The Economic Impact of Grand View University

Prepared by

Harvey Siegelman and Daniel Otto

Strategic Economics Group

Des Moines, Iowa

October, 2010

Executive Summary

The economic impact of Grand View University on the economy of central Iowa in 2009 was substantial. The University impacted the economy by its operations and purchases, through its payrolls and programs, as a result of the local spending by its students and by the dollars spent on its capital expansion projects. As a result, the net impact on the central Iowa economy in 2009 was:

- Nearly $90 million in additional consumer spending, growing to $127 million by 2015
- About $34 million in additional personal income, increasing to $44 million by 2015
- 1,041 additional central Iowa jobs, about 56% of which were in the high-paying professional services sectors – by 2015 the number is projected to grow to 1,348 jobs
- More than $1.3 million spent in the hospitality retail sectors by the more than 47,000 visitors that Grand View brought to the community
- Cumulatively over the last decade, Grand View construction projects added about 646 jobs and $66 million to the area economy, an annual average of 65 jobs and $6.6 million in spending
- By 2015, new construction projects at Grand View are projected to add another $62 million and another 578 jobs to the local economy, or an annual average of $10.3 million in spending and 96 jobs
- In 2009, Grand View drew 81% of its enrollment from the greater metropolitan area and placed 83% of its most recent graduates with metro area employers - one-third of them with the area's ten largest firms

Introduction

Grand View University is a major contributor to the social and economic progress of the people of central Iowa. It provides broad-based education and training to citizens throughout the region and has a reputation that draws students from across the country and around the world. It trains our youth for the jobs of tomorrow. It aids in the transfer of technology and knowledge from applied research to practical application.

In May 2010, Grand View University commissioned the Strategic Economics Group to analyze the economic impact that the University has on the businesses and residents of central Iowa. This analysis included 1) information on the 2009 operations expenditures of the University, 2) the impact of student expenditures on businesses in the central Iowa market, 3) the economic impact of the educational, athletic and cultural programs of the University and 4) the cumulative impact of the substantial capital expansion program of the University.

The project staff built an input-output model for each of the four areas identified above. The input-output models reflect the economic condition of the local area and are used by translating the initial spending in these four functional areas into the ultimate effects on the economy of the region.

In this report the project staff identified the major economic and social impacts of Grand View University on the lives and economic well-being of the citizens of central Iowa by using qualitative and statistical analyses. However, many positive factors that defy quantification are nonetheless important to our quality of life.

Methodology

This study is primarily concerned with analyzing the demand-side effects of the University on the State's economy. It investigates the University's effects on Iowa's economy based on the various goods and services that Grand View University and its employees, students, vendors and visitors purchase locally. These effects are quantifiable. Supply-side effects, or the effects that the University has on the area economy based on the resources it offers are also important to evaluate, although more difficult to quantify. For example, the presence of dedicated centers of academic concentration and highly skilled labor attracts increased business activity to the region. Certainly the University's health sciences and other unique or niche programs serve as such business magnets.

By providing access to libraries, noncredit courses, continuing education opportunities and cultural and athletic events, Grand View University enhances the quality of life for all citizens of the region and the State. Such unmeasured benefits are likely to be even greater than the measured ones.

The methodology employed in this study involved examining data for four aspects of the activities of the University:

1. **University Operations** – including the management, classroom teaching, operations and maintenance of the service delivery
2. **Student Spending** – including the incidental consumption spending by students and their families at retail and service businesses in the area
3. **Grand View Visitor Spending** – including university arts, theatre and cultural programs, academic support centers and institutes, athletic and extra-curricular events and activities, visits by family members and use of University facilities for community, civic and business functions

4. **Grand View Building Expansion and Renovation Spending** – including the construction of new student housing and the renovation and expansion of classroom facilities

For each of these components and for the total, the project staff examined the impact on the area economies using three metrics or indicators:

1. **Output Production** – a measure of the increased value of all goods, services and labor within the service area because of this economic activity. At the state level, it represents the growth that occurred in the State Gross Domestic Product due to Grand View's activities.
2. **Income** – the measure of increased personal income as a result of this economic activity.
3. **Jobs** – the estimate of job growth that this activity generated.

In each case – output, income and jobs – the total impact is the sum of the following factors:

1. **Direct Effect** – the initial economic activity of the University that drives the subsequent effect on other sectors of the economy.
2. **Secondary Effects** – the resulting business-related effect on the vendors and employees of the University and the consumer-related consequence of added payrolls and increased vendor purchases on other vendors in the surrounding community as a result of the direct effect.

The project staff analyzed operational, student and visitor data for the 2009 calendar year and built economic impact models for each of these three economic areas, as measured by each of the three metrics or indicators (output, income and jobs), identifying the direct economic effect and the secondary impact of that direct spending. The project staff utilized the Iowa IMPLAN Input-Output Model (See Appendix A for a more detailed description of the IMPLAN model).

Figure 1. Structure of the Analysis

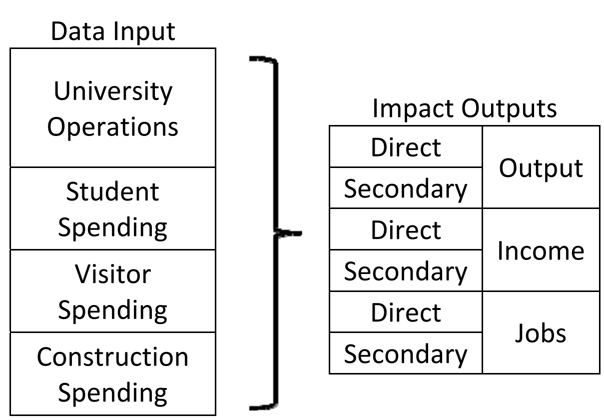


Table 1 shows that during 2009, the economic impact of Grand View University on central Iowa was an increase of $89.4 million in output, $33.8 million increase in income and an additional 1,041 jobs. The following sections of this report will examine each of the components that added up to these totals.[1]

Table 1. Summary of Grand View University Economic Impact, 2009

Component	Value of Output ($1,000)	Value of Income ($1,000)	Number of Jobs
University Operations	$48,235	$19,749	462
Student Spending	$32,473	$10,831	483
Visitor Spending	$2,137	$707	32
Construction Spending (Annualized)	$6,570	$2,516	65
Total	$89,415	$33,803	1,041

In addition to building the economic impact models for the 2009 year, the project staff built another set of models to project the impact of growth and change between 2009 and 2015. During that time, enrollment is expected to grow by 412 students, attendance is expected to grow with the enrollment increases and inflation is expected to cause all of the costs to rise by about 5%.[2]

Grand View Operations – the University as an Enterprise and an Employer

The most significant way that the University benefits Iowa's economy relates to its local vendor purchases - associated with the operating expenses of the University. Those include faculty and staff payrolls, the purchasing of office supplies, motor vehicles and their maintenance, utilities, books and periodicals, custodial and repair services and insurance, just to name a few. In addition, there are the capital outlays for equipment, the construction of new buildings and the improvement of existing ones.

According to University officials, Grand View spent approximately $28.3 million during 2009 on such items. The local payrolls and purchases generated a total of $48.2 million in output production (or economic activity) which, in turn, resulted in 462 additional jobs within the State. These direct and secondary economic impacts are depicted in Tables 2-4.

[1] Throughout this report, numbers in tables and charts may not add up to the totals because of individual rounding of the components.

[2] Operational costs and student enrollment projections were provided by Grand View University. The inflation projections came from the U.S. Government, Office of Management and Budget, U.S. Budget Assumptions, FY2011, January, 2010.

Table 2. Output Impact of Grand View Operation Spending, 2009 ($1,000s)

Sectors	Direct Impact	Secondary Impact	Total Impact
Agric. & Mining	$0	$234	$234
Transport. & Utilities	$0	$1,852	$1,852
Manufacturing	$0	$1,784	$1,784
Trade	$0	$2,354	$2,354
Financial	$0	$4,751	$4,751
Services	$28,311	$7,607	$35,918
Other	$0	$1,342	$1,342
Total	$28,311	$19,924	$48,235

In 2009, the secondary impact added another $19.9 million as the money was re-spent throughout the community. The total impact on spending was more than $48.2 million. This economic activity generated a total of $19.9 Million of additional income in the economy.

