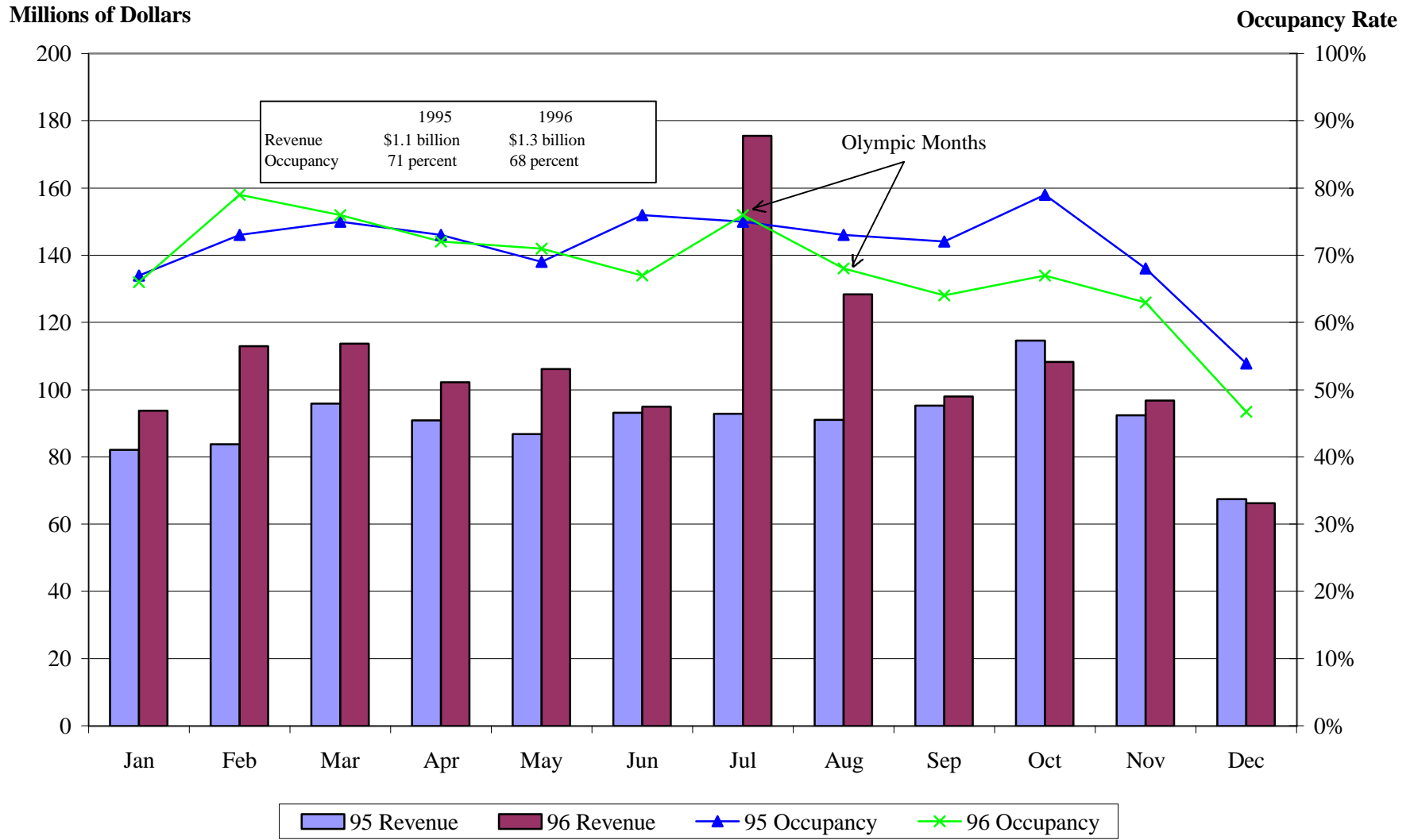


Figure 2
A Comparison of Revenue for Atlanta's Lodging Industry
(during the Period around the 1996 Summer Olympic Games)

