

ECONOMIC EMERGENCY REPORT**Economic Impact of a Fire on Main Street in Melrose, Minnesota**

Prepared by Brigid Tuck and Neil Linscheid, October 2016

INTRODUCTION

On Thursday, September 8, 2016, fire started in downtown Melrose, Minnesota. Eleven businesses and ten apartment units were affected by the blaze. Businesses impacted include insurance agencies, restaurants, and a realtor.

In the wake of the fire, business owners, families, and city leaders face decisions. Business owners have choices regarding rebuilding and reopening. Families have to find temporary, and potentially new long-term, housing. City leaders must determine the best ways to support them. University of Minnesota Extension has prepared this economic impact analysis report to assist those making these challenging decisions. This report is presented in partnership with the EDA Center at the University of Minnesota-Crookston.¹



The affected businesses employ 32 people. If the businesses were to close permanently as a result of the fire, an estimated 52 jobs across all businesses in the region would be affected by the fire. The job losses would translate into a decrease of \$5.7 million in economic activity, including \$1.8 million in lost labor income. This is an annual impact. With time, the impact will dissipate as the economy readjusts. This represents the “worst-case” scenario of all businesses closing due to the fire.

Ten apartment units were also affected. If each apartment were to equate to a loss of \$10,000 of household income in the region, the region would experience a total estimated loss of \$1.9 million in economic activity.

WHAT IS AN ECONOMIC EMERGENCY?

Communities can face a sudden and unanticipated change in their local economy. A major employer announces it is reducing its workforce, a fire destroys an operating facility, or a flood damages downtown. In these situations, communities often need to make quick, but important, decisions about how to react. They work closely with the local business(es) affected and work to help the business(es) and community recover. The University of Minnesota economic emergency program is designed to provide community leaders with information to assist in making decisions

¹ The EDA Center at Crookston is one of a national network of University Centers. The mission of University Centers is to connect university resources with the economic development community. The University Centers are funded by the U.S. Economic Development Administration which is a bureau of the U.S. Department of Commerce.

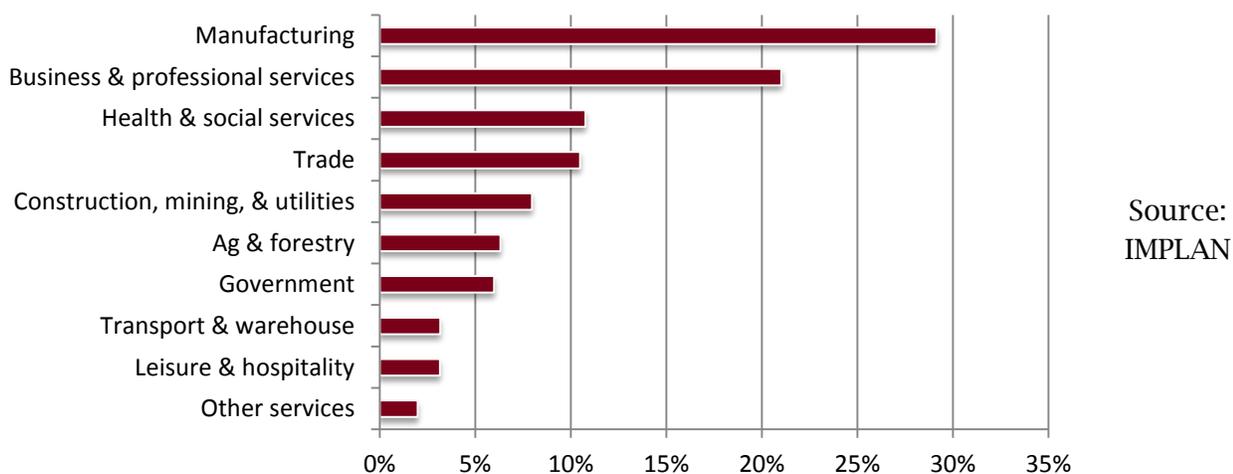
regarding the community's future. This analysis predicts the impact of a change in the economy of Stearns County (data are not available at the city level). Information from the IMPLAN (MIG, Inc.) input-output model is used in this analysis². There are a few important things to note related to this analysis and the tool used. Please see the section on assumptions and terms in the appendix to understand these factors.