Table 3. Income Impact of Grand View Operation Spending, 2009 ($1,000s)

Sectors	Direct Impact	Secondary Impact	Total Impact
Agric. & Mining	$0	$16	$16
Transport. & Utilities	$0	$421	$421
Manufacturing	$0	$261	$261
Trade	$0	$973	$973
Financial	$0	$1,005	$1,005
Services	$13,876	$2,612	$16,488
Other	$0	$586	$586
Total	$13,876	$5,874	$19,749

When people are employed by Grand View University, their paychecks create a direct demand for additional goods and services in the local economy. The $28.3 million of direct spending produces $13.8 million of wages and salaries which supports an additional $5.9 million in income as it is re-spent in the local economy. That means the Grand View University spending generated a multiplier effect of 1.4 when it circulated throughout the central Iowa economy ($19.7M ÷ 13.8M = 1.423).

Table 4. Jobs Impact of Grand View Operation Expenditures, 2009

Sectors	Direct Impact	Secondary Impact	Total Impact
Agric. & Mining	0	1	1
Transport. & Utilities	0	5	5
Manufacturing	0	5	5
Trade	0	30	30
Financial	0	41	41
Services	289	81	370
Other	0	9	9
Total	289	173	462

Each job that exists either directly or indirectly as a result of Grand View University's presence in the State contributes to the Des Moines metro area's economic stability and growth. The actual number of full-time people that Grand View directly employed in 2009 was 289. This number generated an additional 173 jobs throughout the local economy in 2009, for a total of 462 jobs from operations spending.

Grand View University Students as Consumers

College students are a lucrative market. According to National Retail Federation annual purchasing survey author Kathy Grannis, "… average college student's family will spend $616.13 on new apparel, furniture for dorms or apartments, school supplies and electronics." [3]

"The average family will shell out $236.94 on computers, cell phones, MP3 players, cameras and other electronics; down from the $266.08 estimated last year when spending on electronics reached an all-time high. Other expenditures include shoes ($62.20), collegiate branded gear or supplies ($36.26) and school supplies ($62.91). College students will spend significantly more on dorm or apartment furnishings this year, signaling a change from last year when more students lived at home to save their family money. Families are expected to dish out an average of $96.94 on bedding, microwaves, small refrigerators and chairs, up from $80.06 last year."

The national survey of college student spending patterns can be seen in Table 5.[4]

[3] Kathy Grannis, **"**Back to School Sales Up As Parents Replenish Children's Needs, According to NRF." National Retail Federation, July 15, 2010.
[4] Geoffrey D. Paulin, "Expenditures of College-Age Students and Nonstudents", Monthly Labor Review, July, 2001.

Table 5. Expenditures of students for selected items, 2010 Dollars

Characteristic	Amount	Percent
Total Expenditures	$14,037	100%
Education	$2,260	16%
Housing	$3,743	27%
Food	$2,493	18%
Transportation	$1,613	11%
Apparel and services	$945	7%
Entertainment	$913	7%
Travel and vacation	$663	5%
Other	$1,407	10%
Excluding Housing and Education	$8,034	57%
Excluding Education	$11,777	84%

Students make an important financial contribution to the local economy. During the 2009 academic year, about 22% of Grand View University's students came from outside of the metro area. They brought purchasing power with them. In addition, the 1,753 students who lived within the metro area or who commuted also represented and continue to represent a market to the extent that, were it not for Grand View University, they might attend college elsewhere.

Chart 1 shows the national distribution of college student spending. We have used this national pattern to estimate the consumer spending of current Grand View students.

Chart 1. College Student Spending Pattern, 2010

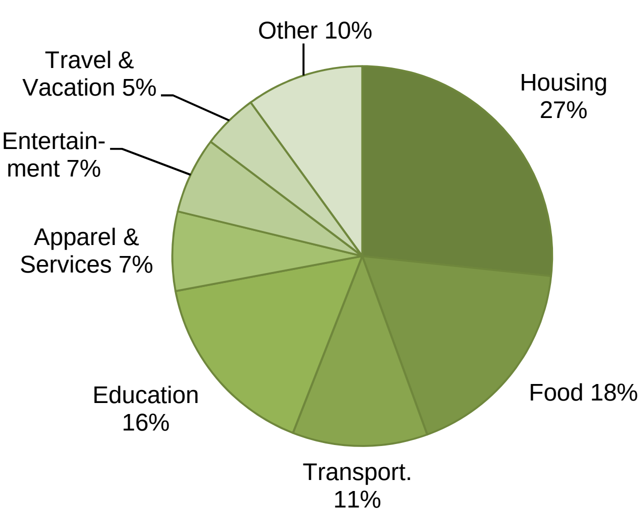


Table 6 identifies the geographic origin of students who took at least one course at Grand View University during the 2009-10 academic year. Clearly, the largest share came from Polk, Dallas and Warren counties.

Table 6. Home Residence of Grand View Students, 2009-10

Counties	Students	Share
Dallas, Polk & Warren	1,577	70%
Boone, Story, Jasper, Madison & Marion	176	8%
14 additional counties	77	3%
All other counties in Iowa	270	12%
Out-of-State	142	6%
Foreign	19	1%
Total	2,261	100%

Figure 2 shows the concentration of students within the surrounding central Iowa counties and essentially identifies a pattern similar to the retail sector's primary, secondary and tertiary markets. For a more detailed map of in-state residence patterns see Appendix B.

Figure 2. Location of Grand View Students Whose Home Residence was in Central Iowa, 2009

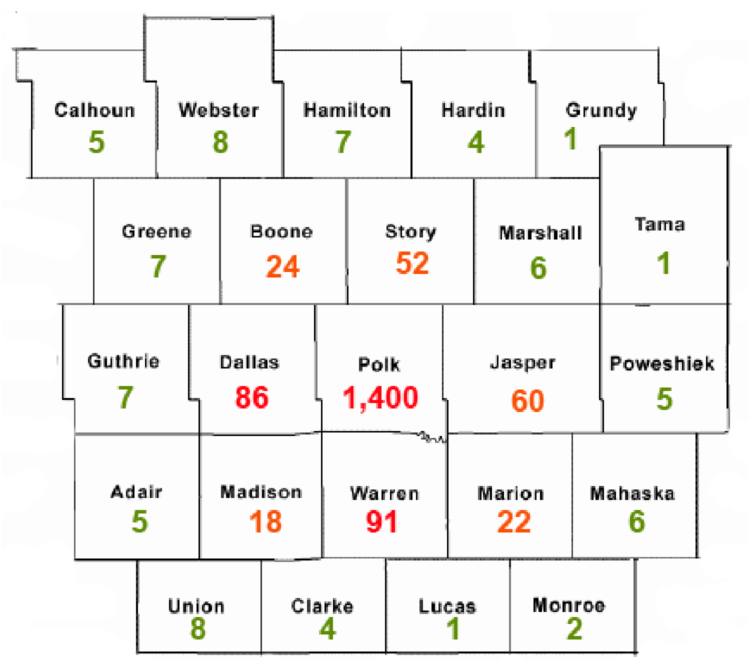


Table 7, based on the national survey, identifies the estimated spending by Grand View students during the 2009-10 academic year, differentiating the students who live in University housing ("On Campus") from those who either commuted or who lived in private owned or rented housing. This distinction is important in order to avoid double counting the cost of University-owned housing as well as tuition costs which we already included in the operating expenditures of the University.

Table 7. Estimated Expenditures by Grand View Students, 2009-10

Category	U.S. Student Spending Estimate (per student)	Grand View Total Student Spending Off Campus Students ($1,000s)	On Campus Students (i$1,000s)	Total ($1,000s)
Education	$2,260	Excluded	Excluded	$0
Housing	$3,743	$5,524	Excluded	$5,524
Food	$2,493	$3,680	$1,404	$5,084
Transportation	$1,613	$2,381	$908	$3,290
Apparel and services	$945	$1,395	$532	$1,927
Entertainment	$913	$1,347	$514	$1,861
Travel and vacation	$663	$978	$373	$1,351
Other	$1,407	$2,077	$792	$2,869
Total expenditures	$14,037	$17,383	$4,523	$21,906

Excluding the direct cost of education, about 32% of the remaining amount was spent on housing, 21% on food, 14% on transportation, about 8% each on apparel and entertainment and 6% on travel. Using these norms, we estimate that the 2,261 Grand View students spent about $21.9 million on living expenses in 2010.

