



Labovitz School  
OF BUSINESS AND ECONOMICS

Bureau of Business and  
Economic Research

*Consulting Report*

# The Economic Impact of Constructing Five Electric Power Lines in Minnesota, North Dakota, South Dakota and Wisconsin, 2010-2015

November 2010

For

CapX2020 including:

Central Minnesota Municipal Power Agency  
Dairyland Power Cooperative  
Great River Energy  
Minnesota Power  
Minnkota Power Cooperative  
Missouri River Energy Services  
Otter Tail Power Company  
Rochester Public Utilities  
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# **The economic impact of constructing the CapX2020 electric transmission lines in Minnesota, North Dakota, South Dakota and Wisconsin, 2010-2015**

## ***Executive Summary***

The CapX2020 electric transmission line projects are the largest development of new transmission in the upper Midwest in 30 years. They will span a distance of more than 700 miles and are estimated to cost approximately \$2 billion (double-circuit capable). The new infrastructure will provide a foundation for the region's projected electric growth, ensure reliability, and connect into renewable energy sources proposed in southern and western Minnesota and the Dakotas. Midwestern states are known for their strong wind resources; Minnesota has one of the strongest renewable energy standards in the country. The CapX2020 projects will help deliver renewable energy to customers, while also providing electric reliability.

The lines themselves provide significant additional benefits through ensuring a strong, reliable electric transmission system that can deliver affordable electricity to customers throughout the region; this economic impact study solely evaluates the impact of the construction project.

The study was completed by the University of Minnesota Duluth Bureau of Business and Economic Research. The study team used the IMPLAN economic modeling software, which evaluates the effect of direct, indirect and induced effects of spending on the greater economy. Additional detail on the study team and software is included below and in the attached appendices.

Key findings of the study's economic modeling include:

- \$3.4 billion in sales generated from construction-related activity in the four states studied (due to industry and inter-industry spending and the "ripple effect" of the spending)
- \$1.6 billion in wages, rents and profits from construction-related payroll spending
- More than \$149 million in tax revenue in the four states combined
- \$1.93 returned to the economy for each dollar spent on the project, due to indirect and induced spending
- Nearly 8,000 jobs in peak year of construction (2013), including construction jobs, indirect and induced jobs. Thousands more jobs will be created in 2010-2012 and 2014-2015

## ***What does this economic impact study cover?***

The University of Minnesota Duluth Labovitz School's Bureau of Business and Economic Research (BBER) estimated the economic impact of constructing five new transmission lines. BBER reported impacts for the economies of Minnesota, North Dakota, South Dakota and Wisconsin.

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The five projects included:

- 1) Bemidji to Grand Rapids, Minnesota
- 2) Fargo, North Dakota to St. Cloud, Minnesota
- 3) Monticello to St. Cloud, Minnesota
- 4) Brookings County, South Dakota to Hampton, Minnesota
- 5) Hampton, Minnesota to La Crosse, Wisconsin

### ***How are these impact estimates calculated?***

BBER used the economic modeling software IMPLAN to estimate three measures of impact:

- Employment (or jobs)
- Output (or sales)
- Value Added (which includes payroll expenditures)

Tax impacts for federal, state and local taxes were also estimated.

For each measure, the secondary effects (indirect and induced) were estimated through the use of multipliers in the model. Assumptions for modeling were developed in consultation with the CapX2020 utilities.

### ***How much additional sales, value added (which includes wages) and additional employment will be created because of these power line construction projects?***

The full report presents a detailed look at estimates of sales, value added and employment impacts (referred to in the model as Output, Value Added and Employment measures). The report presents these details by state, by project and by year. The report also presents details of tax impacts for each project's peak construction year.

The economic impact for each year can be summarized as follows:

CapX2020 Group 1 Projects: Total Impact by Year						
Source:	2010	2011	2012	2013	2014	2015
IMPLAN						
Jobs	571	2,257	4,580	7,802	5,907	2,425
Sales	\$83,898,436	\$331,679,368	\$669,189,640	\$1,141,517,832	\$855,323,968	\$349,113,280
Value added	\$39,075,021	\$154,476,976	\$311,188,144	\$531,010,416	\$395,359,856	\$160,802,624



The economic impact for each state can be summarized as follows:

CapX2020 Group 1 Projects: Total Economic Impact by State

Source: IMPLAN	Total Value Added	Total Sales	Additional Jobs (in the Peak Year)
Minnesota	\$1,448,387,584	\$3,109,850,464	7,261 (year 2013)
Wisconsin	\$110,416,448	\$241,556,224	541 (year 2013)
North Dakota	\$19,433,664	\$47,431,008	255 (year 2014)
South Dakota	\$13,674,976	\$31,884,800	120 (year 2014)

The economic impact for each construction project can be summarized as follows:

CapX2020 Group 1 Projects: Total Economic Impact by Project Line

Source: IMPLAN		
Bemidji-Grand Rapids	Sales	\$865,244,928
	Value Added	\$402,980,480
Fargo-St. Cloud (MN)	Sales	\$786,593,808
	Value Added	\$366,350,048
Fargo-St. Cloud (ND)	Sales	\$ 31,884,800
	Value Added	\$13,674,976
Monticello-St. Cloud (MN)	Sales	\$258,748,172
	Value Added	\$120,509,901
Brookings County-Hampton (MN)	Sales	\$1,330,493,024
	Value Added	\$619,666,368
Brookings County-Hampton (SD)	Sales	\$47,431,008
	Value Added	\$19,433,664
Hampton-Rochester-La Crosse (MN)	Sales	\$528,929,024
	Value Added	\$246,344,320
Hampton-Rochester-La Crosse (WI)	Sales	\$241,556,224
	Value Added	\$110,416,448

Note: Employment impacts from construction cannot be summed for a total over the two-year construction period, as this employment may be from recurring jobs.

### ***How many additional jobs will be created, and where in the economies of the states will these jobs be found?***

The secondary jobs created by the projects' construction activity will be in sectors closely related to the construction industry, such as architectural, engineering and related services; food services and drinking places; wholesale trade businesses; real estate establishments; employment services; private hospitals; offices of physicians, dentists and health practitioners; retail stores; and others. The report details the top secondary jobs related to each project and provides a complete list of additional indirect and induced jobs in Appendix B.

## How much and what kind of tax contribution will be paid by these projects?

Total tax impacts are summarized in the following table. The report details tax impacts by kind, by project, by state and by year. Appendix C of the report provides a complete look at tax impacts.

CapX2020 Group 1 Projects: Tax Impacts in Peak Years

		Source: IMPLAN	Employee Compensation	Proprietor Income	Indirect Business Taxes	Households	Corporations
Bemidji	<u>Minnesota</u>						
	Federal		\$2,464,238	\$274,253	\$256,573	\$1,824,966	\$304,893
	State/Local		\$53,621	\$0	\$1,604,414	\$874,872	\$206,862
Fargo-St. Cloud	<u>Minnesota</u>						
	Federal		\$6,839,826	\$761,226	\$712,154	\$5,065,439	\$846,273
	State/Local		\$148,831	\$0	\$4,453,267	\$2,428,325	\$574,173
	<u>North Dakota</u>						
	Federal		\$546,477	\$76,177	\$35,427	\$183,872	\$47,950
	State/Local		\$8,802	\$0	\$302,208	\$64,242	\$22,772
[St. Cloud	<u>Minnesota</u>						
	Federal		\$6,839,826	\$761,226	\$712,154	\$5,065,439	\$846,273
	State/Local		\$148,831	\$0	\$4,453,267	\$2,428,325	\$574,173
Brookings	<u>Minnesota</u>						
	Federal		\$21,813,530	\$2,427,696	\$2,271,196	\$16,154,670	\$2,698,928
	State/Local		\$474,651	\$0	\$14,202,330	\$7,744,398	\$1,831,148
	<u>South Dakota</u>						
	Federal		\$902,826	\$187,821	\$82,659	\$415,949	\$99,332
	State/Local		\$19,820	\$0	\$596,319	\$62,171	\$53,895
La Crosse	<u>Minnesota</u>						
	Federal		\$5,377,643	\$598,495	\$559,913	\$3,982,575	\$665,361
	State/Local		\$117,015	\$0	\$3,501,270	\$1,909,210	\$451,429
	<u>Wisconsin</u>						
	Federal		\$2,323,307	\$354,371	\$185,027	\$1,531,543	\$273,492
	State/Local		\$45,411	\$0	\$1,528,229	\$747,448	\$316,018

In conclusion, the above tables (and the more detailed tables of the full report) show that the total economic impact from the completion of all proposed transmission line projects would add almost \$ 1.6 billion in wages, rents and profits to the combined states' economies. This Value Added total represents the direct value of the wages, etc., plus the additional inter-industry spending that resulted from these wages, plus any additional household spending that resulted from the direct wages and inter-industry spending.

The Output (or sales) total shows that more than \$3.4 billion in production would be added to the combined states' economies. The Output total represents the direct value of local production, plus the additional inter-industry transactions that resulted from local production, plus any additional household spending that resulted from inter-industry production.

Employment impacts in multiyear projects cannot be summed without risking double-counting of on-going jobs. Although the combined employment total for all projects and all years can be summed from the individual project tables of this report, for multi-year projects BBER bases employment estimates on the peak year job estimate. Also, in most cases, these additional jobs are for the duration of the project. In this way, the multi-state, multi-year Employment impact of almost 8,000 jobs in the peak year of construction (year 2013) represents almost 4,000 direct jobs in construction and almost 4,000 associated, indirect and induced other jobs dependent on, but not a part of, the construction sector. Those sectors range from engineering and architectural services to food services and trucking, as well as any jobs created by the additional household spending and activity linked to direct and indirect jobs in the construction industry.

Finally, the IMPLAN model provides an opportunity to calculate a multiplier value associated with each of the measures (Value Added, Output and Employment). For example, the employment multipliers for construction in the four states, during the various highest employment years, averages 1.9. This multiplier estimates that for every job in the construction industry associated with transmission lines, another 0.9 job is created as the indirect and induced effect of the construction industry's job. In the same way, the model estimates that for every dollar of wages, rents, interest and profits directly related to line construction, another \$1.21 is generated in the economies of the states through indirect and induced effects.



## Project Description

### *BBER's Deliverables*

The consortium known as CapX2020<sup>1</sup> asked the University of Minnesota Duluth Labovitz School Bureau of Business and Economic Research (BBER)<sup>2</sup> to estimate the economic impact of constructing five new power transmission lines, and to report value added, employment and output measures for the economies of the states in which construction will take place.

### *Scope of Work*

BBER studied and estimated the economic impacts of five construction projects: 1) a 70-mile, 230 kV transmission line between Bemidji and Grand Rapids in north central Minnesota; 2) and 3) a 250-mile, 345 kV transmission line between Fargo, North Dakota and St. Cloud and Monticello, here modeled as the Fargo-St. Cloud and the Monticello-St. Cloud routes; 4) a 240-mile, 345 kV transmission line between Brookings County, South Dakota and Hampton, Minnesota, plus a related 345 kV line between Marshall and Granite Falls; and 5) a 150-mile, 345 kV transmission line between Hampton and Rochester, Minnesota, continuing on to La Crosse, Wisconsin. The economic modeling data and software used was IMPLAN version 3.0.<sup>3</sup> The study used IMPLAN's economic multiplier analysis and input/output modeling, created in Minnesota by the Minnesota IMPLAN Group, Inc. Data was the most recent IMPLAN data, which is for year 2008. Results of modeling are presented in this written report and will also be

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<sup>1</sup> "CapX2020 is a joint initiative of 11 transmission-owning utilities in Minnesota and the surrounding region to expand the electric transmission grid to ensure reliable and affordable service to 2020 and beyond. The CapX2020 utilities include cooperatives and investor-owned and municipal utilities." For information about CapX2020 including the "CapX2020 proposed transmission line project | Delivering reliable electricity for the future" factsheet, see <http://www.capx2020.com/>

<sup>2</sup>The Labovitz School's research bureau (BBER) collects, analyzes, and disseminates information regarding the economy of Duluth, northeast Minnesota, the state of Minnesota and the region. The BBER also provides specific research to identify economic problems and opportunities in Minnesota and the region, and acts as a catalyst which generates research from faculty, staff and students within the School. In addition, the BBER operates as a place for students to gain the hands-on, real-world skills of conducting economic and business research, and perhaps most importantly, it provides unbiased data and analysis concerning the economic viability of building, expanding or relocating businesses in the northern Minnesota region. Funded by a special appropriation of the Minnesota Legislature, private contracts and research grants, the BBER recently completed an economic impact study of ferrous and non-ferrous mining in the state, and assisted with a U.S. Department of Labor Regional innovation Grant for the region.

<sup>3</sup> IMPLAN is used by other state governments and the USDA Forest Service, among others. See Minnesota IMPLAN Group, Inc., IMPLAN System (data and software), 1725 Tower Drive West, Suite 140, Stillwater, MN 55082, [www.implan.com](http://www.implan.com).

presented in a PowerPoint presentation.

The research objectives of the study included:

- To study the economic impact of construction of proposed expansion of the electric power transmission industry in Minnesota, including jobs, payroll and production, focusing on the state of Minnesota where the majority of construction will occur.
- In addition to the Minnesota impacts, additional impacts will be estimated to include South Dakota, North Dakota and Wisconsin.
- Industry impacts will be modeled using three measures and three effects of construction activity. This will include the measures of employment, output and value added, and will also model direct, indirect and induced economic effects in the economies of the study area.
- Selected suppliers to the construction industries in the study area will also be modeled.
- Possible tax impacts for the study area(s) will be modeled.
- The findings of the impact analysis will be drafted into a report and slide presentation of results.

### *Study Area*

The geographic scope for this economic impact analysis is proposed as the states through which the proposed new transmission lines will travel and in which construction activity will take place. Interactive maps with route options are available at <http://www.capx2020.com/routemaps/index.html>, and include the following:

1. Bemidji-Grand Rapids 230 kV transmission line project
2. Fargo-St. Cloud 345 kV transmission line project
3. Monticello-St. Cloud 345 kV transmission line project
4. Brookings County-Hampton 345 kV transmission line project
5. Hampton-Rochester-La Crosse 345 kV transmission line project

The following map summarizes economic impact study area(s) illustrating some of the possible routes under consideration and permitting:

# CapX2020 Group 1 Projects

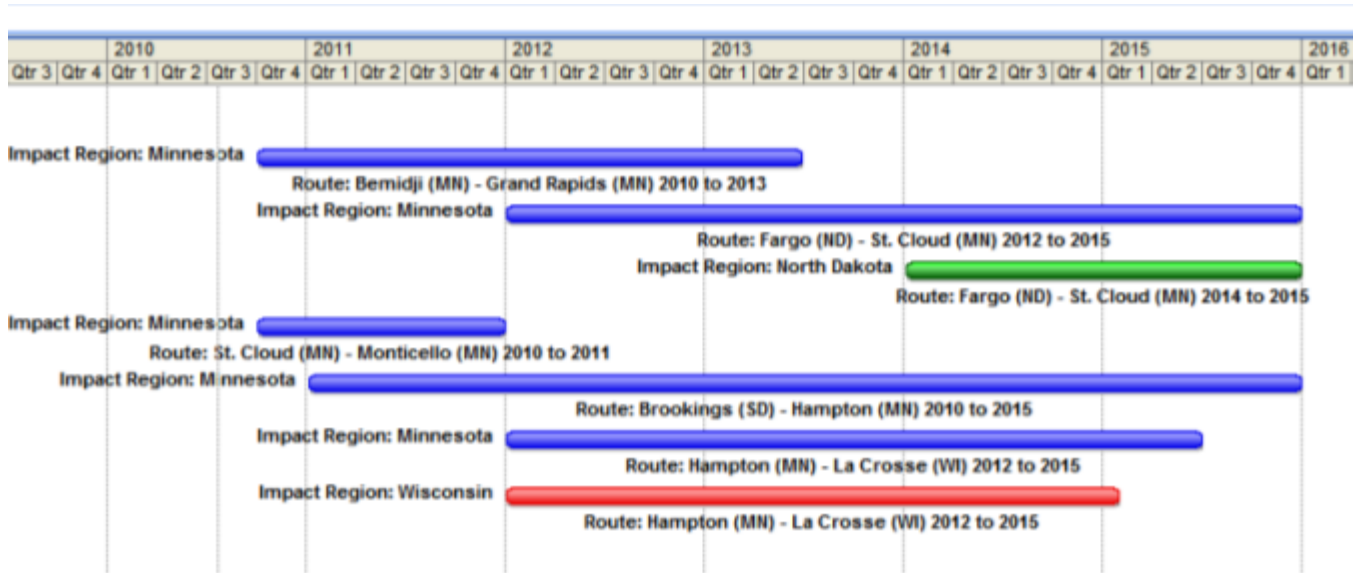
The map displays the following project routes and locations:

- Green Line:** Bemidji to Grand Rapids
- Orange Line:** Fargo to Alexandria to St. Cloud to Monticello
- Blue Line:** Granite Falls to Brookings
- Pink Line:** Hampton to Rochester to La Crosse

Major cities marked include Bemidji, Grand Rapids, Fargo, Alexandria, St. Cloud, Monticello, Granite Falls, Brookings, Hampton, Rochester, and La Crosse. Lake Superior is shown in the northeast corner.

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Figure 2. CapX2020 Group I Projects: Impact Years by Line Project



## Impact Procedures and Input Assumptions

### *Input Out Impact Analysis*

The mathematical input output model used to estimate impact in this study uses a matrix representation of the region's economy to predict the effect of changes in one industry on others and by consumers, government and suppliers on the economy. Input-output depicts inter-industry relations of an economy. It shows how the output of one industry is an input to each other industry. The matrix of inputs and outputs shows how dependent each industry is on all others in the economy, both as customer of their outputs and as supplier of their inputs. Input-output economics has been used to study regional economies within a nation, and as a tool for national and regional economic planning. Also, as used in this study, a main use of input-output analysis is for predict the economic impacts of events as well as public investments or programs.

Minnesota IMPLAN Group, Inc. (MIG) is the corporation responsible for the production of IMPLAN (Impact analysis for PLANning) data and software. Using classic input-output analysis in combination with regional specific Social Accounting Matrices and Multiplier Models, IMPLAN provides a highly accurate and adaptable model for its users. The IMPLAN database contains county, state, zip code and federal economic statistics which are specialized by region, not estimated from national averages and can be used to measure the effect on a regional or local economy of a given change or event in the economy's activity.<sup>4</sup>

IMPLAN's Social Accounting System describes transactions that occur between producers and intermediate and final consumers using a Social Accounting Matrix (SAM). One of the important aspects of SAM is that they also examine non-market transactions, such as transfer payments between institutions. Other examples of these types of transactions would include: government to household transfers in the form of unemployment benefits, or household to government transfers in the form of taxes. Because Social Accounting System examines all the aspects of a local economy, it provides a more complete and accurate "snapshot" of the economy and its spending patterns.

