

# **Sovereign Center Economic Impact: 2001-02 through 2010-11**

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## **Executive Summary**

The Sovereign Center and Sovereign Performing Arts Center in Reading, Pennsylvania are host to a variety of events including family entertainment, concerts, minor league hockey, arena football, conventions and community civic events. This report summarizes the estimated economic impact of the Center's expenditures as well as the spending of visitors to the Center. The Center's expenditures total more than \$56 million related to payroll, purchases of goods and services, tax payments, event generated parking revenue and charitable giving. Over the past ten years, more than 4.5 million people have visited the Center, generating approximately \$198 million of economic activity from meals, gasoline purchases, shopping expenditures and hotel stays. The combined, estimated economic impact from 2001-02 through 2010-11 exceeds \$254 million. These estimates are based exclusively on direct spending impacts; no multipliers or indirect impacts are included. In addition, the estimates emphasize visitors' reports of spending that is attributable to their visit to the Sovereign Center and Berks County.

## **Facilities**

The Sovereign Center includes the Arena, Sovereign Performing Arts Center (SPAC), and the Reading Eagle Theatre. The Berks County Convention Center Authority oversaw the \$40 million construction project with financing for the project from \$16 million in state funding, \$2.25 million contributed by Sovereign Bank for naming rights, \$12 million in low-interest (below 6%) by Sovereign Bank, and \$2.5 million in private funding from a capital campaign. (Cohen, 1999). The remainder was financed by the Berks County Convention Center which recoups the funding through “a 5% hotel tax imposed on rooms within 15 miles of Reading” (Cohen, p.25).

Table 1. Seating Capacities

<b><u>Sovereign Center Seating Configuration:</u></b>	<b><u>Capacity</u></b>
Concerts & Full Arena events	6,000 – 9,000
Reading Eagle Theater	2,500-5,500
Hockey / Ice Show	7,215
Basketball	8,000
Boxing	8,500

Source: [www.smgworld.com](http://www.smgworld.com)

The Arena is home to the Reading Royals, an ECHL ice hockey team and the Reading Express, an Indoor Football League (IFL) team. SPAC is home to the Reading Symphony Orchestra and the Broadway on 6th Street series; it has seating capacity of 1,819 and includes three ballrooms. The addition of the Reading Eagle Theater came in the summer of 2004 when the Reading Eagle Company purchased naming rights to this universal theater configuration. The set-up turns the Sovereign Center into a smaller, more intimate setting for shows ranging in size from 2,500 to 4,500 patrons. SPAC also has three ballrooms, each with its own unique features and amenities. Ballroom capacities range from 120 to 400 guests.

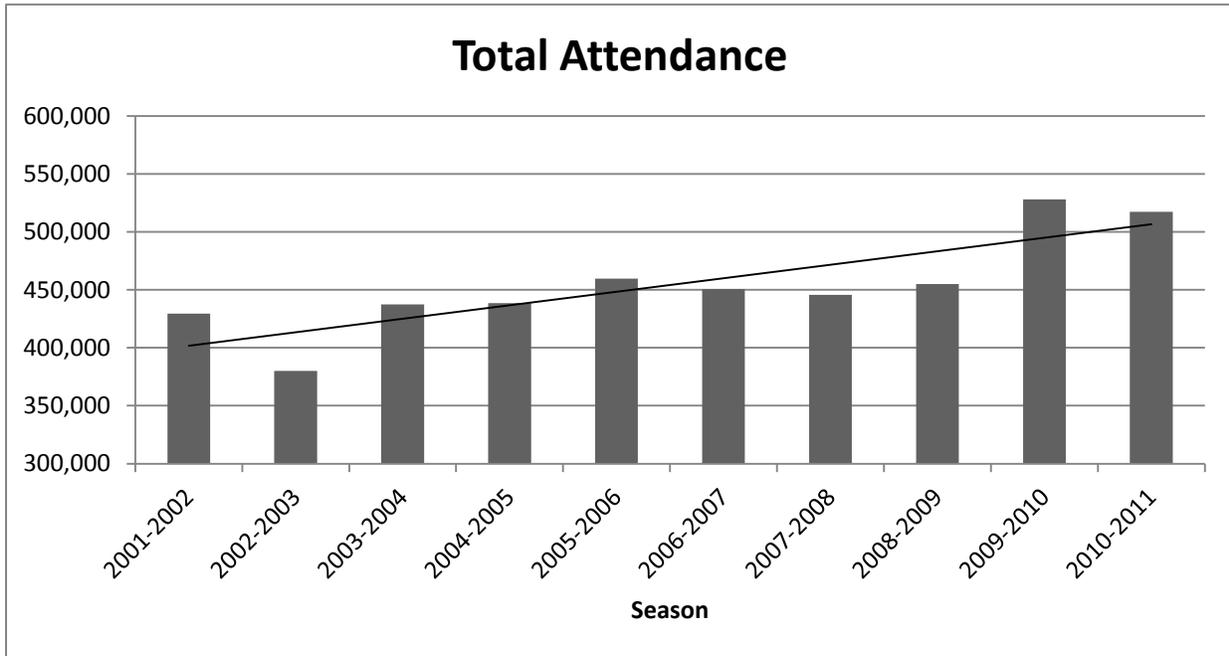
In addition to providing sporting, music and theatrical entertainment, the Sovereign Center offers 25,200 square feet of banquet space on the arena floor. With seating for up to 1,200 guests, the Sovereign Center can accommodate large functions as well as smaller ones using the Reading Eagle Theater setup. The Sovereign Center also offers a multipurpose room which measures 4,575 square feet and accommodates functions for up to 200 guests. See Table 1 for summary of seating capacities. (Source: [www.sovereigncenter.com](http://www.sovereigncenter.com))

Since its opening in 2001, the Sovereign Center has been managed by SMG. They were founded in 1977 with the management of their first facility, the Louisiana Superdome. SMG currently manages 225 venues, with more than 1.75 million seats in the US, Puerto Rico, Canada and Europe. (Source: [www.smgworld.com](http://www.smgworld.com))

## Attendance

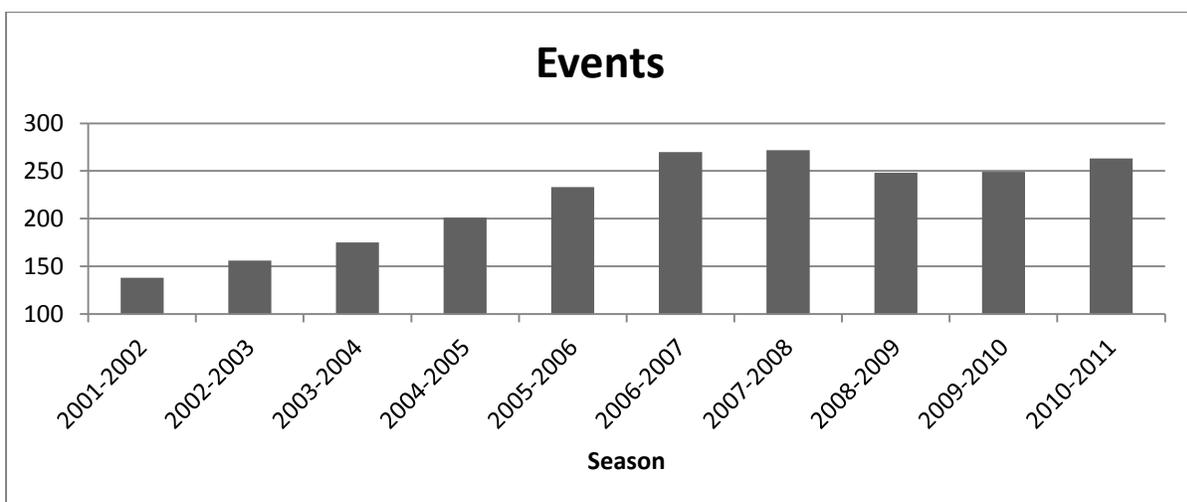
The Center's attendance, from 2001-2011 has exceeded 4.5 million visitors. Despite difficult macroeconomic circumstances since 2008, yearly attendance has generally increased over time, as shown in Figure 1.

Figure 1. Attendance



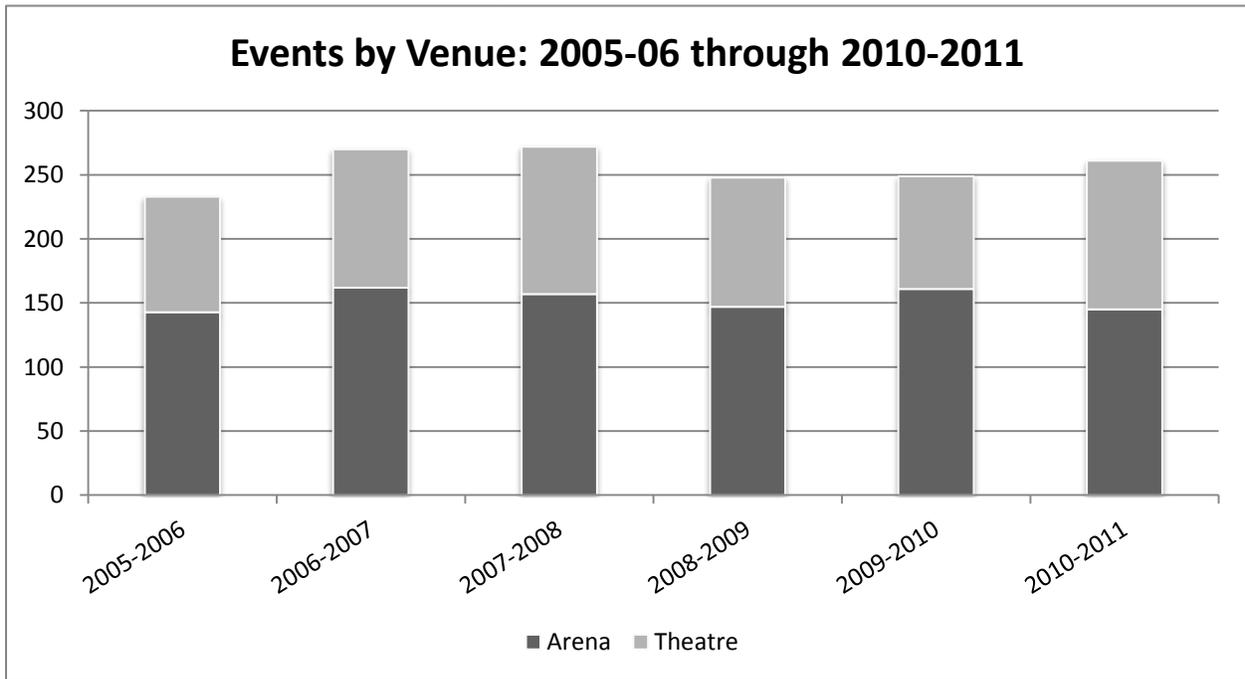
From 2001 through 2007, the number of events held at the Center consistently increased, from 138 in 2001 nearly doubling to 272 in 2008, as evidenced in Figure 2.

