



Economic Contribution of Beacon Bluff Business Center

A REPORT OF THE ECONOMIC IMPACT ANALYSIS PROGRAM

Authored by Brigid Tuck and Situ Chitrakar



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September 2018

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EXECUTIVE SUMMARY: ECONOMIC CONTRIBUTION OF BEACON BLUFF BUSINESS CENTER

The Saint Paul Port Authority's mission is to "create quality job opportunities, expand the tax base, and advance sustainable development" in Saint Paul. As part of this mission, the Authority has worked with public and private partners to redevelop the Beacon Bluff Business Center. By redeveloping the site, the Saint Paul Port Authority has helped create economic activity in Saint Paul. Businesses located in the center bring jobs, sales, labor income, and tax value to Saint Paul. An analysis performed by University of Minnesota Extension quantifies this activity in Ramsey County.

At the end of 2017, the business center was home to seven businesses with 615 employees. The businesses included manufacturing, health care, wholesale trade, and other similar industries. The Saint Paul Port Authority also has several businesses with signed purchase agreements. These businesses are anticipated to occupy the center within the next few years, thus this analysis examines the center's potential contribution in five and 10 years.

Economic Contribution in 2017: As mentioned, Beacon Bluff Business Center businesses employed 615 workers in Ramsey County. After accounting for jobs and output generated in supporting businesses, Beacon Bluff Business Center operations generated an estimated \$119.9 million of economic activity in 2017. This includes \$60.8 million of labor income. The center supported 955 jobs across all industries. The industries most affected by the Beacon Bluff Business Center included food service and drinking places, administrative support services, and professional and business services.

According to the input-output model Extension used, the average job at Beacon Bluff Business Center pays \$68,000. The jobs supported by the center (including indirect and induced) pay an average of \$63,800. By comparison, the average earnings per job in the zip code area is \$53,400.

Potential Economic Contribution in 2022: Businesses with signed purchase agreements plan to hire 315 people during the next five years, bringing total employment at the center to 930. In total, Beacon Bluff Business Center operations will generate an estimated \$212.6 million of economic activity in 2022. This includes \$92.0 million of labor income. The center will support 1,490 jobs. This is a conservative estimate, as it only includes known business growth.

Potential Economic Contribution in 2027: Businesses with signed agreements also plan to hire a total of 395 workers during the next 10 years, bringing total employment in the center to 1,010. In total, Beacon Bluff Business Center operations will generate an estimated \$235.1 million of economic activity in 2027. This includes \$100.3 million of labor income. The center will support 1,630 jobs. Again, this is conservative, as it is based only on business plans known as of 2017.

Notes on the Analysis: This is an economic contribution study. It differs from economic impact. In an economic impact study, if a business were to move from one location in Ramsey County to the Beacon Bluff Business Center, the business would not create any economic impact. Overall, the economy did not gain any new activity. Extension did not trace the history of the businesses in the center. The goal of this study was to quantify the current contribution of the business center.



INTRODUCTION

The Saint Paul Port Authority's mission is to "create quality job opportunities, expand the tax base, and advance sustainable development" in Saint Paul. As part of this mission, the Authority has redeveloped the Beacon Bluff Business Center. Originally the site of 3M's headquarters, it is being revitalized through public and private partnerships.

The Saint Paul Port Authority, with community input, adopted seven development principles for the Beacon Bluff site. These principles are to:

- preserve and enhance historic resources,
- realize potential for creating quality jobs,
- embrace green planning, building, and operating strategies,
- evoke a sense of place,
- improve connectivity,
- foster public safety, and
- invest in the public realm.¹

By redeveloping the site, the Saint Paul Port Authority has helped create economic activity in Saint Paul. Businesses located in the center bring jobs, sales, labor income, and tax value to Saint Paul. The Authority wanted to understand the economic contribution the redeveloped business center is making in both Ramsey County and Minnesota. Knowing more about its economic contribution helps measure progress on the Authority's principle to "realize potential for creating quality jobs." Thus, the Authority contracted with University of Minnesota Extension to conduct an economic contribution analysis. This report details its findings.

The Beacon Bluff Business Center currently has 11 parcels on 40 acres (Map 1). The center is zoned industrial and designed for value-added light manufacturing and industrial activity. The location provides quick access to Phalen Boulevard and Interstate 35E.