IMPLAN also uses a multiplier model. Multipliers are a numeric way of describing the impact of a change. An employment multiplier of 1.9 would suggest that for every 10 employees hired in the given industry, 19 total jobs (in all sectors) would be added to the given economic region. The multiplier model is derived mathematically using the input-output model and Social Accounting System formats. Once there is a clear picture of the economy through SAM and multipliers, its behavior can be predicted for a defined event, such as the construction of power lines.

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<sup>4</sup> For further information on input output modeling, BBER recommends to readers the following two sources: 1) Maki, Wilbur; Richard Lichty (2000). *Urban Regional Economics*. Iowa State University Press; and 2) the IMPLAN Web site at <http://implan.com/V3/Index.php>. Also note an excerpt from Maki and Lichty as an appendix to this report.



## *Models*

Models were created to include all impact model years beginning with 2010. BBER's modeling used the completion date supplied by the CapX2020 Project Management Office as well as companies involved in any new project.

Regional data for the impact models for value added, employment and output measures were supplied by IMPLAN for this impact. Employment assumptions were provided to the researchers to enable creation of the impact models. From these data, Social Accounts, Production, Absorption and Byproducts information were generated from the national level data and were incorporated into the model. All region study definitions and impact model assumptions were agreed on before work with the models began. Inputs required for these models included average employment for each year during any construction periods and dollar cost on a year by year basis for such construction periods.

The BBER worked closely with the CapX2020 Project Management Office as well as the utilities that comprise CapX2020 in determining key assumptions in the development of the IMPLAN models. (Along with Great River Energy, Elk River, Minn., and Xcel Energy, Minneapolis, utilities or groups that expect to participate in one or more of the CapX2020 projects are: Central Minnesota Municipal Power Agency, Blue Earth, Minn.; Dairyland Power Cooperative, La Crosse, Wis.; Minnesota Power, Duluth, Minn.; Minnkota Power Cooperative, Grand Forks, N.D.; Missouri River Energy Services, Sioux Falls, S.D.; Otter Tail Power Company, Fergus Falls, Minn.; Rochester Public Utilities, Rochester, Minn.; Southern Minnesota Municipal Power Agency, Rochester, Minn., and WPPI Energy, Sun Prairie, Wis.)

An important key assumption agreed to before the modeling began was to report the statewide impacts. Models that can report county specific impacts are not within the scope of the current project.

## *IMPLAN Models*

There are two components to the IMPLAN system: the software and databases. The databases provide all information to create regional IMPLAN models. The software performs the calculations and provides an interface for the user to make final demand changes. IMPLAN software version 3 was used in this analysis.

Comprehensive and detailed data coverage of the IMPLAN study areas by county, and the ability to incorporate user-supplied data at each stage of the model building process, provides a high degree of flexibility both in terms of geographic coverage and model formulation, in this case definition of the counties of Minnesota, South Dakota, North Dakota and Wisconsin, and the definition of specific models for construction and operations. Using the IMPLAN software and data, BBER identified the industry's proposed expenditures in terms of the sectoring scheme for the model, in producer prices, in historical dollars based on the year of the model, and applied those dollars spent within the study area definition given for the impact analysis.

## *Data*

**IMPLAN data files use federal government data sources including:**

- U.S. Bureau of Economic Analysis Benchmark I/O Accounts of the U.S.
- U.S. Bureau of Economic Analysis Output Estimates
- U.S. Bureau of Economic Analysis REIS Program

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- U.S. Bureau of Labor Statistics County Employment and Wages (CEW) Program
- U.S. Bureau of Labor Statistics Consumer Expenditure Survey
- U.S. Census Bureau County Business Patterns
- U.S. Census Bureau Decennial Census and Population Surveys
- U.S. Census Bureau Economic Censuses and Surveys
- U.S. Department of Agriculture Crop and Livestock Statistics

**IMPLAN data files consist of the following components: employment, industry output, value added, institutional demands, national structural matrices and inter-institutional transfers.**

Impacts for this model use the most recent IMPLAN data available which is for the year 2008. The impact is reported in 2011, 2012 and 2013 dollars.

**Economic impacts are made up of direct, indirect and induced impacts. The following cautions are suggested assumptions for accepting the impact model:**

- IMPLAN input-output is a production based model.
- Local or export based purchases that represent transfers from other potential local purchases are not counted.
- The numbers (from U.S. Department of Commerce secondary data) treat both full and part-time individuals as being employed.
- Assumptions need to be made concerning the nature of the local economy before impacts can be interpreted.
- The IMPLAN model was constructed for the year 2008 (most recent data available).

### **Definitions Used in This Report**

The IMPLAN models for both operations and construction use the following definitions for the three measures and three effects of the impact reports:

#### **Measures**

Value Added – A measure of the impacting industry’s contribution to the local community; it includes wages, rents, interest and profits.

Output – Represents the value of local production required to sustain activities.

Employment – Estimates are in terms of jobs, not in terms of full-time equivalent employees. Hence, these may be temporary, part-time or short-term jobs.

#### **Effects**

Direct – Initial spending in the study area resulting from the project.

Indirect – The additional inter-industry spending from the direct impact.

Induced – The impact of additional household expenditure resulting from the direct and indirect impact.

## Industry Definitions

IMPLAN models for this study used the following industry sector to define construction activity.

**Table 1. Industry Definition for Impacting Sector**

<i>IMPLAN Sector</i>	<i>Description</i>	<i>NAICS Equivalent</i>
36	Construction of other new nonresidential structures	23

NAICS Sector: 23 Construction. The Construction sector comprises establishments primarily engaged in the construction of buildings and other structures, heavy construction (except buildings), additions, alterations, reconstruction, installation, and maintenance and repairs. Establishments engaged in demolition or wrecking of buildings and other structures, clearing of building sites, and sale of materials from demolished structures are also included. This sector also includes those establishments engaged in blasting, test drilling, landfill, leveling, earthmoving, excavating, land drainage and other land preparation. The industries within this sector have been defined on the basis of their unique production processes. As with all industries, the production processes are distinguished by their use of specialized human resources and specialized physical capital. Construction activities are generally administered or managed at a relatively fixed place of business, but the actual construction work is performed at one or more different project sites (<http://www.census.gov/>).

## Findings

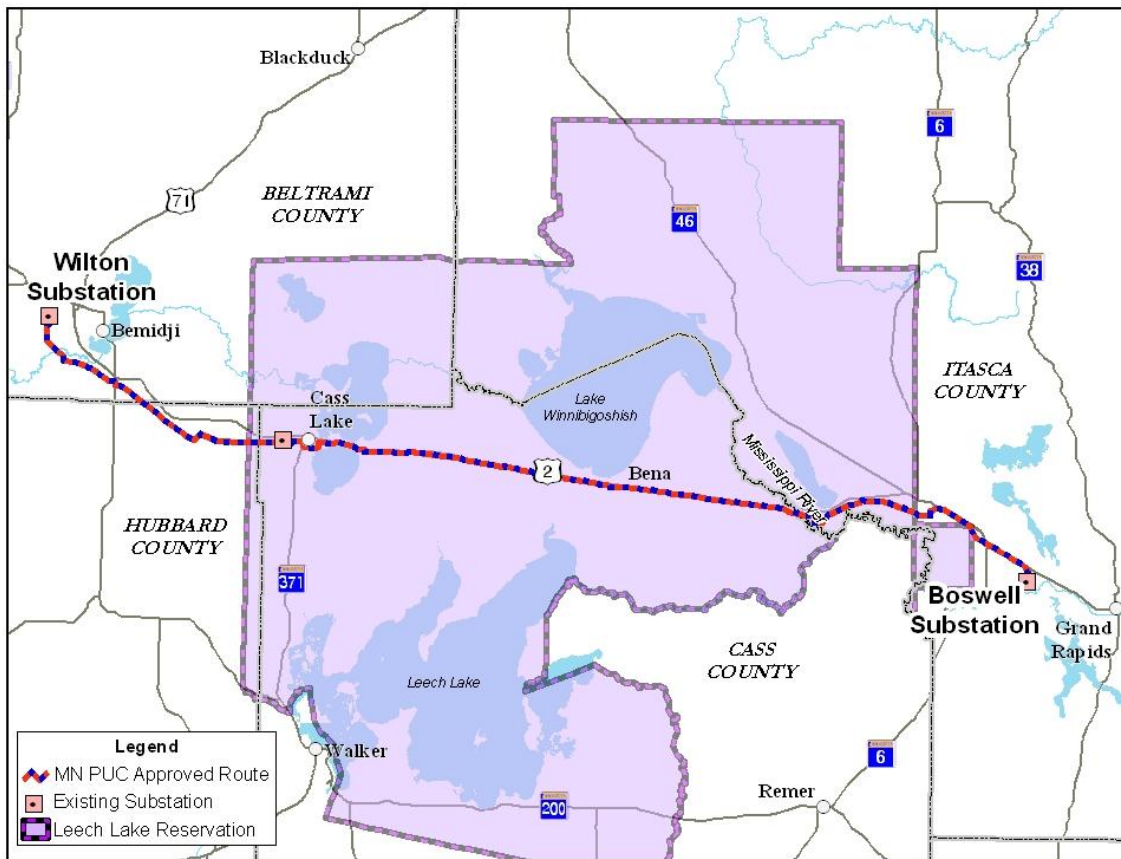
Economic impacts are reported by transmission line project as follows:

- 1) **Bemidji Line:** a 70-mile, 230 kV transmission line between Bemidji and Grand Rapids in north central Minnesota
- 2) **Fargo-St. Cloud Line:** a 210-mile, 345 kV transmission line between Fargo, North Dakota and St. Cloud, Minnesota
- 3) **Monticello-St. Cloud Line:** a 345 kV transmission line project from St. Cloud, Minnesota to Monticello, Minnesota
- 4) **Brookings County-Hampton Line:** a 240-mile, 345 kV transmission line between Brookings County, South Dakota and Hampton, Minnesota, plus a related 345 kV line between Marshall and Granite Falls, Minnesota
- 5) **Hampton Line:** a 150-mile, 345 kV transmission line between Hampton and Rochester, Minnesota, continuing on to La Crosse, Wisconsin

### *Bemidji-Grand Rapids Line Project Construction Impacts 2010 to 2013*

Located within north central Minnesota, economic impacts for the construction of this line are modeled for the years 2010 through 2013, and reflect economic activity in the state of Minnesota. A useful interactive map is provided at the CapX2020 website.

**Figure 3. Bemidji-Grand Rapids Line Project Map**



Source: <http://www.capx2020.com/routemaps/BGR-routemaps.html>

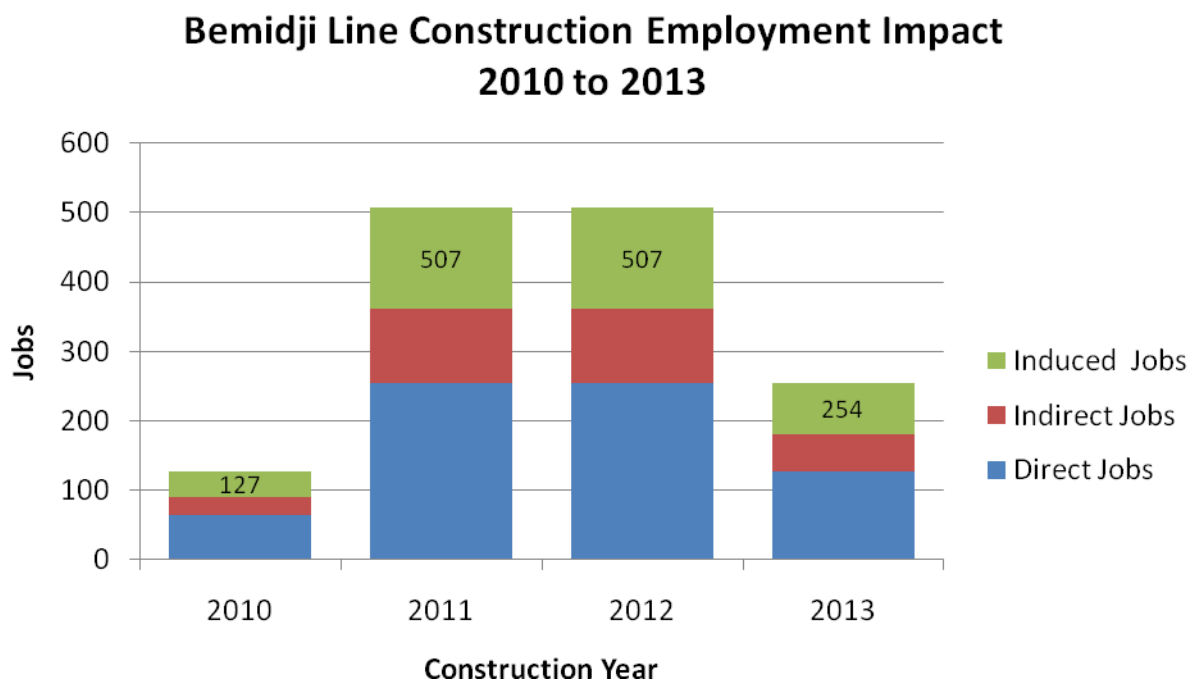
**Table 2. Bemidji-Grand Rapids Line Project: Construction Impacts, 2010 to 2013, in 2010 Dollars**

Bemidji					
Source: IMPLAN		<i>Direct Effect</i>	<i>Indirect Effect</i>	<i>Induced Effect</i>	<i>Total</i>
2010					
	Value Added	\$3,684,312	\$2,244,696	\$2,754,392	\$8,683,392
	Output	\$ 9,526,048	\$4,368,944	\$ 4,749,248	\$ 18,644,224
	Employment	64	26	37	127
2011					
	Value Added	\$14,737,248	\$8,978,784	\$11,017,568	\$34,733,568
	Output	\$38,104,192	\$17,475,776	\$18,996,992	\$74,576,896
	Employment	255	106	147	507
2012					
	Value Added	\$14,737,248	\$8,978,784	\$11,017,568	\$34,733,568
	Output	\$38,104,192	\$17,475,776	\$18,996,992	\$74,576,896

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2013	Employment	255	106	147	507
	Value Added	\$7,368,624	\$4,489,392	\$5,508,784	\$17,366,784
	Output	\$19,052,096	\$8,737,888	\$9,498,496	\$37,288,448
	Employment	128	53	73	254

**Figure 4. Bemidji-Grand Rapids Line Construction Employment Impacts**



**Table 3. Bemidji-Grand Rapids Line Project: Top 25 Indirect and Induced Job Sectors  
Dependent on Construction Employment, Peak Construction Year, 2012**

<i>Industry</i>	<i>Direct</i>	<i>Indirect</i>	<i>Induced</i>	<i>Total</i>
Construction of other new nonresidential structures	255.1	0.0	0.0	255.1
Architectural, engineering and related services	0.0	24.5	0.5	24.9
Food services and drinking places	0.0	3.5	15.3	18.8
Wholesale trade businesses	0.0	5.9	4.5	10.3
Real estate establishments	0.0	2.8	6.4	9.2
Employment services	0.0	6.1	2.8	8.8
Private hospitals	0.0	0.0	7.0	7.0
Offices of physicians, dentists and health practitioners	0.0	0.0	6.9	6.9
Retail stores – general merchandise	0.0	1.6	5.1	6.7
Retail stores – food and beverage	0.0	1.4	4.8	6.2

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Nursing and residential care facilities	0.0	0.0	5.7	5.7
Retail non-stores – direct and electronic sales	0.0	1.8	3.7	5.5
Civic, social, professional, and similar organizations	0.0	2.0	2.8	4.8
Retail stores – motor vehicle and parts	0.0	1.6	3.2	4.8
Transport by truck	0.0	3.2	1.2	4.5
Monetary authorities and depository credit activities	0.0	2.0	2.3	4.3
Services to buildings and dwellings	0.0	2.5	1.6	4.1
Legal services	0.0	2.5	1.6	4.1
Automotive repair and maintenance, except car washes	0.0	2.0	1.9	3.9
Securities, commodity contracts, investments	0.0	1.0	2.6	3.7
Retail stores – miscellaneous	0.0	0.9	2.5	3.5
Private household operations	0.0	0.0	3.4	3.4
Individual and family services	0.0	0.0	3.1	3.1
Retail stores – building material and garden supply	0.0	0.8	2.3	3.1
Retail stores – clothing and clothing accessories	0.0	0.7	2.4	3.0
<i>As well as additional full and part-time jobs in another 144 various sectors of the economy . . .</i>				252.3
			Total	507.4

*Bemidji-Grand Rapids Line Project Construction Tax Impacts 2012*

**Table 4. Bemidji-Grand Rapids Line Project: Summary of Federal, State and Local Tax Impacts for the Peak Year of Construction Activity, 2012**

<i>Source: IMPLAN</i>	<i>Employee Compensation</i>	<i>Proprietor Income</i>	<i>Indirect Business Taxes</i>	<i>Households</i>	<i>Corporations</i>
Federal Government Non-Defense	\$2,464,238	\$274,253	\$256,573	\$1,824,966	\$304,893
State/Local Non-Education	\$53,621	\$0	\$1,604,414	\$874,872	\$206,862
Total	\$2,517,859	\$274,253	\$1,860,987	\$2,699,838	\$511,755

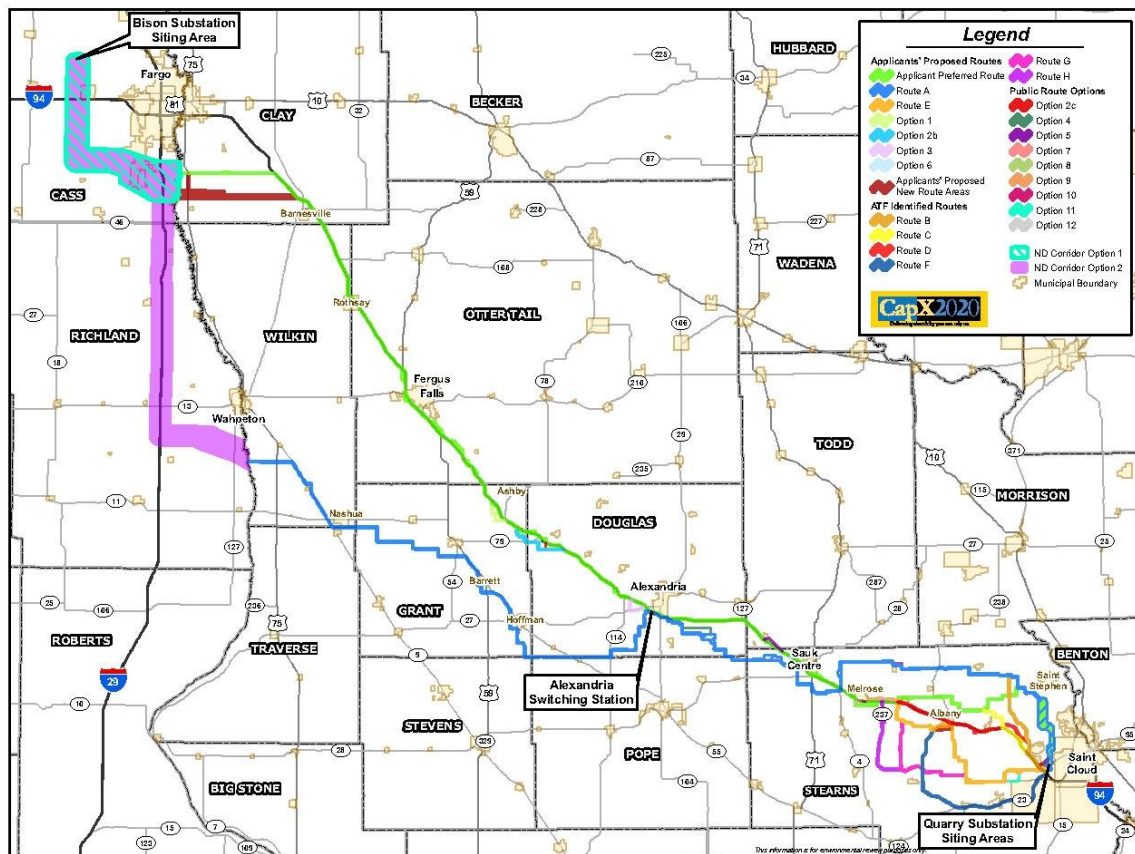
Note: Although *Proprietor Income* is reported as \$0, these taxes are included in other categories and contribute to the total.