Figure 2. Number of Events per Year



Between the 2007-08 and 2010-11, the mean number of annual events is 258. Figure 3 shows the 2005-06 through 2010-11 composition of events between the two venues.

Figure 3. Events by Venue, 2005-06 through 2010-11



Figures 4 and 5 report the breakdown of events by type for the Arena and Theatre, respectively.

Figure 4. Arena Events by Category

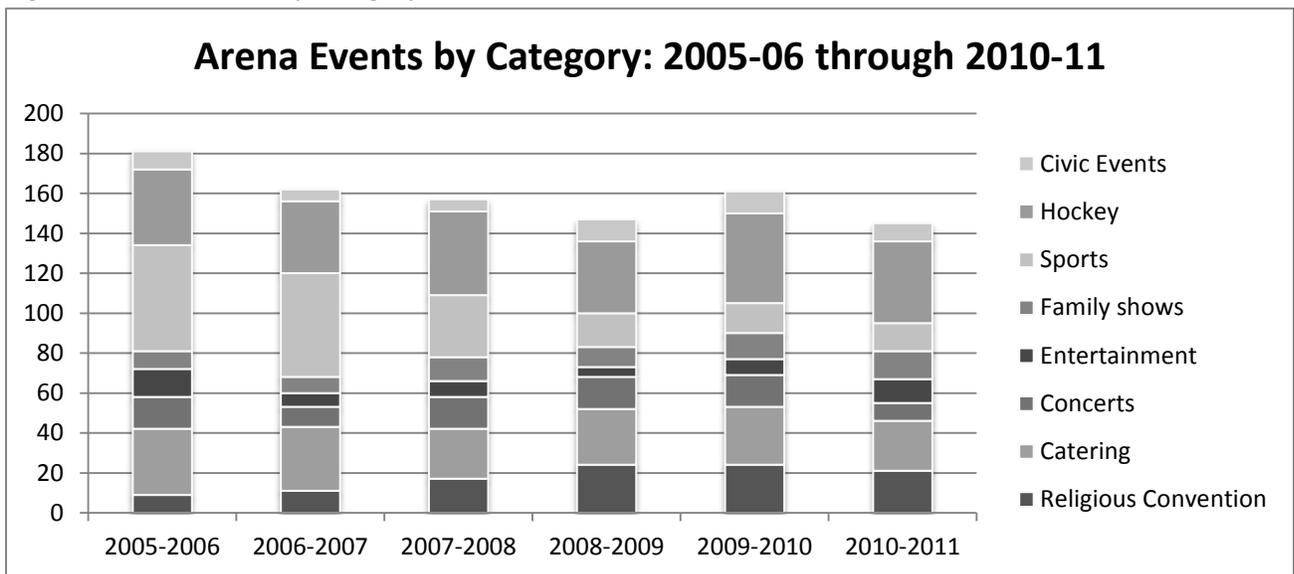
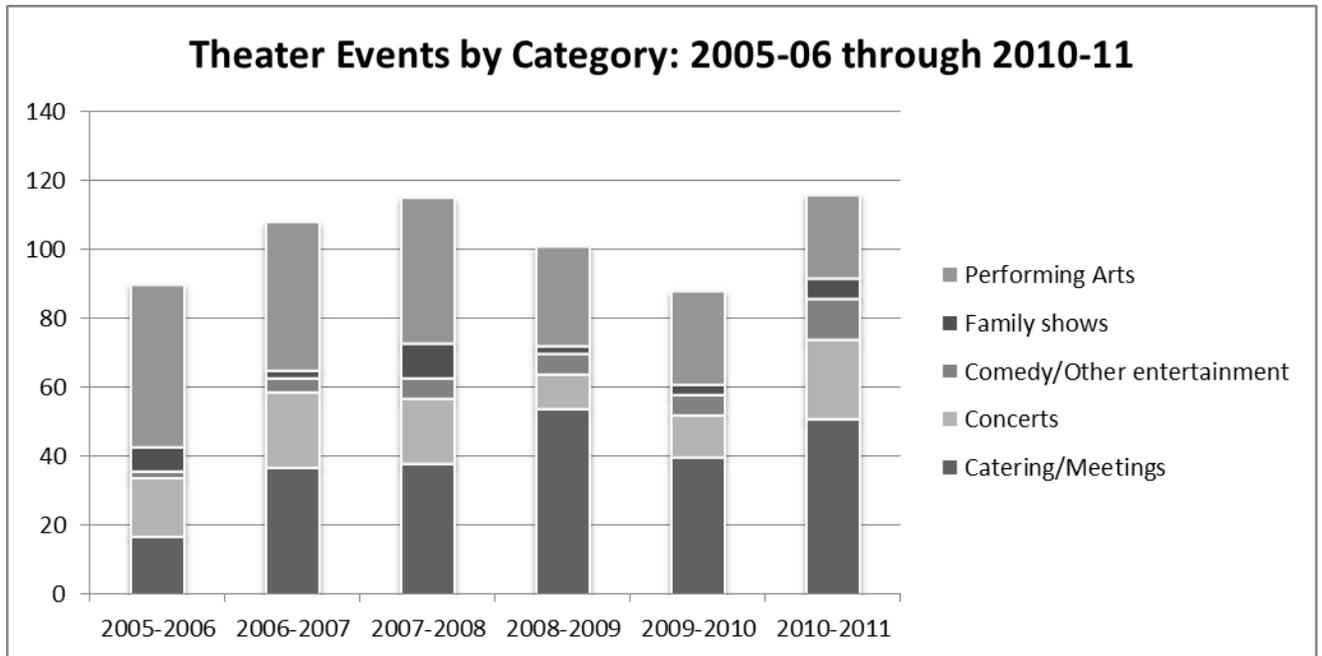


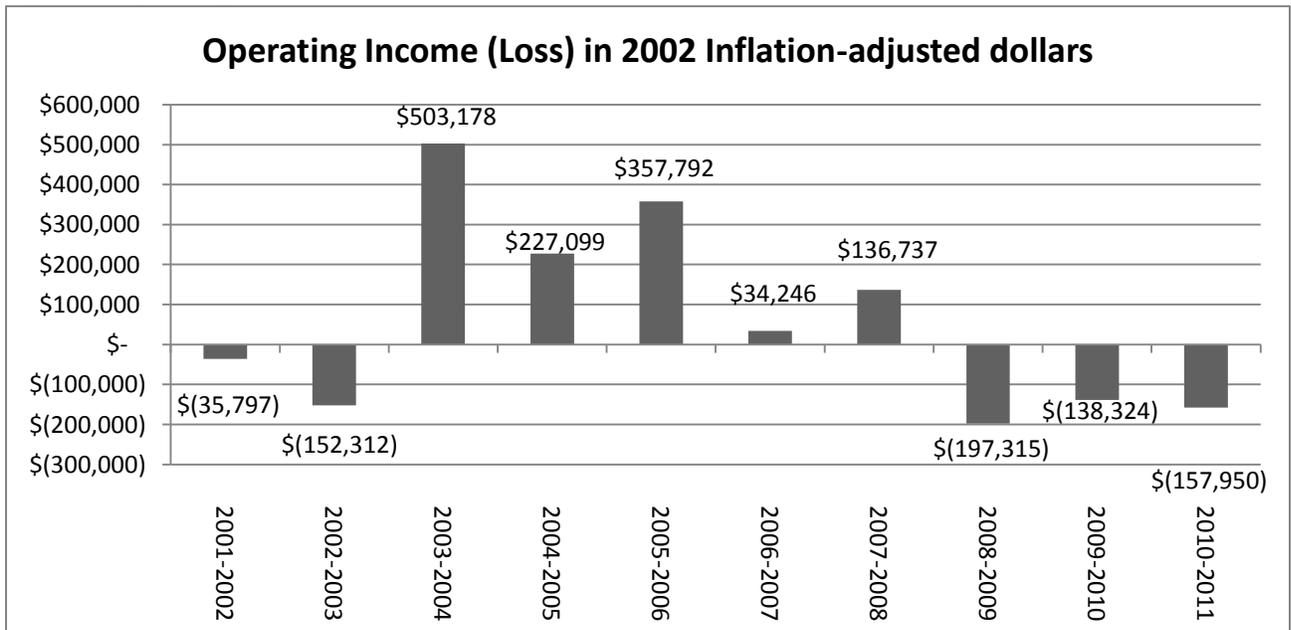
Figure 5. Theater Events by Category



## Results of Operations

The financial performance of the Center has experienced wide fluctuations during its ten-year history. As Figure 6 illustrates, there have been five years each of operating income and losses, with three of the five losses occurring in the past three years.

Figure 6. Operating Results



In 2012, the Center is expected to report a record operating loss.

“The loss is strictly an accounting of all revenue coming in to the Sovereign Center arena and Sovereign Performing Arts Center theater and all the operating expenses. It does not account for the hotel tax receipts that bring in more than \$1 million a year to the authority, or the construction bond payments of just under \$1 million. The difference built up a reserve of \$2 million, but the authority spent \$500,000 to buy half-interest in the Reading Royals two years ago. The Royals account for about \$500,000 of the projected loss this year.” (Spatz, 4/20/12)

Despite recent losses the net ten-year operating income is more than \$577,000 (adjusted for inflation).

## **Direct Expenditures- Sovereign Center**

The Center contributes to the county economy in several important ways. The following tables summarize the inflation-adjusted value of expenditures by category, 2001-02 through 2010-11. Nominal, or unadjusted for inflation, expenditures are provided in the Appendix.