Map 1: Beacon Bluff Business Center



¹ Kaiser, R. (2011). *2011 environmental initiative awards: Saint Paul Port Authority's Beacon Bluff redevelopment*. Retrieved from <https://www.changemakers.com/node/167675>.

Businesses building in the center must meet a series of development criteria. Overall, all new businesses must provide “significant” jobs and contribute to the tax base. Several of the criteria relate to jobs. Businesses must create a minimum of one job per 1,000 square feet of building space, pay a minimum wage of \$12.61 per hour plus benefits, commit to employ Saint Paul residents in at least 70 percent of new hires, and sign a 10-year workforce agreement with the Port Authority. Several additional criteria apply to new construction and buildings. Businesses must have a building-to-land coverage ratio of at least 35 percent, commit to abiding by the Port Authority’s covenants, and commit to seeking energy efficient building and site design. Manufacturers are also required to have a minimum of \$60 per square foot of construction value.²

At the end of 2017, the center was home to seven businesses with 615 employees. The businesses were primarily in the manufacturing, health care, and wholesale trade industries.

ECONOMIC CONTRIBUTION OF BEACON BLUFF BUSINESS CENTER IN RAMSEY COUNTY

Total economic contribution is composed of direct, indirect, and induced effects. Calculating the total economic contribution of a business or activity begins with determining its direct effects. Indirect and induced effects are then calculated using input-output models.

Redevelopment of the Beacon Bluff Business Center will affect the economy as vacant and underutilized land returns to economically productive use. Once developed, businesses in the center will generate sales and employ workers. Thus, the direct effects of the center are the employment and the output of businesses located in the center.

Input-output models trace the flow of dollars throughout a local economy and capture the indirect and induced, or secondary, effects of an economic activity. To quantify the indirect and induced effects of the Beacon Bluff Business Center, the direct effects were entered into the input-output model IMPLAN. This analysis uses IMPLAN version 3.0 with SAM multipliers and 2016 data.³

Indirect effects are those associated with a change in economic activity due to spending for goods and services directly tied to the business or activity.

In this case, these are changes in the local economy occurring because businesses in the Beacon Bluff Business Center purchase goods and related services. As businesses make purchases for things like electricity, water, and other inputs, this creates an increase in purchases across the supply chain. Indirect effects are the summary of these changes across an economy.

Types of Effects

Direct: Spending and employment by businesses located in the Beacon Bluff Business Center

Indirect: Activity generated by spending for goods and services by businesses in the Beacon Bluff Business Center (business-to-business spending)

Induced: Activity generated by spending of employees of businesses in the business center (consumer-to-business spending)

² Saint Paul Port Authority. (2014). *Beacon Bluff Business Center*. Retrieved from: <https://www.sppa.com/wp-content/uploads/Beacon-Bluff-Brochure.pdf>

³ www.implan.com

Induced effects are those associated with a change in economic activity due to spending by the employees of businesses (labor) and by households. These are economic changes related to spending by people directly employed by businesses in the Beacon Bluff Business Center. They create effects as they make purchases for things like health care, housing, and food. Induced effects also include household spending related to indirect effects.

Economic contribution effects can be measured in terms of output (sales), labor income, and employment. Output is typically the most common result of an economic contribution study. Labor income is also recommended as a measure, because it shows the economic benefits that accrue for study area residents. Employment includes full-time, part-time, and seasonal employment, not full-time equivalents. A more detailed explanation of terms can be found in the appendix.

Ramsey County is the primary study area for this analysis. The following sections detail the contribution of Beacon Bluff Business Center in the county. The final section examines its impact on the state of Minnesota. The study area in this instance matters, since the larger the study area, the more options exist to purchase locally. As a result, the contribution tends to be higher in larger study areas.

Direct Effects

To quantify its direct effects, the Saint Paul Port Authority provided Extension with a list of the businesses currently operating in the center and their total employment. The seven businesses employed 615 workers as of the end of 2017 (Table 1). Of these jobs, the largest share (48 percent) were related to the health care industry.