Millions of Dollars

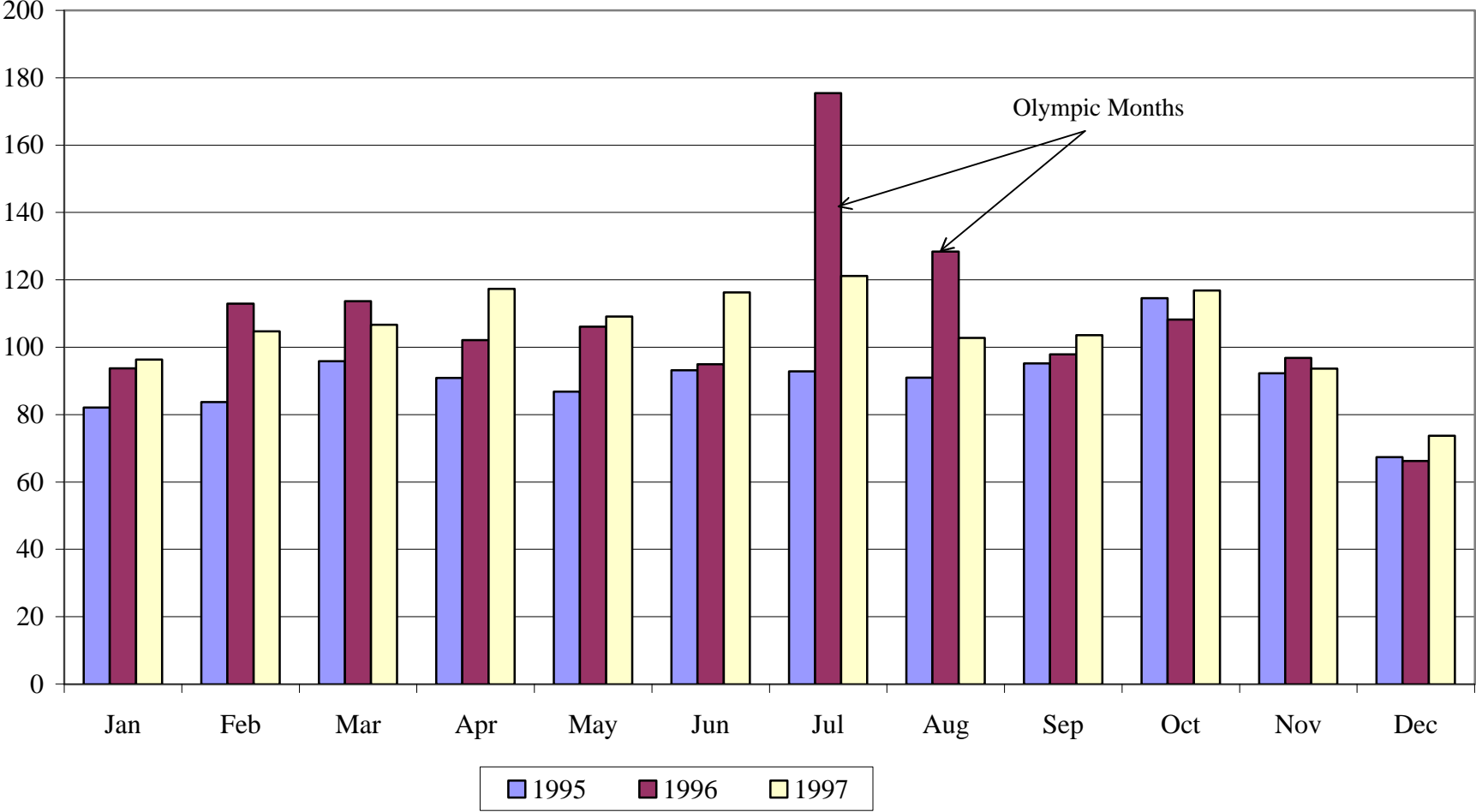


Figure 3