Table 8. Grand View Student Spending Impact in 2009

Student Spending	Output ($1,000)	Income ($1,000)	Jobs
Direct Effect	$21,906	$7,394	387
Secondary Impact	$10,567	$3,437	97
Total Impact	$32,473	$10,831	483

Table 8 shows that the secondary effect of the $21.9 million in direct student spending in the Iowa economy generated an estimated $32.5 million in economic activity, $10.8 million in income and an additional 483 jobs in the State (For detail tables see Appendix C).

Grand View Visitors Impact the Local Economy

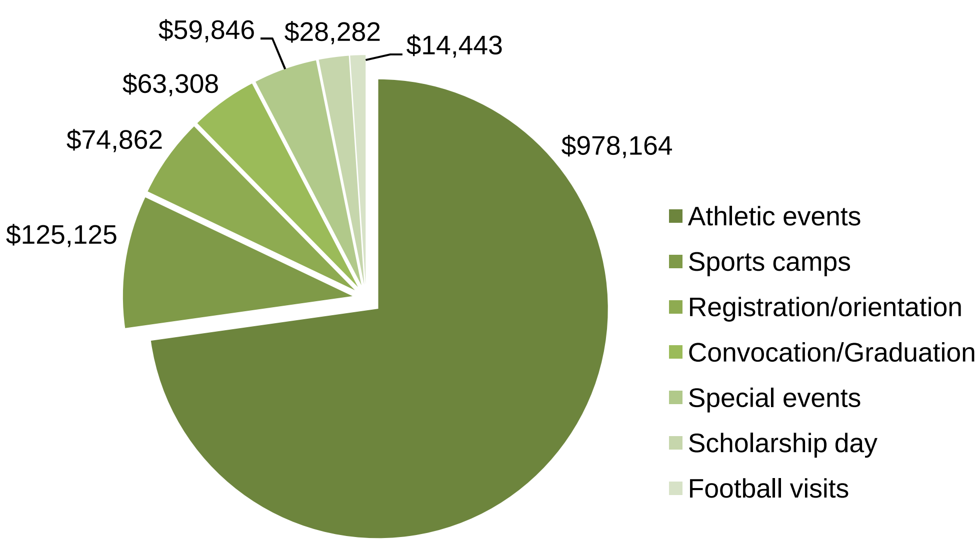
Visitors to the campus are also contributors to the local economy and support the tourism and hospitality industry as well as area retailers —important sectors of the local economy. Grand View University, its sponsored events and its employees and students attracted more than 47,000 visits to the campus in 2009. These visitors brought money to the area that they might otherwise not have and spent it on dining and lodging and shopping in nearby stores and entertainment venues.

Table 9. Grand View Visitor Spending Estimates by Event, 2009

Category	Events	Metro Visitors	Non-Metro Visitors	Total Visitors	Estimated Spending
Registration/orientation	7	463	403	866	$74,862
Scholarship day	4	168	153	321	$28,282
Special events	11	390	320	710	$59,846
Convocation/Graduation	1	2,600	100	2,700	$63,308
Football visits	12	32	84	116	$14,443
Athletic events	110	36,000	2000	38,000	$978,164
Sports camps	50	4,200	300	4,500	$125,125
Total	195	43,853	3,360	47,213	$1,344,029

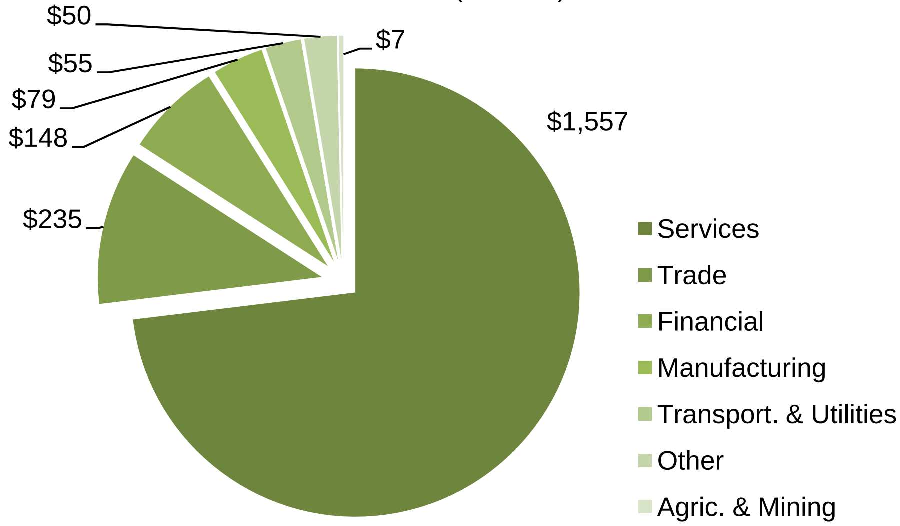
We estimate that the total spending by visitors in the local economy in 2009 was more than $1.3 million from the seven major categories listed above.[5] This $1.3 million of direct spending generated secondary spending as the money continued to circulate in the local economy, resulting in an increase of $2.1 million in economic activity, $706,703 in wage and salary income and an additional 32 local jobs. Those jobs were mostly in the retail trade, entertainment, lodging and dining establishments in the area economy. Detail tables showing the secondary impact can be found in Appendix C.

Chart 2. Grand View Visitor Spending, 2009



[5] The project staff developed visitor spending norms for data provided by the Greater Des Moines Visitor & Convention Bureau, the Greater Des Moines Partnership and composite of methods extracted from similar studies done for the University of Arizona, University of Southern California, University of California, Davis and San Diego and Middle Tennessee University.

Chart 3. Sectors Impacted by Grand View Visitor Spending, 2009 ($1,000s)



Grand View Construction Spending as an Economic Stimulus

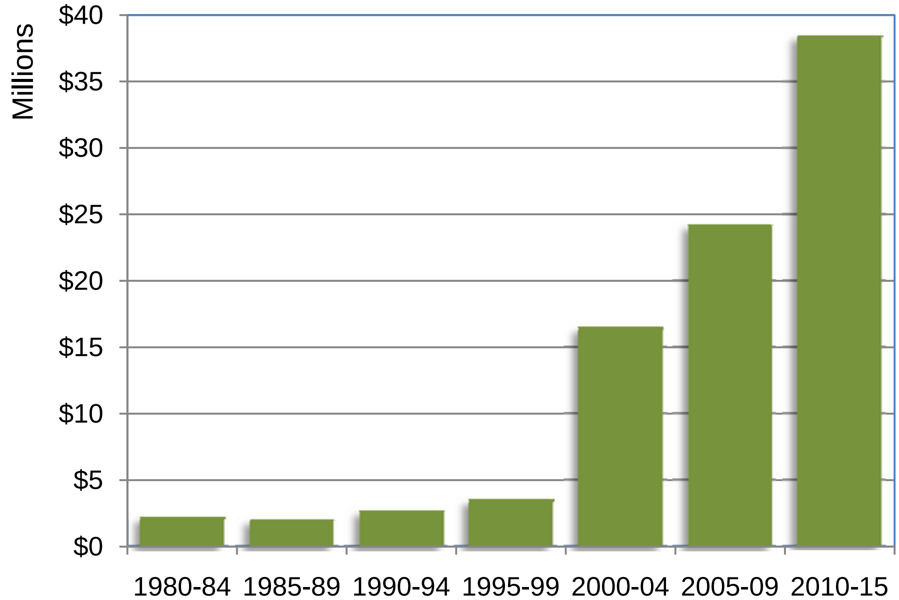
Since the 1960s, Grand View University has invested nearly $93 million in new buildings, renovation and expansion of existing buildings, new equipment and furnishings and planned construction projects through 2015. Over the decade, the University expanded and renovated its brick-and-mortar footprint by more than $40 million and an additional $38.5 million in growth is planned for the 2010-15 period.