The Saint Paul Port Authority also has several businesses with signed purchase agreements. These businesses are anticipated to occupy the center during the next few years. In five years, they will increase employment in the center to 930. In 10 years, employment is anticipated to grow to 1,010. The largest share of 2027 jobs will be in manufacturing.

Table 1: Beacon Bluff Business Center Employment by Industry

	Current 2017	Projected 2022	Projected 2027
Manufacturing	86	316	396
Health care	293	293	293
Wholesale trade	52	52	52
Other industries	184	269	269
Total	615	930	1,010

Source: Saint Paul Port Authority

Because signed agreements are in place, this analysis examines three scenarios—the economic contribution of the Beacon Bluff Business Center in 2017, its future contribution in 2022, and its future contribution in 2027. The future contribution scenarios are based on what is currently known about business plans. Since several parcels remain available, it is likely additional direct jobs will be created. Since these are unknown at this time, they are not included in the analysis.

Total Effects and Top Industries Affected 2017

Directly, businesses in the Beacon Bluff Business Center employed 615 workers in 2017. The input-output model estimates \$70.3 million of output and \$42.0 million in labor income are generated by workers in the Beacon Bluff Business Center (Table 2).⁴

In total, Beacon Bluff Business Center operations generated an estimated \$119.9 million of economic activity in 2017. This included \$60.8 million of labor income. The center supported 955 jobs.

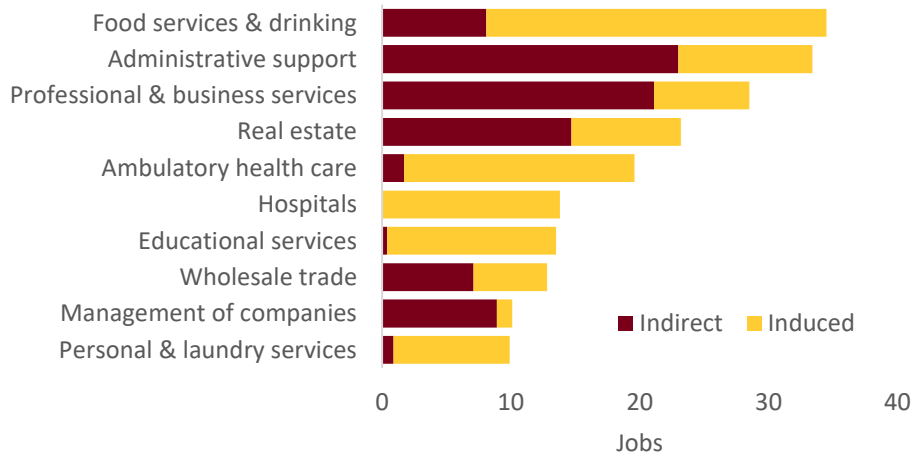
Table 2: Economic Contribution of Beacon Bluff Business Center, Ramsey County, 2017

	Output (millions)	Employment	Labor Income (millions)
Direct	\$70.3	615	\$42.0
Indirect	\$21.3	130	\$8.4
Induced	\$28.3	210	\$10.4
Total	\$119.9	955	\$60.8

University of Minnesota Extension Estimates, 2018 dollars

Of the 955 jobs supported by the center, 615 were at the center itself. The additional 340 jobs were in industries across the economy. The industries most affected by the Beacon Bluff Business Center include food services and drinking places, administrative support services, and professional and business services (Chart 1).

Chart 1: Top Industries Affected, Sorted by Employment, Beacon Bluff Business Center Operations, Ramsey County, 2017



Interestingly, the business center generates strong indirect and induced effects. Indirect effects are highest in areas like administrative support services, professional and business services, and real estate. Induced effects, or those related to spending by employees, are higher in areas like health care and food services and drinking establishments.

⁴ Output and labor income are from the input-output model and are based on industry averages for the businesses in the center. The businesses themselves did not provide data on output or labor income.

According to the input-output model, the average job at the Beacon Bluff Business Center pays \$68,000 (Table 3).⁵ The jobs supported (or the indirect and induced jobs) pay an average of \$63,800. This compares to the average earnings per job of \$53,400 for the zip code area, which indicates the Saint Paul Port Authority is meeting its goal of creating quality jobs.