Skier Visits and Snowfall in Calgary
A Comparison of 1987 and 1988

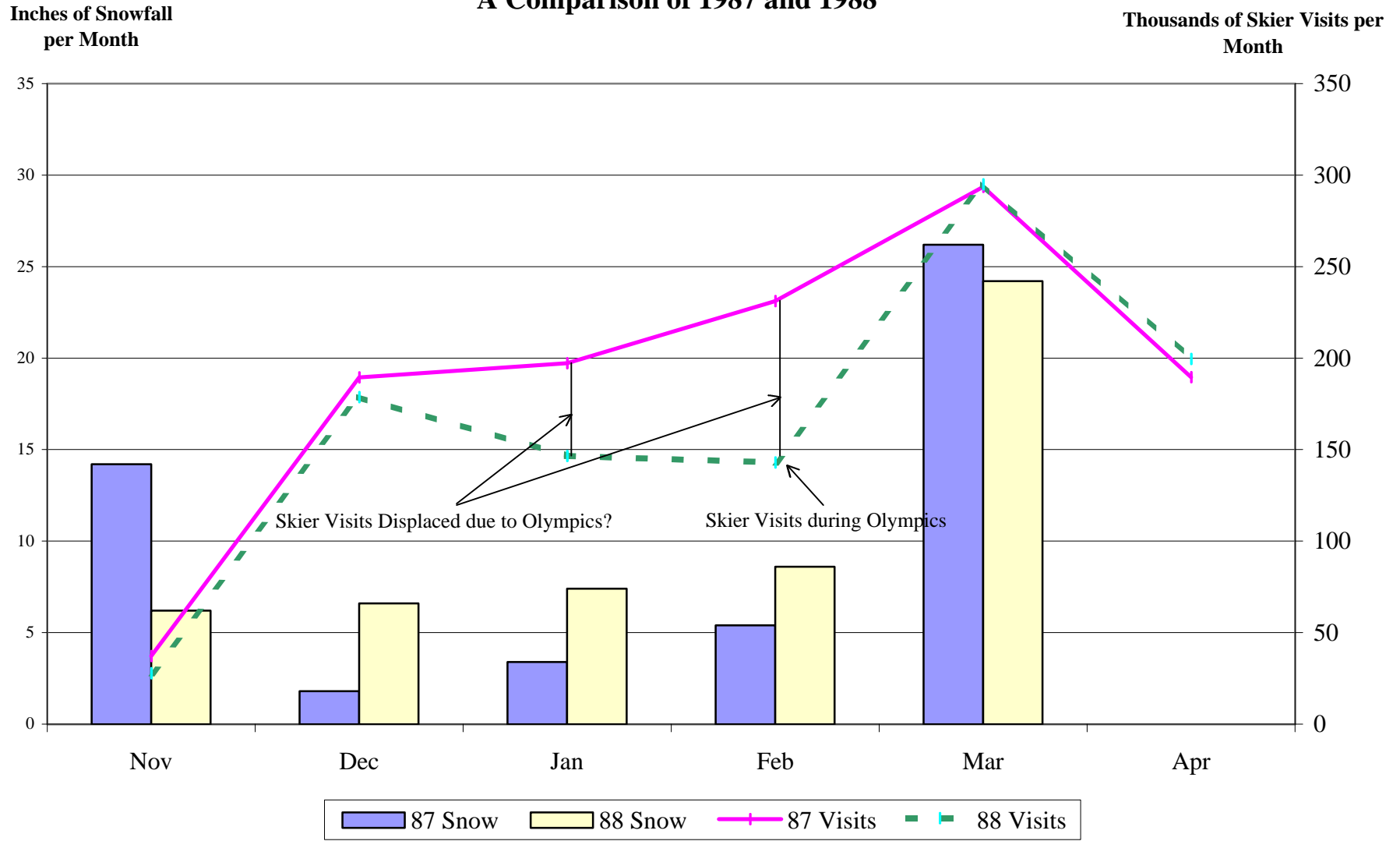
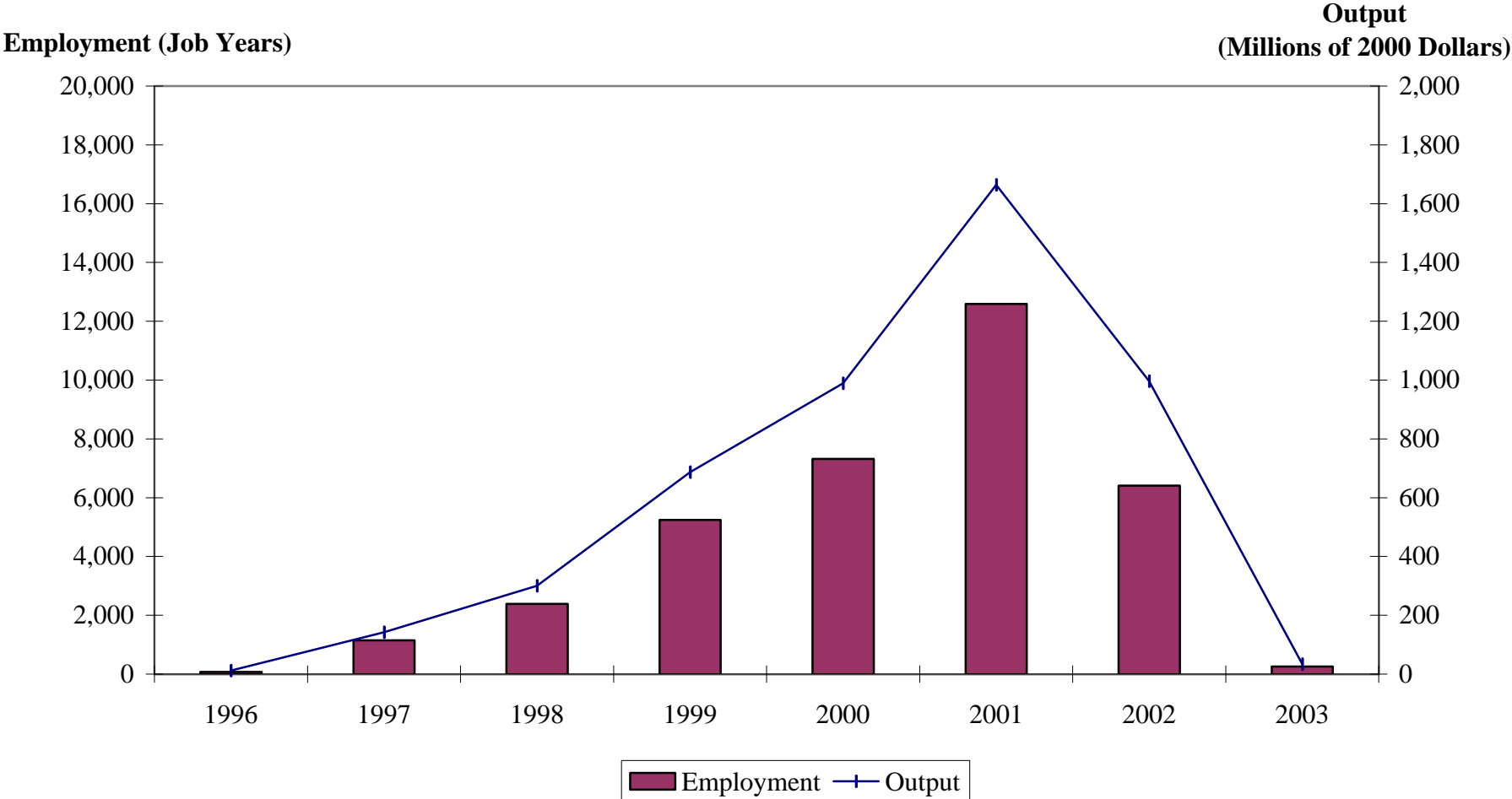