Table 10. Grand View Capital Investment in Buildings and Furnishings

Type	From 1960 to projected 2015	From 2000 to 2009	From 2010 to 2015
Building	$67,501,344	$23,156,003	$34,495,000
Renovation	$19,941,921	$12,138,006	$4,000,000
Furniture and Furnishings	$1,778,862	$1,778,862	$0
Equipment	$3,707,040	$3,707,040	$0
Total	$92,929,167	$40,779,910	$38,495,000

The economic impact of this investment has stimulated a total of nearly $66 million in spending in the Metro area over the past decade – with an annual average of $6.5 million per year. With the multiplier effect, it has caused annual income to grow by an average of nearly $2.5 million with net increase over the decade of 646 jobs – adding an average of 65 jobs per year to the local economy. The detail tables that show this effect can be found in Appendix C.

Chart 4. Grand View Capital Expansion Projects by the Period When Started



The big capital expansion period for Grand View University began in 2000 and the outlook for the near term appears to be just as strong – for the University and for the metro community that it supports.

Grand View University – A Look Ahead at the Economic Impact, 2015

The project staff modified all of the models that we created for the 2009 economic impact analysis to reflect the anticipated increases summarized in Table 11.

Table 11. Growth Factors in the Grand View Economic Impact Models

Component	2009	Projected 2015	Difference	Percent Difference
Total Operating Expense	$28,310,792	$41,644,797	$13,334,005	47.1%
Total Payroll Positions	289	320	31	10.7%
Fall Student Enrollment	2,039	2,451	412	20.2%
Off Campus	1,476	1,638	162	11.0%
On Campus (University housing)	563	813	250	44.4%
Campus Visitors	47,213	56,656	9,443	20.0%
Campus Visitors Spending	$1,344,029	$1,693,477	$349,448	26.0%
Construction Spending	$4,077,991	$6,415,833	$2,337,842	57.3%

The projected operating expenses and payroll positions, student enrollment and construction spending levels were prepared by the University as a component of their multiyear planning process.[6] The campus visitor projections were developed by the project staff reflecting the 20% enrollment increase and the 5% inflationary cost increases projected by the U.S. Government Office of Management and Budget (see footnote 1 on p.4).

Table 1 (repeated from p. 4) shows the economic Impact for 2009, identifying the individual components.

Table 1. Summary of Grand View University Economic Impact, 2009

Component	Value of Output ($1,000)	Value of Income ($1,000)	Number of Jobs
University Operations	$48,235	$19,749	462
Student Spending	$32,473	$10,831	483
Visitor Spending	$2,137	$707	32
Construction Spending (Annualized)	$6,570	$2,516	65
Total	$89,415	$33,803	1,041

Table 12 shows the economic impact that we project for 2015, based on the assumptions identified. It includes the same components and reflects the effect of the multipliers applied by the IMPLAN model.

Table 12. Summary of Grand View University Projected Economic Impact, 2015

Component	Value of Output ($1,000)	Value of Income ($1,000)	Number of Jobs
University Operations	$72,179	$25,024	579
Student Spending	$42,312	$14,214	633
Visitor Spending	$2,685	$883	40
Construction Spending (Annualized)	$10,282	$3,841	96
Total	$127,457	$43,962	1,348

Table 13 shows the net difference between the 2009 economic impact and the impact projected for 2015. Over the next five years, the economic impact Grand View University will have over the central Iowa area will increase by nearly $38 million, adding an additional $10 million to the personal income level of the community and increasing the employment level by another 306 jobs.

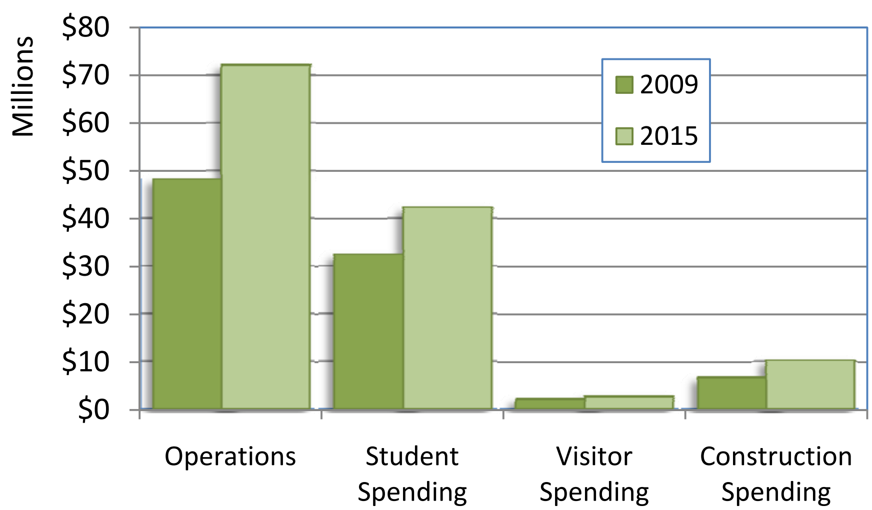
[6] Grand View University officials provided the student enrollment projection for 2015 as well as the projected operating expense categories. Project staff projected the 2015 visitor attendance based on the projected student enrollment.

Table 13. Grand View Economic Impact Change between 2009 and 2015

Component	Value of Output ($1,000)	Value of Income ($1,000)	Number of Jobs
University Operations	$23,944	$5,275	117
Student Spending	$9,839	$3,383	150
Visitor Spending	$548	$177	8
Construction Spending	$3,712	$1,325	32
Total	$38,042	$10,159	306

Chart 5 shows the magnitude of impact that Grand View University currently exerts on the economy of the area and the incremental increase in impact that we anticipate to occur over the next five years.

Chart 5. Economic Impact of Grand View on the Community Output Production



Grand View University Contributes to Cultural and Educational Growth

Through the arts, sports, education and community service – Grand View University keeps central Iowa involved, brings world-renowned attractions to the region and is a contributor to the cultural richness and the quality of life prized by local residents. Grand View contributes to the cultural life of central Iowa through performances, exhibitions, films, recitals and lectures by Grand View faculty, visiting lecturers, students and others. Theater, art, music and dance programs are offered to the public throughout the school year.

In response to the re-certification/license renewal requirements for teachers, counselors and school administrators, health care professionals and business professionals the Grand View College for Professional and Adult Learning operate an extensive Continuing Education department, offering a wide variety of workshops, seminars and non-degree courses to students in live and electronic formats.

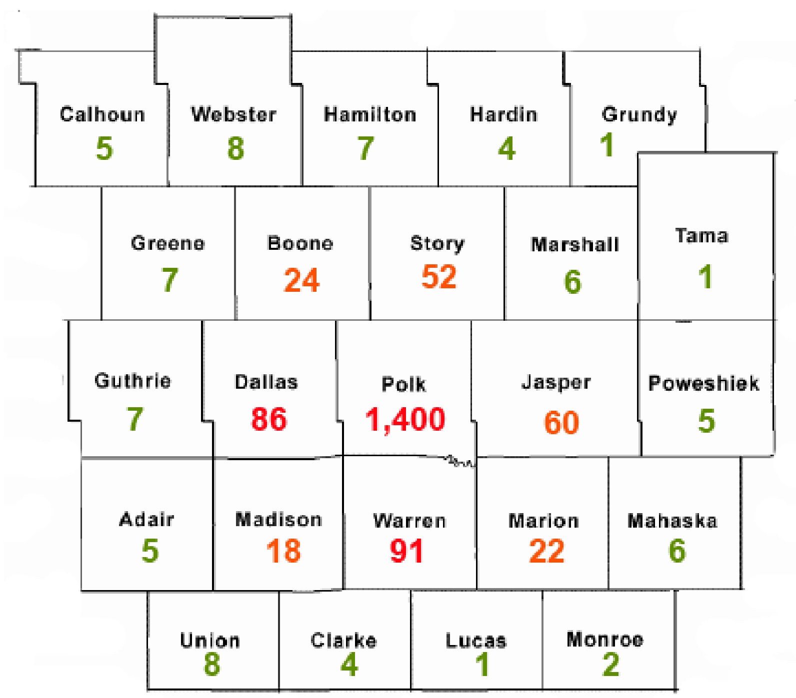
Grand View University Enriches the Local Labor Market

Grand View's specialized education programs are a durable asset to central Iowa employers. This can be illustrated by comparing two tables and two figures. Table 6 and Figure 2 (repeated from p. 8 in this report) identified the 'origin' of Grand View's recent student enrollment – their home residence.