Table 3: Average Labor Income Per Job, 2017

Category	Average
Jobs at Beacon Bluff Business Center (direct effects)	\$68,000
Jobs supported by Beacon Bluff (total effects)	\$63,800
Jobs in zip code 55106 (home to Beacon Bluff)	\$53,400

Source: IMPLAN and EMSI, wages are in 2018 dollars

Total Effects and Top Industries Affected 2022

Directly, the businesses in the Beacon Bluff Business Center are anticipated to employ 930 workers in 2022. This is the result of businesses with signed agreements being operational by 2022. The input-output model estimates those employees will generate \$131.6 million of output, including \$61.0 million in labor income (Table 4). As noted, these direct effects include what is currently planned and known for the business center. It is also certainly possible additional new businesses will occupy the center, thus increasing the direct effect.

In total, Beacon Bluff Business Center operations will generate an estimated \$212.6 million of economic activity in 2022. This includes \$92.0 million of labor income. The center will support 1,490 jobs across all industries. These contributions will be annual, as long as the businesses operate at projected levels.

Table 4: Potential Economic Contribution of Beacon Bluff Business Center, Ramsey County, 2022

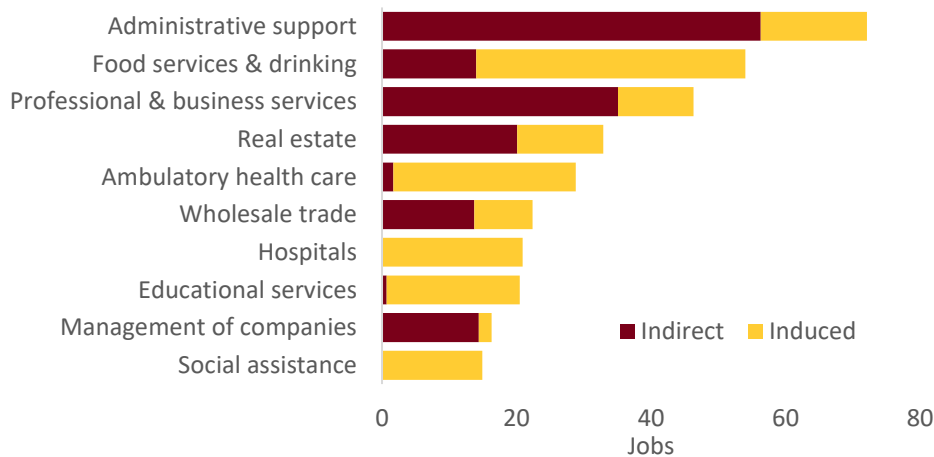
	Output (millions)	Employment	Labor Income (millions)
Direct	\$131.6	930	\$61.0
Indirect	\$38.0	240	\$15.2
Induced	\$43.0	320	\$15.8
Total	\$212.6	1,490	\$92.0

University of Minnesota Extension Estimates, 2018 dollars

Of the 1,490 jobs potentially supported by the business center, 930 will be at the center itself. The additional 560 jobs will be in industries across the local economy. The industries anticipated to be most affected by the Beacon Bluff Business Center in 2022 include administrative support services, food services and drinking places, and professional and business services (Chart 2).

⁵ This is based on the input-output model's defaults for wages paid by industry. The Beacon Bluff Business Center businesses did not provide wage data for this study.

Chart 2: Top Industries Affected, Sorted by Employment, Potential Beacon Bluff Business Center Operations, Ramsey County, 2022



Total Effects and Top Industries Affected 2027

Directly, businesses in the Beacon Bluff Business Center are anticipated to employ 1,010 workers in 2027. This is the result of the anticipated expansion of businesses in the center. The input-output model estimates that businesses with this level of employment would produce \$146.1 million of output and pay \$66.1 million in labor income (Table 5). The direct effects for 2027 are based on information available in 2017. It is certainly feasible additional direct effects will be created as new businesses move into the center.

In total, the operations of the Beacon Bluff Business Center will generate an estimated \$235.1 million of economic activity in 2027. This includes \$100.3 million of labor income. The center will support 1,630 jobs.