### *Fargo-St. Cloud Line Project Construction Impacts 2012 to 2015*

Located in both west central Minnesota and southeast North Dakota, economic impacts for the construction of this line are modeled for the years 2012 through 2015 and reflect economic activity in the states of Minnesota and North Dakota. A useful interactive map is provided at the CapX2020 website.

**Figure 5. Fargo-St. Cloud Line Project Map**



Source: CapX2020

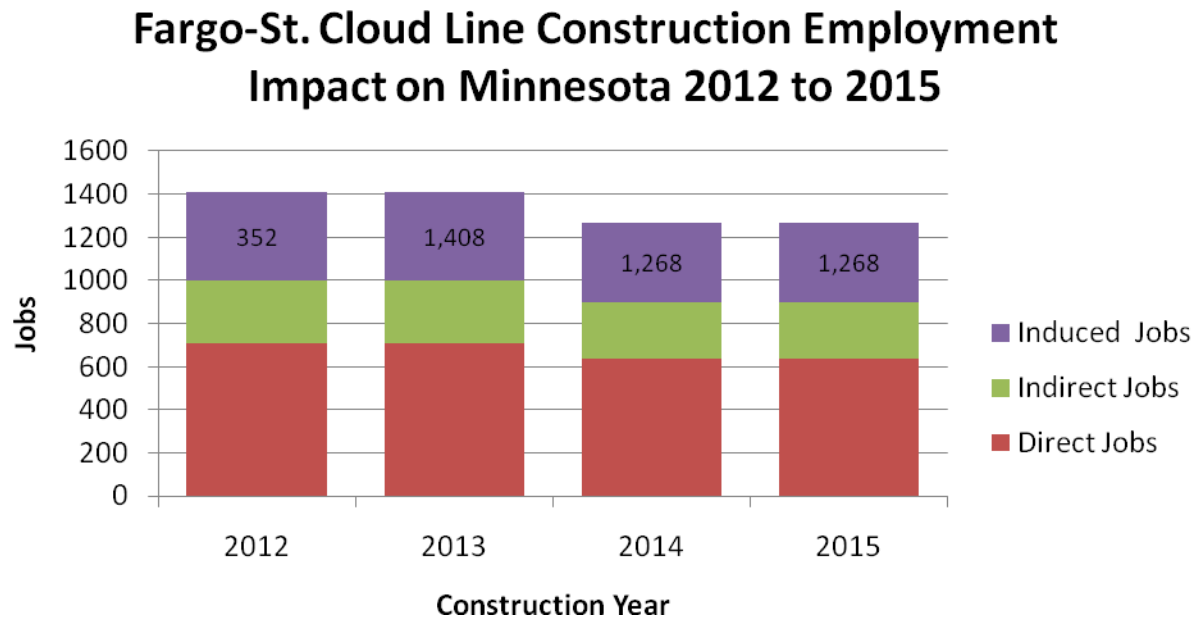
**Table 5. Fargo-St. Cloud Line Project: Construction Impacts in Minnesota, 2012 to 2015, in 2010 Dollars**

Fargo (MN)					
Source: IMPLAN		<i>Direct Effect</i>	<i>Indirect Effect</i>	<i>Induced Effect</i>	<i>Total</i>
2012					
	Value Added	\$40,905,216	\$24,921,856	\$30,580,736	\$96,407,808
	Output	\$105,763,328	\$48,506,368	\$52,728,704	\$206,998,528
	Employment	708	293	407	1,408
2013					
	Value Added	\$40,905,216	\$24,921,856	\$30,580,736	\$96,407,808
	Output	\$105,763,328	\$48,506,368	\$52,728,704	\$206,998,528
	Employment	708	293	407	1,408
2014					
	Value Added	\$36,814,720	\$22,429,632	\$27,522,688	\$86,767,104
	Output	\$95,186,944	\$43,655,680	\$47,455,872	\$186,298,368
	Employment	637	264	367	1,268
2015					
	Value Added	\$36,814,720	\$22,429,632	\$27,522,688	\$86,767,104
	Output	\$95,186,944	\$43,655,680	\$47,455,872	\$186,298,368
	Employment	637	264	367	1,268

**Table 6. Fargo-St. Cloud Line Project: Construction Impacts in North Dakota, 2014 to 2015, in 2010 dollars**

Fargo (ND)					
Source: IMPLAN		<i>Direct Effect</i>	<i>Indirect Effect</i>	<i>Induced Effect</i>	<i>Total</i>
2014					
	Value Added	\$3,866,528	\$1,461,688	\$1,509,276	\$6,837,488
	Output	\$10,576,320	\$2,707,400	\$2,658,680	\$15,942,400
	Employment	74	21	25	120
2015					
	Value Added	\$3,866,528	\$1,461,688	\$1,509,276	\$6,837,488
	Output	\$10,576,320	\$2,707,400	\$2,658,680	\$15,942,400
	Employment	74	21	25	120

**Figure 6. Fargo-St. Cloud Line Construction Employment Impact on Minnesota 2012 to 2015**



**Table 7. Fargo-St. Cloud Line Project: Top 25 Indirect and Induced Job Sectors Dependent on Construction Employment, Peak Construction Year, 2013 (in Minnesota)**

Industry	Direct	Indirect	Induced	Total
Construction of other new nonresidential structures	708.0	0.0	0.0	708.0
Architectural, engineering and related services	0.0	67.9	1.3	69.2
Food services and drinking places	0.0	9.6	42.6	52.2
Wholesale trade businesses	0.0	16.3	12.4	28.6
Real estate establishments	0.0	7.7	17.9	25.5
Employment services	0.0	16.9	7.6	24.5
Private hospitals	0.0	0.0	19.3	19.3
Offices of physicians, dentists, health practitioners	0.0	0.0	19.1	19.1
Retail stores – general merchandise	0.0	4.4	14.1	18.5
Retail stores – food and beverage	0.0	4.0	13.3	17.3
Nursing and residential care facilities	0.0	0.0	15.8	15.8
Retail non-stores – direct and electronic sales	0.0	5.0	10.2	15.2
Civic, social, professional and similar organizations	0.0	5.6	7.8	13.4
Retail stores – motor vehicle and parts	0.0	4.4	8.8	13.2
Transport by truck	0.0	9.0	3.4	12.4
Monetary authorities, depository credit intermediation	0.0	5.4	6.4	11.9
Services to buildings and dwellings	0.0	7.0	4.5	11.5
Legal services	0.0	7.0	4.4	11.4
Automotive repair and maintenance, except car washes	0.0	5.6	5.3	10.9
Securities, commodity contracts, investments, related	0.0	2.9	7.3	10.2
Retail stores – miscellaneous	0.0	2.5	7.0	9.6
Private household operations	0.0	0.0	9.5	9.5
Individual and family services	0.0	0.0	8.7	8.7
Retail stores – building material and garden supply	0.0	2.2	6.5	8.7

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Retail stores – clothing and clothing accessories	0.0	1.8	6.6	8.4
<i>As well as additional full and part-time jobs in another 194 various sectors of the economy . . .</i>				700.3
			Total	1,408.4

*Fargo-St. Cloud Line Project Construction Tax Impacts 2012 (Minnesota) and 2014 (North Dakota)*

**Table 8. Fargo-St. Cloud Line Project: Summary of Federal, State and Local Tax Impacts for the Peak Year of Construction Activity, Minnesota Year 2013**

<i>Source: IMPLAN</i>	<i>Employee Compensation</i>	<i>Proprietor Income</i>	<i>Indirect Business Taxes</i>	<i>Households</i>	<i>Corporations</i>
<u>Minnesota 2012</u>					
Federal Gov. Non-Defense	\$6,839,826	\$761,226	\$712,154	\$5,065,439	\$846,273
State/Local Non-Education	\$148,831	\$0*	\$4,453,267	\$2,428,325	\$574,173
Minnesota Total	\$6,988,657	\$761,226	\$5,165,421	\$7,493,764	\$1,420,446

\*Note: Although *Proprietor Income* is reported as \$0, these taxes are included in other categories and contribute to the total.

**Table 9. Fargo-St. Cloud Line Project: Summary of Federal, State and Local Tax Impacts for the Peak Year of Construction Activity, North Dakota Year 2015**

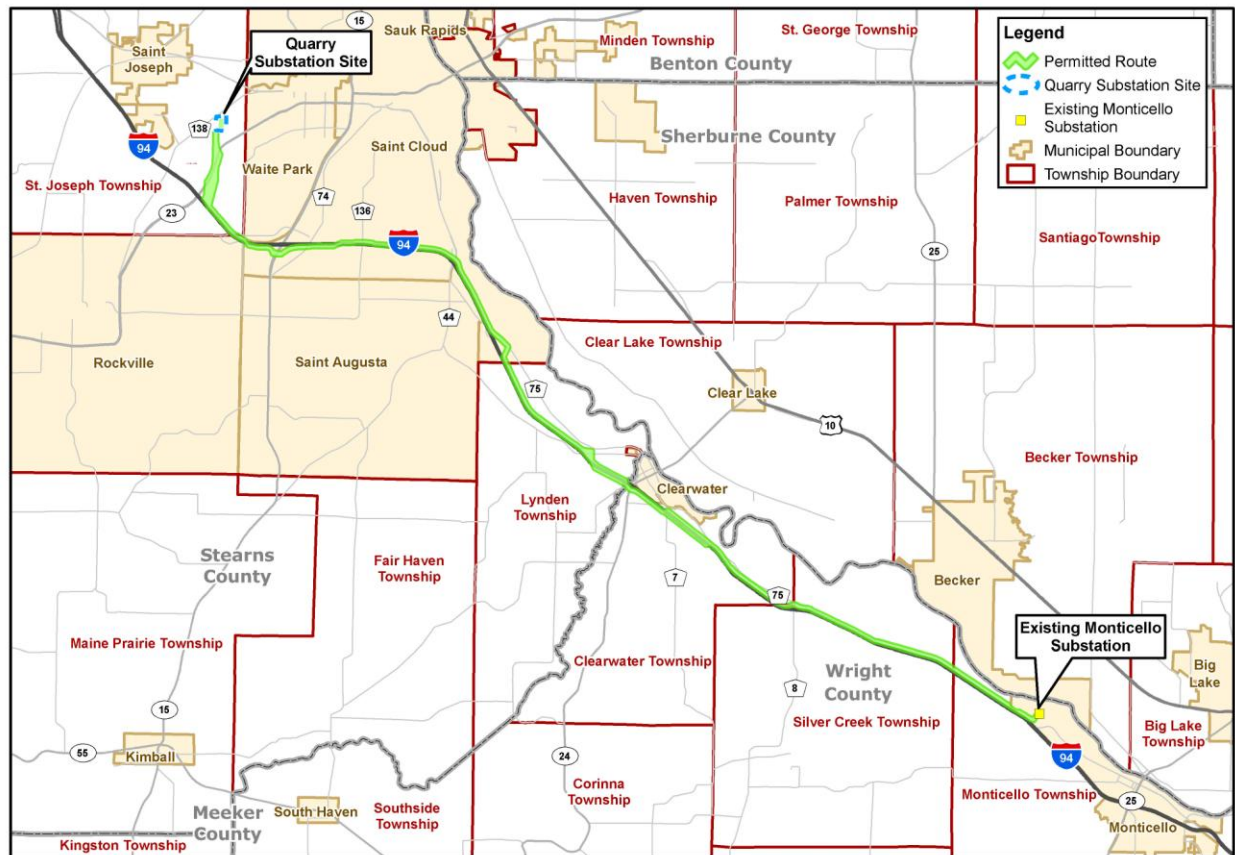
<u>North Dakota 2014</u>					
Federal Go. Non-Defense	\$546,477	\$76,177	\$35,427	\$183,872	\$47,950
State/Local Non-Education	\$8,802	\$0*	\$302,208	\$64,242	\$22,772
North Dakota Total	\$555,279	\$76,177	\$337,635	\$248,114	\$70,722

\*Note: Although *Proprietor Income* is reported as \$0, these taxes are included in other categories and contribute to the total.

### *Monticello-St. Cloud Line Project Construction Impacts 2010 to 2011*

Located in west central Minnesota, economic impacts for the construction of this line are modeled for the years 2010 and 2011 and reflect economic activity in the state of Minnesota. A useful interactive map is provided at the CapX2020 website.

**Figure 7. Monticello-St. Cloud Line Project Map**



Source: CapX2020

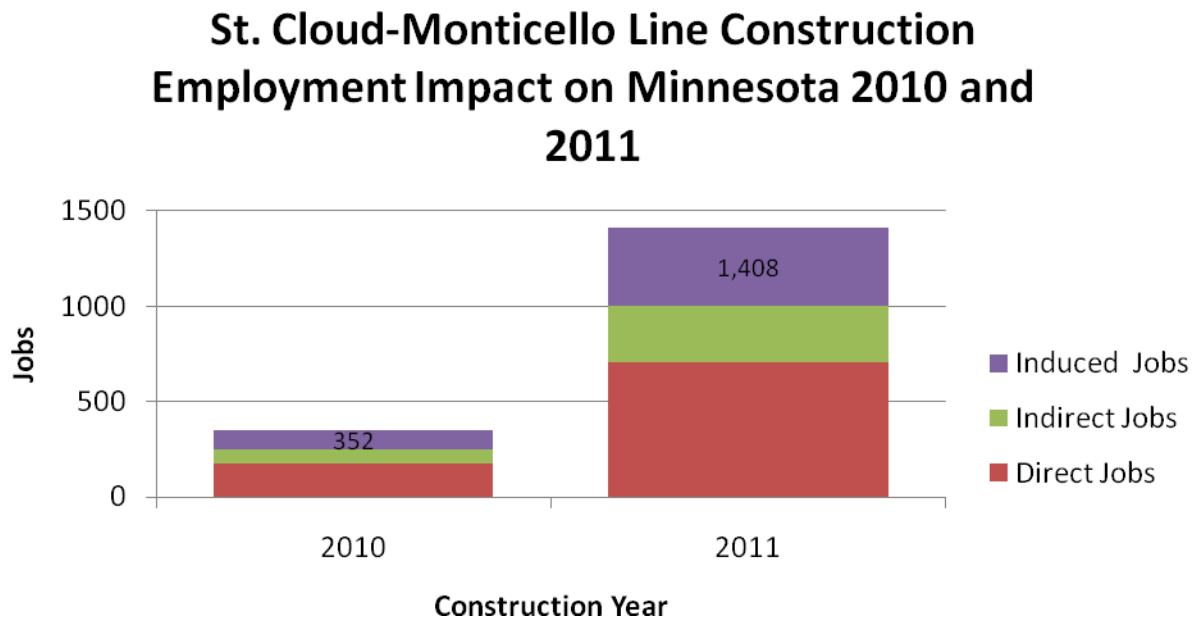
**Table 10. Monticello-St. Cloud Line Project: Construction Impacts in Minnesota, 2010 and 2011, in 2010 Dollars**

Monticello-St. Cloud  
(MN)

Source: IMPLAN

	<i>Direct Effect</i>	<i>Indirect Effect</i>	<i>Induced Effect</i>	<i>Total</i>
2010				
Value Added	\$10,226,317	\$6,230,467	\$7,645,197	\$24,101,981
Output	\$26,440,850	\$12,126,597	\$13,182,189	\$51,749,636
Employment	177	73	102	352
2011				
Value Added	\$40,905,268	\$24,921,867	\$30,580,784	\$96,407,920
Output	\$105,763,400	\$48,506,389	\$52,728,747	\$206,998,536
Employment	708	293	407	1,408

**Figure 8. Monticello-St. Cloud Line Construction Employment Impact on Minnesota 2010 and 2011**



**Table 11. Monticello-St. Cloud Line Project: Top 25 Indirect and Induced Job Sectors  
Dependent on Construction Employment, Peak Construction Year, 2011 (in Minnesota)**

<i>Industry</i>	<i>Direct</i>	<i>Indirect</i>	<i>Induced</i>	<i>Total</i>
Construction of other new nonresidential structures	708.0	0.0	0.0	708.0
Architectural, engineering and related services	0.0	67.9	1.3	69.2
Food services and drinking places	0.0	9.6	42.6	52.2
Wholesale trade businesses	0.0	16.3	12.4	28.6
Real estate establishments	0.0	7.7	17.9	25.5
Employment services	0.0	16.9	7.6	24.5
Private hospitals	0.0	0.0	19.3	19.3
Offices of physicians, dentists and other health practitioners	0.0	0.0	19.1	19.1
Retail stores – general merchandise	0.0	4.4	14.1	18.5
Retail stores – food and beverage	0.0	4.0	13.3	17.3
Nursing and residential care facilities	0.0	0.0	15.8	15.8
Retail non-stores – direct and electronic sales	0.0	5.0	10.2	15.2
Civic, social, professional and similar organizations	0.0	5.6	7.8	13.4
Retail stores – motor vehicle and parts	0.0	4.4	8.8	13.2
Transport by truck	0.0	9.0	3.4	12.4
Monetary authorities and depository credit intermediation	0.0	5.4	6.4	11.9
Services to buildings and dwellings	0.0	7.0	4.5	11.5
Legal services	0.0	7.0	4.4	11.4
Automotive repair and maintenance, except car washes	0.0	5.6	5.3	10.9
Securities, commodity contracts, investments and related	0.0	2.9	7.3	10.2
Retail stores – miscellaneous	0.0	2.5	7.0	9.6
Private household operations	0.0	0.0	9.5	9.5
Individual and family services	0.0	0.0	8.7	8.7
Retail stores – building material and garden supply	0.0	2.2	6.5	8.7
Retail stores – clothing and clothing accessories	0.0	1.8	6.6	8.4
<i>As well as additional full and part-time jobs in another 194 various sectors of the economy . . .</i>				255.4
			<b>Total</b>	<b>1,408.4</b>