Table 6. Home Residence of Grand View Students, 2009-10

Counties	Students	Share
Dallas, Polk & Warren	1,577	70%
Boone, Story, Jasper, Madison & Marion	176	8%
14 additional counties	77	3%
All other counties in Iowa	270	12%
Out-of-State	142	6%
Foreign	19	1%
Total	2,261	100%

Figure 2. Location of Grand View Students Whose Home Residence was in Central Iowa, 2009

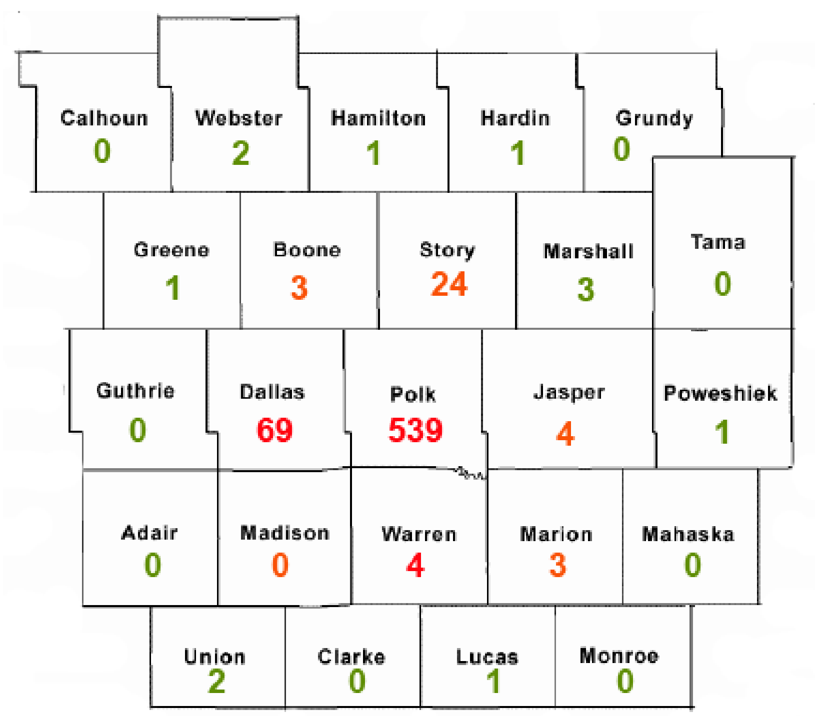


Follow-up surveys of Grand View's graduating classes of 2008 and 2009 showed that recent graduates took jobs and stayed within the Des Moines metropolitan area. If Table 6 and Figure 2 show the 'origin' of Grand View's student enrollment, then Table 14 and Figure 3 show their 'destination'. Grand View students came to central Iowa to attend the University and chose to stay and take jobs in central Iowa when they graduated.

Table 14. Job Placement Location of Grand View Students, 2008-09

Counties	Students	Share
Dallas, Polk & Warren	612	77%
Boone, Story, Jasper, Madison & Marion	34	4%
14 additional counties	12	2%
All other counties in Iowa	34	4%
Unknown, Iowa	11	1%
Out-of-State	58	7%
Foreign	4	1%
Unknown, other	26	3%
Total	791	100%

Figure 3. Location of Grand View Graduates Residing in Central Iowa in 2008-09



Only 8 percent left Iowa after graduation. Most of the recent graduates are employed in fields consistent with their majors. The top employers for 2007-09 graduates were in the health care and financial sectors. Because these graduates stayed in their 'home' area, employers are more likely to experience lower job turnover rates in the future. Metro area employers will find that recruitment and retention costs will be lower when professionals are already familiar with the region.

Table 15. Metro Area Job Placements by Sector, 2008-09

Sector	Placements	Share
Health Care	148	25%
Financial	116	20%
Trade and Personal Services	73	12%
Social and Rehabilitative Services	63	11%
Higher Education	36	6%
Primary Education	36	6%
Government and Private Non-Profit	30	5%
Business Services	24	4%
Self-Employed	7	1%
Other	60	10%
Total	593	100%

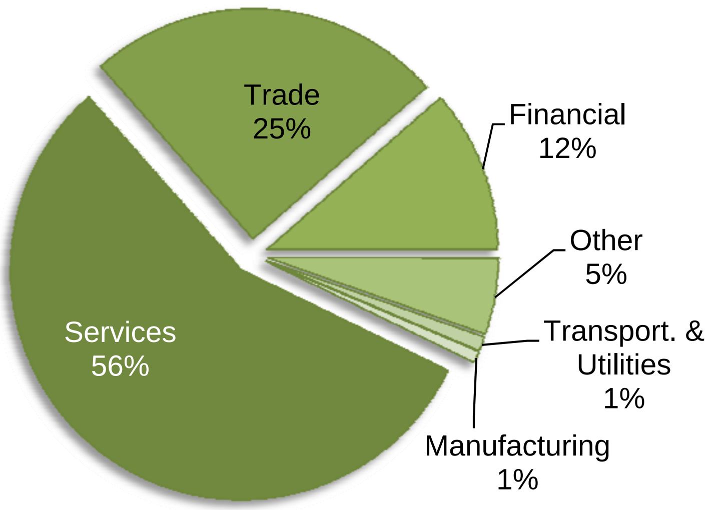
The largest number of recent graduates from the classes of 2008 and 2009 who were employed in the metro area accepted positions at Mercy Hospital (49), Iowa Health System (42), Veterans Hospital (12), Broadlawns Medical Center (9), Well Fargo (51), Principal Financial (10), Nationwide (9), Des Moines Public Schools (8), Meredith (7) and Pioneer (4).

Summary

In this study we examined four ways in which Grand View University interacts with the central Iowa economy: through its operations and purchases, through the spending pattern of its students and the visitors it attracts to central Iowa and through its physical plant capital expansion program. In 2009, Grand View University impacted nearly $90 million in economic activity in Iowa, increased the personal income levels by about $34 million and generated an additional 1,041 jobs.

As anticipated, about 56% of the jobs that Grand View University affected in 2009 were in the professional and other service sectors. Jobs in the retail and wholesale trade sector accounted for another 25% of the total. Chart 6 illustrates the distribution of jobs in the Iowa economy that were affected by Grand View University in 2009. More details can be found in the IMPLAN tables in Appendix C.

Chart 6. Jobs Impact of Grand View University by sector, 2009



Grand View University primarily draws its students from an eight county area in central Iowa (Polk, Dallas, Warren, Boone, Story, Jasper, Madison and Marion). In 2009, those eight counties were the 'origin' of 78% of the student body. Also, central Iowa was the primary location where Grand View students began working after they graduated. During the 2008 and 2009 academic years, 83% of the 791 Grand View graduates reported that they had accepted positions with greater metro area employers (about one-third of them at the metro area's ten largest employers).

This study documents that Grand View University has had an important impact on the metro area by increasing the pool of skilled workers that uniquely meet the needs of area employers. The analysis also showed that in 2009, the $90 million in impact on local spending, the $34 million growth in local income and the creation of more than 1,000 new jobs were additional benefits to the community.

By 2015, the economic impact is expected to grow to $127 million, generating $44 million in personal income and 1,348 jobs.

Appendix A – IMPLAN Input-Output Model

The traditional indicators which economists use for measuring the economic importance of an activity include the size of its workforce and payroll, its capital investment and its local purchase of goods and services. Economists call these the 'direct expenditures' or 'direct effects'.

Direct effects refer to the operational characteristics (employment, payroll, sales) of the activities that we studied. The secondary effects include two components: indirect effects and induced effects. Indirect effects measure the value of supplies and services that were purchased as inputs by the University from businesses and firms within the region. Induced effects occurred when workers in the direct and indirect industries spent their earnings on goods and services from other vendors and businesses within the region. Induced effects are also often called 'household effects'. The total economic impact is the aggregate of the direct, indirect and induced effects. It is the total effect on the economy of transactions that are attributable to the initial direct economic activity of Grand View University.

But the workers and the vendors who receive those indirect and induced expenditures don't bury them in a mattress. They will spend some of the money, save some of it and thus begins the journey by which the dollars travel through many hands before they finally leave the economic region. Economists call this phenomenon the 'multiplier effect'. The multiplier factor is calculated by dividing the sum of the direct, indirect and induced effects by the direct effect.