**Table 2. Payroll Expenditures**

Season	Facilities	Reading Royals	Food/Beverage	Total
2001-02	\$ 2,107,986	\$ 558,122	\$ 540,950	\$ 3,207,058
2002-03	\$ 1,828,349	\$ 484,084	\$ 469,189	\$ 2,781,621
2003-04	\$ 2,037,910	\$ 598,500	\$ 408,491	\$ 3,044,901
2004-05	\$ 2,136,237	\$ 561,200	\$ 479,705	\$ 3,177,142
2005-06	\$ 2,129,372	\$ 449,450	\$ 484,346	\$ 3,063,168
2006-07	\$ 1,989,114	\$ 467,190	\$ 473,963	\$ 2,930,267
2007-08	\$ 2,175,909	\$ 603,120	\$ 550,643	\$ 3,329,672
2008-09	\$ 2,020,725	\$ 567,000	\$ 573,972	\$ 3,161,697
2009-20	\$ 1,870,798	\$ 526,220	\$ 537,425	\$ 2,934,443
2010-11	\$ 1,521,029	\$ 436,908	\$ 519,992	\$ 2,477,929
Total	\$ 19,817,429	\$ 5,251,794	\$ 5,038,675	\$ 30,107,898

**Table 3. Purchases of Goods & Services**

Year	Facilities & F/B	Reading Royals	Total
2001-02	\$ 1,257,922	\$ 721,266	\$ 1,979,188
2002-03	\$ 1,091,052	\$ 625,585	\$ 1,716,637
2003-04	\$ 610,559	\$ 574,750	\$ 1,185,309
2004-05	\$ 561,189	\$ 570,400	\$ 1,131,589
2005-06	\$ 1,164,234	\$ 783,200	\$ 1,947,434
2006-07	\$ 1,484,115	\$ 730,800	\$ 2,214,915
2007-08	\$ 1,593,570	\$ 823,200	\$ 2,416,770
2008-09	\$ 1,573,580	\$ 683,760	\$ 2,257,340
2009-20	\$ 1,207,428	\$ 647,400	\$ 1,854,828
2010-11	\$ 1,150,698	\$ 577,640	\$ 1,728,338
Total	\$ 11,694,348	\$ 6,738,001	\$ 18,432,349

Payroll is the primary direct expenditure paid by the Center. Table 2 summarizes payroll expenditures for the Center, Reading Royals and SMG. Table 3 summarizes the 2001-02 through 2010-11 inflation-adjusted expenditures for the purchase of goods and services from local vendors, representing the second largest category of direct expenditure made by the Center. The third largest direct expenditure category is amusement tax payments. Table 4 reports the annual inflation-adjusted tax payments to the City of Reading.

**Table 4. City Amusement Tax Payments**

Year	Facilities & F/B	Reading Royals	Total
2001-02	\$ 304,820	\$ 90,158	\$394,978
2002-03	\$ 205,978	\$ 78,198	\$ 284,176
2003-04	\$ 342,231	\$ 114,000	\$ 456,231
2004-05	\$ 346,870	\$ 111,320	\$ 458,190
2005-06	\$ 308,418	\$ 104,130	\$ 412,548
2006-07	\$ 275,190	\$ 78,909	\$ 354,099
2007-08	\$ 323,730	\$ 85,680	\$ 409,410
2008-09	\$ 230,210	\$ 60,178	\$ 290,387
2009-20	\$ 255,276	\$ 57,685	\$ 312,961
2010-11	\$ 206,666	\$ 54,492	\$ 261,158
Total	\$ 2,799,390	\$ 834,750	\$ 3,634,139

Patrons pay to park in City owned garages and thus generate parking revenue. In addition, the Center provides charitable assistance in the form of food and beverage gifts to organizations in community. The inflation-adjusted values of shared parking receipts disbursed to Reading Parking Authority and the donations of food and beverage to local charities is provided in Table 5.

**Table 5. City Parking Revenue Charitable Donations**

Season	City		Charitable Giving Reading Royals	Total
	Parking Revenue	Charitable Giving Facility & F/B		
2001-02	\$ 313,407	\$ 68,692	-	\$ 382,099
2002-03	\$ 239,624	\$ 65,862	-	\$ 305,486
2003-04	\$ 299,705	\$ 64,626	-	\$ 364,331
2004-05	\$ 303,192	\$ 73,040	-	\$ 376,231
2005-06	\$ 290,515	\$ 70,617	\$ 75,557	\$ 436,688
2006-07	\$ 346,130	\$ 77,383	\$ 72,002	\$ 495,515
2007-08	\$ 297,555	\$ 85,839	\$ 146,216	\$ 529,610
2008-09	\$ 294,999	\$ 77,112	\$ 126,230	\$ 498,341
2009-20	\$ 298,842	\$ 37,831	\$ 124,853	\$ 461,526
2010-11	\$ 227,555	\$ 26,957	\$ 135,035	\$ 389,546
Total	\$ 2,911,522	\$ 647,958	\$ 679,893	\$ 4,239,373

## Survey Methodology & Data

Two sets of surveys were administered in order to gain insight about the direct spending of visitors to the Sovereign Center. The first surveys excluded the sporting events, instead focusing on visitors attending special, non-recurring events such as concerts and family shows. Initially, the survey instrument was piloted using paper surveys administered by Sovereign Center interns. Once it was determined the questions were clear and guests were willing to respond, an electronic version was also used to gather survey data. After selected events, Center visitors received an email invitation to participate in the survey.

Table 6. Survey Administration

<u>Date of Surveyed</u>	<u>Event</u>	<u>Category</u>	<u>Survey Method</u>	<u>Venue</u>	<u>Attendance</u>	<u>Responses</u>
1/26/2012	Rock of Ages	Concert	P	SPAC	1,319	19
2/24/2012	Blake Shelton	Concert	E	ARENA	6,592	174
3/16/2012	Eric Church	Concert	E	ARENA	6,769	71
3/21/2012	Daughtry	Concert	E	ARENA	2,706	92
3/26/2012	Van Halen	Concert	E	ARENA	5,066	193
4/12/2012	Damn Yankees	Theatre	E	SPAC	697	4
4/20/2012	Gabriel Iglesias	Comedy	E & P	SPAC	1,743	67
2/4/2012	Disney on Ice	Family	E & P	ARENA	8,262	32
3/23-25, 2012	JazzFest	Concert	E & P	SPAC	1,495	73
<b>TOTALS</b>					<b>34,649</b>	<b>725</b>
Percentage of Turnstile (excluding hockey) Completing a Survey					2.1%	
Notes: E = electronic survey; P = paper survey; E&P = both methods						
SPAC = Sovereign Performing Arts Center						

Table 6 provides a summary of the non-sporting events from which paper surveys were administered or patrons who purchased tickets were emailed an invitation to participate in the survey. The electronic version of the survey asked respondents to indicate if they had completed a paper survey. In the few instances where the respondent indicated a paper survey was completed, the electronic response was excluded in order to eliminate double-counting.

Approximately 86% of the survey responses were obtained from guests who attended concerts at either the Arena or the SPAC. These surveys (hereafter referred to as the non-sport category) represent just over 2% of the total, non-sport turnstile attendance.

In order to better gauge what, if any, differences in spending behavior exist between hockey patrons and visitors to non-sport events, hockey patrons were asked to participate in a separate survey. Based on the database of hockey ticket purchasers, invitations to participate in the survey were sent after the Reading Royals' season was completed (in order to avoid repeated invitations

being sent to guests attending more than one game). The number of surveys obtained (hereafter referred to as the sport category) from Reading Royals' patrons (just under 150) represents approximately one-half of 1% of the number of survey invitations (over 28,000) sent. Because a relatively small percentage of sport survey responses was obtained it is possible the sample is not representative of the total population. (To a lesser extent that possibility also exists with the non-sport sample.)

Therefore, in order to provide conservative, but fair estimates of the economic contribution of Center visitors to the Berks County economy, two sets of calculations were made for each category of visitor direct spending. First, extrapolations from non-sport turnstile attendance and the related non-sport survey findings are provided. Second, the extrapolations from sporting event attendance based on the survey responses from those visitors are provided. These lower-bound estimates exclude any impact of sports patrons (hockey and arena football). The sample characteristics provided next, focus primarily on the characteristics of the non-sport surveys obtained as the primary basis for visitors' direct spending estimates. In each section, the computations related to sports visitors are provided after the discussion of the non-sport analysis.

## **Sample Characteristics**

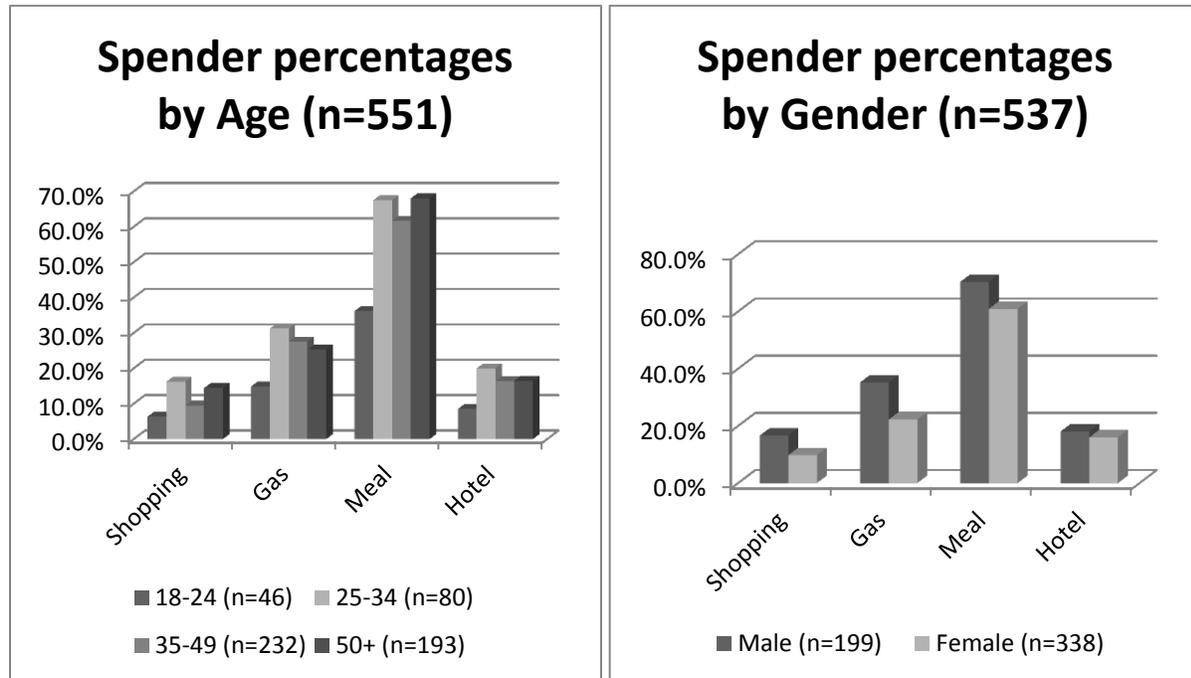
The surveys provide several important insights about the characteristics of the guests attending the Sovereign Center's concert and specialty acts. First, more than 36% of the respondents indicated this experience was the first time they, or members of their party, had attended an event at the Center. The distribution of group size shows 55.5% of respondents traveled with one other person; 9.4% traveled alone; 11.5% were a party of three; 15.5% were a party of four and 8.1% were part of a group larger than four. Demographically, a majority of survey respondents are female (61.4%). Of the 723 respondents answering the question about age: 7.5% indicated 8-24; 14.9% are 25-34; 42% are 35-49; and 35.5% are 50 or older.

When asked about their spending in association with their Center event attendance, 9.2% indicated their travel to or within Berks County would include shopping; 20.1% would purchase gas; 47.8% would purchase a meal; and 12.4% would stay overnight in a Berks County hotel. Responses from hockey patrons reveal slightly higher percentages for three of the four spending categories: 15% indicated shopping; 44% purchase gas; 44% dine out; but only 3% would stay overnight in a hotel.