Figure 4
Employment and Output Impacts
Resulting from the Olympics



Appendix

Integrating Impact Analysis with State Olympic Officer's Report

This appendix integrates the Governor's Office of Planning and Budget's economic, demographic, and fiscal analysis, documented in this report, with the impacts to the state budget documented in the State Olympic Officer's (SOO) report. The SOO's report details what can be called state government direct revenue and expenditure required to host the Games. In contrast, GOPB's analysis is primarily concerned with the additional economic activity brought about because Utah is hosting the Games.

A complicating factor is that the standard in economic analysis is to report results in inflation adjusted constant dollars. In GOPB's report, the results are reported in inflation adjusted 2000 dollars. However, because legislative appropriations are in current, non-adjusted dollars, the results in the SOO's report have not been adjusted for inflation. Also, to integrate with state budgeting, the SOO's report is on a fiscal year basis while most economic results are presented on a calendar year basis.

To integrate with the results in the SOO's report, the results in Appendix Table 1 are in current, non-adjusted dollars, on a fiscal year basis. Except for these adjustments, Table 10 and Appendix Table 1 are the same.

Appendix Table 1
Estimated State Government Fiscal Impacts
(Thousands of Dollars, Fiscal Year)

| Impact | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | Total |
|-------------------------------------|------|-------|-------|--------|--------|---------|---------|-------|---------|
| Revenue: | | | | | | | | | |
| Sales Tax | 75 | 1,156 | 3,325 | 7,283 | 12,096 | 18,828 | 30,894 | 1,442 | 75,099 |
| Income Tax | 85 | 1,091 | 3,137 | 6,947 | 11,711 | 19,134 | 26,137 | 1,279 | 69,522 |
| Corporate Income Tax | 9 | 119 | 343 | 759 | 1,280 | 2,091 | 2,856 | 140 | 7,596 |
| Departmental Collections | 10 | 130 | 374 | 828 | 1,395 | 2,279 | 3,114 | 152 | 8,282 |
| Indirect Federal Funds | 18 | 315 | 909 | 1,958 | 3,234 | 5,152 | 4,695 | 209 | 16,490 |
| Direct Federal Funding for Olympics | 0 | 0 | 656 | 1,968 | 36,848 | 55,397 | 51,926 | 419 | 147,213 |
| Other | 11 | 141 | 406 | 899 | 1,516 | 2,477 | 3,383 | 166 | 8,999 |
| Total | 209 | 2,952 | 9,149 | 20,642 | 68,080 | 105,358 | 123,004 | 3,806 | 333,201 |
| Expenditure | | | | | | | | | |
| Direct Expenditure for Olympics | 0 | 0 | 731 | 2,194 | 41,085 | 61,767 | 57,897 | 467 | 164,141 |
| General | 52 | 859 | 2,481 | 5,371 | 8,903 | 14,226 | 12,993 | 585 | 45,470 |
| Public Education | 47 | 880 | 2,547 | 5,409 | 8,866 | 14,010 | 12,723 | 546 | 45,028 |
| Higher Education | 25 | 452 | 1,294 | 2,767 | 4,452 | 6,920 | 5,969 | 266 | 22,144 |
| Total | 124 | 2,191 | 7,053 | 15,740 | 63,306 | 96,924 | 89,581 | 1,863 | 276,782 |
| Net Revenue | 85 | 762 | 2,096 | 4,901 | 4,774 | 8,434 | 33,423 | 1,943 | 56,419 |

Source: Governor's Office of Planning and Budget