The multiplier effect for any economy or industry is examined using an 'input-output analysis'. The tool was devised by the 1973 Nobel Prize winning economist Wassily Leontief. It uses a matrix that measures inter-industry relations in an economy and shows how the output (sales) of one industry becomes the input (purchases) for another. The most widely used regional input-output economic impact tool is the IMPLAN model developed and distributed by Minnesota IMPLAN Group, Inc. (MIG). According to MIG, the model is currently in use by more than 1,000 public and private institutions.

The project staff for this study employed the latest version of the IMPLAN model to determine the total impact of the direct expenditures made by Grand View University in 2009 and projected to occur in 2015. The total impact includes the direct, indirect and induced economic effects.

The project team started by developing the spending profile of the University, as identified in its operating budget. The team used the University's total cost of service delivery as the direct effect variable for the modeling of output, total employment as the direct effect variable for the modeling of jobs and total payroll as the direct effect variable for the modeling of income.

In addition to the direct employment and payroll effects, the overall operations of the University generate secondary impacts within the community as services and supplies are purchased and payroll dollars get spent in local businesses. The project staff applied the IMPLAN statewide regional economic input-output model, modified by staff at Iowa State University to determine the magnitude of these secondary impacts.

The results of this Input-Output analysis are presented in the various tables found throughout this report and in Appendix C.

Appendix B – Home Residence Location of In-state Grand View Students, 2009

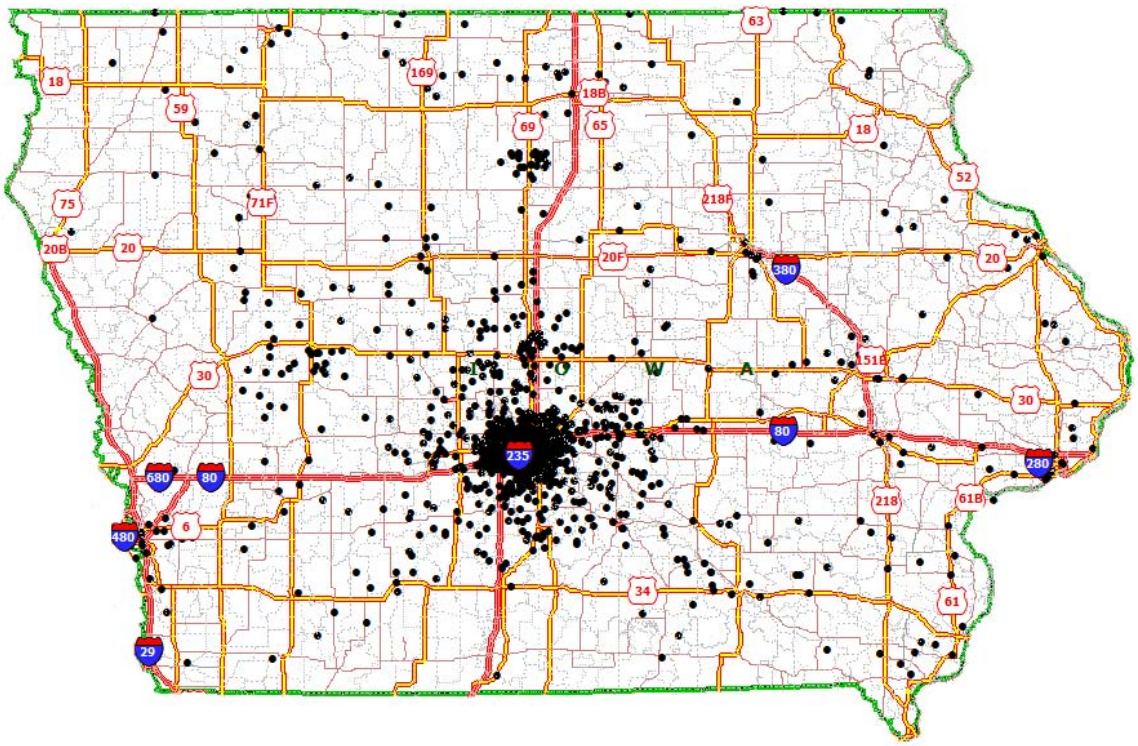


Table B1. Home Residence of Grand View Students, 2009

Origin	Enrollment	Origin	Enrollment
Alaska	1	Minnesota	28
Arizona	1	Missouri	10
Arkansas	4	Nebraska	9
California	9	New Jersey	1
Colorado	3	New York	1
Florida	2	Texas	42
Illinois	15	Utah	2
Indiana	1	Virginia	2
Iowa	2,100	Washington	3
Kansas	2	Wisconsin	2
Louisiana	2		
Massachusetts	1	Foreign	19
Michigan	1	Total	2,142

Appendix C – IMPLAN Tables

Total Impact Tables, 2009:

Table C1. Output Impact of Grand View Total Spending, 2009 ($1,000s)

Sectors	Direct Impact	Secondary Impact	Total Impact
Agric. & Mining	$0	$326	$326
Transport. & Utilities	$0	$2,798	$2,798
Manufacturing	$0	$2,936	$2,936
Trade	$10,436	$4,355	$14,792
Financial	$5,524	$7,776	$13,300
Services	$35,600	$13,601	$49,202
Other	$4,078	$1,983	$6,061
Total	$55,639	$33,776	$89,415

Table C2. Income Impact of Grand View Totaln Spending, 2009 ($1,000s)

Sectors	Direct Impact	Secondary Impact	Total Impact
Agric. & Mining	$0	$25	$25
Transport. & Utilities	$0	$727	$727
Manufacturing	$0	$469	$469
Trade	$4,531	$1,801	$6,332
Financial	$868	$1,773	$2,641
Services	$16,320	$4,749	$21,068
Other	$1,630	$910	$2,540
Total	$23,349	$10,454	$33,803

Table C3. Jobs Impact of Grand View Total Expenditures, 2009

Sectors	Direct Impact	Secondary Impact	Total Impact
Agric. & Mining	0	2	2
Transport. & Utilities	0	11	11
Manufacturing	0	9	9
Trade	206	55	261
Financial	55	64	119
Services	440	145	584
Other	42	14	56
Total	742	299	1,041

Total Impact Tables, 2015:

Table C4. Output Impact of Grand View Total Expenditures, 2015 ($1,000s)

Sectors	Direct Impact	Secondary Impact	Total Impact
Agric. & Mining	$0	$513	$513
Transport. & Utilities	$0	$4,351	$4,351
Manufacturing	$0	$4,494	$4,494
Trade	$13,815	$5,915	$19,730
Financial	$6,756	$11,670	$18,426
Services	$51,226	$19,221	$70,447
Other	$6,416	$3,081	$9,497
Total	$78,213	$49,244	$127,457

Table C5. Income Impact of Grand View Total Expenditures, 2015 ($1,000s)

Sectors	Direct Impact	Secondary Impact	Total Impact
Agric. & Mining	$0	$38	$38
Transport. & Utilities	$0	$1,101	$1,101
Manufacturing	$0	$708	$708
Trade	$5,998	$2,439	$8,436
Financial	$1,062	$2,596	$3,657
Services	$19,388	$6,764	$26,153
Other	$2,460	$1,410	$3,869
Total	$28,907	$15,055	$43,962

Table C6. Jobs Impact of Grand View Total Expenditures, 2015

Sectors	Direct Impact	Secondary Impact	Total Impact
Agric. & Mining	0	3	3
Transport. & Utilities	0	15	15
Manufacturing	0	13	13
Trade	272	73	345
Financial	67	99	166
Services	518	204	723
Other	61	22	83
Total	919	429	1,348

Operations Tables, 2009:

Table C7. Output Impact of Grand View Operation Spending, 2009 ($1,000s)

Sectors	Direct Impact	Secondary Impact	Total Impact
Agric. & Mining	$0	$234	$234
Transport. & Utilities	$0	$1,852	$1,852
Manufacturing	$0	$1,784	$1,784
Trade	$0	$2,354	$2,354
Financial	$0	$4,751	$4,751
Services	$28,311	$7,607	$35,918
Other	$0	$1,342	$1,342
Total	$28,311	$19,924	$48,235