OVERVIEW OF THE ECONOMY

Understanding the economy of the area affected is critical in order to interpret the impact. The modeling done in this report is based on the county-level, the smallest geography available in the input-output model. Thus, it is important to understand the composition of the Stearns County economy. Given the geographic distribution of economic activity in the county, it's also important to understand how Melrose fits into the overall county economy. This section of the report explores both the county and city economy.

Businesses and enterprises in Stearns County produced \$16.1 billion of goods and services (output) in 2014. Manufacturing was the leading source of output, producing 30 percent (\$4.7 billion) of the county's total (Chart 1). Business and professional services accounted for over 20 percent of output, followed by health and social services and trade (retail plus wholesale).

Chart 1: Output by Industry, Stearns County, 2014

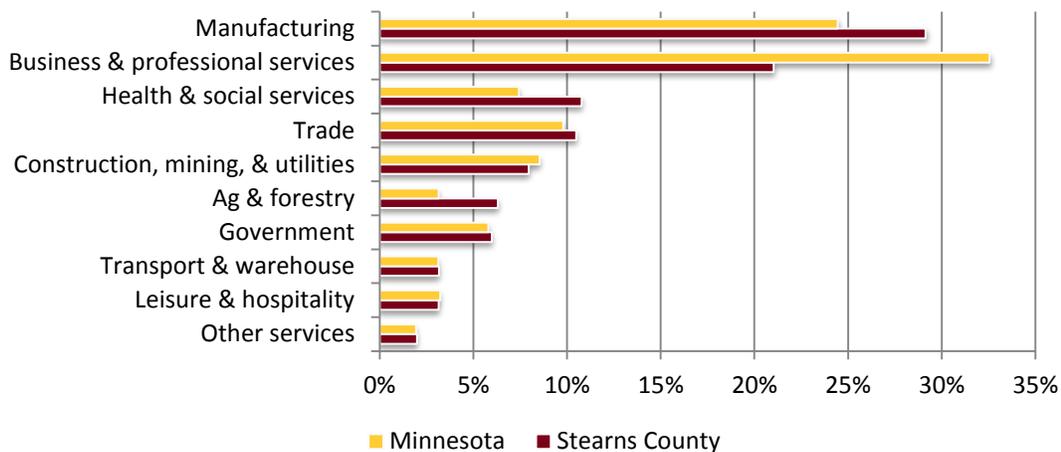


Stearns County has a diverse economy that reflects Minnesota's economy. Stearns County is slightly more manufacturing dependent - 29 percent of Stearns County's output comes from the industry versus 24 percent of Minnesota's (Chart 2). Conversely, Stearns County has a lower share of output derived from the professional and business services industry versus the state.

Stearns County is home to St. Cloud, one of Greater Minnesota's largest cities, which serves as a regional economic hub. Therefore, it is not surprising to see a slightly higher share of output coming from the health care and trade industries.

² IMPLAN, www.implan.com. Data for 2014 is the most recent available.

Chart 2: Percent of Output by Industry, Stearns County Versus Minnesota, 2014



Source:
IMPLAN

In many ways, Melrose reflects Stearns County’s economy. A significant share of jobs are in the manufacturing industry (Table 1). Professional and business service and health care jobs are also important - with 539 jobs in education and health services, 146 in professional and business services, and 65 in financial activities.

In total, in the first quarter of 2016, there were 2,586 jobs in Melrose.

Table 1: Employment by Industry, Melrose

INDUSTRY	JOBS
MANUFACTURING	1,070
EDUCATION AND HEALTH SERVICES	539
TRADE, TRANSPORTATION, & UTILITIES	438
PROFESSIONAL AND BUSINESS SERVICES	146
LEISURE AND HOSPITALITY	126
FINANCIAL ACTIVITIES	65
PUBLIC ADMINISTRATION	28
ALL OTHER	174
TOTAL, ALL INDUSTRIES	2,586

SOURCE: QCEW, MINNESOTA DEED

ECONOMIC IMPACT

On September 8, fire started on Main Street in downtown Melrose. In the end, the fire damaged buildings which housed 11 businesses and ten apartment units. The businesses affected were critical components of the Melrose’s economy, providing jobs and income in the city. The apartment units provided needed housing for local residents. Disrupting both the business

operations and the housing situation will each have impacts on the local economy. These impacts are detailed in the next two sections.