While the spending characteristics for the sample overall are interesting, in order to emphasize the economic activity that Berks County derives specifically from the Center's existence, attention should be focused only on the economic activity that occurred because of the Center. Thus, the survey included a key question: "If you had not purchased a ticket for this event, would you have done any of the above activities (shopping, purchasing gas, dining, overnight stay) in Berks County today? Of the 717 responses to this question, 553 (77.1%) indicated they would not have spent money in these categories otherwise. The percentage of hockey patrons indicating they would not have spent in these categories is 50.3%.

Concentrating on these 550+ non-sport responders (herein referred to as Spenders) provides additional insight regarding the kinds of economic activity and the type of visitors the Center is attracting to Berks County. Figures 7A and 7B provide additional demographic details about the Spender category, by age and gender, respectively.

Figures 7A & 7B. Spending by Age (7A) and Spending by Gender (7B)



Note: One respondent omitted a response from the question about gender and two did not indicate age.

More than 41% of the Spenders indicated this was their first visit to the Center. The distribution reflects a 50-50 split between individuals and pairs and groups of three or more. With respect to the types of economic activity reported by the Spenders, incorporating a meal as part of their visit to the Center event was most commonly reported (46.7%). Second most common type of spending is to purchase gas (14.5%), followed by overnight stays in Berks County hotel (12.8%), and shopping (8.0%). Table 7 provides a summary of Spenders as a percentage of the total sample and within the Spender sub-category.

Table 7A. Spender Percentages: NON-SPORT

	<u>Shopping</u>	<u>Gas</u>	<u>Meal</u>	<u>Hotel</u>
Number of Spenders	44	80	258	71
% of Total Spenders (n=553)	8.0%	14.5%	46.7%	12.8%
<b>% of Total Responses (n=725)</b>	<b>6.1%</b>	<b>11.0%</b>	<b>35.6%</b>	<b>9.8%</b>

In order to conservatively estimate direct spending across these categories, we must utilize the percentages of respondents who indicated they spent and would not have spent if they hadn't attended an event at the Sovereign Center. These values are shown in the last row of Table 7A

(bold). The corresponding percentages for the sport category are: 8.5% shopping; 12.8% gas; 14.9% meal; and 1.4% hotel. These values are shown the last row of Table 7B.

Table 7B. Spender Percentages: SPORT

	<u>Shopping</u>	<u>Gas</u>	<u>Meal</u>	<u>Hotel</u>
Number of Spenders	12	18	21	2
% of Total Spenders (n=72)	16.7%	25.7%	29.6%	2.8%
<b>% of Total Responses (n=141)</b>	<b>8.5%</b>	<b>12.8%</b>	<b>14.9%</b>	<b>1.4%</b>

Table 8 shows the turnstile attendance for each venue for the first ten years of Center operations. Turnstile attendance, and not ticket sales, is a better metric for estimating the economic activity of actual visitors of the Center and Berks County. Applying the percentages from Table 7A to the turnstile attendance for the combined SPAC, Reading Eagle Theatre and Sovereign Center events total (3.327 million) forms the basis of the non-sport estimates of direct spending by visitors. Applying the sport results from Table 7B to the combined Reading Royals and Reading Express turnstile attendance (1.728 million) forms the basis for the sport estimates of visitors’ direct spending for each category.

Table 8. Turnstile attendance, all events

		Reading	Sovereign				
		Eagle	Center	Reading	Reading		
	SPAC	Theatre	Events	Express	Royals		
Year	Turnstile	Turnstile	Turnstile	Turnstile	Turnstile	TOTAL	
2001-02	40,064	-	321,901	-	180,751	542,716	
2002-03	58,884	-	266,810	-	170,493	496,187	
2003-04	68,852	2,269	334,449	-	186,168	591,738	
2004-05	63,458	21,503	291,800	-	189,223	565,984	
2005-06	69,616	18,225	298,967	24,007	160,468	571,283	
2006-07	76,391	13,858	270,257	29,064	146,074	535,644	
2007-08	66,742	39,883	365,414	29,790	158,497	660,326	
2008-09	49,243	16,646	279,603	28,064	130,362	503,918	
2009-10	35,294	21,192	118,997	17,365	129,253	322,101	
2010-11	64,073	7,239	45,525	17,727	130,779	265,343	
TOTAL	592,617	140,815	2,593,723	146,017	1,582,068	5,055,240	
TOTAL		3,327,155			1,728,085		
% OF TOTAL		65.8%			34.2%		

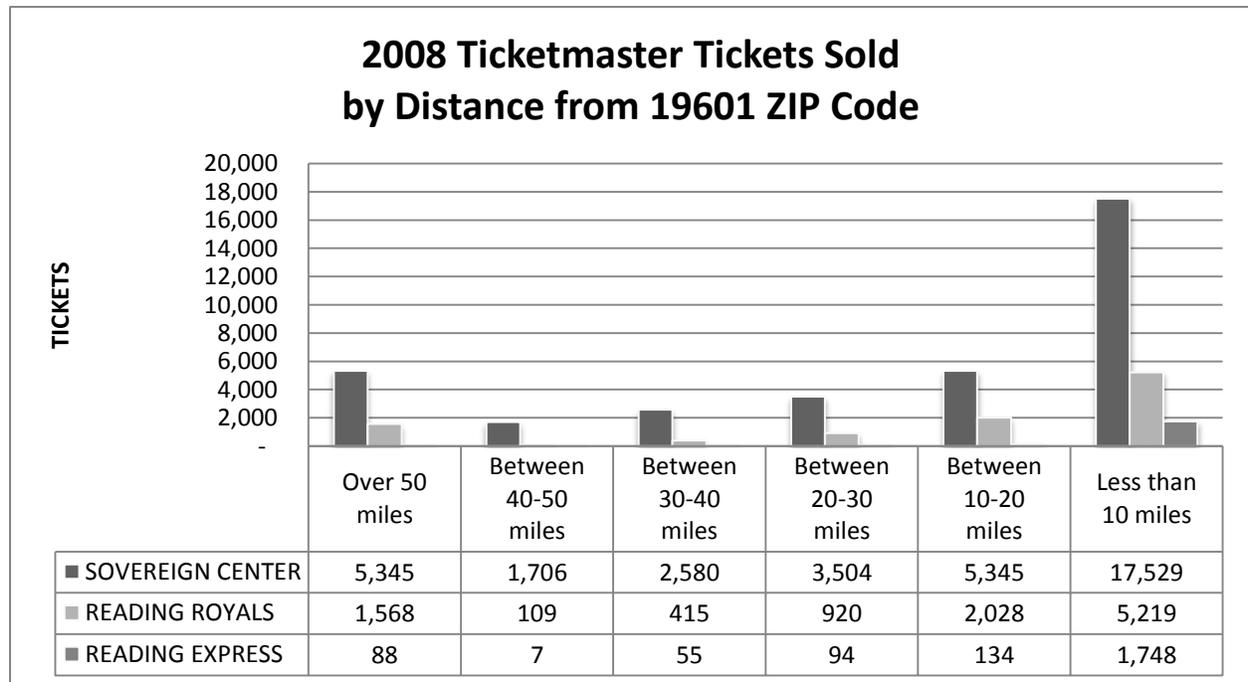
Analysis of attendance by zip code provides additional evidence regarding the distances traveled to the Center which provides insight regarding the potential for economic activity associated

with a visit to the Center. According to 2008 data provided by Ticketmaster, ticket sales to purchasers from outside a 50-mile radius (based on Reading’s 19601 zip code) totaled 7,001 tickets. More than half of those tickets (5,345 or approximately 76%) are associated with events other than hockey or arena football. Focusing on the 50-mile threshold is consistent with IRS regulations which generally require at least that distance in order for overnight stays and per diem costs of travel to be recognized. Figures 8, 9 and 10 provide the data on the distribution of ticket sales by distance, by event category, and a 50-mile radius map, respectively.

Comparing the 2007-08 turnstile totals, from Table 8 above, the combined turnstile attendance for SPAC, Reading Eagle Theater and Sovereign Center Events is 472,039. That year, 28,790 attended the Reading Express games and 158,497 attended the Reading Royals’ hockey games. The Sovereign Center events represented 71.6% of the total turnstile attendance. Yet, the Ticketmaster data suggests, Sovereign Center events represent, on average, 76.3% of the ticket sales to residents beyond a 50-mile radius. This suggests that a lower bound estimate of direct visitor spending based on turnstile attendance at the Center’s non-sporting events is a reasonable basis.

Because the sports surveys indicated these patrons do spend in each of the expenditure categories and because some sports patrons do travel more than 50 miles for a hockey or arena football game, the estimate of visitor spending should also consider sports patrons. Thus, both categories of visitors are included in the analysis.

Figure 8. 2007-08 Ticketmaster ticket sales by distance





It is important to note that the Ticketmaster ticket totals are only a portion of the overall ticket sales for the Center. Visitors can purchase tickets directly from the Sovereign Center Box Office and online through the Center’s website. Thus, these figures do not necessarily reflect the geographic distribution of ticket sales overall. It is unclear whether the sales through Ticketmaster potentially under- or over-state the number of total visitors from outside the 50 mile radius. The following section provides the estimates for each spending category, beginning with the most frequently reported spending: Meals.

## **Direct Expenditures- Center Visitors**

### Spending on Meals

Electronic survey respondents were asked to provide details about each spending category. Supplemental information in the Appendix summarizes the data which was used to estimate the average amount spent of \$11.26 per person.

Table 9A. Spending on Meals: NON-SPORT TURNSTILE

	NON-SPORT		AVERAGE	NON-SPORT
	TURNSTILE	35.6% of	EXPENDITURE	ANNUAL
Year	ATTENDANCE	TURNSTILE	PER PERSON	EXPENDITURE
2001-02	361,965	128,860	\$ 11.26	\$ 1,450,958
2002-03	325,694	115,947	\$ 11.26	\$ 1,305,564
2003-04	405,570	144,383	\$ 11.26	\$ 1,625,752
2004-05	376,761	134,127	\$ 11.26	\$ 1,510,269
2005-06	386,808	137,704	\$ 11.26	\$ 1,550,543
2006-07	360,506	128,340	\$ 11.26	\$ 1,445,110
2007-08	472,039	168,046	\$ 11.26	\$ 1,892,197
2008-09	345,492	122,995	\$ 11.26	\$ 1,384,925
2009-10	175,483	62,472	\$ 11.26	\$ 703,434
2010-11	116,837	41,594	\$ 11.26	\$ 468,348
<b>TOTAL</b>	<b>3,327,155</b>	<b>1,184,467</b>		<b>\$ 13,337,100</b>

The non-sport estimated spending on meals is computed by applying the percentage of non-sport survey respondents indicating they purchased a meal because they attended a special event at the Center (35.6%) to the turnstile attendance each year. (The total turnstile count is based on SPAC, Reading Eagle Theatre, and non-sporting events at the Sovereign Center, as provided by the Center staff and reported in Table 8.) Then, this estimated number of visitors is multiplied by the average meal price of \$11.26.