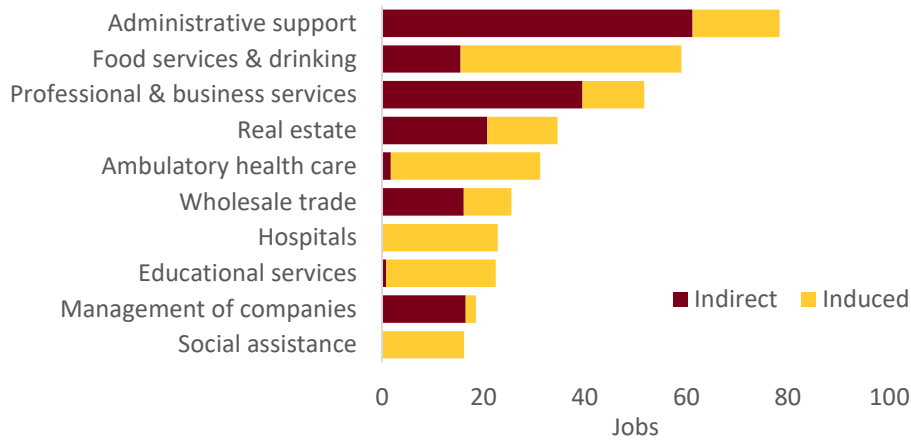
Table 5: Potential Economic Contribution of Beacon Bluff Business Center, Ramsey County, 2027

	Output (millions)	Employment	Labor Income (millions)
Direct	\$146.1	1,010	\$66.1
Indirect	\$42.2	270	\$17.0
Induced	\$46.8	350	\$17.2
Total	\$235.1	1,630	\$100.3

University of Minnesota Extension Estimates

Of the 1,630 jobs projected to be supported by the business center, 1,010 will be at the center itself. The additional 620 jobs are anticipated in industries across the local economy. The industries projected to be most affected by the Beacon Bluff Business Center in 2027 include administrative support services, food services and drinking places, and professional and business services (Chart 3).

**Chart 3: Top Industries Affected, Sorted by Employment, Potential
Beacon Bluff Business Center Operations, Ramsey County, 2027**



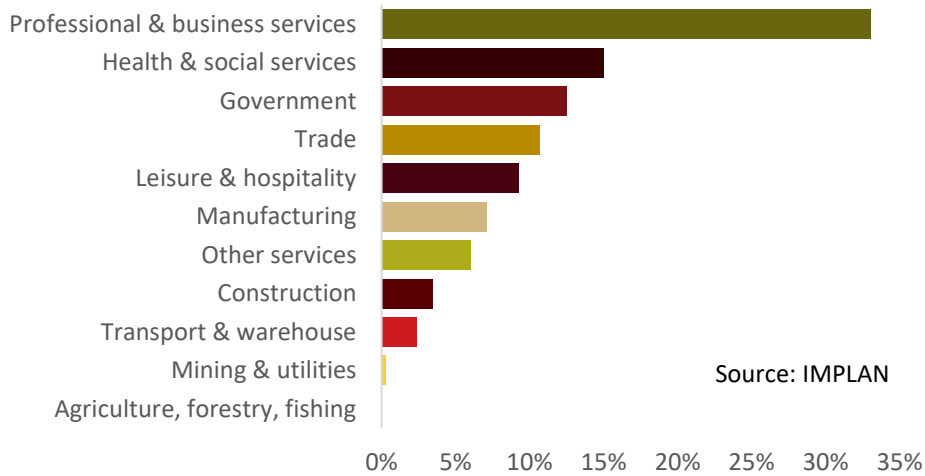
BEACON BLUFF BUSINESS CENTER IN THE CONTEXT OF RAMSEY COUNTY’S ECONOMY

Ramsey County’s economy and history are closely tied to that of Minnesota’s capital city, Saint Paul. The confluence of the Minnesota and Mississippi Rivers at Fort Snelling initially drew Native Americans and fur traders to the region. With time, a small community was established three miles south and named Saint Paul. The location was beneficial for economic activity—for steamboat trade on the river, for farming in the nearby rich soils, and for railroad activity. These advantages helped grow Saint Paul into a major commerce hub.

Today, Ramsey County has the second highest number of jobs of any county in the state (second only to Hennepin County and Minneapolis). Ramsey County’s economy and demographics are diverse.