Economic Impact Related to Affected Businesses

Businesses affected by the fire have several options for the future. The business could rebuild and reopen at its previous size, the business could rebuild and reopen at a larger or smaller scale than previously, the business could move to another community or become a home-based business, or the business could close permanently. Given the level of uncertainty at this time, this analysis details the economic impact should all the businesses cease operations as a result of the fire. Thus, this should be considered the “worst case” scenario.

Businesses affected were in the leisure and hospitality, financial activities, professional and business services, trade, and educational services industries.

Table 2: Business Affected by Fire, by Industry

INDUSTRY	NUMBER OF BUSSINESS AFFECTED
EDUCATION AND HEALTH SERVICES	1
TRADE, TRANSPORTATION, & UTILITIES	2
PROFESSIONAL AND BUSINESS SERVICES	2
LEISURE AND HOSPITALITY	3
FINANCIAL ACTIVITIES	3
TOTAL	11

SOURCE: QCEW, MINNESOTA DEED

Of the 11 businesses affected by the fire, two have already reopened for business. Since they are back in operation, these businesses are not included in the following analysis.

The additional nine businesses employ, at their peak employment, 32 people. This is the direct employment effect (Table 3). According to the IMPLAN model, the loss of 32 people in their specific industries will lead to an estimated loss of \$3.0 million of economic activity in Melrose, including \$0.9 million of lost labor income.

Table 3: Economic Impact of Melrose Fire On Stearns County: Potential Losses if Business Operations Cease Due to Fire

	DIRECT	INDIRECT	INDUCED	TOTAL
OUTPUT (MILLIONS)	-\$3.0	-\$1.8	-\$0.9	-\$5.7
EMPLOYMENT	-32	-13	-7	-52
LABOR INCOME (MILLIONS)	-\$0.9	-\$0.6	-\$0.3	-\$1.8

ESTIMATES BY UNIVERSITY OF MINNESOTA EXTENSION

The affected businesses generate additional economic activity in the county. When the businesses make purchases for goods and services used in their production process, that leads to their suppliers making more purchases, thus triggering activity along the supply chain. This is the indirect effect. As an example, a restaurant purchases food ingredients, electricity, and water, among other items. If the restaurant does not reopen, the food supplier, the electric company, and the water utility all lose sales. These losses are quantified in the indirect effect.

In addition to purchases on the supply chain, businesses also pay workers. The workers, in turn, spend their wages, salaries, and benefits in the region. This triggers activity along those supply chains. This is the induced effect. In the restaurant example, the employees without work will have less income to spend. If the restaurant does not reopen, places where employees spend money (grocery stores, doctor's offices, and retail businesses, for example) will lose sales. These losses are quantified in the induced effect.

If the affected businesses were not to reopen, the loss of 32 jobs in the selected industries will lead to a total loss of an estimated 52 jobs. There are 2,586 jobs in Melrose, thus, if the businesses closed, this would affect two percent of the total workforce.³

In addition to lost jobs, the potential closure of the businesses would also affect output and labor income. If the businesses were to close, total output in the county would decline by an estimated \$5.7 million.