*Monticello-St. Cloud Line Project Construction Tax Impacts 2011 (Minnesota)*

**Table 12. Monticello-St. Cloud Line Project: Summary of Federal, State and Local Tax Impacts  
for the Peak Year of Construction Activity, Minnesota Year 2011**

<i>Source: IMPLAN</i>	<i>Employee Compensation</i>	<i>Proprietor Income</i>	<i>Indirect Business Taxes</i>	<i>Households</i>	<i>Corporations</i>
<b>Minnesota 2011</b>					
Federal Gov. Non-Defense	\$6,839,826	\$761,226	\$712,154	\$5,065,439	\$846,273
State/Local Non-Education	\$148,831	\$0	\$4,453,267	\$2,428,325	\$574,173
<b>Minnesota Total</b>	<b>\$6,988,657</b>	<b>\$761,226</b>	<b>\$5,165,421</b>	<b>\$7,493,764</b>	<b>\$1,420,446</b>

\*Note: Although *Proprietor Income* is reported as \$0, these taxes are included in other categories and

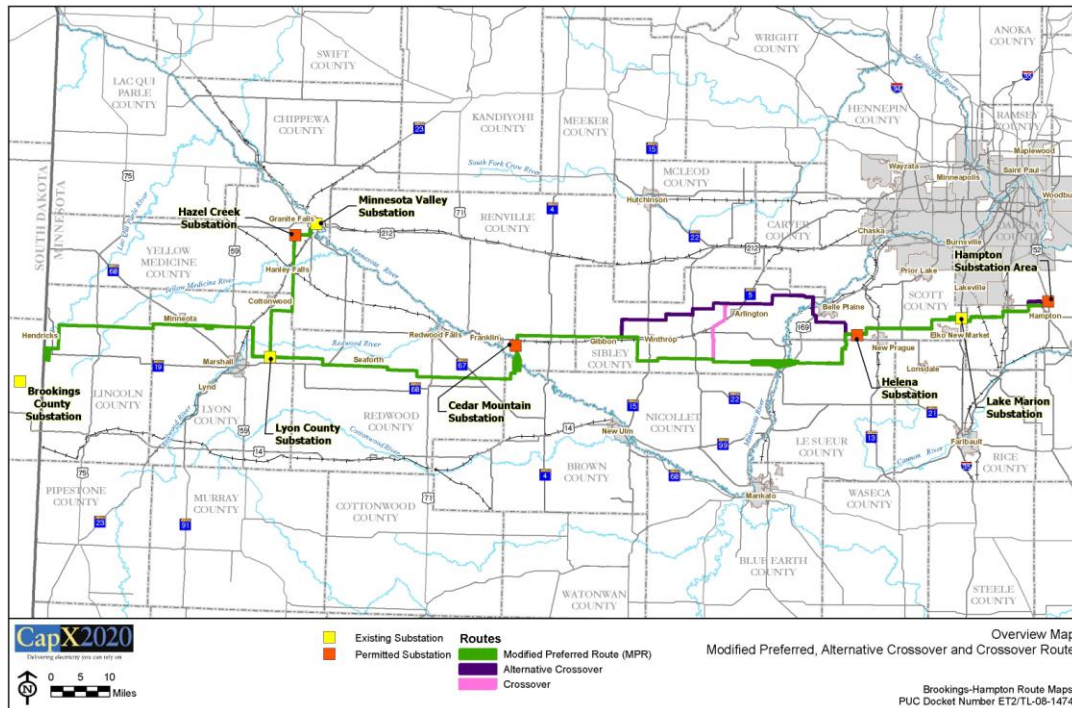
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contribute to the total.

### *Brookings County-Hampton Line Project Construction Impacts 2010 to 201, SD and MN*

Located in both southern Minnesota and eastern South Dakota, economic impacts for the construction of this line are modeled for the years 2010 through 2015 and reflect economic activity in the states of Minnesota and South Dakota. A useful interactive map is provided at the CapX2020 website.

**Figure 9. Brookings County-Hampton Line Project Map**



Source: <http://www.capx2020.com/routemaps/BCH-routemaps.html>

**Table 13. Brookings County-Hampton Line Project: Construction Impacts in Minnesota, 2010 to 2015, in 2010 Dollars**

Brookings MN					
Source: IMPLAN		<i>Direct Effect</i>	<i>Indirect Effect</i>	<i>Induced Effect</i>	<i>Total</i>
2010					
	Value Added	\$2,668,656	\$1,625,900	\$1,995,088	\$6,289,648
	Output	\$6,900,000	\$3,164,552	\$3,440,016	\$13,504,576
	Employment	46	19	27	92
2011					
	Value Added	\$9,901,088	\$6,032,320	\$7,402,064	\$23,335,488
	Output	\$25,600,000	\$11,740,928	\$12,762,976	\$50,103,936

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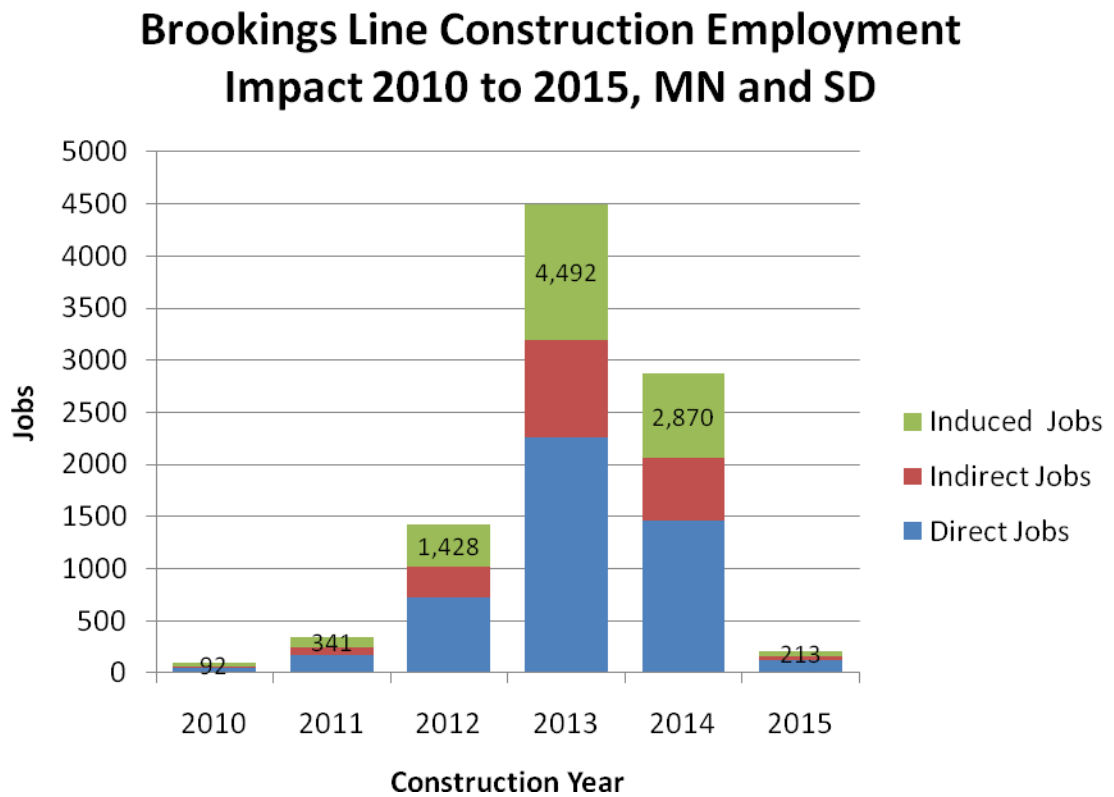


2012	Employment	171	71	99	341
	Value Added	\$41,460,864	\$25,260,352	\$30,996,160	\$97,717,248
	Output	\$107,200,000	\$49,165,184	\$53,444,864	\$209,809,920
2013	Employment	718	297	413	1,428
	Value Added	\$130,454,784	\$79,480,576	\$97,527,808	\$307,463,168
	Output	\$337,299,456	\$154,696,192	\$168,161,792	\$660,158,464
2014	Employment	2,258	935	1,299	4,492
	Value Added	\$75,960,064	\$46,279,168	\$56,787,712	\$179,026,944
	Output	\$196,399,616	\$90,075,136	\$97,915,904	\$384,390,144
2015	Employment	1,315	544	756	2,615
	Value Added	\$2,475,272	\$1,508,080	\$1,850,516	\$5,833,872
	Output	\$6,400,000	\$2,935,232	\$3,190,744	\$12,525,984
	Employment	43	18	25	85

**Table 14. Brookings County-Hampton Line Project: Construction Impacts in South Dakota, 2014 to 2015, in 2010 Dollars**

Brookings SD					
Source: IMPLAN		<i>Direct Effect</i>	<i>Indirect Effect</i>	<i>Induced Effect</i>	<i>Total</i>
2014					
	Value Added	\$6,565,232	\$3,069,872	\$3,320,672	\$12,955,776
	Output	\$19,999,936	\$5,823,584	\$5,797,072	\$31,620,672
	Employment	151	50	55	255
2015					
	Value Added	\$3,282,616	\$1,534,936	\$1,660,336	\$6,477,888
	Output	\$9,999,968	\$2,911,792	\$2,898,536	\$15,810,336
	Employment	75	25	27	128

Figure 10. Brookings County-Hampton Line Construction Employment Impact 2010 to 2015, MN and SD



**Table 15. Brookings County-Hampton Line Project: Top 25 Indirect and Induced Job Sectors Dependent on Construction Activity, Peak Construction Year, 2013, (in Minnesota)**

<i>Industry</i>	<i>Direct</i>	<i>Indirect</i>	<i>Induced</i>	<i>Total</i>
Construction of other new nonresidential structures	2,258.1	0.0	0.0	2,258.1
Architectural, engineering and related services	0.0	216.6	4.0	220.6
Food services and drinking places	0.0	30.6	135.8	166.5
Wholesale trade businesses	0.0	51.9	39.5	91.4
Real estate establishments	0.0	24.4	57.0	81.4
Employment services	0.0	53.8	24.4	78.2
Private hospitals	0.0	0.0	61.6	61.6
Offices of physicians, dentists and health practitioners	0.0	0.0	60.8	60.8
Retail stores – general merchandise	0.0	14.1	44.9	59.1
Retail stores – food and beverage	0.0	12.8	42.3	55.1
Nursing and residential care facilities	0.0	0.0	50.3	50.3
Retail non-stores – direct and electronic sales	0.0	15.9	32.5	48.4
Civic, social, professional and similar organizations	0.0	17.9	25.0	42.9
Retail stores – motor vehicle and parts	0.0	14.0	28.1	42.1
Transport by truck	0.0	28.6	10.8	39.4
Monetary authorities and depository credit intermediation	0.0	17.3	20.6	37.9
Services to buildings and dwellings	0.0	22.3	14.4	36.7
Legal services	0.0	22.4	13.9	36.4
Automotive repair and maintenance, except car washes	0.0	17.8	16.9	34.7
Securities, commodity contracts, investments	0.0	9.1	23.3	32.4
Retail stores – miscellaneous	0.0	8.1	22.5	30.6
Private household operations	0.0	0.0	30.4	30.4
Individual and family services	0.0	0.0	27.7	27.7
Retail stores – building material and garden supply	0.0	7.0	20.7	27.6
Retail stores – clothing and clothing accessories	0.0	5.9	20.9	26.8
<i>As well as additional full and part-time jobs in another 259 various sectors of the economy . . .</i>				2,233.5
			Total	4,491.6

*Brookings County-Hampton Line Project Construction Tax Impacts 2013 (Minnesota) and 2014 (South Dakota)*

**Table 16. Brookings County-Hampton Line Project: Summary of Federal, State and Local Tax Impacts for the Peak Year of Construction Activity, Minnesota 2013**

<i>Source: IMPLAN</i>	<i>Employee Compensation</i>	<i>Proprietor Income</i>	<i>Indirect Business Taxes</i>	<i>Households</i>	<i>Corporations</i>
<u>Minnesota 2013</u>					
Federal Gov. Non-Defense	\$21,813,530	\$2,427,696	\$2,271,196	\$16,154,670	\$2,698,928
State/Local Non-Education	\$474,651	\$0	\$14,202,330	\$7,744,398	\$1,831,148
Minnesota Total	\$22,288,181	\$2,427,696	\$16,473,526	\$23,899,068	\$4,530,076

\*Note: Although *Proprietor Income* is reported as \$0, these taxes are included in other categories and contribute to the total.

**Table 17. Brookings County-Hampton Line Project: Summary of Federal, State and Local Tax Impacts for the Peak Year of Construction Activity, South Dakota 2014**

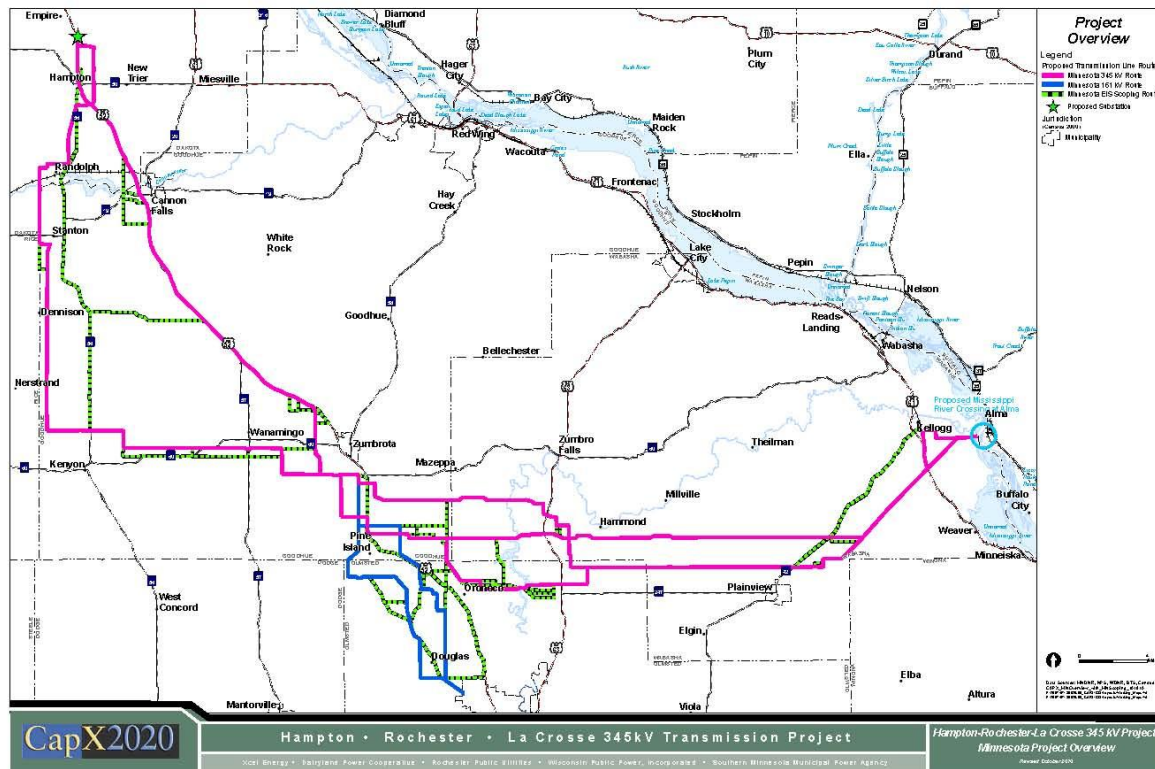
<u>South Dakota 2014</u>					
Federal Go. Non-Defense	\$902,826	\$187,821	\$82,659	\$415,949	\$99,332
State/Local Non-Education	\$19,820	\$0*	\$596,319	\$62,171	\$53,895
South Dakota Total	\$922,646	\$187,821	\$678,978	\$478,120	\$153,227

\*Note: Although *Proprietor Income* is reported as \$0, these taxes are included in other categories and contribute to the total.

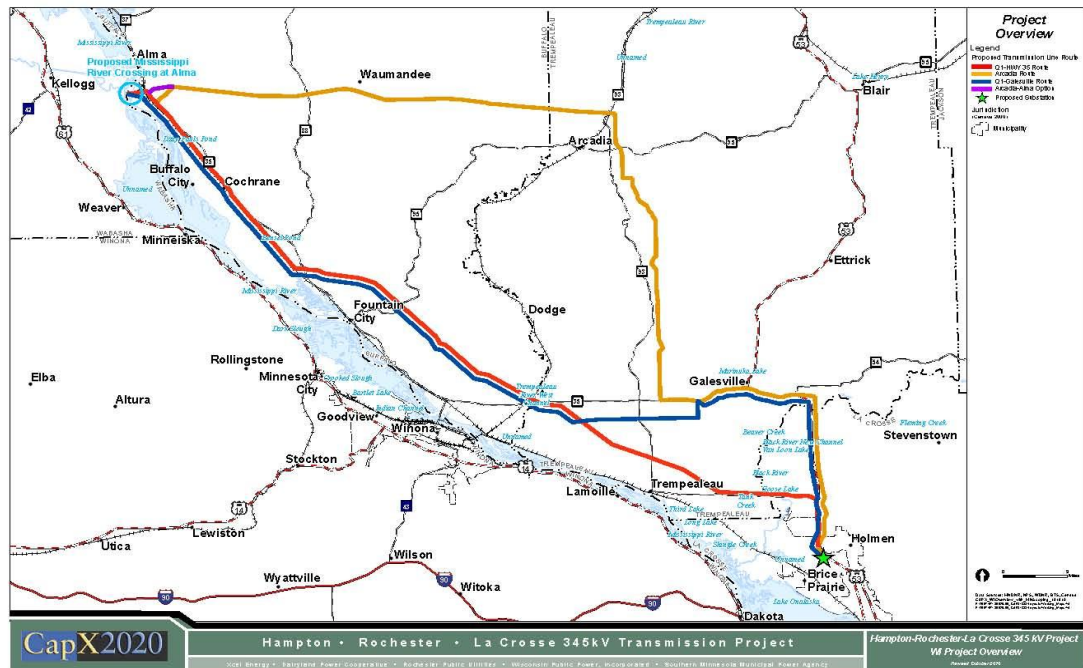
## Hampton-Rochester-La Crosse Line Project Construction Impacts 2012 to 2015

Located in both southern Minnesota and southwestern Wisconsin, economic impacts for the construction of this line are modeled for the years 2012 through 2015 and reflect economic activity in the states of Minnesota and Wisconsin. A useful interactive map is provided at the CapX2020 website. Figure 11. Hampton-Rochester-La Crosse Line Project Map