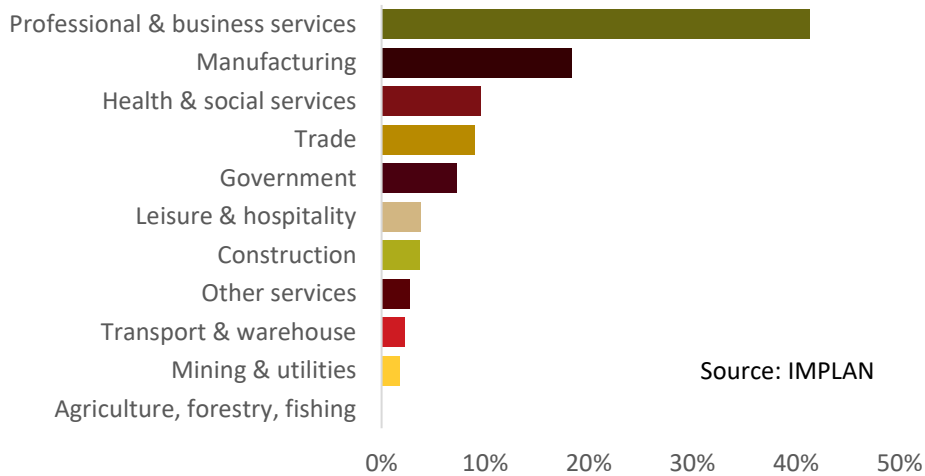
In 2016, there were 426,000 jobs in Ramsey County. Of those, one-third were in the professional and business services sector (Chart 4). Other industries with a large share of employment in the county include health and social services, government, and trade. In 2017, Beacon Bluff Business Center supported 962 of the 426,000 jobs. It also helped support the diversity of employment, with direct jobs in manufacturing, health care, and wholesale trade.

Chart 4: Percent of Employment by Industry, Ramsey County, 2016



In 2016, businesses in Ramsey County generated \$69.1 billion of output. Businesses in the professional and business services industry contributed 41 percent of this output, followed by manufacturing and health and social services (Chart 5). In 2017, Beacon Bluff Business Center operations supported \$122.2 million of the total output.

Chart 5: Percent of Output by Industry, Ramsey County, 2016



ECONOMIC CONTRIBUTION OF BEACON BLUFF BUSINESS CENTER IN MINNESOTA

The Beacon Bluff Business Center also contributes to Minnesota’s economy. Ramsey County is part of the state, so the contribution to the county is part of Minnesota’s results. However, indirect and induced effects tend to be higher the larger the study area, as there is more opportunity for the additional effects to accumulate in the region.

Estimates show the Beacon Bluff Business Center contributed \$145.5 million of output to Minnesota’s economy in 2017 (Table 6). This included \$67.6 million of labor income and 1,115 jobs.

Table 6: Economic Contribution of Beacon Bluff Business Center, Minnesota, 2017

	Output (millions)	Employment	Labor Income (millions)
Direct	\$70.2	615	\$41.2
Indirect	\$27.7	160	\$10.1
Induced	\$47.6	340	\$16.3
Total	\$145.5	1,115	\$67.6

University of Minnesota Extension Estimates

With its projected growth, the Beacon Bluff Business Center will generate \$244.0 million of economic activity in 2022 (Table 7). This includes \$99.3 million in labor income and 1,720 jobs.

Table 7: Potential Economic Contribution of Beacon Bluff Business Center, Minnesota, 2022

	Output (millions)	Employment	Labor Income (millions)
Direct	\$124.2	930	\$57.1
Indirect	\$49.8	290	\$18.3
Induced	\$70.0	500	\$23.9
Total	\$244.0	1,720	\$99.3

University of Minnesota Extension Estimates

Based on current plans, the Beacon Bluff Business Center will contribute an estimated \$270.1 million in economic activity to the state’s economy in 2027 (Table 8). This includes \$108.5 in labor income and 1,870 jobs.