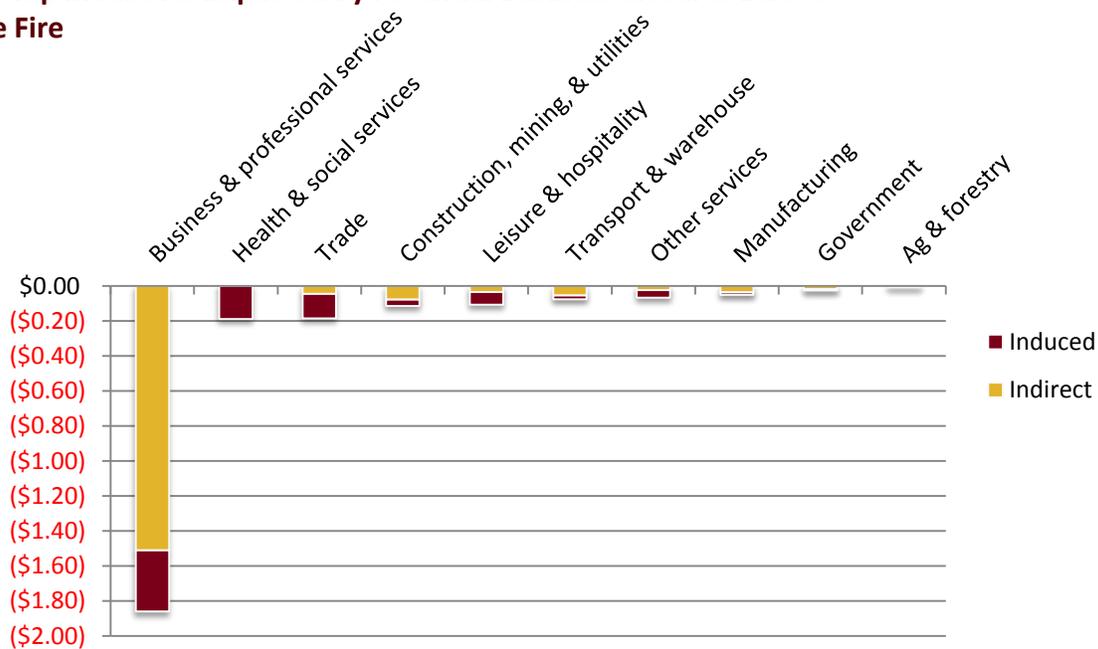
Labor income will also drop in Stearns County. Lost jobs at the businesses would directly cause an estimated decrease in labor income of \$0.9 million at the businesses. The combination of lost spending of employee wages and declines in spending by the affected businesses will decrease total labor income in the county by an estimated \$1.8 million.

The results presented above are for Stearns County, since this is the smallest geographic area for analysis in the model. However, since the direct effects are going to be in Melrose, it is likely the majority of the indirect and induced effects will also be experienced in the city. It is possible some of the affect jobs, income, and output will be in other parts of the county.

If the affected businesses close as a result of the fire, there will be an estimated \$5.7 million decline in economic activity. Of that, \$3.0 million will be direct decreases from the businesses. The rest, \$2.7 million, will be indirect and induced effects. The industries experiencing the highest impacts are shown in Chart 3. The business and professional services industry will see an estimated decline of \$1.8 million. The health and social services industry will experience an estimated decline of nearly \$200,000.

³ This assumes all the lost jobs are in Melrose. Since the direct effect is centered in Melrose, it is likely the majority of the effect will be at the city-level. The model, however, is based on the county, so it's possible some of the jobs affected will be in other parts of Stearns County.

Chart 3: Top Industries Impacted by Potential Business Closures Due to Melrose Fire



Note: this is the worst case scenario, assuming the businesses all close. Should the businesses reopen, the impacts of the fire will dissipate as the businesses return to full operation.

Economic Impact Related to Affected Residents

Ten apartment units were also damaged by the blaze. The families residing in the buildings are now displaced and must find alternative housing. According to Melrose city officials, occupancy rates are high in the city and there are few alternatives for the families. Should the families choose to relocate outside of the city, their lost spending will also decrease economic activity.

There is no reliable way to measure the total incomes of the displaced families. However, we can model an example of what lost household income means to the community. Table 4 shows the impact of a loss of \$10,000 in household income.

A loss of \$10,000 in household income would result in a total estimated drop of \$19,400 in the economy. The model is linear, therefore, if the direct loss were \$50,000, the total loss would be an estimated \$97,000. In Melrose, ten apartment units were affected. If each apartment loss translated into conservative estimate of \$10,000 in lost household income (assuming the families move), the total impact would be \$1.9 million.

A loss of \$10,000 was modeled for two reasons. First, as mentioned, the model is linear, and working with a tens-based figure makes for easy scaling of the results. Second, this is a conservative figure. The average household income in Melrose is \$37,400. Using a figure lower than the average means this is a conservative estimate.