### Minnesota route options



## Wisconsin route options



Source: <http://www.capx2020.com/routemaps/HRL-routemaps.html>

**Table 18. Hampton-Rochester-La Crosse Line Project: Construction Impacts in Minnesota 2012 to 2015, in 2010 Dollars**

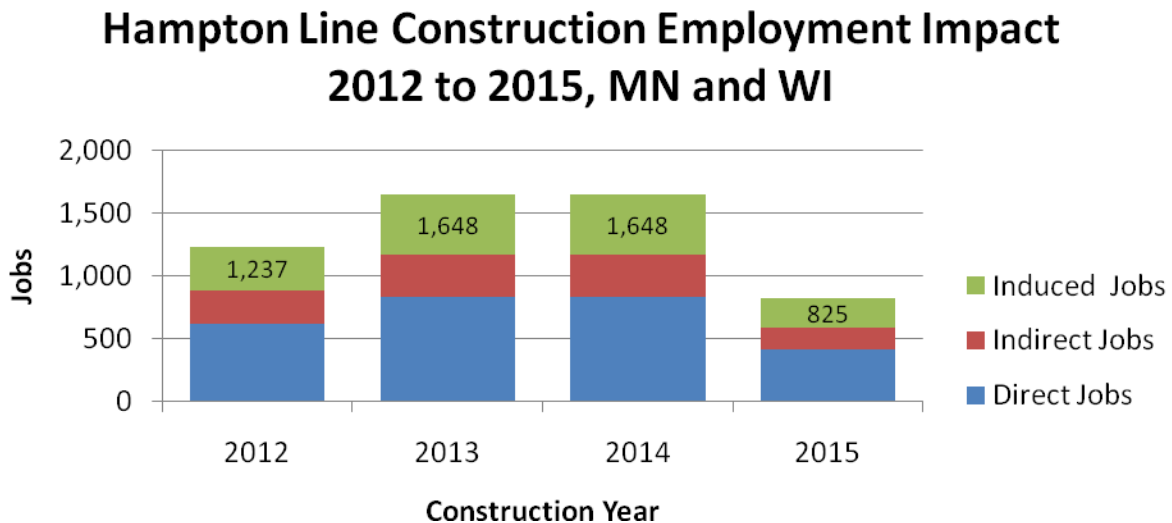
La Crosse MN					
Source: IMPLAN		<i>Direct Effect</i>	<i>Indirect Effect</i>	<i>Induced Effect</i>	<i>Total</i>
2012					
	Value Added	\$24,120,512	\$14,695,616	\$18,032,512	\$56,848,640
	Output	\$62,365,312	\$28,602,688	\$31,092,480	\$122,060,544
	Employment	418	173	240	831
2013					
	Value Added	\$32,160,704	\$19,594,176	\$24,043,328	\$75,798,272
	Output	\$83,153,664	\$38,136,832	\$41,456,640	\$162,747,392
	Employment	557	231	320	1,107
2014					
	Value Added	\$32,160,704	\$19,594,176	\$24,043,328	\$75,798,272
	Output	\$83,153,664	\$38,136,832	\$41,456,640	\$162,747,392
	Employment	557	231	320	1,107
2015					
	Value Added	\$16,080,352	\$9,797,088	\$12,021,664	\$37,899,136
	Output	\$41,576,832	\$19,068,416	\$20,728,320	\$81,373,696
	Employment	278	115	160	554

**Table 19. Hampton-Rochester-La Crosse Line Project: Construction Impacts in Wisconsin 2012 to 2015, in 2010 Dollars**

La Crosse WI					
Source: IMPLAN		<i>Direct Effect</i>	<i>Indirect Effect</i>	<i>Induced Effect</i>	<i>Total</i>
2012					
	Value Added	\$11,858,368	\$6,134,144	\$7,488,224	\$25,480,768
	Output	\$30,717,248	\$11,827,584	\$13,198,944	\$55,743,744
	Employment	206	86	114	406
2013					
	Value Added	\$15,811,168	\$8,178,864	\$9,984,288	\$33,974,272
	Output	\$40,956,288	\$15,770,112	\$17,598,592	\$74,324,992
	Employment	275	115	152	541
2014					
	Value Added	\$15,811,168	\$8,178,864	\$9,984,288	\$33,974,272
	Output	\$40,956,288	\$15,770,112	\$17,598,592	\$74,324,992
	Employment	275	115	152	541
2015					
	Value Added	\$7,905,584	\$4,089,432	\$4,992,144	\$16,987,136
	Output	\$20,478,144	\$7,885,056	\$8,799,296	\$37,162,496

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**Figure 12. Hampton-Rochester-La Crosse Line Construction Employment Impact 2012 to 2015, MN and WI**



**Table 20. Hampton-Rochester-La Crosse Line Project: Top 25 Indirect and Induced Job Sectors Dependent on Construction Activity, Peak Construction Year, 2013, (in Minnesota)**

Industry	Direct	Indirect	Induced	Total
Construction of other new nonresidential structures	556.7	0.0	0.0	556.7
Architectural, engineering and related services	0.0	53.4	1.0	54.4
Food services and drinking places	0.0	7.6	33.5	41.0
Wholesale trade businesses	0.0	12.8	9.7	22.5
Real estate establishments	0.0	6.0	14.1	20.1
Employment services	0.0	13.3	6.0	19.3
Private hospitals	0.0	0.0	15.2	15.2
Offices of physicians, dentists and health practitioners	0.0	0.0	15.0	15.0
Retail stores – general merchandise	0.0	3.5	11.1	14.6
Retail stores – food and beverage	0.0	3.2	10.4	13.6
Nursing and residential care facilities	0.0	0.0	12.4	12.4
Retail non-stores – direct and electronic sales	0.0	3.9	8.0	11.9
Civic, social, professional and similar organizations	0.0	4.4	6.2	10.6
Retail stores – motor vehicle and parts	0.0	3.5	6.9	10.4
Transport by truck	0.0	7.1	2.7	9.7
Monetary authorities and depository credit intermediation	0.0	4.3	5.1	9.3
Services to buildings and dwellings	0.0	5.5	3.5	9.1
Legal services	0.0	5.5	3.4	9.0

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Automotive repair and maintenance, except car washes	0.0	4.4	4.2	8.6
Securities, commodity contracts, investments and related activities	0.0	2.2	5.8	8.0
Retail stores – miscellaneous	0.0	2.0	5.5	7.5
Private household operations	0.0	0.0	7.5	7.5
Individual and family services	0.0	0.0	6.8	6.8
Retail stores – building material and garden supply	0.0	1.7	5.1	6.8
Retail stores – clothing and clothing accessories	0.0	1.4	5.2	6.6
<i>As well as additional full and part-time jobs in another 178 various sectors of the economy . . .</i>				550.6
<b>Total</b>				<b>1,107.3</b>

*Hampton-Rochester-La Crosse Line Project Construction Tax Impacts 2013 (Minnesota and Wisconsin)*

**Table 21. Hampton-Rochester-La Crosse Line Project: Summary of Federal, State and Local Tax Impacts for the Peak Year of Construction Activity, 2014**

<i>Source: IMPLAN</i>	<i>Employee Compensation</i>	<i>Proprietor Income</i>	<i>Indirect Business Taxes</i>	<i>Households</i>	<i>Corporations</i>
<u>Minnesota</u>					
Federal Gov. Non-Defense	\$5,377,643	\$598,495	\$559,913	\$3,982,575	\$665,361
State/Local Non-Education	\$117,015	\$0	\$3,501,270	\$1,909,210	\$451,429
Minnesota Sub-total	\$5,494,658	\$598,495	\$4,061,183	\$5,891,785	\$1,116,790
<u>Wisconsin</u>					
Federal Gov. Non-Defense	\$2,323,307	\$354,371	\$185,027	\$1,531,543	\$273,492
State/Local Non-Education	\$45,411	\$0	\$1,528,229	\$747,448	\$316,018
Wisconsin Sub-total	\$2,368,718	\$354,371	\$1,713,256	\$2,278,991	\$589,510
MN and WI Total	\$7,863,376	\$952,866	\$5,774,439	\$8,170,776	\$1,706,300

\*Note: Although *Proprietor Income* is reported as \$0, these taxes are included in other categories and contribute to the total.

## Conclusion

Although there are variations in impacts across the four states included in the study area, for the five line projects considered as a whole it is estimated that more than \$149 million in tax revenue will be generated. It is also estimated that more than \$3.4 billion in sales will be generated to construction-related activity. Also, nearly \$1.6 billion in construction-related payroll spending will occur. Finally, through the rounds of spending or ripple effect of direct spending in the states' economies, it is estimated that \$1.93 will be returned for each dollar spent on this construction activity. Summing all projects' peak year employment, it is estimated that during the various peak years of construction activity, as many as 8,400 jobs in construction and construction-related industries can be added to the four states' economies.

Grand Totals:

**Table 22. CAPX Projects, Construction Impacts, All Measures, All Effects; Total by Project**

CAPX Projects, Construction Impacts, All Measures, All Effects; Total by Project

Source: IMPLAN

		Total by Project
Fargo-St. Cloud MN	<i>Peak Year Employment</i>	1,408
	<i>Output</i>	\$ 786,593,808
	<i>Value Added</i>	\$ 366,350,048
Fargo-St. Cloud ND	<i>Peak Year Employment</i>	120
	<i>Output</i>	\$ 31,884,800
	<i>Value Added</i>	\$ 13,674,976
Monticello-St. Cloud MN	<i>Peak Year Employment</i>	1,408
	<i>Output</i>	\$ 258,748,172
	<i>Value Added</i>	\$ 120,509,901
Hampton-Rochester-La Crosse MN	<i>Peak Year Employment</i>	1,107
	<i>Output</i>	\$ 528,929,024
	<i>Value Added</i>	\$ 246,344,320
Hampton-Rochester-La Crosse WI	<i>Peak Year Employment</i>	541
	<i>Output</i>	\$ 241,556,224
	<i>Value Added</i>	\$ 110,416,448
Bemidji-Grand Rapids	<i>Peak Year Employment</i>	507
	<i>Output</i>	\$ 205,086,464
	<i>Value Added</i>	\$ 95,517,312
Brookings County-Hampton MN	<i>Peak Year Employment</i>	4,492
	<i>Output</i>	\$ 1,330,493,024
	<i>Value Added</i>	\$ 619,666,368
Brookings County-Hampton SD	<i>Peak Year Employment</i>	255
	<i>Output</i>	\$ 47,431,008

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	<i>Value Added</i>	\$ 19,433,664
<i>All Projects</i>	<i>Peak Year Employment</i>	9,838
	<i>Output</i>	\$3,430,722,524
	<i>Value Added</i>	\$1,591,913,037

**Table 23. Tax Summary**

Tax Summary: Variation in Totals by State for Peak Construction Year Tax Revenue (where  
“Peak Year” Varies by State from 2012 to 2015)

Source: IMPLAN

Minnesota Totals	Federal Gov. Non-Defense	\$90,124,766
	State/Local Non-Education	\$48,180,412
North Dakota Totals	Federal Gov. Non-Defense	\$889,903
	State/Local Non-Education	\$398,024
South Dakota Totals	Federal Gov. Non-Defense	\$1,688,587
	State/Local Non-Education	\$732,205
Wisconsin Totals	Federal Gov. Non-Defense	\$4,667,740
	State/Local Non-Education	\$2,637,106
Grand Total		\$149,318,743

■

## References

For discussion of IMPLAN and input output modeling, see the following:

Maki, Wilbur R., and Richard W. Lichty. Urban Regional Economics: Concepts, Tools, Applications. February 2000. Iowa State Press.

Miernyk , Willam. Elements of Input Output Analysis, New York, Random House, 1966.

Miller, Ronald E., and Peter D. Blair. Input-output Analysis: Foundations and Extensions, Englewood Cliffs, N.J. PrenticeHall, 1985 (out of print).

Olson, Doug and Scott Lindall, "IMPLAN Professional Software, Analysis, and Data Guide," Minnesota IMPLAN Group, Inc., 1725 Tower Drive West, Suite 140, Stillwater, MN 55082, [www.implan.com](http://www.implan.com).

For more information on CapX2020 projects, see the FAQs, maps, newsletters and other materials at:

<http://www.capx2020.com/>

## Appendix A: Complete Summary Tables: All Measures, All Effects, All Years, All Projects

CAPX Projects, Construction Impacts, All Measures, All Effects; Total by Project, and Total by Year  
Source: IMPLAN

		2010			
		<i>Direct</i>	<i>Indirect</i>	<i>Induced</i>	<i>Total</i>
Fargo-St. Cloud MN	Employment	0	0	0	0
	Output	0	0	0	0
	Value Added	0	0	0	0
Fargo-St. Cloud ND	Employment				
	Output				
	Value Added				
St. Cloud- Monticello MN	Employment	177	73	102	352
	Output	26,440,850	12,126,597	13,182,189	51,749,636
	Value Added	10,226,317	6,230,467	7,645,197	24,101,981
Hampton- Rochester MN	Employment	0	0	0	0
	Output	0	0	0	0
	Value Added	0	0	0	0
Hampton-La Crosse WI	Employment	0	0	0	0
	Output	0	0	0	0
	Value Added	0	0	0	0
Bemidji-Grand Rapids	Employment	64	26	37	127
	Output	9,526,048	4,368,944	4,749,248	18,644,224
	Value Added	3,684,312	2,244,696	2,754,392	8,683,392
Brookings County Hampton MN	Employment	46	19	27	92
	Output	6,900,000	3,164,552	3,440,016	13,504,576
	Value Added	2,668,656	1,625,900	1,995,088	6,289,648
Brookings County Hampton SD	Employment	0	0	0	0
	Output	0	0	0	0
	Value Added	0	0	0	0
					2010
Total by Year:					571
					\$83,898,436
					\$39,075,021

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CAPX Projects, Construction Impacts, All Measures, All Effects; Total by Project, and Total by Year  
Source: IMPLAN

		2011			
		<i>Direct</i>	<i>Indirect</i>	<i>Induced</i>	<i>Total</i>
Fargo-St. Cloud MN	Employment	0	0	0	0
	Output	0	0	0	0
	Value Added	0	0	0	0
Fargo-St. Cloud ND	Employment				
	Output				
	Value Added				
St. Cloud- Monticello MN		708	293	407	1,408
		105,763,400	48,506,389	52,728,747	206,998,536
		40,905,268	24,921,867	30,580,784	96,407,920
Hampton- Rochester MN	Employment	0	0	0	0
	Output	0	0	0	0
	Value Added	0	0	0	0
Hampton-La Crosse WI	Employment	0	0	0	0
	Output	0	0	0	0
	Value Added	0	0	0	0
Bemidji-Grand Rapids	Employment	255	106	147	507
	Output	38,104,192	17,475,776	18,996,992	74,576,896
	Value Added	14,737,248	8,978,784	11,017,568	34,733,568
Brookings County Hampton MN	Employment	171	71	99	341
	Output	25,600,000	11,740,928	12,762,976	50,103,936
	Value Added	9,901,088	6,032,320	7,402,064	23,335,488
Brookings County Hampton SD	Employment	0	0	0	0
	Output	0	0	0	0
	Value Added	0	0	0	0
					2011
Total by Year:					2,257
					\$331,679,368
					\$154,476,976

CAPX Projects, Construction Impacts, All Measures, All Effects; Total by Project, and Total by Year  
Source: IMPLAN

		2012			
		<i>Direct</i>	<i>Indirect</i>	<i>Induced</i>	<i>Total</i>
Fargo-St. Cloud MN	Employment	708	293	407	1,408
	Output	105,763,400	48,506,389	52,728,747	206,998,536
	Value Added	40,905,268	24,921,867	30,580,784	96,407,920
Fargo-St. Cloud ND	Employment	0	0	0	0
	Output	0	0	0	0
	Value Added	0	0	0	0
St. Cloud- Monticello MN		0	0	0	0
		0	0	0	0
		0	0	0	0
Hampton- Rochester MN	Employment	418	173	240	830
	Output	62,365,312	28,602,688	31,092,480	122,060,544
	Value Added	24,120,512	14,695,616	18,032,512	56,848,640
Hampton-La Crosse WI	Employment	206	86	114	406
	Output	30,717,248	11,827,584	13,198,944	55,743,744
	Value Added	11,858,368	6,134,144	7,488,224	25,480,768
Bemidji-Grand Rapids	Employment	255	106	147	507
	Output	38,104,192	17,475,776	18,996,992	74,576,896
	Value Added	14,737,248	8,978,784	11,017,568	34,733,568
Brookings County Hampton MN	Employment	718	297	413	1,428
	Output	107,200,000	49,165,184	53,444,864	209,809,920
	Value Added	41,460,864	25,260,352	30,996,160	97,717,248
Brookings County Hampton SD	Employment	0	0	0	0
	Output	0	0	0	0
	Value Added	0	0	0	0
					2012
Total by Year:					4,580
Employment					\$669,189,640
Output					\$311,188,144
Value Added					

CAPX Projects, Construction Impacts, All Measures, All Effects; Total by Project, and Total by Year  
Source: IMPLAN

		2013			
		<i>Direct</i>	<i>Indirect</i>	<i>Induced</i>	<i>Total</i>
Fargo-St. Cloud MN	Employment	708	293	407	1,408
	Output	105,763,400	48,506,389	52,728,747	206,998,536
	Value Added	40,905,268	24,921,867	30,580,784	96,407,920
Fargo-St. Cloud ND	Employment	0	0	0	0
	Output	0	0	0	0
	Value Added	0	0	0	0
St. Cloud- Monticello MN		0	0	0	0
		0	0	0	0
		0	0	0	0
Hampton- Rochester MN	Employment	557	230	320	1,107
	Output	83,153,664	38,136,832	41,456,640	162,747,392
	Value Added	32,160,704	19,594,176	24,043,328	75,798,272
Hampton-La Crosse WI	Employment	275	115	151	541
	Output	40,956,288	15,770,112	17,598,592	74,324,992
	Value Added	15,811,168	8,178,864	9,984,288	33,974,272
Bemidji-Grand Rapids	Employment	128	53	73	254
	Output	19,052,096	8,737,888	9,498,496	37,288,448
	Value Added	7,368,624	4,489,392	5,508,784	17,366,784
Brookings County Hampton MN	Employment	2,258	935	1,299	4,492
	Output	337,299,456	154,696,192	168,161,792	660,158,464
	Value Added	130,454,784	79,480,576	97,527,808	307,463,168
Brookings County Hampton SD	Employment	0	0	0	0
	Output	0	0	0	0
	Value Added	0	0	0	0
					2013
Total by Year:					7,802
Employment					\$1,141,517,832
Output					\$531,010,416
Value Added					

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CAPX Projects, Construction Impacts, All Measures, All Effects; Total by Project, and Total by Year  
Source: IMPLAN

		2014			
		<i>Direct</i>	<i>Indirect</i>	<i>Induced</i>	<i>Total</i>
Fargo-St. Cloud MN	Employment	637	264	366	1,268
	Output	95,186,944	43,655,680	47,455,872	186,298,368
	Value Added	36,814,720	22,429,632	27,522,688	86,767,104
Fargo-St. Cloud ND	Employment	74	21	25	120
	Output	10,576,320	2,707,400	2,658,680	15,942,400
	Value Added	3,866,528	1,461,688	1,509,276	6,837,488
St. Cloud-Monticello MN		0	0	0	0
		0	0	0	0
		0	0	0	0
Hampton-Rochester MN	Employment	557	230	320	1,107
	Output	83,153,664	38,136,832	41,456,640	162,747,392
	Value Added	32,160,704	19,594,176	24,043,328	75,798,272
Hampton-La Crosse WI	Employment	275	115	151	541
	Output	40,956,288	15,770,112	17,598,592	74,324,992
	Value Added	15,811,168	8,178,864	9,984,288	33,974,272
Bemidji-Grand Rapids	Employment	0	0	0	0
	Output	0	0	0	0
	Value Added	0	0	0	0
Brookings County-Hampton MN	Employment	1,315	544	756	2,615
	Output	196,399,616	90,075,136	97,915,904	384,390,144
	Value Added	75,960,064	46,279,168	56,787,712	179,026,944
Brookings County-Hampton SD	Employment	151	50	55	255
	Output	19,999,936	5,823,584	5,797,072	31,620,672
	Value Added	6,565,232	3,069,872	3,320,672	12,955,776