Table 9B. Spending on Meals: SPORT TURNSTILE

	SPORT		AVERAGE	SPORT
	TURNSTILE	14.9% of	EXPENDITURE	ANNUAL
Year	ATTENDANCE	TURNSTILE	PER PERSON	EXPENDITURE
2001-02	180,751	26,932	\$ 11.26	\$ 303,253
2002-03	170,493	25,403	\$ 11.26	\$ 286,043
2003-04	186,168	27,739	\$ 11.26	\$ 312,342
2004-05	189,223	28,194	\$ 11.26	\$ 317,467
2005-06	184,475	27,487	\$ 11.26	\$ 309,501
2006-07	175,138	26,096	\$ 11.26	\$ 293,836
2007-08	188,287	28,055	\$ 11.26	\$ 315,897
2008-09	158,426	23,605	\$ 11.26	\$ 265,798
2009-10	146,618	21,846	\$ 11.26	\$ 245,987
2010-11	148,506	22,127	\$ 11.26	\$ 249,154
TOTAL	1,728,085	1,184,467		\$ 2,899,277

Table 9B reports the sport event estimate of direct spending on meals, based on sports turnstile attendance. The results are an estimated lower-bound annual amount of expenditure related to meals exceeding \$13.3 million, and upper-bound estimate of \$16.2 million (sum of non-sport \$13.3 and sport \$2.9 million).

### Gasoline Purchases

Using data from Edmunds.com, a weighted average gasoline tank size of 17.8 gallons was computed, based on the top-10 vehicles sold in April 2012. These vehicles represent a cross-section of categories: small and midsize sedan, crossover SUV, and trucks. Based on the specifications data from Edmunds, and the relative percentages of sales for each model, the weighted average gas tank size was derived (see the Appendix). Assuming the average quantity of gasoline purchased is a half tank, the gasoline expenditure computations are based on a quantity of 8.9 gallons per purchase. This estimate is consistent with a national estimate of 9 gallons per fill up (NACS Annual Fuels Report, 2011).

Extrapolating the survey results for gasoline purchases is more complicated than estimating the meal expenditure. This is because visitors do not each drive separately to the Center. Therefore, a series of computations was performed in order to account for the range of group sizes carpooling to the Center. Table 10A provides the non-sport estimate of gasoline expenditure. First, the turnstile attendance is multiplied by the percentage of survey respondents indicating they purchased gas (the column listed as 11% of Turnstile). These annual counts were then categorized across group sizes, based on the survey data. For example, 7.5% of respondents indicated they traveled alone; 42.5% reported that they traveled with one other person, etc. Thus the 11.0% yearly turnstile amounts were then allocated by the percentages across the group sizes, and then divided by the group size to yield the number of gas purchases made as a result of

attending a Center event. To illustrate, the 8,461 value is obtained by the following computation:  $(39,816 \times 42.5\%) \div 2$  (the group size). In this way, the Total Number of Gas Purchases accounts for the turnstile count as well as the average numbers of visitors per car. Multiplying the number of purchases (14,254 in 2001-02) by the average number of gallons purchased (8.9 gallons) by the average retail price per gallon (\$1.51 in 2001) provides the estimated amounts spent on gasoline purchases (\$191,553). The lower bound estimated ten-year total expenditure is nearly \$2.6 million. Table 10B reports the estimated purchases from attendance at the sporting events. The combined estimate is \$4.39 million.

**Table 10A. Spending on gasoline: NON-SPORT TURNSTILE**

Year	NON-SPORT TURNSTILE	11.0% of TURNSTILE	VISITORS PER CAR					TOTAL NUMBER OF GAS PURCHASES	GALLONS	AVERAGE	
			GROUP SIZE	GROUP SIZE	GROUP SIZE	GROUP SIZE	GROUP SIZE			RETAIL PRICE PER GALLON	TOTAL SPENT
			7.5%	42.5%	9.1%	11.5%	5.7%				
2001-02	361,965	39,816	2,986	8,461	1,208	1,145	454	14,254	8.9	\$ 1.51	\$ 191,553
2002-03	325,694	35,826	2,687	7,613	1,087	1,030	408	12,825	8.9	\$ 1.51	\$ 172,358
2003-04	405,570	44,613	3,346	9,480	1,353	1,283	509	15,971	8.9	\$ 1.59	\$ 226,000
2004-05	376,761	41,444	3,108	8,807	1,257	1,192	472	14,836	8.9	\$ 1.88	\$ 248,239
2005-06	386,808	42,549	3,191	9,042	1,291	1,223	485	15,232	8.9	\$ 2.30	\$ 311,795
2006-07	360,506	39,656	2,974	8,427	1,203	1,140	452	14,196	8.9	\$ 2.59	\$ 327,234
2007-08	472,039	51,924	3,894	11,034	1,575	1,493	592	18,588	8.9	\$ 2.80	\$ 463,214
2008-09	345,492	38,004	2,850	8,076	1,153	1,093	433	13,605	8.9	\$ 3.27	\$ 395,942
2009-10	175,483	19,303	1,448	4,102	586	555	220	6,910	8.9	\$ 2.35	\$ 144,527
2010-11	116,837	12,852	964	2,731	390	369	147	4,601	8.9	\$ 2.79	\$ 114,243
Note: Average retail prices per gallon based on US Census Bureau, Statistical Abstract of the US, 2012.										TOTAL	\$2,595,104

**Table 10B. Spending on gasoline: SPORT TURNSTILE**

Year	SPORT TURNSTILE	12.8% of TURNSTILE	VISITORS PER CAR					TOTAL NUMBER OF GAS PURCHASES	GALLONS	AVERAGE	
			GROUP SIZE	GROUP SIZE	GROUP SIZE	GROUP SIZE	GROUP SIZE			RETAIL PRICE PER GALLON	TOTAL SPENT
			6.3%	41.0%	18.8%	18.1%	16.0%				
2001-02	180751	23136	1458	4743	1450	1047	740	9,438	8.9	\$ 1.51	\$ 126,832
2002-03	170493	21823	1375	4474	1368	987	698	8,902	8.9	\$ 1.51	\$ 119,634
2003-04	186168	23830	1501	4885	1493	1078	763	9,720	8.9	\$ 1.59	\$ 137,554
2004-05	189223	24221	1526	4965	1518	1096	775	9,880	8.9	\$ 1.88	\$ 165,312
2005-06	184475	23613	1488	4841	1480	1068	756	9,632	8.9	\$ 2.30	\$ 197,168
2006-07	175138	22418	1412	4596	1405	1014	717	9,145	8.9	\$ 2.59	\$ 210,791
2007-08	188287	24101	1518	4941	1510	1091	771	9,831	8.9	\$ 2.80	\$ 244,991
2008-09	158426	20279	1278	4157	1271	918	649	8,272	8.9	\$ 3.27	\$ 240,739
2009-10	146618	18767	1182	3847	1176	849	601	7,655	8.9	\$ 2.35	\$ 160,113
2010-11	148506	19009	1198	3897	1191	860	608	7,754	8.9	\$ 2.79	\$ 192,539
Note: Average retail prices per gallon based on US Census Bureau, Statistical Abstract of the US, 2012.										TOTAL	\$ 1,795,672

## Hotel Stays

The data suggest approximately 48% of the reported hotel stays by non-sporting event visitors to the Sovereign Center takes place outside downtown Reading. Based on the surveys and hotel rack rates a weighted average cost of accommodation \$109 was calculated in order to estimate the direct economic impact of Center visitors in the hotel spending category (see Appendix).

**Table 11A. Spending on hotel stays: NON-SPORT TURNSTILE**

			VISITORS PER ROOM								
			GROUP	GROUP	GROUP	GROUP	GROUP				
	NON-SPORT		SIZE	SIZE	SIZE	SIZE	SIZE		AVERAGE		
	TURNSTILE	9.8% of	1	2	3	4	5	TOTAL	HOTEL	TOTAL	
Year	ATTENDANCE	TURNSTILE	7.5%	42.5%	9.1%	11.5%	5.7%	STAYS	PRICE	EXPENDITURE	
2001-02	361,965	35,473	2,660	7,538	1,076	1,020	404	12,699	\$109	\$1,384,146	
2002-03	325,694	31,918	2,394	6,783	968	918	364	11,426	\$109	\$1,245,447	
2003-04	405,570	39,746	2,981	8,446	1,206	1,143	453	14,228	\$109	\$1,550,891	
2004-05	376,761	36,923	2,769	7,846	1,120	1,062	421	13,218	\$109	\$1,440,726	
2005-06	386,808	37,907	2,843	8,055	1,150	1,090	432	13,570	\$109	\$1,479,145	
2006-07	360,506	35,330	2,650	7,508	1,072	1,016	403	12,647	\$109	\$1,378,567	
2007-08	472,039	46,260	3,469	9,830	1,403	1,330	527	16,560	\$109	\$1,805,067	
2008-09	345,492	33,858	2,539	7,195	1,027	973	386	12,121	\$109	\$1,321,154	
2009-10	175,483	17,197	1,290	3,654	522	494	196	6,156	\$109	\$671,043	
2010-11	116,837	11,450	859	2,433	347	329	131	4,099	\$109	\$446,782	
									TOTAL	\$12,722,967	

**Table 11B. Spending on hotel stays: SPORT TURNSTILE**

			VISITORS PER ROOM								
			GROUP	GROUP	GROUP	GROUP	GROUP				
	SPORT		SIZE	SIZE	SIZE	SIZE	SIZE		AVERAGE	SPORT	
	TURNSTILE	1.4% of	1	2	3	4	5	TOTAL	HOTEL	TOTAL	
Year	ATTENDANCE	TURNSTILE	6.3%	41.0%	18.8%	18.1%	16.0%	STAYS	PRICE	EXPENDITURE	
2001-02	180,751	2,531	190	538	77	73	29	906	\$109	\$98,741	
2002-03	170,493	2,387	179	507	72	69	27	854	\$109	\$93,137	
2003-04	186,168	2,606	195	554	79	75	30	933	\$109	\$101,700	
2004-05	189,223	2,649	199	563	80	76	30	948	\$109	\$103,369	
2005-06	184,475	2,583	194	549	78	74	29	925	\$109	\$100,775	
2006-07	175,138	2,452	184	521	74	70	28	878	\$109	\$95,675	
2007-08	188,287	2,636	198	560	80	76	30	944	\$109	\$102,858	
2008-09	158,426	2,218	166	471	67	64	25	794	\$109	\$86,545	
2009-10	146,618	2,053	154	436	62	59	23	735	\$109	\$80,095	
2010-11	148,506	2,079	156	442	63	60	24	744	\$109	\$81,126	
									TOTAL	\$944,023	

Like the computations performed for the gasoline purchase estimates, estimating the amounts spent on hotel accommodations also requires some consideration as to the sizes of the groups

visiting the Center. Table 11A provides the details of the analysis based on the non-sport turnstile attendance. Following the same procedure discussed above, the gross turnstile attendance (only for special events) is reduced to reflect the percentage of survey respondents indicating they stayed overnight (9.8% of respondents). The estimated number of Center visitors staying overnight is then categorized by group size to determine the number of hotel rooms booked by Center visitors. Last, the average room price (\$109) is multiplied by the total number of stays each year to determine the amounts spent on lodgings. The non-sport, ten-year estimated total exceeds \$12.7 million. Table 11B provides the same computations for the sporting event attendance, reporting an additional \$.9 million estimated expenditures for hotel accommodations.