Table 8: Potential Economic Contribution of Beacon Bluff Business Center, Minnesota, 2027

	Output (millions)	Employment	Labor Income (millions)
Direct	\$137.9	1,010	\$61.8
Indirect	\$55.7	320	\$20.6
Induced	\$76.5	540	\$26.1
Total	\$270.1	1,870	\$108.5

University of Minnesota Extension Estimates

NOTES ON THE ANALYSIS

This is an economic contribution study. Economic contribution studies examine the current size and scope of an industry or activity. They measure and quantify the *total* role. This differs from economic impact. Economic impact examines the *net* role. In an economic impact study, if a business were to move from one location in Ramsey County to the Beacon Bluff Business Center, the business would not create any economic impact. Overall, the economy did not gain any new activity. This is because it was already part of Ramsey County's economy. Extension did not trace the history of the businesses in the center. The goal of this study was to quantify the current contribution of the Beacon Bluff Business Center.



APPENDIX: METHODS AND TERMS

Special models, called input-output models, exist to conduct economic contribution analysis. There are several input-output models available. IMPLAN (Impact Analysis for PLANning) is one such model. Many economists use IMPLAN for economic contribution analysis because it can measure output and employment impacts, is available on a county-by-county basis, and is flexible for the user. IMPLAN has some limitations and qualifications, but it is one of the best tools available to economists for input-output modeling. Understanding the IMPLAN tool, its capabilities, and its limitations helps ensure the best results from the model.

One of the most critical aspects of understanding economic contribution analysis is the distinction between the “local” and “non-local” economy. The local economy is identified as part of the model-building process. Either the group requesting the study or the analyst defines the local area. Typically, the study area (the local economy) is a county or a group of counties that share economic linkages. In this study, the primary study area is Ramsey County. A secondary study area is Minnesota.

A few definitions are essential to properly read the results of an IMPLAN analysis. These terms and their definitions are provided below.

Output

Output is measured in dollars and is equivalent to total sales. The output measure includes significant double counting. Think of corn, for example. The value of the corn is counted when it is sold to the mill and then again when it is sold to the dairy producers as a feed supplement. It is then counted again when the dairy producer sells the milk to the cheese manufacturer. And it is counted yet again when the cheese is sold. The value of the corn is built into the price of each of these items and then the sale of each of these items are added up to get total sales (or output). Output is not equivalent to GDP.

Employment

Employment includes full- and part-time workers, as well as seasonal workers. Employment is measured in annual average jobs, not full-time equivalents (FTEs). IMPLAN includes total wage and salaried employees, as well as the self-employed, in employment estimates. Because employment is measured in jobs and not in dollar values, it tends to be a very stable metric.

Labor Income

Labor income includes all forms of employment income, including employee compensation (wages, salaries, and benefits), and proprietor income. Labor income measures the value added to the product by the labor component.

Direct Impact

Direct impact is equivalent to the initial activity in the economy. In this study, it is the employment, output, and labor income of the businesses occupying the business center.

Indirect Impact

The indirect impact is the summation of changes in the local economy that occur due to spending for inputs (goods and services) by the industry or industries directly impacted. For instance, if



employment in a manufacturing plant increases by 100 jobs, this implies a corresponding increase in output by the plant. As the plant increases output, it must also purchase more inputs, such as electricity, steel, and equipment. As the plant increases purchases of these items, its suppliers must also increase production, and so forth. As these ripples move through the economy, they can be captured and measured. Ripples related to the purchase of goods and services are indirect impacts. In this study, indirect impacts are those associated with spending by Beacon Bluff Business Center businesses to purchase inputs.

Induced Impact

The induced impact is the summation of changes in the local economy that occur due to spending by labor; that is, spending by employees in the industry or industries directly impacted. For instance, if employment in a manufacturing plant increases by 100 jobs, the new employees will have more money to purchase housing, buy groceries, and go out to dinner. As they spend their new income, more activity occurs in the local economy. This can be quantified and is called the induced impact. Primarily, in this study, the induced impacts are those economic changes related to spending by employees of the Beacon Bluff Business Center businesses.

Total Impact

The total impact is the summation of the direct, indirect, and induced impacts.

Input-Output, Supply and Demand, and Size of Market

Care must be taken when using regional input-output models to ensure they are being used in the appropriate type of analysis. If input-output models are used to examine the impact of an industry so large that its expansion or contraction results in major supply and demand shifts, causing the prices of inputs and labor change, input-output can overstate the impacts or impacts. It is not likely the businesses in the Beacon Bluff Business Center have an impact on national input prices. Hence, the model should reliably estimate the impacts.