Total by Year:      Employment  
                                 Output  
                                 Value Added

2014
5,907
\$855,323,968
\$395,359,856

CAPX Projects, Construction Impacts, All Measures, All Effects; Total by Project, and Total by Year  
Source: IMPLAN

		2015			
		<i>Direct</i>	<i>Indirect</i>	<i>Induced</i>	<i>Total</i>
Fargo-St. Cloud MN	Employment	637	264	366	1,268
	Output	95,186,944	43,655,680	47,455,872	186,298,368
	Value Added	36,814,720	22,429,632	27,522,688	86,767,104
Fargo-St. Cloud ND	Employment	74	21	25	120
	Output	10,576,320	2,707,400	2,658,680	15,942,400
	Value Added	3,866,528	1,461,688	1,509,276	6,837,488
St. Cloud-Monticello MN		0	0	0	0
		0	0	0	0
		0	0	0	0
Hampton-Rochester MN	Employment	278	115	160	554
	Output	41,576,832	19,068,416	20,728,320	81,373,696
	Value Added	16,080,352	9,797,088	12,021,664	37,899,136
Hampton-La Crosse WI	Employment	137	58	76	271
	Output	20,478,144	7,885,056	8,799,296	37,162,496
	Value Added	7,905,584	4,089,432	4,992,144	16,987,136
Bemidji-Grand Rapids	Employment	0	0	0	0
	Output	0	0	0	0
	Value Added	0	0	0	0
Brookings County-Hampton MN	Employment	43	18	25	85
	Output	6,400,000	2,935,232	3,190,744	12,525,984
	Value Added	2,475,272	1,508,080	1,850,516	5,833,872
Brookings County-Hampton SD	Employment	75	25	27	128
	Output	9,999,968	2,911,792	2,898,536	15,810,336
	Value Added	3,282,616	1,534,936	1,660,336	6,477,888
		2015			
Total by Year:		Employment	2,425		
		Output	\$349,113,280		
		Value Added	\$160,802,624		

CAPX Projects, Construction Impacts, All Measures, All Effects; Total by Project, and T  
Source: IMPLAN

		Total by Project:	Peak Year Employment
Fargo-St. Cloud MN	Employment	--	1408
	Output	\$ 786,593,808	
	Value Added	\$ 366,350,048	
Fargo-St. Cloud ND	Employment	--	120
	Output	\$ 31,884,800	
	Value Added	\$ 13,674,976	
St. Cloud- Monticello MN		--	1408
		\$ 258,748,172	
		\$ 120,509,901	
Hampton- Rochester MN	Employment	--	1107
	Output	\$ 528,929,024	
	Value Added	\$ 246,344,320	
Hampton-La Crosse WI	Employment	--	541
	Output	\$ 241,556,224	
	Value Added	\$ 110,416,448	
Bemidji-Grand Rapids	Employment	--	507
	Output	\$ 205,086,464	
	Value Added	\$ 95,517,312	
Brookings County Hampton MN	Employment	--	4492
	Output	\$ 1,330,493,024	
	Value Added	\$ 619,666,368	
Brookings County Hampton SD	Employment	--	255
	Output	\$ 47,431,008	
	Value Added	\$ 19,433,664	
			9838
All Years	Employment	--	
	Output	\$ 3,430,722,524	
	Value Added	\$ 1,591,913,037	

CAPX Projects, Construction Impacts, All Measures, All Effects  
Source: IMPLAN

		Total by Project:	
	Employment		--
Fargo-Monticello MN	Output	\$	1,045,341,952
	Value Added	\$	486,859,584
Fargo-Monticello ND	Employment		--
	Output	\$	31,884,800
	Value Added	\$	13,674,976
Hampton-Rochester MN	Employment		--
	Output	\$	528,929,024
	Value Added	\$	246,344,320
Hampton-La Crosse WI	Employment		--
	Output	\$	241,556,224
	Value Added	\$	110,416,448
Bemidji-Grand Rapids	Employment		--
	Output	\$	865,244,928
	Value Added	\$	402,980,480
Brookings County Hampton MN	Employment		--
	Output	\$	1,330,493,024
	Value Added	\$	619,666,368
Brookings County Hampton SD	Employment		--
	Output	\$	47,431,008
	Value Added	\$	19,433,664
All Years	Employment		--
	Output	\$	3,430,722,496
	Value Added	\$	1,591,912,672



## **Appendix B: Indirect and Induced Jobs Dependent on CAPX2020 Projects**

The top 25 indirect and induced jobs creating sectors are indicated in red type. Summary tables showing the totals for each impact effect (direct, indirect and induced) as well as a full list of all indirect and induced jobs created during the peak year employment for each proposed CapX2020 projects is shown in the tables below.

### Summary of totals for each impact effect (direct, indirect, and induced):

CAPX Projects, Construction Impacts, Employment Totals by Project and by Year  
Source: IMPLAN

		Fargo-St. Cloud MN	Fargo-St. Cloud ND	St. Cloud-Monticello MN	Hampton-Rochester MN	Hampton-La Crosse WI	Bemidji-Grand Rapids	Brookings County-Hampton MN	Brookings County-Hampton SD
2010	Direct	0	0	177	0	0	64	46	0
	Indirect	0	0	73	0	0	26	19	0
	Induced	0	0	102	0	0	37	27	0
	Total	0	0	352	0	0	127	92	0
2011	Direct	0	0	708	0	0	255	171	0
	Indirect	0	0	293	0	0	106	71	0
	Induced	0	0	407	0	0	147	99	0
	Total	0	1,408	0	0	0	507	341	0
2012	Direct	708	0	0	418	206	255	718	0
	Indirect	293	0	0	173	86	106	297	0
	Induced	407	0	0	240	114	147	413	0
	Total	1,408	0	0	830	406	507	1,428	0
2013	Direct	708	0	0	557	275	128	2,258	0
	Indirect	293	0	0	230	115	53	935	0
	Induced	407	0	0	320	151	73	1,299	0
	Total	1,408	0	0	1,107	541	254	4,492	0
2014	Direct	637	74	0	557	275	0	1,315	151
	Indirect	264	21	0	230	115	0	544	50
	Induced	366	25	0	320	151	0	756	55
	Total	1,268	120	0	1,107	541	0	2,615	255
2015	Direct	637	74	0	278	137	0	43	75
	Indirect	264	21	0	115	58	0	18	25
	Induced	366	25	0	160	76	0	25	27
	Total	1,268	120	0	554	271	0	85	128
peak year employment		1,408	120	1,408	1,107	541	507	4,492	255

**All indirect and induced jobs created during the peak year employment for each proposed CapX2020 project:**

Tables are presented in the following order:

1. Fargo-St. Cloud MN
2. Fargo-St. Cloud ND
3. Monticello-St. Cloud MN
4. Hampton-Rochester-La Crosse MN
5. Hampton-Rochester-La Crosse WI
6. Bemidji-Grand Rapids MN
7. Brookings County-Hampton MN
8. Brookings County-Hampton SD

Employment	Fargo-St. Cloud 2013	Copyright 2010 Minnesota IMPLAN Group, Inc.				
Sector	Description	Direct	Indirect	Induced	Total	Multiplier
0	Total	708.0	293.1	407.2	1,408.4	1.99
36	Construction of other new nonresidential structures	708.0	0.0	0.0	708.0	
369	Architectural, engineering and related services	0.0	67.9	1.3	69.2	
413	Food services and drinking places	0.0	9.6	42.6	52.2	
319	Wholesale trade businesses	0.0	16.3	12.4	28.6	
360	Real estate establishments	0.0	7.7	17.9	25.5	
382	Employment services	0.0	16.9	7.6	24.5	
397	Private hospitals	0.0	0.0	19.3	19.3	
394	Offices of physicians, dentists, and other health practitioners	0.0	0.0	19.1	19.1	
329	Retail stores – general merchandise	0.0	4.4	14.1	18.5	
324	Retail stores – food and beverage	0.0	4.0	13.3	17.3	
398	Nursing and residential care facilities	0.0	0.0	15.8	15.8	
331	Retail non-stores – direct and electronic sales	0.0	5.0	10.2	15.2	
425	Civic, social, professional and similar organizations	0.0	5.6	7.8	13.4	
320	Retail stores – motor vehicle and parts	0.0	4.4	8.8	13.2	
335	Transport by truck	0.0	9.0	3.4	12.4	
354	Monetary authorities and depository credit intermediation activities	0.0	5.4	6.4	11.9	

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388	Services to buildings and dwellings	0.0	7.0	4.5	11.5	
367	Legal services	0.0	7.0	4.4	11.4	
414	Automotive repair and maintenance, except car washes	0.0	5.6	5.3	10.9	
356	Securities, commodity contracts, investments and related activities	0.0	2.9	7.3	10.2	
330	Retail stores – miscellaneous	0.0	2.5	7.0	9.6	
426	Private household operations	0.0	0.0	9.5	9.5	
400	Individual and family services	0.0	0.0	8.7	8.7	
323	Retail stores – building material and garden supply	0.0	2.2	6.5	8.7	
327	Retail stores – clothing and clothing accessories	0.0	1.8	6.6	8.4	
368	Accounting, tax preparation, bookkeeping and payroll services	0.0	5.8	2.5	8.3	
357	Insurance carriers	0.0	1.1	6.1	7.1	
417	Commercial and industrial machinery and equipment repair and maintenance	0.0	6.3	0.6	6.9	
392	Private junior colleges, colleges, universities and professional schools	0.0	0.1	6.3	6.4	
326	Retail stores – gasoline stations	0.0	1.5	4.8	6.3	
325	Retail stores – health and personal care	0.0	1.3	4.5	5.9	
328	Retail stores – sporting goods, hobby, book and music	0.0	1.4	4.1	5.6	
391	Private elementary and secondary schools	0.0	0.0	5.2	5.2	
161	Ready-mix concrete manufacturing	0.0	4.9	0.0	5.0	
393	Other private educational services	0.0	0.1	4.8	4.9	
381	Management of companies and enterprises	0.0	3.1	1.8	4.9	
399	Child day care services	0.0	0.0	4.8	4.8	
351	Telecommunications	0.0	2.5	2.2	4.7	
355	Non-depository credit intermediation and related activities	0.0	1.4	3.1	4.5	
395	Home health care services	0.0	0.0	4.5	4.5	
396	Medical and diagnostic labs and outpatient and other ambulatory care services	0.0	0.0	4.4	4.4	
386	Business support services	0.0	2.6	1.7	4.3	
419	Personal care services	0.0	0.0	4.2	4.2	
374	Management, scientific and technical consulting services	0.0	2.5	1.5	4.0	
377	Advertising and related services	0.0	1.9	2.0	3.9	
321	Retail stores – furniture and home furnishings	0.0	0.9	2.9	3.9	
339	Couriers and messengers	0.0	1.9	1.7	3.7	
322	Retail stores – electronics and appliances	0.0	1.2	2.4	3.7	
39	Maintenance and repair construction of nonresidential structures	0.0	2.2	1.5	3.6	
401	Community food, housing and other relief services, including rehabilitation	0.0	0.0	3.5	3.5	

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	services					
424	Grant-making, giving and social advocacy organizations	0.0	0.0	3.4	3.4	
427	U.S. Postal Service	0.0	1.4	1.9	3.3	
358	Insurance agencies, brokerages and related activities	0.0	0.5	2.8	3.3	
432	Other state and local government enterprises	0.0	0.8	2.3	3.1	
336	Transit and ground passenger transportation	0.0	1.3	1.8	3.1	
365	Commercial and industrial machinery and equipment rental and leasing	0.0	3.0	0.1	3.1	
387	Investigation and security services	0.0	1.6	1.3	2.9	
407	Fitness and recreational sports centers	0.0	0.5	2.4	2.9	
99	Wood windows and doors and millwork manufacturing	0.0	2.8	0.1	2.9	
187	Ornamental and architectural metal products manufacturing	0.0	2.7	0.1	2.8	
409	Amusement parks, arcades and gambling industries	0.0	0.0	2.7	2.7	
402	Performing arts companies	0.0	0.4	2.3	2.7	
372	Computer systems design services	0.0	1.8	0.8	2.6	
31	Electric power generation, transmission and distribution	0.0	1.0	1.5	2.5	
410	Other amusement and recreation industries	0.0	0.1	2.3	2.5	
404	Promoters of performing arts and sports and agents for public figures	0.0	0.4	1.8	2.3	
163	Other concrete product manufacturing	0.0	2.2	0.0	2.2	
113	Printing	0.0	1.0	1.2	2.2	
389	Other support services	0.0	1.3	0.8	2.1	
40	Maintenance and repair construction of residential structures	0.0	0.1	2.0	2.1	
162	Concrete pipe, brick and block manufacturing	0.0	2.0	0.0	2.1	
380	All other miscellaneous professional, scientific and technical services	0.0	1.5	0.4	2.0	
416	Electronic and precision equipment repair and maintenance	0.0	1.5	0.4	1.9	
422	Other personal services	0.0	0.1	1.8	1.9	
186	Plate work and fabricated structural product manufacturing	0.0	1.8	0.0	1.8	
384	Office administrative services	0.0	1.2	0.5	1.7	
418	Personal and household goods repair and maintenance	0.0	1.2	0.5	1.7	
373	Other computer related services, including facilities management	0.0	1.3	0.4	1.7	
390	Waste management and remediation services	0.0	0.8	0.8	1.6	
338	Scenic and sightseeing transportation and support activities for transportation	0.0	1.0	0.6	1.6	
421	Dry-cleaning and laundry services	0.0	0.2	1.4	1.6	
352	Data processing, hosting, ISP, web search portals and related services	0.0	0.6	1.0	1.6	
332	Transport by air	0.0	0.5	1.1	1.6	

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379	Veterinary services	0.0	0.0	1.6	1.6	
415	Car washes	0.0	0.6	1.0	1.5	
117	Asphalt shingle and coating materials manufacturing	0.0	1.4	0.0	1.4	
341	Newspaper publishers	0.0	0.5	0.8	1.3	
423	Religious organizations	0.0	0.0	1.3	1.3	
340	Warehousing and storage	0.0	0.6	0.7	1.3	
149	Other plastics product manufacturing	0.0	1.1	0.2	1.3	
403	Spectator sports companies	0.0	0.3	0.9	1.3	
346	Motion picture and video industries	0.0	0.3	0.9	1.2	
102	Prefabricated wood building manufacturing	0.0	1.2	0.0	1.2	
363	General and consumer goods rental except video tapes and discs	0.0	0.5	0.7	1.2	
166	Cut stone and stone product manufacturing	0.0	1.1	0.0	1.2	
370	Specialized design services	0.0	0.9	0.2	1.1	
359	Funds, trusts and other financial vehicles	0.0	0.0	1.1	1.1	
25	Mining and quarrying stone	0.0	1.1	0.0	1.1	
375	Environmental and other technical consulting services	0.0	0.7	0.3	1.0	
376	Scientific research and development services	0.0	0.6	0.4	1.0	
430	State and local government passenger transit	0.0	0.4	0.6	1.0	
348	Radio and television broadcasting	0.0	0.4	0.5	1.0	
362	Automotive equipment rental and leasing	0.0	0.5	0.5	1.0	
383	Travel arrangement and reservation services	0.0	0.5	0.5	1.0	
97	Engineered wood member and truss manufacturing	0.0	0.9	0.0	0.9	
189	Metal tank (heavy gauge) manufacturing	0.0	0.8	0.0	0.8	
60	Poultry processing	0.0	0.0	0.7	0.7	
333	Transport by rail	0.0	0.5	0.2	0.7	
420	Death care services	0.0	0.0	0.6	0.6	
364	Video tape and disc rental	0.0	0.0	0.6	0.6	
26	Mining and quarrying sand, gravel, clay and ceramic and refractory minerals	0.0	0.6	0.0	0.6	
406	Museums, historical sites, zoos and parks	0.0	0.0	0.6	0.6	
405	Independent artists, writers and performers	0.0	0.3	0.3	0.6	
95	Sawmills and wood preservation	0.0	0.5	0.0	0.6	
62	Bread and bakery product manufacturing	0.0	0.0	0.5	0.5	
107	Paperboard container manufacturing	0.0	0.4	0.2	0.5	
169	Miscellaneous nonmetallic mineral product manufacturing	0.0	0.5	0.0	0.5	

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411	Hotels and motels, including casino hotels	0.0	0.2	0.3	0.5	
20	Extraction of oil and natural gas	0.0	0.4	0.1	0.4	
371	Custom computer programming services	0.0	0.3	0.1	0.4	
195	Machine shops	0.0	0.4	0.0	0.4	
350	Internet publishing and broadcasting	0.0	0.2	0.2	0.4	
14	Animal production, except cattle, poultry and eggs	0.0	0.0	0.4	0.4	
378	Photographic services	0.0	0.1	0.3	0.4	
70	Soft drink and ice manufacturing	0.0	0.0	0.4	0.4	
16	Commercial logging	0.0	0.3	0.0	0.4	
213	Other commercial and service industry machinery manufacturing	0.0	0.4	0.0	0.4	
115	Petroleum refineries	0.0	0.3	0.1	0.4	
32	Natural gas distribution	0.0	0.2	0.2	0.4	
342	Periodical publishers	0.0	0.1	0.2	0.3	
295	Wood kitchen cabinet and countertop manufacturing	0.0	0.2	0.2	0.3	
429	Other federal government enterprises	0.0	0.1	0.2	0.3	
12	Dairy cattle and milk production	0.0	0.0	0.3	0.3	
349	Cable and other subscription programming	0.0	0.1	0.2	0.3	
353	Other information services	0.0	0.1	0.2	0.3	
144	Plastics pipe and pipe fitting manufacturing	0.0	0.3	0.0	0.3	
366	Lessors of nonfinancial intangible assets	0.0	0.2	0.1	0.3	
273	Wiring device manufacturing	0.0	0.3	0.0	0.3	
216	Air conditioning, refrigeration and warm air heating equipment manufacturing	0.0	0.3	0.0	0.3	
343	Book publishers	0.0	0.0	0.3	0.3	
116	Asphalt paving mixture and block manufacturing	0.0	0.3	0.0	0.3	
202	Other fabricated metal manufacturing	0.0	0.2	0.0	0.3	
194	Spring and wire product manufacturing	0.0	0.2	0.0	0.3	
197	Coating, engraving, heat treating and allied activities	0.0	0.2	0.0	0.2	
59	Animal (except poultry) slaughtering, rendering and processing	0.0	0.0	0.2	0.2	
196	Turned product and screw, nut and bolt manufacturing	0.0	0.2	0.0	0.2	
136	Paint and coating manufacturing	0.0	0.2	0.0	0.2	
2	Grain farming	0.0	0.0	0.2	0.2	
317	All other miscellaneous manufacturing	0.0	0.0	0.2	0.2	
345	Software publishers	0.0	0.1	0.1	0.2	
344	Directory, mailing list and other publishers	0.0	0.1	0.1	0.2	