Table 4: Economic Impact of Melrose Fire On Stearns County: Example of Lost Household Income

	DIRECT	INDIRECT	INDUCED	TOTAL
OUTPUT	-\$10,000	\$0	\$-9,400	\$19,400
EMPLOYMENT	-1	0	-0.1	-1.1
LABOR INCOME	-\$10,000	\$0	-\$3,200	-\$13,200

ESTIMATES BY UNIVERSITY OF MINNESOTA EXTENSION

Value of Affected Property

While the businesses and residents are the primary drivers of economic activity affected by the fire, the buildings themselves also have value. The blaze damaged four buildings. Of those, 2 will be demolished, 1 will be refurbished, and 1 has already reopened. Owners of the two buildings that will be demolished have yet to commit to rebuilding. The two buildings, prior to the fire, were valued at \$314,400. These buildings contribute to the tax base of the city. Should the buildings not be rebuilt, the City of Melrose would lose \$3,423 in taxes annually.

CONSIDERATIONS

This analysis is focused on the economic impact of the fire – particularly the impacts on businesses and households if those businesses and households were to leave the community. This information is designed to be helpful as community leaders consider options for supporting the affected businesses and residents.

There are other critical economic considerations not covered in this analysis. This analysis does not include consideration of the costs of rebuilding. Rebuilding would generate a positive economic impact, in the short-term, as construction companies will generate activity during the reconstruction period. Of course, either the business or the insurance company will have to pay for the reconstruction, which can place additional financial stress on the businesses.

This analysis also does not look at the longer-term potential consequences for families. For example, if the families leave the school district, this will have an impact on the budget of the district.

SUMMARY

Melrose business owners, residents, and city leaders are working together to recover from the September 8 fire. The community is making critical decisions – and having information about the economic impact of the fire is valuable.

Businesses affected by the fire employ 32 people. If the businesses were to close permanently as a result of the fire, an estimated 52 jobs across all businesses in the region would be affected. The 52 jobs represent two percent of all jobs in Melrose.

The job losses would translate into a decrease of \$5.7 million in economic activity, including \$1.8 million in lost labor income. This represents the “worst-case” scenario. As businesses reopen, the impacts would dissipate.

Ten apartment units were also affected. If each apartment were to equate to a loss of \$10,000 of household income in the region, the region would experience a total estimated loss of \$1.9 million in economic activity.

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ASSUMPTIONS AND TERMS

Economic impact analysis is based on several critical assumptions. An understanding of the assumptions ensures the results are interpreted properly. Here are the key assumptions made in this analysis.

- One job is one job, regardless if the job is full-time, part-time, or seasonal, in the IMPLAN database. The jobs considered here are not full-time equivalents. Therefore, it isn't unusual for industries with high levels of part-time employment to experience higher employment impacts.
- The model is linear. Changes in output or employment can be modeled in a linear fashion. For example, if only half of the employees are permanently laid off, the economic impact numbers can be divided in half.
- The database is built on data available publicly. When data is not available for a specific industry, say due to data disclosure issues, econometric models are used to create estimates for the industry.

KEY TERMS

The following are a few key terms used in economic impact analysis.

Output

Output is measured in dollars and is equivalent to total sales. The output measure can include significant double counting. For example, think of corn. The value of the corn is counted when it is sold to the mill, again when it is sold to the dairy farmer, again as part of the price of fluid milk, and then yet again when it is sold as cheese. The value of the corn is built into the price of each of these items and then the sales of each of these items are added up to get total sales (or output).

Employment

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

In the model, one job is one job, regardless if the job is full-time, part-time, and seasonal.

Labor Income

Labor income measures the value that is added to the product by the labor component. For example, in the corn example, when the corn is sold, a certain percentage of the sale goes to the farmer for his/her labor. Then when the mill sells the corn as feed to the dairy farmer it includes in the price some markup for its labor costs. When the dairy farmer sells the milk to the cheese manufacturer, he/she includes a value for his/her labor. These individual value increments for labor can be measured. This is labor income. Labor income does not include double counting.

Labor income is comprised of employee compensation (wages, salaries, and benefits) and proprietor income. Proprietor income includes income for the self-employed, which is how many agricultural producers register their income.

Direct Impact

The direct impact is equivalent to the initial change in the economy.

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 of its inputs, such as electricity, steel, and equipment. As it increases its purchase of these items, its suppliers must also increase its 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.

Induced Impact

The induced impact is the summation of changes in the local economy that occur due to **spending by labor** -- 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 spend 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.

Total Impact

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