Table C8. Income Impact of Grand View Operation Spending, 2009 ($1,000s)

Sectors	Direct Impact	Secondary Impact	Total Impact
Agric. & Mining	$0	$16	$16
Transport. & Utilities	$0	$421	$421
Manufacturing	$0	$261	$261
Trade	$0	$973	$973
Financial	$0	$1,005	$1,005
Services	$13,876	$2,612	$16,488
Other	$0	$586	$586
Total	$13,876	$5,874	$19,749

Table C9. Jobs Impact of Grand View Operation Expenditures, 2009

Sectors	Direct Impact	Secondary Impact	Total Impact
Agric. & Mining	0	1	1
Transport. & Utilities	0	5	5
Manufacturing	0	5	5
Trade	0	30	30
Financial	0	41	41
Services	289	81	370
Other	0	9	9
Total	289	173	462

Operations Tables, 2015:

Table C10. Output Impact of Grand View Operation Expenditures, 2015 ($1,000s)

Sectors	Direct Impact	Secondary Impact	Total Impact
Agric. & Mining	$0	$392	$392
Transport. & Utilities	$0	$3,086	$3,086
Manufacturing	$0	$2,906	$2,906
Trade	$0	$3,225	$3,225
Financial	$0	$7,643	$7,643
Services	$41,645	$11,051	$52,696
Other	$0	$2,232	$2,232
Total	$41,645	$30,534	$72,179

Table C11. Income Impact of Grand View Operation Expenditures, 2015 ($1,000s)

Sectors	Direct Impact	Secondary Impact	Total Impact
Agric. & Mining	$0	$26	$26
Transport. & Utilities	$0	$691	$691
Manufacturing	$0	$418	$418
Trade	$0	$1,327	$1,327
Financial	$0	$1,570	$1,570
Services	$16,179	$3,833	$20,013
Other	$0	$980	$980
Total	$16,179	$8,845	$25,024

Table C12. Jobs Impact of Grand View Operation Expenditures, 2015

Sectors	Direct Impact	Secondary Impact	Total Impact
Agric. & Mining	0	2	2
Transport. & Utilities	0	9	9
Manufacturing	0	8	8
Trade	0	40	40
Financial	0	68	68
Services	320	118	438
Other	0	15	15
Total	320	259	579

Student Spending Tables, 2009:

Table C13. Output Impact of Grand View Student Spending, 2009 ($1,000s)

Sectors	Direct Impact	Secondary Impact	Total Impact
Agric. & Mining	$0	$70	$70
Transport. & Utilities	$0	$750	$750
Manufacturing	$0	$790	$790
Trade	$10,301	$1,422	$11,723
Financial	$5,524	$2,523	$8,047
Services	$6,081	$4,478	$10,559
Other	$0	$533	$533
Total	$21,906	$10,567	$32,473

Table C14. Income Impact of Grand View Student Spending, 2009 ($1,000s)

Sectors	Direct Impact	Secondary Impact	Total Impact
Agric. & Mining	$0	$6	$6
Transport. & Utilities	$0	$247	$247
Manufacturing	$0	$134	$134
Trade	$4,470	$587	$5,057
Financial	$868	$629	$1,497
Services	$2,056	$1,565	$3,620
Other	$0	$270	$270
Total	$7,394	$3,437	$10,831

Table C15. Jobs Impact of Grand View Student Spending, 2009

Sectors	Direct Impact	Secondary Impact	Total Impact
Agric. & Mining	0	1	1
Transport. & Utilities	0	4	4
Manufacturing	0	2	2
Trade	203	18	221
Financial	55	20	75
Services	129	48	177
Other	0	4	4
Total	387	97	483

Student Spending Tables, 2015:

Table C16. Output Impact of Grand View Student Spending, 2015 ($1,000s)

Sectors	Direct Impact	Secondary Impact	Total Impact
Agric. & Mining	$0	$92	$92
Transport. & Utilities	$0	$985	$985
Manufacturing	$0	$1,041	$1,041
Trade	$13,646	$1,869	$15,515
Financial	$6,756	$3,295	$10,051
Services	$8,057	$5,874	$13,931
Other	$0	$696	$696
Total	$28,459	$13,853	$42,312

Table C17. Income Impact of Grand View Student Spending, 2015 ($1,000s)

Sectors	Direct Impact	Secondary Impact	Total Impact
Agric. & Mining	$0	$8	$8
Transport. & Utilities	$0	$324	$324
Manufacturing	$0	$176	$176
Trade	$5,922	$772	$6,693
Financial	$1,062	$821	$1,883
Services	$2,724	$2,052	$4,775
Other	$0	$354	$354
Total	$9,707	$4,507	$14,214

Table C18. Jobs Impact of Grand View Student Spending, 2015

Sectors	Direct Impact	Secondary Impact	Total Impact
Agric. & Mining	0	1	1
Transport. & Utilities	0	5	5
Manufacturing	0	3	3
Trade	269	23	292
Financial	67	26	93
Services	171	63	233
Other	0	6	6
Total	507	127	633

Visitor Spending Tables, 2009:

Table C19. Output Impact of Grand View Visitor Spending, 2009 ($1,000s)

Sectors	Direct Impact	Secondary Impact	Total Impact
Agric. & Mining	$0	$7	$7
Transport. & Utilities	$0	$55	$55
Manufacturing	$0	$79	$79
Trade	$135	$102	$237
Financial	$0	$149	$149
Services	$1,209	$350	$1,559
Other	$0	$50	$50
Total	$1,344	$793	$2,137

Table C20. Income Impact of Grand View Visitor Spending, 2009 ($1,000s)

Sectors	Direct Impact	Secondary Impact	Total Impact
Agric. & Mining	$0	$1	$1
Transport. & Utilities	$0	$15	$15
Manufacturing	$0	$12	$12
Trade	$61	$42	$103
Financial	$0	$37	$37
Services	$388	$123	$511
Other	$0	$27	$27
Total	$449	$257	$707

Table C21. Jobs Impact of Grand View Visitor Spending, 2009

Sectors	Direct Impact	Secondary Impact	Total Impact
Agric. & Mining	0	0	0
Transport. & Utilities	0	0	0
Manufacturing	0	0	0
Trade	3	1	4
Financial	0	1	1
Services	22	4	26
Other	0	1	1
Total	25	7	32

Visitor Spending Tables, 2015:

Table C22. Output Impact of Grand View Visitor Spending, 2015 ($1,000s)

Sectors	Direct Impact	Secondary Impact	Total Impact
Agric. & Mining	$0	$9	$9
Transport. & Utilities	$0	$69	$69
Manufacturing	$0	$99	$99
Trade	$169	$127	$297
Financial	$0	$186	$186
Services	$1,524	$438	$1,962
Other	$0	$62	$62
Total	$1,693	$991	$2,685

Table C23. Income Impact of Grand View Visitor Spending, 2015 ($1,000s)

Sectors	Direct Impact	Secondary Impact	Total Impact
Agric. & Mining	$0	$1	$1
Transport. & Utilities	$0	$19	$19
Manufacturing	$0	$15	$15
Trade	$76	$52	$129
Financial	$0	$47	$47
Services	$485	$154	$639
Other	$0	$34	$34
Total	$562	$322	$883

Table C24. Jobs Impact of Grand View Visitor Spending, 2015

Sectors	Direct Impact	Secondary Impact	Total Impact
Agric. & Mining	0	0	0
Transport. & Utilities	0	0	0
Manufacturing	0	0	0
Trade	4	2	5
Financial	0	1	1
Services	28	5	32
Other	0	1	1
Total	31	9	40

Construction Spending Tables – Total 2000-09:

Table C25. Output Impact of Grand View Construction Spending, 2000-09 ($1,000s)

Sectors	Direct Impact	Secondary Impact	Total Impact
Agric. & Mining	$0	$144	$144
Transport. & Utilities	$0	$1,405	$1,405
Manufacturing	$0	$2,828	$2,828
Trade	$0	$4,784	$4,784
Financial	$0	$3,520	$3,520
Services	$0	$11,654	$11,654
Other	$40,780	$584	$41,363
Total	$40,780	$24,919	$65,699

Table C26. Income Impact of Grand View Construction Spending, 2000-09 ($1,000s)