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159	Glass product manufacturing made of purchased glass	0.0	0.1	0.1	0.2	
19	Support activities for agriculture and forestry	0.0	0.1	0.1	0.2	
201	Fabricated pipe and pipe fitting manufacturing	0.0	0.2	0.0	0.2	
260	Lighting fixture manufacturing	0.0	0.2	0.0	0.2	
3	Vegetable and melon farming	0.0	0.0	0.2	0.2	
142	Plastics packaging materials and unlaminated film and sheet manufacturing	0.0	0.1	0.1	0.2	
100	Wood container and pallet manufacturing	0.0	0.1	0.1	0.2	
408	Bowling centers	0.0	0.0	0.2	0.2	
385	Facilities support services	0.0	0.1	0.1	0.2	
314	Sign manufacturing	0.0	0.1	0.1	0.2	
215	Heating equipment (except warm air furnaces) manufacturing	0.0	0.2	0.0	0.2	
283	Motor vehicle parts manufacturing	0.0	0.1	0.0	0.2	
118	Petroleum lubricating oil and grease manufacturing	0.0	0.1	0.0	0.2	
188	Power boiler and heat exchanger manufacturing	0.0	0.2	0.0	0.2	
54	Fruit and vegetable canning, pickling and drying	0.0	0.0	0.1	0.2	
18	Commercial hunting and trapping	0.0	0.0	0.1	0.1	
53	Frozen food manufacturing	0.0	0.0	0.1	0.1	
55	Fluid milk and butter manufacturing	0.0	0.0	0.1	0.1	
250	Automatic environmental control manufacturing	0.0	0.1	0.0	0.1	
69	All other food manufacturing	0.0	0.0	0.1	0.1	
96	Veneer and plywood manufacturing	0.0	0.1	0.0	0.1	
198	Valve and fittings other than plumbing manufacturing	0.0	0.1	0.0	0.1	
228	Material handling equipment manufacturing	0.0	0.1	0.0	0.1	
239	Other communications equipment manufacturing	0.0	0.1	0.0	0.1	
11	Cattle ranching and farming	0.0	0.0	0.1	0.1	
337	Transport by pipeline	0.0	0.1	0.0	0.1	
103	All other miscellaneous wood product manufacturing	0.0	0.1	0.1	0.1	
272	Communication and energy wire and cable manufacturing	0.0	0.1	0.0	0.1	
141	All other chemical product and preparation manufacturing	0.0	0.1	0.0	0.1	
133	Pharmaceutical preparation manufacturing	0.0	0.0	0.1	0.1	
306	Surgical appliance and supplies manufacturing	0.0	0.0	0.1	0.1	
65	Snack food manufacturing	0.0	0.0	0.1	0.1	
114	Support activities for printing	0.0	0.0	0.0	0.1	
108	Coated and laminated paper, packaging paper and plastics film manufacturing	0.0	0.0	0.0	0.1	

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56	Cheese manufacturing	0.0	0.0	0.1	0.1	
146	Polystyrene foam product manufacturing	0.0	0.1	0.0	0.1	
33	Water, sewage and other treatment and delivery systems	0.0	0.0	0.1	0.1	
347	Sound recording industries	0.0	0.0	0.1	0.1	
431	State and local government electric utilities	0.0	0.0	0.1	0.1	
171	Steel product manufacturing from purchased steel	0.0	0.1	0.0	0.1	
152	Other rubber product manufacturing	0.0	0.1	0.0	0.1	
267	Motor and generator manufacturing	0.0	0.1	0.0	0.1	
105	Paper mills	0.0	0.0	0.1	0.1	
58	Ice cream and frozen dessert manufacturing	0.0	0.0	0.1	0.1	
98	Reconstituted wood product manufacturing	0.0	0.1	0.0	0.1	
71	Breweries	0.0	0.0	0.1	0.1	
302	Showcase, partition, shelving and locker manufacturing	0.0	0.1	0.0	0.1	
6	Greenhouse, nursery and floriculture production	0.0	0.0	0.1	0.1	
291	Boat building	0.0	0.0	0.1	0.1	
268	Switchgear and switchboard apparatus manufacturing	0.0	0.1	0.0	0.1	
305	Surgical and medical instrument, laboratory and medical instrument manufacturing	0.0	0.0	0.1	0.1	
63	Cookie, cracker and pasta manufacturing	0.0	0.0	0.1	0.1	
10	All other crop farming	0.0	0.1	0.0	0.1	
134	In-vitro diagnostic substance manufacturing	0.0	0.0	0.1	0.1	
85	All other textile product mills	0.0	0.0	0.0	0.1	
137	Adhesive manufacturing	0.0	0.1	0.0	0.1	
87	Cut and sew apparel contractors	0.0	0.0	0.0	0.1	
183	Crown and closure manufacturing and metal stamping	0.0	0.0	0.0	0.1	
170	Iron and steel mills and ferroalloy manufacturing	0.0	0.1	0.0	0.1	
139	Toilet preparation manufacturing	0.0	0.0	0.1	0.1	
143	Unlaminated plastics profile shape manufacturing	0.0	0.0	0.0	0.1	
226	Pump and pumping equipment manufacturing	0.0	0.1	0.0	0.1	
309	Dental laboratories manufacturing	0.0	0.0	0.1	0.1	
185	Hand tool manufacturing	0.0	0.0	0.0	0.1	
38	Construction of other new residential structures	0.0	0.0	0.0	0.1	
1	Oilseed farming	0.0	0.0	0.0	0.1	
9	Sugarcane and sugar beet farming	0.0	0.0	0.0	0.1	

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42	Other animal food manufacturing	0.0	0.0	0.0	0.1	
<b>Employment</b>	CAPX 2020 Fargo 2015	Copyright 2010 Minnesota IMPLAN Group, Inc.				
<b>Sector</b>	<b>Description</b>	<b>Direct</b>	<b>Indirect</b>	<b>Induced</b>	<b>Total</b>	<b>Multiplier</b>
0	Total	74.1	21.0	25.3	120.3	1.62
36	Construction of other new nonresidential structures	74.1	0.0	0.0	74.1	
369	Architectural, engineering and related services	0.0	3.9	0.0	4.0	
413	Food services and drinking places	0.0	0.7	3.0	3.7	
319	Wholesale trade businesses	0.0	1.9	1.0	2.9	
397	Private hospitals	0.0	0.0	1.8	1.8	
329	Retail stores – general merchandise	0.0	0.5	0.9	1.4	
324	Retail stores – food and beverage	0.0	0.5	1.0	1.4	
394	Offices of physicians, dentists, and other health practitioners	0.0	0.0	1.4	1.4	
331	Retail non-stores – direct and electronic sales	0.0	0.6	0.8	1.4	
320	Retail stores – motor vehicle and parts	0.0	0.5	0.6	1.1	
398	Nursing and residential care facilities	0.0	0.0	1.0	1.0	
335	Transport by truck	0.0	0.8	0.2	1.0	
354	Monetary authorities and depository credit intermediation activities	0.0	0.5	0.5	1.0	
425	Civic, social, professional and similar organizations	0.0	0.5	0.5	1.0	
414	Automotive repair and maintenance, except car washes	0.0	0.6	0.4	0.9	
360	Real estate establishments	0.0	0.3	0.6	0.9	
417	Commercial and industrial machinery and equipment repair and maintenance	0.0	0.8	0.0	0.8	
382	Employment services	0.0	0.6	0.2	0.8	
330	Retail stores – miscellaneous	0.0	0.3	0.5	0.8	
388	Services to buildings and dwellings	0.0	0.5	0.2	0.7	
426	Private household operations	0.0	0.0	0.7	0.7	
357	Insurance carriers	0.0	0.1	0.6	0.7	
323	Retail stores – building material and garden supply	0.0	0.2	0.4	0.6	
367	Legal services	0.0	0.4	0.2	0.6	
327	Retail stores – clothing and clothing accessories	0.0	0.2	0.4	0.6	
368	Accounting, tax preparation, bookkeeping and payroll services	0.0	0.4	0.1	0.5	
325	Retail stores – health and personal care	0.0	0.2	0.3	0.5	
399	Child day care services	0.0	0.0	0.5	0.5	

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386	Business support services	0.0	0.3	0.1	0.5	
400	Individual and family services	0.0	0.0	0.5	0.5	
326	Retail stores – gasoline stations	0.0	0.1	0.3	0.4	
351	Telecommunications	0.0	0.3	0.2	0.4	
365	Commercial and industrial machinery and equipment rental and leasing	0.0	0.4	0.0	0.4	
356	Securities, commodity contracts, investments and related activities	0.0	0.1	0.3	0.4	
328	Retail stores – sporting goods, hobby, book and music	0.0	0.1	0.3	0.4	
161	Ready-mix concrete manufacturing	0.0	0.4	0.0	0.4	
419	Personal care services	0.0	0.0	0.3	0.3	
381	Management of companies and enterprises	0.0	0.2	0.1	0.3	
322	Retail stores – electronics and appliances	0.0	0.1	0.2	0.3	
358	Insurance agencies, brokerages and related activities	0.0	0.1	0.3	0.3	
355	Non-depository credit intermediation and related activities	0.0	0.1	0.2	0.3	
432	Other state and local government enterprises	0.0	0.1	0.2	0.3	
393	Other private educational services	0.0	0.0	0.3	0.3	
321	Retail stores – furniture and home furnishings	0.0	0.1	0.2	0.3	
409	Amusement parks, arcades and gambling industries	0.0	0.0	0.3	0.3	
39	Maintenance and repair construction of nonresidential structures	0.0	0.2	0.1	0.2	
396	Medical and diagnostic labs and outpatient and other ambulatory care services	0.0	0.0	0.2	0.2	
427	U.S. Postal Service	0.0	0.1	0.1	0.2	
401	Community food, housing and other relief services, including rehabilitation services	0.0	0.0	0.2	0.2	
373	Other computer related services, including facilities management	0.0	0.2	0.0	0.2	
424	Grant-making, giving and social advocacy organizations	0.0	0.0	0.2	0.2	
416	Electronic and precision equipment repair and maintenance	0.0	0.2	0.0	0.2	
339	Couriers and messengers	0.0	0.1	0.1	0.2	
372	Computer systems design services	0.0	0.2	0.0	0.2	
404	Promoters of performing arts and sports and agents for public figures	0.0	0.0	0.1	0.2	
377	Advertising and related services	0.0	0.1	0.1	0.2	
391	Private elementary and secondary schools	0.0	0.0	0.2	0.2	
99	Wood windows and doors and millwork manufacturing	0.0	0.2	0.0	0.2	
31	Electric power generation, transmission and distribution	0.0	0.1	0.1	0.2	
392	Private junior colleges, colleges, universities and professional schools	0.0	0.0	0.2	0.2	
163	Other concrete product manufacturing	0.0	0.2	0.0	0.2	

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348	Radio and television broadcasting	0.0	0.1	0.1	0.2	
389	Other support services	0.0	0.1	0.0	0.2	
336	Transit and ground passenger transportation	0.0	0.1	0.1	0.1	
338	Scenic and sightseeing transportation and support activities for transportation	0.0	0.1	0.0	0.1	
40	Maintenance and repair construction of residential structures	0.0	0.0	0.1	0.1	
341	Newspaper publishers	0.0	0.1	0.1	0.1	
374	Management, scientific and technical consulting services	0.0	0.1	0.0	0.1	
421	Dry-cleaning and laundry services	0.0	0.0	0.1	0.1	
383	Travel arrangement and reservation services	0.0	0.1	0.1	0.1	
380	All other miscellaneous professional, scientific and technical services	0.0	0.1	0.0	0.1	
415	Car washes	0.0	0.1	0.1	0.1	
352	Data processing, hosting, ISP, web search portals and related services	0.0	0.1	0.1	0.1	
395	Home health care services	0.0	0.0	0.1	0.1	
410	Other amusement and recreation industries	0.0	0.0	0.1	0.1	
407	Fitness and recreational sports centers	0.0	0.0	0.1	0.1	
390	Waste management and remediation services	0.0	0.1	0.0	0.1	
403	Spectator sports companies	0.0	0.0	0.1	0.1	
387	Investigation and security services	0.0	0.1	0.0	0.1	
186	Plate work and fabricated structural product manufacturing	0.0	0.1	0.0	0.1	
379	Veterinary services	0.0	0.0	0.1	0.1	
384	Office administrative services	0.0	0.1	0.0	0.1	
422	Other personal services	0.0	0.0	0.1	0.1	
420	Death care services	0.0	0.0	0.1	0.1	
26	Mining and quarrying sand, gravel, clay and ceramic and refractory minerals	0.0	0.1	0.0	0.1	
162	Concrete pipe, brick and block manufacturing	0.0	0.1	0.0	0.1	
362	Automotive equipment rental and leasing	0.0	0.0	0.0	0.1	
97	Engineered wood member and truss manufacturing	0.0	0.1	0.0	0.1	
363	General and consumer goods rental except video tapes and discs	0.0	0.0	0.0	0.1	

<b>Employment</b>	St. Cloud-Monticello 2011	Copyright 2010 Minnesota IMPLAN Group, Inc.				
<b>Sector</b>	<b>Description</b>	<b>Direct</b>	<b>Indirect</b>	<b>Induced</b>	<b>Total</b>	<b>Multiplier</b>
0	Total	708.0	293.1	407.2	1,408.4	1.99
36	Construction of other new nonresidential structures	708.0	0.0	0.0	708.0	
369	Architectural, engineering and related services	0.0	67.9	1.3	69.2	
413	Food services and drinking places	0.0	9.6	42.6	52.2	
319	Wholesale trade businesses	0.0	16.3	12.4	28.6	
360	Real estate establishments	0.0	7.7	17.9	25.5	
382	Employment services	0.0	16.9	7.6	24.5	
397	Private hospitals	0.0	0.0	19.3	19.3	
394	Offices of physicians, dentists and other health practitioners	0.0	0.0	19.1	19.1	
329	Retail stores – general merchandise	0.0	4.4	14.1	18.5	
324	Retail stores – food and beverage	0.0	4.0	13.3	17.3	
398	Nursing and residential care facilities	0.0	0.0	15.8	15.8	
331	Retail non-stores – direct and electronic sales	0.0	5.0	10.2	15.2	
425	Civic, social, professional and similar organizations	0.0	5.6	7.8	13.4	
320	Retail stores – motor vehicle and parts	0.0	4.4	8.8	13.2	
335	Transport by truck	0.0	9.0	3.4	12.4	
354	Monetary authorities and depository credit intermediation activities	0.0	5.4	6.4	11.9	
388	Services to buildings and dwellings	0.0	7.0	4.5	11.5	
367	Legal services	0.0	7.0	4.4	11.4	
414	Automotive repair and maintenance, except car washes	0.0	5.6	5.3	10.9	
356	Securities, commodity contracts, investments and related activities	0.0	2.9	7.3	10.2	
330	Retail stores – miscellaneous	0.0	2.5	7.0	9.6	
426	Private household operations	0.0	0.0	9.5	9.5	
400	Individual and family services	0.0	0.0	8.7	8.7	
323	Retail stores – building material and garden supply	0.0	2.2	6.5	8.7	
327	Retail stores – clothing and clothing accessories	0.0	1.8	6.6	8.4	
368	Accounting, tax preparation, bookkeeping and payroll services	0.0	5.8	2.5	8.3	
357	Insurance carriers	0.0	1.1	6.1	7.1	
417	Commercial and industrial machinery and equipment repair and maintenance	0.0	6.3	0.6	6.9	

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392	Private junior colleges, colleges, universities and professional schools	0.0	0.1	6.3	6.4	
326	Retail stores – gasoline stations	0.0	1.5	4.8	6.3	
325	Retail stores – health and personal care	0.0	1.3	4.5	5.9	
328	Retail stores – sporting goods, hobby, book and music	0.0	1.4	4.1	5.6	
391	Private elementary and secondary schools	0.0	0.0	5.2	5.2	
161	Ready-mix concrete manufacturing	0.0	4.9	0.0	5.0	
393	Other private educational services	0.0	0.1	4.8	4.9	
381	Management of companies and enterprises	0.0	3.1	1.8	4.9	
399	Child day care services	0.0	0.0	4.8	4.8	
351	Telecommunications	0.0	2.5	2.2	4.7	
355	Non-depository credit intermediation and related activities	0.0	1.4	3.1	4.5	
395	Home health care services	0.0	0.0	4.5	4.5	
396	Medical and diagnostic labs and outpatient and other ambulatory care services	0.0	0.0	4.4	4.4	
386	Business support services	0.0	2.6	1.7	4.3	
419	Personal care services	0.0	0.0	4.2	4.2	
374	Management, scientific and technical consulting services	0.0	2.5	1.5	4.0	
377	Advertising and related services	0.0	1.9	2.0	3.9	
321	Retail stores – furniture and home furnishings	0.0	0.9	2.9	3.9	
339	Couriers and messengers	0.0	1.9	1.7	3.7	
322	Retail stores – electronics and appliances	0.0	1.2	2.4	3.7	
39	Maintenance and repair construction of nonresidential structures	0.0	2.2	1.5	3.6	
401	Community food, housing and other relief services, including rehabilitation services	0.0	0.0	3.5	3.5	
424	Grant-making, giving, and social advocacy organizations	0.0	0.0	3.4	3.4	
427	U.S. Postal Service	0.0	1.4	1.9	3.3	
358	Insurance agencies, brokerages and related activities	0.0	0.5	2.8	3.3	
432	Other state and local government enterprises	0.0	0.8	2.3	3.1	
336	Transit and ground passenger transportation	0.0	1.3	1.8	3.1	
365	Commercial and industrial machinery and equipment rental and leasing	0.0	3.0	0.1	3.1	
387	Investigation and security services	0.0	1.6	1.3	2.9	
407	Fitness and recreational sports centers	0.0	0.5	2.4	2.9	
99	Wood windows and doors and millwork manufacturing	0.0	2.8	0.1	2.9	
187	Ornamental and architectural metal products manufacturing	0.0	2.7	0.1	2.8	
409	Amusement parks, arcades and gambling industries	0.0	0.0	2.7	2.7	