### Retail Purchases

Table 12 summarizes the survey results regarding the location of shopping activity, based on the non-sport surveys. (Note- 44 respondents indicated they went shopping as part of their visit to the Center, but only 27 indicated where they went shopping.) In order to estimate the direct spending by Sovereign Center visitors, which resulted from the Center’s event and would not have occurred otherwise, an estimate of shopping expenditure per visit in a context of tourism or leisure activity is needed. Most of the industry reports focus on retail sales per square foot of space and not on the amount spent per visitor. In addition, much of the academic literature deals with theoretical questions and frameworks from which consumers make purchase decisions.

Table 12. Survey responses, shopping venues visited

Location	Count	% of Total
VF Outlet	14	51.9%
Berkshire Mall & Surrounding Stores	6	22.2%
Boscovs	3	11.1%
Classic Harley	1	3.7%
Shops on Penn Street	1	3.7%
Target	1	3.7%
Walmart	1	3.7%
Total	27	100.0%

However, there is one study which sheds light on the issue of average spending per shopping visit in a tourist context. Fairhurst, et al. (2007) used survey data from visitors to Tennessee to categorize tourist shoppers across demographic, behavioral and spending categories. Data in the Appendix provides the breakdown across spending categories by Fairhurst and the adaptation of those ranges for this study.

The amounts reported in Tables 13A and 13B are computed as follows. As before, the total turnstile attendance is reduced to reflect the percentage of respondents indicating they went shopping as part of their visit to the Center. These amounts were then categorized across spending categories, using the percentages from the research by Fairhurst, and applying reduced spending amounts to avoid upward bias (details provided in the Appendix). The ten-year

estimated shopping expenditure for non-sport turnstile attendance exceeds \$30.7 million. Table 13B reports the estimate (\$22.2 million) of shopping expenditures based on sporting event attendance. The combined, upper-bound estimate of shopping expenditures is \$52.9 million.

**Table 13A. Spending on shopping: NON-SPORT TURNSTILE**

Year	NON-SPORT		AMOUNT SPENT PER PERSON				TOTAL
	TURNSTILE ATTENDANCE	6.1% of TURNSTILE	\$25 12.8%	\$75 21.6%	\$150 43.2%	\$300 22.4%	
2001-02	361,965	22,080	\$ 70,656	\$ 357,694	\$ 1,430,775	\$ 1,483,767	\$ 3,342,892
2002-03	325,694	19,867	\$ 63,575	\$ 321,851	\$ 1,287,403	\$ 1,335,085	\$ 3,007,914
2003-04	405,570	24,740	\$ 79,167	\$ 400,784	\$ 1,603,137	\$ 1,662,513	\$ 3,745,601
2004-05	376,761	22,982	\$ 73,544	\$ 372,315	\$ 1,489,261	\$ 1,544,419	\$ 3,479,539
2005-06	386,808	23,595	\$ 75,505	\$ 382,244	\$ 1,528,975	\$ 1,585,603	\$ 3,572,327
2006-07	360,506	21,991	\$ 70,371	\$ 356,252	\$ 1,425,008	\$ 1,477,786	\$ 3,329,417
2007-08	472,039	28,794	\$ 92,142	\$ 466,469	\$ 1,865,876	\$ 1,934,982	\$ 4,359,469
2008-09	345,492	21,075	\$ 67,440	\$ 341,415	\$ 1,365,661	\$ 1,416,241	\$ 3,190,757
2009-10	175,483	10,704	\$ 34,254	\$ 173,412	\$ 693,649	\$ 719,340	\$ 1,620,656
2010-11	116,837	7,127	\$ 22,807	\$ 115,458	\$ 461,833	\$ 478,938	\$ 1,079,036
<b>TOTALS</b>	<b>3,327,155</b>	<b>202,956</b>	<b>\$ 649,461</b>	<b>\$3,287,895</b>	<b>\$ 13,151,578</b>	<b>\$ 13,638,674</b>	<b>\$30,727,607</b>

**Table 13B. Spending on shopping: SPORT TURNSTILE**

Year	SPORT		AMOUNT SPENT PER PERSON				TOTAL
	TURNSTILE ATTENDANCE	8.5% of TURNSTILE	\$25 12.8%	\$75 21.6%	\$150 43.2%	\$300 22.4%	
2001-02	180,751	15,364	\$ 49,164	\$ 248,894	\$ 995,577	\$ 1,032,450	\$ 2,326,085
2002-03	170,493	14,492	\$ 46,374	\$ 234,769	\$ 939,075	\$ 973,856	\$ 2,194,074
2003-04	186,168	15,824	\$ 50,638	\$ 256,353	\$ 1,025,413	\$ 1,063,392	\$ 2,395,796
2004-05	189,223	16,084	\$ 51,469	\$ 260,560	\$ 1,042,240	\$ 1,080,842	\$ 2,435,111
2005-06	184,475	15,680	\$ 50,177	\$ 254,022	\$ 1,016,088	\$ 1,053,721	\$ 2,374,009
2006-07	175,138	14,887	\$ 47,638	\$ 241,165	\$ 964,660	\$ 1,000,388	\$ 2,253,851
2007-08	188,287	16,004	\$ 51,214	\$ 259,271	\$ 1,037,085	\$ 1,075,495	\$ 2,423,065
2008-09	158,426	13,466	\$ 43,092	\$ 218,153	\$ 872,610	\$ 904,929	\$ 2,038,784
2009-10	146,618	12,463	\$ 39,880	\$ 201,893	\$ 807,572	\$ 837,482	\$ 1,886,827
2010-11	148,506	12,623	\$ 40,394	\$ 204,493	\$ 817,971	\$ 848,266	\$ 1,911,124
<b>TOTALS</b>	<b>1,728,085</b>	<b>146,887</b>	<b>\$ 470,039</b>	<b>\$2,379,573</b>	<b>\$ 9,518,292</b>	<b>\$ 9,870,822</b>	<b>\$22,238,726</b>

## **Convention-related Expenditure & Impacts**

In addition to sports, concerts, and other entertainment related events, the Center has hosted district conventions of the Jehovah’s Witnesses since 2005-2006. That year, there were nine convention days, bringing over 66,000 visitors to the Center. More recently that number has nearly tripled to over 178,000 in the 2010-11 fiscal year. Table 14A summarizes the number of convention days, weekends and attendance figures in each year.

**Table 14A. Summary of Jehovah's Witness Convention Attendance**

Season	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	Total
Convention Weekends	3	4	6	8	8	7	
Convention Days	9	11	17	24	24	21	106
Total Attendance	66,194	58,043	48,701	138,800	185,373	178,450	675,561
Average Daily Attendance	7,355	5,277	2,865	5,783	7,724	8,498	6,373

According to Bill Malloy, field representative for Christian Congregation of Jehovah's Witnesses, the district conventions attract participants from the mid-Atlantic region, including visitors from Maryland, Delaware, New Jersey, New York, and Pennsylvania. He estimates only 4-5% of the attenders are residents of Berks County. Thus, these events bring a significant number of traveling visitors to Reading and Berks County for overnight stays on multiple summer weekends.

Applying the same methodology used to estimate economic impacts for the non-sporting and sporting events, Table 14B reports the economic impacts from the Jehovah's Witnesses conventions from 2005-06 through 2010-11.

**Table 14B. Jehovah's Witness Convention Spending by Category**

	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	Total
Hotel	\$ 392,400	\$ 523,200	\$ 784,800	\$ 1,046,400	\$ 1,046,400	\$ 915,600	\$ 4,708,800
Meals	\$ 708,077	\$ 620,886	\$ 520,955	\$ 1,484,744	\$ 1,982,935	\$ 1,908,880	\$ 7,226,476
Shopping	\$ 9,583,567	\$ 8,403,466	\$ 7,050,931	\$ 20,095,464	\$ 26,838,303	\$ 25,835,991	\$ 97,807,722
Gas	\$ 73,692	\$ 110,645	\$ 179,424	\$ 279,389	\$ 200,784	\$ 208,580	\$ 1,052,514
Total	\$ 10,757,737	\$ 9,658,196	\$ 8,536,109	\$ 22,905,996	\$ 30,068,422	\$ 28,869,051	\$ 110,795,512

Data obtained from Malloy indicates each convention weekend is associated with an average of 1,200 hotel room reservations per night. Applying the same average room rate (\$109) used above results in \$4.7 million of estimated economic activity associated with lodging. Assuming that each room represents one vehicle of convention attenders, and applying the same methodology used previously, produces an estimate of approximately \$1 million in gasoline purchases. Assuming each of the attenders visiting from outside Berks County purchases just one meal (some will bring all their food, others will purchase more meals) results in \$7.2 million in restaurant spending. Last, applying the same methodology and percentages related to shopping expenditures as above results in \$97.8 million in retail expenditures. Additional information and supporting tables are provided in the Appendix.

Crystal Seitz, President of the Greater Reading Conventions & Visitors Bureau, indicates "Third Tier convention attendee spending is \$256 per overnight (we use \$200). This includes food, transportation, hotel and other (shopping, gas, coffee, etc.). If you have 100 people stay overnight for an event the economic impact will be on average \$20,000 (100 people x \$200)." Utilizing this approach results in a total convention-related economic impact estimate of \$128.4 million from 2005-06 through 2010-11. (See Table 14C) Thus, the methodology employed in this report provides a slightly more conservative estimate of convention visitor spending.