Sectors	Direct Impact	Secondary Impact	Total Impact
Agric. & Mining	$0	$24	$24
Transport. & Utilities	$0	$444	$444
Manufacturing	$0	$623	$623
Trade	$0	$1,989	$1,989
Financial	$0	$1,022	$1,022
Services	$0	$4,490	$4,490
Other	$16,299	$268	$16,567
Total	$16,299	$8,859	$25,158

Table C27. Jobs Impact of Grand View Construction Spending, 2000-09

Sectors	Direct Impact	Secondary Impact	Total Impact
Agric. & Mining	0	1	1
Transport. & Utilities	0	8	8
Manufacturing	0	9	9
Trade	0	62	62
Financial	0	25	25
Services	0	119	119
Other	418	5	423
Total	418	228	646

Construction Spending Tables - Annualized 2009:

Table C28. Output Impact of Grand View Construction Spending, Annualized 2009 ($1,000s)

Sectors	Direct Impact	Secondary Impact	Total Impact
Agric. & Mining	$0	$14	$14
Transport. & Utilities	$0	$140	$140
Manufacturing	$0	$283	$283
Trade	$0	$478	$478
Financial	$0	$352	$352
Services	$0	$1,165	$1,165
Other	$4,078	$58	$4,136
Total	$4,078	$2,492	$6,570

Table C29. Income Impact of Grand View Construction Spending, Annualized 2009 ($1,000s)

Sectors	Direct Impact	Secondary Impact	Total Impact
Agric. & Mining	$0	$2	$2
Transport. & Utilities	$0	$44	$44
Manufacturing	$0	$62	$62
Trade	$0	$199	$199
Financial	$0	$102	$102
Services	$0	$449	$449
Other	$1,630	$27	$1,657
Total	$1,630	$886	$2,516

Table C30. Jobs Impact of Grand View Construction Spending, Annualized 2009 ($1,000s)

Sectors	Direct Impact	Secondary Impact	Total Impact
Agric. & Mining	0	0	0
Transport. & Utilities	0	1	1
Manufacturing	0	1	1
Trade	0	6	6
Financial	0	3	3
Services	0	12	12
Other	42	0	42
Total	42	23	65

Construction Spending Tables - Total 2010-15:

Table 31. Output Impact of Grand View Construction Spending, 2010-15 ($1,000s)

Sectors	Direct Impact	Secondary Impact	Total Impact
Agric. & Mining	$0	$122	$122
Transport. & Utilities	$0	$1,263	$1,263
Manufacturing	$0	$2,688	$2,688
Trade	$0	$4,166	$4,166
Financial	$0	$3,269	$3,269
Services	$0	$11,144	$11,144
Other	$38,495	$543	$39,038
Total	$38,495	$23,194	$61,689

Table C32. Income Impact of Grand View Construction Spending, 2010-15 ($1,000s)

Sectors	Direct Impact	Secondary Impact	Total Impact
Agric. & Mining	$0	$18	$18
Transport. & Utilities	$0	$398	$398
Manufacturing	$0	$592	$592
Trade	$0	$1,724	$1,724
Financial	$0	$951	$951
Services	$0	$4,354	$4,354
Other	$14,757	$248	$15,006
Total	$14,757	$8,286	$23,043

Table C33. Jobs Impact of Grand View Construction Spending, 2010-15

Sectors	Direct Impact	Secondary Impact	Total Impact
Agric. & Mining	0	1	1
Transport. & Utilities	0	7	7
Manufacturing	0	9	9
Trade	0	52	52
Financial	0	24	24
Services	0	113	113
Other	369	4	373
Total	369	209	578

Construction Spending Tables, 2015:

Table C34. Output Impact of Grand View Construction Spending, Annualized 2015 ($1,000s)

Sectors	Direct Impact	Secondary Impact	Total Impact
Agric. & Mining	$0	$20	$20
Transport. & Utilities	$0	$210	$210
Manufacturing	$0	$448	$448
Trade	$0	$694	$694
Financial	$0	$545	$545
Services	$0	$1,857	$1,857
Other	$6,416	$90	$6,506
Total	$6,416	$3,866	$10,282

Table C35. Income Impact of Grand View Construction Spending, Annualized 2015 ($1,000s)

Sectors	Direct Impact	Secondary Impact	Total Impact
Agric. & Mining	$0	$3	$3
Transport. & Utilities	$0	$66	$66
Manufacturing	$0	$99	$99
Trade	$0	$287	$287
Financial	$0	$158	$158
Services	$0	$726	$726
Other	$2,460	$41	$2,501
Total	$2,460	$1,381	$3,841

Table C36. Jobs Impact of Grand View Construction Spending, Annualized 2015 ($1,000s)

Sectors	Direct Impact	Secondary Impact	Total Impact
Agric. & Mining	0	0	0
Transport. & Utilities	0	1	1
Manufacturing	0	1	1
Trade	0	9	9
Financial	0	4	4
Services	0	19	19
Other	61	1	62
Total	61	35	96

Appendix D - About the Research Team

Strategic Economics Group (SEG) is the region's only locally- owned economic research consulting firm. It has served businesses and government clients in Iowa and the Midwest since 2001. It was founded by the former State Economist of Iowa, Harvey Siegelman. He assembled a team of some of the sharpest and most able economists in the region. SEG team develops economic impact studies, cost-benefit models, management information systems and forensic projections.

SEG's government clients include the Federal Reserve Bank of Chicago, U.S. Department of Agriculture, U.S. Small Business Administration, Iowa Legislature, Iowa Department of Agriculture and Land Stewardship, Iowa Department of Economic Development, Iowa Workforce Development and the Treasurer of Iowa.

The list of SEG business clients include Iowa Farm Bureau Federation, Iowa Area Development Group, Iowa Association of Business and Industry, Iowa Association of Realtors, Hubbell Realty, Iowa District Export Council, Service Corps of Retired Executives, Urban Caucus, Chamber Alliance, Greater Dallas County Development Alliance, Greater Des Moines Partnership, Iowa Association of Electric Cooperatives, Iowa Utility Association, Alliant Energy, Mid-American Energy, Principal Financial, American Home Mortgage Corporation, Iowa Credit Union League, Iowa Treasury Management Association, Catholic Health Initiative, Iowans for a Better Future, Iowa Gaming Association, Mediacom Communications, StrategicAmerica, Flynn Wright Advertising, Iowa Off-Highway Vehicle Association and the West Metro Regional Airport Authority.

SEG's academic clients include Drake University, Des Moines Area Community College, Iowa Assn. of Community College Presidents, Iowa Association of Community College Trustees and the Iowa Student Loan Liquidity Corporation.

Harvey Siegelman is the President and Senior Economic Analyst with Strategic Economics Group. Prior to forming this research-based consulting firm, Mr. Siegelman was Iowa's longest-serving State Economist. He also served as Adjunct Professor of Economics at Drake University. His specialties include project management, strategic planning and development and analysis of state and local government finances.

Prior to his appointment as State Economist, he was a professor of economics at University of Wisconsin-Whitewater Campus and Findlay University (Ohio). He also was a visiting professor of economics at Wichita State University. From 1973-74, he was an economic advisor to the Finance Minister of the Government of Israel.

Daniel Otto is a Senior Economic Analyst with Strategic Economic Group and Professor of Economics at Iowa State University in Ames, Iowa. Professor Otto received his doctorate in economics from Virginia Polytechnic Institute in 1981 and joined Iowa State University that same year as an Associate Professor and Extension Economist. He is currently Professor and Extension Economist and Associate Director of Community and Economic Development Programs at Iowa State University. His current research areas include Community and Regional Economic Modeling and Policy Analysis, Economic and Fiscal Impact Analysis and Project Evaluation, Agricultural Policy Analysis, Locational Determinants of Firms and Individuals in Rural Areas, Economics of Rural Services and Infrastructure Issues, Spatial Impacts of Infrastructure Investments.

His recent activities have included economic development workshops, analysis of community facilities and services, income and employment, economic impact studies and workshops on public policy issues for rural areas. He has also worked with developing databases, economic forecasting and input-output modeling activities.

For additional information contact:
Harvey Siegelman -- 515-246-0764
hsiegelman@economicsgroup.com

www.economicsgroup.com