**Table 14C. Flat-rate estimate of convention spending**

Season	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	Total
Convention Weekends	3	4	6	8	8	7	36
Convention Days	9	11	17	24	24	21	106
Total Attendance	66,194	58,043	48,701	138,800	185,373	178,450	675,561
Average Daily Attendance	7,355	5,277	2,865	5,783	7,724	8,498	37,501
Estimated attendance from Outside Berks County	62,884	55,141	46,266	131,860	176,104	169,528	641,783
Third-tier convention spending	\$200	\$200	\$200	\$200	\$200	\$200	\$200
Estimate economic impact	12,576,860	11,028,170	9,253,190	26,372,000	35,220,870	33,905,500	128,356,590

## **Indirect Economic Impact**

In addition to direct spending impact by the Sovereign Center and its visitors, some studies attempt to estimate the economic rippling effect (the indirect or induced impacts) that occurs as direct expenditures are re-spent throughout the local economy. Historically, the computation of these induced effects was achieved through the use of multipliers. More recently, researchers have increasingly expressed doubts about the validity of economic impact estimates utilizing the multiplier approach, for methodological and theoretical reasons.

With respect to the methodology, in order to accurately quantify the overall economic impact of the Center, estimates of the shifts in activity toward the Center but away from other activities in the County should be considered. Because a lengthy survey is less likely to be completed, survey participants were not asked about other activities in Berks County which they could have substituted for attendance at the Center. As Watson, Davies and Thilmany (2008; p. 589) note, “a complete impact analysis should be able to examine measures of “highest and best use” in the context of how people will substitute other activities, purchases or employment in the absence of the industry under study.” The existing data developed for this study does not facilitate this type of analysis.

Similarly, the methodology utilized in this research, namely survey data extrapolated to turnstile attendance, and not Impact Analysis for Planning (IMPLAN) input-output modeling, does not facilitate computation or estimation of an appropriate multiplier for expenditure or labor impacts. “One primary use for an input-output model is the estimation of the total effect on an economy of changes in the components of final demand for goods and services produced within the region (p.20)... Meaningful analysis using multipliers is not clear-cut and mechanistic, but rather requires the exercise of careful judgment... Such analysis allows for a degree of subjectivity and therefore, possible bias to enter the analysis, (p.28)” notes Coughlin and Mandelbaum (1991). In addition, Siegfried and Zimbalist (2002; p. 363) question the broad brush use of “standard local expansion multipliers extracted from regional input-output models. Not only are such multipliers often based on outdated technical coefficients which are treated as invariant to shifts in supply and demand, but they also represent an average over a wide variety of consumption expenditures.”

These caveats do not mean there are no indirect or induced economic impacts. But rather, they suggest more detailed study, beyond the scope of this work, is necessary in order to present reliable estimates. For example, Nola Agha (2000) finds evidence of a positive relationship between minor league baseball and per capita income. "The positive effect of some classifications of minor league baseball may not be unique to the sport of baseball. Minor leagues in hockey are nearly as extensive and may well generate similar effects" (p.23). Thus there may be other economic contributions from the Center to Berks County which are not recognized in this study. Therefore, the financial impacts summarized in the next section should be viewed as conservative estimates of the economic impacts the County derives from the Center's operations.

## **Cumulative Direct Economic Impact**

The total direct economic impact of the Sovereign Center consists of the direct expenditures made by the Center itself, as well as the direct expenditures made by visitors to the Center.

Table 15 reports the annual and ten-year combined expenditures across spending categories for the Center, non-sport visitors, sport visitors and convention attendees, respectively. The Center's direct spending represents 22.2% of the total direct expenditure. Of the amount attributable to the economic activity of visitors, 23.3% is estimated to be derived from non-sporting event visitors, 11.0% from visitors attending sporting events, and 43.5% from convention attendees.

## **Qualitative Impacts**

In addition to the economic or financial contributions the County derives from the Center and its visitors, there are qualitative benefits as well. A review of the local press, reveals several important ways the Sovereign Center participates in and enhances the quality of life within downtown Reading and the surrounding communities. The following excerpt from D. Spatz's article in the McClatchey- Tribune Business News on September 18, 2011 summarizes some of the qualitative benefits derived from the Center:

Reading Mayor Tom McMahan said the venues certainly have boosted municipal income, but even better is that the city's image also is getting a boost by getting 4.5 million people to come in. The events have been world class, he said, and they're accessible here, not just in Philadelphia...

Vaughn D. Spencer, City Council president, said the Center has been invaluable in drawing fans and generating revenue. "It has provided a venue to the city and to greater Reading for sports such as basketball and for high school graduations," Spencer said. "What would it have been like without a Sovereign Center?"

Local tourism chief Crystal A. Seitz said the civic center is a large part of the \$1 billion tourist trade in Berks, enhances the quality of life of county residents in a way that also attracts businesses and brings in conventioners... "Without it, we'd be just another small town," Seitz said.

Table 15. Cumulative Economic Impact

	SEASON											Total	Percent of Total			
	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11						
<b>CENTER</b>																
Payroll	\$3,207,058	\$2,781,621	\$ 3,044,901	\$ 3,177,142	\$ 3,063,168	\$ 2,930,267	\$ 3,329,672	\$ 3,161,697	\$ 2,934,443	\$ 2,477,929	\$ 30,107,898					
Purchases	\$1,979,188	\$1,716,637	1,185,309	1,131,589	1,947,434	2,214,915	2,416,770	2,257,340	1,854,828	1,728,338	\$ 18,432,349					
Tax Payments	\$394,978	\$ 284,176	\$ 456,231	\$ 458,190	\$ 412,548	\$ 354,099	\$ 409,410	\$ 290,387	\$ 312,961	\$ 261,158	\$ 3,634,139					
City Parking Revenue	313,407	239,624	299,705	303,192	290,515	346,130	297,555	294,999	298,842	227,555	\$ 2,911,522					
Charitable Giving	68,692	65,862	64,626	73,040	146,174	149,385	232,055	203,342	162,684	161,992	\$ 1,327,851					
<b>TOTAL CENTER</b>	<b>5,963,323</b>	<b>5,087,920</b>	<b>5,050,772</b>	<b>5,143,152</b>	<b>5,859,838</b>	<b>5,994,795</b>	<b>6,685,462</b>	<b>6,207,765</b>	<b>5,563,759</b>	<b>4,856,972</b>	<b>\$ 56,413,759</b>					22.2%
<b>NON-SPORT VISITORS</b>																
Meals	\$ 1,450,958	\$ 1,305,564	\$ 1,625,752	\$ 1,510,269	\$ 1,550,543	\$ 1,445,110	\$ 1,892,197	\$ 1,384,925	\$ 703,434	\$ 468,348	\$ 13,337,100					
Gasoline	191,553	172,358	226,000	248,239	311,795	327,234	463,214	395,942	144,527	114,243	2,595,104					
Hotel	1,384,146	1,245,447	1,550,891	1,440,726	1,479,145	1,378,567	1,805,067	1,321,154	671,043	446,782	12,722,967					
Shopping	3,342,892	3,007,914	3,745,601	3,479,539	3,572,327	3,329,417	4,359,469	3,190,757	1,620,656	1,079,036	30,727,607					
<b>TOTAL NON-SPORT VISITORS</b>	<b>\$ 6,369,549</b>	<b>\$ 5,731,283</b>	<b>\$ 7,148,244</b>	<b>\$ 6,678,772</b>	<b>\$ 6,913,810</b>	<b>\$ 6,480,328</b>	<b>\$ 8,519,946</b>	<b>\$ 6,292,778</b>	<b>\$ 3,139,660</b>	<b>\$ 2,108,410</b>	<b>\$ 59,382,779</b>					23.3%
<b>SPORT VISITORS</b>																
Meals	\$ 303,253	\$ 286,043	\$ 312,342	\$ 317,467	\$ 309,501	\$ 293,836	\$ 315,897	\$ 265,798	\$ 245,987	\$ 249,154	2,899,277					
Gasoline	126,832	119,634	137,554	165,312	197,168	210,791	244,991	240,739	160,113	192,539	1,795,672					
Hotel	98,741	93,137	101,700	103,369	100,775	95,675	102,858	86,545	80,095	81,126	944,023					
Shopping	2,326,085	2,194,074	2,395,796	2,435,111	2,374,009	2,253,851	2,423,065	2,038,784	1,886,827	1,911,124	22,238,726					
<b>TOTAL SPORT VISITORS</b>	<b>\$ 2,854,911</b>	<b>\$ 2,692,889</b>	<b>\$ 2,947,392</b>	<b>\$ 3,021,259</b>	<b>\$ 2,981,453</b>	<b>\$ 2,854,153</b>	<b>\$ 3,086,811</b>	<b>\$ 2,631,866</b>	<b>\$ 2,373,022</b>	<b>\$ 2,433,944</b>	<b>\$ 27,877,698</b>					11.0%
<b>CONVENTION VISITORS</b>																
	--- 0 ----	--- 0 ----	--- 0 ----	--- 0 ----	\$10,757,737	\$ 9,658,196	\$ 8,536,109	\$ 22,905,996	\$30,068,422	\$28,869,051	\$ 110,795,512					43.5%
Total Economic Impact	\$ 15,187,783	\$13,512,092	\$ 15,146,407	\$14,843,183	\$26,512,838	\$ 24,987,471	\$ 26,828,328	\$ 38,038,405	\$41,144,862	\$38,268,377	\$ 254,469,748					100%

Thus, in addition to the financial benefits the County derives from the Sovereign Center and its visitors, the Sovereign Center also contributes positively to the quality of life of Reading and the surrounding communities in Berks County.

### **Acknowledgements & Study Limitations**

The author would like to thank SMG, the Sovereign Center staff, and Penn State Berks' Center for Entrepreneurship and Economic Development for their support in preparation of this report. This study has some limitations. Selection of a suitable methodology can be problematic because no single method is appropriate in all contexts. The methodology utilized is adapted from several studies and the results obtained may not be generalizable to other contexts. Input-output tables were not used and indirect economic impacts are not included, thus the total impact of the Sovereign Center may be significantly greater than the estimates provided. Last, some limitations may exist with respect to the sample of surveys obtained. Despite attempts to obtain an unbiased and representative sample of Center visitors, the size of the samples obtained and the composition of respondents may not necessarily reflect the overall population. It is unclear whether any bias would result in over- or under-statement of the economic impacts.

## APPENDIX

Table 16. Nominal (unadjusted for inflation) spending amounts by the Center

Nominal/Unadjusted for Inflation Spending by Category & Year	01-02 Season	02-03 Season	03-04 Season	04-05 Season	05-06 Season	06-07 Season	07-08 Season	08-09 Season	09-10 Season	10-11 Season
<b>Total Attendance</b>	429,325	379,972	437,523	438,590	459,741	450,463	445,652	454,900	527,939	517,161
<b>Number of Events</b>	138	156	175	201	233	270	272	248	249	263
<b>Operating Income (loss)</b>										
Arena	\$119,644	(\$63,850)	\$514,062	\$288,625	\$454,207	\$93,688	\$192,000	(\$130,099)	\$561	(\$179,629)
Theater	(\$155,441)	(\$91,570)	\$15,599	(\$41,778)	(\$52,194)	(\$54,325)	(\$29,218)	(\$104,800)	(\$167,216)	(\$17,809)
Net gain (loss)	(\$35,797)	(\$155,420)	\$529,661	\$246,847	\$402,013	\$39,363	\$162,782	(\$234,899)	(\$166,655)	(\$197,438)
<b>Amusement tax revenue to city</b>										
From Sovereign facilities	\$304,820	\$210,182	\$360,243	\$377,033	\$346,537	\$316,310	\$385,393	\$274,059	\$307,562	\$258,333
From Reading Royals	\$90,158	\$79,794	\$120,000	\$121,000	\$117,000	\$90,700	\$102,000	\$71,640	\$69,500	\$68,115
Total	\$394,978	\$289,976	\$480,243	\$498,033	\$463,537	\$407,010	\$487,393	\$345,699	\$377,062	\$326,448
<b>Parking revenue</b>										
To Reading Parking Authority	\$313,407	\$244,514	\$315,479	\$329,556	\$326,421	\$397,850	\$354,232	\$351,189	\$360,051	\$284,443
To Sovereign facilities	\$81,572	\$102,815	\$136,328	\$119,515	\$120,833	\$71,141	\$65,645	\$59,702	\$61,210	\$53,992
<b>Food &amp; Beverage charity operations</b>										
From concession stands	\$68,692	\$67,206	\$68,027	\$79,391	\$79,345	\$88,946	\$102,189	\$91,800	\$45,580	\$33,696
<b>Purchases from local business</b>										
By Sovereign facilities (includes F&B)	\$1,257,922	\$1,113,318	\$642,694	\$609,988	\$1,308,128	\$1,705,879	\$1,897,107	\$1,873,310	\$1,454,733	\$1,438,373
By Reading Royals	\$721,266	\$638,352	\$605,000	\$620,000	\$880,000	\$840,000	\$980,000	\$814,000	\$780,000	\$722,050
Total	\$1,979,188	\$1,751,670	\$1,247,694	\$1,229,988	\$2,188,128	\$2,545,879	\$2,877,107	\$2,687,310	\$2,234,733	\$2,160,423
<b>Payroll and benefits</b>										
By Sovereign facilities*	\$2,107,986	\$1,865,662	\$2,145,168	\$2,321,997	\$2,392,553	\$2,286,338	\$2,590,368	\$2,405,625	\$2,253,973	\$1,901,287
By Reading Royals	\$558,122	\$493,963	\$630,000	\$610,000	\$505,000	\$537,000	\$718,000	\$675,000	\$634,000	\$546,135
By SMG Food & Beverage	\$540,950	\$478,764	\$429,991	\$521,418	\$544,209	\$544,785	\$655,527	\$683,300	\$647,500	\$649,990
Total	\$3,207,058	\$2,838,389	\$3,205,159	\$3,453,415	\$3,441,762	\$3,368,123	\$3,963,895	\$3,763,925	\$3,535,473	\$3,097,412

### Spending on Meals

In order to estimate the direct spending for meals by Center visitors, a review of menus for the above eateries was performed. The above estimates are supported by data from First Research's *Restaurants- Quarterly Update 5/28/2012* states, "for casual-dining chain restaurants, individual checks average up to \$25... Quick casual restaurant checks typically range from \$6 to \$9" (p.3). Because this study considers a ten-year span, and in order to limit potential over-estimation of economic impact (upward bias), a moderate estimate of \$10 per person is used as the average per person meal cost in the Various and National Chains categories.

**Table 17. Weighted Average Restaurant Cost, per person**

	Count	% of Total	Average Spending per Person
Various	68	36.4%	\$10.00
Fast food & Pizza	31	16.6%	\$7.00
National Chains	22	11.8%	\$10.00
Outside In	21	11.2%	\$15.00
Peanut Bar	18	9.6%	\$15.00
Ugly Oyster	17	9.1%	\$15.00
Viva	10	5.3%	\$15.00
Total	187	100.0%	
Weighted Average Spending Per Person			\$11.26

### Spending on Gas

Data on the top-10 best-selling vehicles was obtained to calculate the average fuel tank size.

**Table 18. Average gas tank size**

Top-10 vehicles	Units	% of total	Tank size	Weighted Average Tank Size
Honda Accord	35385	13.7%	18.5	2.54
Ford-F150	32548	12.6%	26	3.28
Camry	32414	12.6%	17	2.14
Corolla	24185	9.4%	13.2	1.24
Civic	23657	9.2%	13.2	1.21
Honda CRV	23627	9.2%	15.3	1.40
Chevy Silverado 1500	23303	9.0%	26	2.35
Chevy Malibu	21906	8.5%	15.6	1.33
Ford Fusion	20832	8.1%	16.5	1.33
Ford Focus	19825	7.7%	12.4	0.95
Total	257682	100.0%		17.78
Half-tank purchase	8.9 gallons			
Source: <a href="http://www.edmunds.com/car-reviews/top-10/top-10-best-selling-vehicles.html">http://www.edmunds.com/car-reviews/top-10/top-10-best-selling-vehicles.html</a>				

## Spending on Hotels

Table 19. Average cost of hotel room

HOTEL	RACK RATE	% of reported stays	WEIGHTED COST
Wyndham- Abraham Lincoln	\$ 98.00	48.4%	\$ 47.42
Best Western	\$ 76.00	9.7%	\$ 7.35
Country Inn & Suites	\$ 114.00	6.5%	\$ 7.35
Crown Plaza	\$ 159.00	6.5%	\$ 10.26
Hampton Inn	\$ 119.00	6.5%	\$ 7.68
Inn at Reading	\$ 114.00	6.5%	\$ 7.35
Marriott Courtyard	\$ 174.00	6.5%	\$ 11.23
Days Inn	\$ 78.00	3.2%	\$ 2.52
Homewood Courtyard	\$ 139.00	3.2%	\$ 4.48
Comfort Inn	\$ 119.00	3.2%	\$ 3.84
TOTAL WEIGHTED AVERAGE COST			\$ 109.48
NOTE: Best available rate data was obtained from hotel property websites on June 17, 2012.			

## Spending on Shopping

Comparing the composition of Center visitors by age to the categories developed by Fairhurst suggests the “Alone” typology of shopper most closely resembles the visitors to the Center, with roughly the same percentage in the 50+ age category (35.5% from Center surveys; 34.7% in Fairhurst study). In order to minimize potential overstatement of spending by Center visitors, the average spending amounts used in this study are from the lower end of the first four spending ranges. In addition, the percentage (8%) Fairhurst attributes to spending at the \$500+ level is capped at \$300 in this study. Thus, the \$300 spending level is attributed to 22.4% of the survey respondents (the sum of Fairhurst’s 14.4% + 8.0% for the top two spending categories). The \$25 and \$75 are the mid-point values for the first two ranges utilized by Fairhurst. The second two values are the doubling of the prior level: \$75 doubles to \$150 and \$150 doubles to \$300. The only rationale for using these reduced amounts is to limit upward bias in the estimated shopping expenditures.

Table 20. Spending categories

FAIRHURST		SOVEREIGN	
Spending Category	Percentages	Median Spending	Percentages
\$1-49	12.80%	\$25	12.8%
\$50-99	21.60%	\$75	21.6%
\$100-299	43.20%	\$150	43.2%
\$300-499	14.40%	\$300	22.4%
\$500-999	8.00%	NA	NA

## Convention Attenders' Spending

**Table 21. Convention Hotel Spending**

Season	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	Total
Convention Weekends	3	4	6	8	8	7	36
Average Number Rooms per Weekend	1200	1200	1200	1200	1200	1200	1200
Total rooms per year	3600	4800	7200	9600	9600	8400	43200
Average Room Rate	\$ 109	\$ 109	\$ 109	\$ 109	\$ 109	\$ 109	\$ 109
Estimated Hotel Spending	\$ 392,400	\$ 523,200	\$ 784,800	\$1,046,400	\$1,046,400	\$ 915,600	\$4,708,800

**Table 22. Convention Meal Spending- including amounts based on one, two, or three meals purchased**

Season	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	Total
Convention Weekends	3	4	6	8	8	7	36
Convention Days	9	11	17	24	24	21	106
Total Attendance	66,194	58,043	48,701	138,800	185,373	178,450	675,561
Average Daily Attendance	7,355	5,277	2,865	5,783	7,724	8,498	37,501
Percentage of visitors outside Berks County	95%	95%	95%	95%	95%	95%	95%
Number of Visitors from outside Berks County	62,884	55,141	46,266	131,860	176,104	169,528	641,783
Average meal price	11.26	11.26	11.26	11.26	11.26	11.26	11.26
Estimated meal expenditure (1 meal)	708,077	620,886	520,955	1,484,744	1,982,935	1,908,880	7,226,476
Estimated meal expenditure (2 meals)	1,416,154	1,241,772	1,041,909	2,969,487	3,965,870	3,817,759	14,452,952
Estimated meal expenditure (3 meals)	2,124,232	1,862,658	1,562,864	4,454,231	5,948,805	5,726,639	21,679,428

Note: The estimate of spending on meals included in the total impact is based on one meal only. The computations related to two, and three meals are provided as a reference.

**Table 23. Convention Shopping Expenditures**

Season	Non-Berks						Total
	County	\$ 25	\$ 75	\$ 150	\$ 300	Visitors	
		12.8%	21.6%	43.2%	22.4%		
2005-06	62,884	\$ 201,230	\$ 1,018,726	\$ 4,074,903	\$ 4,225,825	\$ 9,583,567	
2006-07	55,141	\$ 176,451	\$ 893,282	\$ 3,573,127	\$ 3,705,465	\$ 8,403,466	
2007-08	46,266	\$ 148,051	\$ 749,508	\$ 2,998,034	\$ 3,109,072	\$ 7,050,931	
2008-09	131,860	\$ 421,952	\$ 2,136,132	\$ 8,544,528	\$ 8,860,992	\$ 20,095,464	
2009-10	176,104	\$ 563,534	\$ 2,852,890	\$ 11,411,562	\$ 11,834,212	\$ 26,838,303	
2010-11	169,528	\$ 542,488	\$ 2,746,346	\$ 10,985,382	\$ 11,392,248	\$ 25,835,991	

**Table 24. Convention Gasoline Purchases, assuming one purchase per hotel room**

Season	Number of gas purchases	Gallons	Average Retail Price		Total Spent
			per Gallon		
2005-06	3,600	8.9	\$ 2.30	\$	73,692
2006-07	4,800	8.9	\$ 2.59	\$	110,645
2007-08	7,200	8.9	\$ 2.80	\$	179,424
2008-09	9,600	8.9	\$ 3.27	\$	279,389
2009-10	9,600	8.9	\$ 2.35	\$	200,784
2010-11	8,400	8.9	\$ 2.79	\$	208,580
Total					\$1,052,514

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