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402	Performing arts companies	0.0	0.4	2.3	2.7	
372	Computer systems design services	0.0	1.8	0.8	2.6	
31	Electric power generation, transmission and distribution	0.0	1.0	1.5	2.5	
410	Other amusement and recreation industries	0.0	0.1	2.3	2.5	
404	Promoters of performing arts and sports and agents for public figures	0.0	0.4	1.8	2.3	
163	Other concrete product manufacturing	0.0	2.2	0.0	2.2	
113	Printing	0.0	1.0	1.2	2.2	
389	Other support services	0.0	1.3	0.8	2.1	
40	Maintenance and repair construction of residential structures	0.0	0.1	2.0	2.1	
162	Concrete pipe, brick and block manufacturing	0.0	2.0	0.0	2.1	
380	All other miscellaneous professional, scientific and technical services	0.0	1.5	0.4	2.0	
416	Electronic and precision equipment repair and maintenance	0.0	1.5	0.4	1.9	
422	Other personal services	0.0	0.1	1.8	1.9	
186	Plate work and fabricated structural product manufacturing	0.0	1.8	0.0	1.8	
384	Office administrative services	0.0	1.2	0.5	1.7	
418	Personal and household goods repair and maintenance	0.0	1.2	0.5	1.7	
373	Other computer related services, including facilities management	0.0	1.3	0.4	1.7	
390	Waste management and remediation services	0.0	0.8	0.8	1.6	
338	Scenic and sightseeing transportation and support activities for transportation	0.0	1.0	0.6	1.6	
421	Dry-cleaning and laundry services	0.0	0.2	1.4	1.6	
352	Data processing, hosting, ISP, web search portals and related services	0.0	0.6	1.0	1.6	
332	Transport by air	0.0	0.5	1.1	1.6	
379	Veterinary services	0.0	0.0	1.6	1.6	
415	Car washes	0.0	0.6	1.0	1.5	
117	Asphalt shingle and coating materials manufacturing	0.0	1.4	0.0	1.4	
341	Newspaper publishers	0.0	0.5	0.8	1.3	
423	Religious organizations	0.0	0.0	1.3	1.3	
340	Warehousing and storage	0.0	0.6	0.7	1.3	
149	Other plastics product manufacturing	0.0	1.1	0.2	1.3	
403	Spectator sports companies	0.0	0.3	0.9	1.3	
346	Motion picture and video industries	0.0	0.3	0.9	1.2	
102	Prefabricated wood building manufacturing	0.0	1.2	0.0	1.2	
363	General and consumer goods rental except video tapes and discs	0.0	0.5	0.7	1.2	

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166	Cut stone and stone product manufacturing	0.0	1.1	0.0	1.2	
370	Specialized design services	0.0	0.9	0.2	1.1	
359	Funds, trusts and other financial vehicles	0.0	0.0	1.1	1.1	
25	Mining and quarrying stone	0.0	1.1	0.0	1.1	
375	Environmental and other technical consulting services	0.0	0.7	0.3	1.0	
376	Scientific research and development services	0.0	0.6	0.4	1.0	
430	State and local government passenger transit	0.0	0.4	0.6	1.0	
348	Radio and television broadcasting	0.0	0.4	0.5	1.0	
362	Automotive equipment rental and leasing	0.0	0.5	0.5	1.0	
383	Travel arrangement and reservation services	0.0	0.5	0.5	1.0	
97	Engineered wood member and truss manufacturing	0.0	0.9	0.0	0.9	
189	Metal tank (heavy gauge) manufacturing	0.0	0.8	0.0	0.8	
60	Poultry processing	0.0	0.0	0.7	0.7	
333	Transport by rail	0.0	0.5	0.2	0.7	
420	Death care services	0.0	0.0	0.6	0.6	
364	Video tape and disc rental	0.0	0.0	0.6	0.6	
26	Mining and quarrying sand, gravel, clay and ceramic and refractory minerals	0.0	0.6	0.0	0.6	
406	Museums, historical sites, zoos and parks	0.0	0.0	0.6	0.6	
405	Independent artists, writers and performers	0.0	0.3	0.3	0.6	
95	Sawmills and wood preservation	0.0	0.5	0.0	0.6	
62	Bread and bakery product manufacturing	0.0	0.0	0.5	0.5	
107	Paperboard container manufacturing	0.0	0.4	0.2	0.5	
169	Miscellaneous nonmetallic mineral product manufacturing	0.0	0.5	0.0	0.5	
411	Hotels and motels, including casino hotels	0.0	0.2	0.3	0.5	
20	Extraction of oil and natural gas	0.0	0.4	0.1	0.4	
371	Custom computer programming services	0.0	0.3	0.1	0.4	
195	Machine shops	0.0	0.4	0.0	0.4	
350	Internet publishing and broadcasting	0.0	0.2	0.2	0.4	
14	Animal production, except cattle, poultry and eggs	0.0	0.0	0.4	0.4	
378	Photographic services	0.0	0.1	0.3	0.4	
70	Soft drink and ice manufacturing	0.0	0.0	0.4	0.4	
16	Commercial logging	0.0	0.3	0.0	0.4	
213	Other commercial and service industry machinery manufacturing	0.0	0.4	0.0	0.4	

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115	Petroleum refineries	0.0	0.3	0.1	0.4	
32	Natural gas distribution	0.0	0.2	0.2	0.4	
342	Periodical publishers	0.0	0.1	0.2	0.3	
295	Wood kitchen cabinet and countertop manufacturing	0.0	0.2	0.2	0.3	
429	Other federal government enterprises	0.0	0.1	0.2	0.3	
12	Dairy cattle and milk production	0.0	0.0	0.3	0.3	
349	Cable and other subscription programming	0.0	0.1	0.2	0.3	
353	Other information services	0.0	0.1	0.2	0.3	
144	Plastics pipe and pipe fitting manufacturing	0.0	0.3	0.0	0.3	
366	Lessors of nonfinancial intangible assets	0.0	0.2	0.1	0.3	
273	Wiring device manufacturing	0.0	0.3	0.0	0.3	
216	Air conditioning, refrigeration and warm air heating equipment manufacturing	0.0	0.3	0.0	0.3	
343	Book publishers	0.0	0.0	0.3	0.3	
116	Asphalt paving mixture and block manufacturing	0.0	0.3	0.0	0.3	
202	Other fabricated metal manufacturing	0.0	0.2	0.0	0.3	
194	Spring and wire product manufacturing	0.0	0.2	0.0	0.3	
197	Coating, engraving, heat treating and allied activities	0.0	0.2	0.0	0.2	
59	Animal (except poultry) slaughtering, rendering and processing	0.0	0.0	0.2	0.2	
196	Turned product and screw, nut, and bolt manufacturing	0.0	0.2	0.0	0.2	
136	Paint and coating manufacturing	0.0	0.2	0.0	0.2	
2	Grain farming	0.0	0.0	0.2	0.2	
317	All other miscellaneous manufacturing	0.0	0.0	0.2	0.2	
345	Software publishers	0.0	0.1	0.1	0.2	
344	Directory, mailing list and other publishers	0.0	0.1	0.1	0.2	
159	Glass product manufacturing made of purchased glass	0.0	0.1	0.1	0.2	
19	Support activities for agriculture and forestry	0.0	0.1	0.1	0.2	
201	Fabricated pipe and pipe fitting manufacturing	0.0	0.2	0.0	0.2	
260	Lighting fixture manufacturing	0.0	0.2	0.0	0.2	
3	Vegetable and melon farming	0.0	0.0	0.2	0.2	
142	Plastics packaging materials and unlaminated film and sheet manufacturing	0.0	0.1	0.1	0.2	
100	Wood container and pallet manufacturing	0.0	0.1	0.1	0.2	
408	Bowling centers	0.0	0.0	0.2	0.2	
385	Facilities support services	0.0	0.1	0.1	0.2	

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314	Sign manufacturing	0.0	0.1	0.1	0.2	
215	Heating equipment (except warm air furnaces) manufacturing	0.0	0.2	0.0	0.2	
283	Motor vehicle parts manufacturing	0.0	0.1	0.0	0.2	
118	Petroleum lubricating oil and grease manufacturing	0.0	0.1	0.0	0.2	
188	Power boiler and heat exchanger manufacturing	0.0	0.2	0.0	0.2	
54	Fruit and vegetable canning, pickling and drying	0.0	0.0	0.1	0.2	
18	Commercial hunting and trapping	0.0	0.0	0.1	0.1	
53	Frozen food manufacturing	0.0	0.0	0.1	0.1	
55	Fluid milk and butter manufacturing	0.0	0.0	0.1	0.1	
250	Automatic environmental control manufacturing	0.0	0.1	0.0	0.1	
69	All other food manufacturing	0.0	0.0	0.1	0.1	
96	Veneer and plywood manufacturing	0.0	0.1	0.0	0.1	
198	Valve and fittings other than plumbing manufacturing	0.0	0.1	0.0	0.1	
228	Material handling equipment manufacturing	0.0	0.1	0.0	0.1	
239	Other communications equipment manufacturing	0.0	0.1	0.0	0.1	
11	Cattle ranching and farming	0.0	0.0	0.1	0.1	
337	Transport by pipeline	0.0	0.1	0.0	0.1	
103	All other miscellaneous wood product manufacturing	0.0	0.1	0.1	0.1	
272	Communication and energy wire and cable manufacturing	0.0	0.1	0.0	0.1	
141	All other chemical product and preparation manufacturing	0.0	0.1	0.0	0.1	
133	Pharmaceutical preparation manufacturing	0.0	0.0	0.1	0.1	
306	Surgical appliance and supplies manufacturing	0.0	0.0	0.1	0.1	
65	Snack food manufacturing	0.0	0.0	0.1	0.1	
114	Support activities for printing	0.0	0.0	0.0	0.1	
108	Coated and laminated paper, packaging paper and plastics film manufacturing	0.0	0.0	0.0	0.1	
56	Cheese manufacturing	0.0	0.0	0.1	0.1	
146	Polystyrene foam product manufacturing	0.0	0.1	0.0	0.1	
33	Water, sewage and other treatment and delivery systems	0.0	0.0	0.1	0.1	
347	Sound recording industries	0.0	0.0	0.1	0.1	
431	State and local government electric utilities	0.0	0.0	0.1	0.1	
171	Steel product manufacturing from purchased steel	0.0	0.1	0.0	0.1	
152	Other rubber product manufacturing	0.0	0.1	0.0	0.1	
267	Motor and generator manufacturing	0.0	0.1	0.0	0.1	

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105	Paper mills	0.0	0.0	0.1	0.1	
58	Ice cream and frozen dessert manufacturing	0.0	0.0	0.1	0.1	
98	Reconstituted wood product manufacturing	0.0	0.1	0.0	0.1	
71	Breweries	0.0	0.0	0.1	0.1	
302	Showcase, partition, shelving and locker manufacturing	0.0	0.1	0.0	0.1	
6	Greenhouse, nursery and floriculture production	0.0	0.0	0.1	0.1	
291	Boat building	0.0	0.0	0.1	0.1	
268	Switchgear and switchboard apparatus manufacturing	0.0	0.1	0.0	0.1	
305	Surgical and medical instrument, laboratory and medical instrument manufacturing	0.0	0.0	0.1	0.1	
63	Cookie, cracker and pasta manufacturing	0.0	0.0	0.1	0.1	
10	All other crop farming	0.0	0.1	0.0	0.1	
134	In-vitro diagnostic substance manufacturing	0.0	0.0	0.1	0.1	
85	All other textile product mills	0.0	0.0	0.0	0.1	
137	Adhesive manufacturing	0.0	0.1	0.0	0.1	
87	Cut and sew apparel contractors	0.0	0.0	0.0	0.1	
183	Crown and closure manufacturing and metal stamping	0.0	0.0	0.0	0.1	
170	Iron and steel mills and ferroalloy manufacturing	0.0	0.1	0.0	0.1	
139	Toilet preparation manufacturing	0.0	0.0	0.1	0.1	
143	Unlaminated plastics profile shape manufacturing	0.0	0.0	0.0	0.1	
226	Pump and pumping equipment manufacturing	0.0	0.1	0.0	0.1	
309	Dental laboratories manufacturing	0.0	0.0	0.1	0.1	
185	Hand tool manufacturing	0.0	0.0	0.0	0.1	
38	Construction of other new residential structures	0.0	0.0	0.0	0.1	
1	Oilseed farming	0.0	0.0	0.0	0.1	
9	Sugarcane and sugar beet farming	0.0	0.0	0.0	0.1	
42	Other animal food manufacturing	0.0	0.0	0.0	0.1	



<b>Employment</b>	CAPX 2020 Brookings County-Hampton 2014	Copyright 2010 Minnesota IMPLAN Group, Inc.				
<b>Sector</b>	<b>Description</b>	<b>Direct</b>	<b>Indirect</b>	<b>Induced</b>	<b>Total</b>	<b>Multiplier</b>
0	Total	556.7	230.5	320.2	1,107.3	1.99
36	Construction of other new nonresidential structures	556.7	0.0	0.0	556.7	
369	Architectural, engineering and related services	0.0	53.4	1.0	54.4	
413	Food services and drinking places	0.0	7.6	33.5	41.0	
319	Wholesale trade businesses	0.0	12.8	9.7	22.5	
360	Real estate establishments	0.0	6.0	14.1	20.1	
382	Employment services	0.0	13.3	6.0	19.3	
397	Private hospitals	0.0	0.0	15.2	15.2	
394	Offices of physicians, dentists and other health practitioners	0.0	0.0	15.0	15.0	
329	Retail stores – general merchandise	0.0	3.5	11.1	14.6	
324	Retail stores – food and beverage	0.0	3.2	10.4	13.6	
398	Nursing and residential care facilities	0.0	0.0	12.4	12.4	
331	Retail non-stores – direct and electronic sales	0.0	3.9	8.0	11.9	
425	Civic, social, professional and similar organizations	0.0	4.4	6.2	10.6	
320	Retail stores – motor vehicle and parts	0.0	3.5	6.9	10.4	
335	Transport by truck	0.0	7.1	2.7	9.7	
354	Monetary authorities and depository credit intermediation activities	0.0	4.3	5.1	9.3	
388	Services to buildings and dwellings	0.0	5.5	3.5	9.1	
367	Legal services	0.0	5.5	3.4	9.0	
414	Automotive repair and maintenance, except car washes	0.0	4.4	4.2	8.6	
356	Securities, commodity contracts, investments and related activities	0.0	2.2	5.8	8.0	
330	Retail stores – miscellaneous	0.0	2.0	5.5	7.5	
426	Private household operations	0.0	0.0	7.5	7.5	
400	Individual and family services	0.0	0.0	6.8	6.8	
323	Retail stores – building material and garden supply	0.0	1.7	5.1	6.8	
327	Retail stores – clothing and clothing accessories	0.0	1.4	5.2	6.6	
368	Accounting, tax preparation, bookkeeping and payroll services	0.0	4.6	2.0	6.5	
357	Insurance carriers	0.0	0.8	4.8	5.6	
417	Commercial and industrial machinery and equipment repair and maintenance	0.0	4.9	0.5	5.4	

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392	Private junior colleges, colleges, universities and professional schools	0.0	0.1	4.9	5.0	
326	Retail stores – gasoline stations	0.0	1.2	3.7	4.9	
325	Retail stores – health and personal care	0.0	1.0	3.6	4.6	
328	Retail stores – sporting goods, hobby, book and music	0.0	1.1	3.3	4.4	
391	Private elementary and secondary schools	0.0	0.0	4.1	4.1	
161	Ready-mix concrete manufacturing	0.0	3.9	0.0	3.9	
393	Other private educational services	0.0	0.1	3.8	3.9	
381	Management of companies and enterprises	0.0	2.4	1.5	3.9	
399	Child day care services	0.0	0.0	3.8	3.8	
351	Telecommunications	0.0	2.0	1.7	3.7	
355	Non-depository credit intermediation and related activities	0.0	1.1	2.4	3.5	
395	Home health care services	0.0	0.0	3.5	3.5	
396	Medical and diagnostic labs and outpatient and other ambulatory care services	0.0	0.0	3.5	3.5	
386	Business support services	0.0	2.1	1.3	3.4	
419	Personal care services	0.0	0.0	3.3	3.3	
374	Management, scientific and technical consulting services	0.0	2.0	1.2	3.2	
377	Advertising and related services	0.0	1.5	1.6	3.1	
321	Retail stores – furniture and home furnishings	0.0	0.7	2.3	3.0	
339	Couriers and messengers	0.0	1.5	1.4	2.9	
322	Retail stores – electronics and appliances	0.0	1.0	1.9	2.9	
39	Maintenance and repair construction of nonresidential structures	0.0	1.7	1.2	2.9	
401	Community food, housing and other relief services, including rehabilitation services	0.0	0.0	2.8	2.8	
424	Grant-making, giving and social advocacy organizations	0.0	0.0	2.7	2.7	
427	U.S. Postal Service	0.0	1.1	1.5	2.6	
358	Insurance agencies, brokerages and related activities	0.0	0.4	2.2	2.6	
432	Other state and local government enterprises	0.0	0.7	1.8	2.5	
336	Transit and ground passenger transportation	0.0	1.0	1.4	2.4	
365	Commercial and industrial machinery and equipment rental and leasing	0.0	2.3	0.1	2.4	
387	Investigation and security services	0.0	1.3	1.0	2.3	
407	Fitness and recreational sports centers	0.0	0.4	1.9	2.3	
99	Wood windows and doors and millwork manufacturing	0.0	2.2	0.1	2.3	
187	Ornamental and architectural metal products manufacturing	0.0	2.1	0.1	2.2	
409	Amusement parks, arcades and gambling industries	0.0	0.0	2.1	2.1	

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402	Performing arts companies	0.0	0.3	1.8	2.1	
372	Computer systems design services	0.0	1.4	0.6	2.0	
31	Electric power generation, transmission and distribution	0.0	0.8	1.2	2.0	
410	Other amusement and recreation industries	0.0	0.1	1.8	1.9	
404	Promoters of performing arts and sports and agents for public figures	0.0	0.3	1.4	1.8	
163	Other concrete product manufacturing	0.0	1.7	0.0	1.7	
113	Printing	0.0	0.8	0.9	1.7	
389	Other support services	0.0	1.1	0.6	1.7	
40	Maintenance and repair construction of residential structures	0.0	0.0	1.6	1.6	
162	Concrete pipe, brick and block manufacturing	0.0	1.6	0.0	1.6	
380	All other miscellaneous professional, scientific and technical services	0.0	1.2	0.3	1.6	
416	Electronic and precision equipment repair and maintenance	0.0	1.2	0.3	1.5	
422	Other personal services	0.0	0.1	1.4	1.5	
186	Plate work and fabricated structural product manufacturing	0.0	1.4	0.0	1.4	
384	Office administrative services	0.0	0.9	0.4	1.4	
418	Personal and household goods repair and maintenance	0.0	0.9	0.4	1.3	
373	Other computer related services, including facilities management	0.0	1.0	0.3	1.3	
390	Waste management and remediation services	0.0	0.7	0.6	1.3	
338	Scenic and sightseeing transportation and support activities for transportation	0.0	0.8	0.5	1.3	
421	Dry-cleaning and laundry services	0.0	0.2	1.1	1.3	
352	Data processing, hosting, ISP, web search portals and related services	0.0	0.4	0.8	1.3	
332	Transport by air	0.0	0.4	0.8	1.3	
379	Veterinary services	0.0	0.0	1.2	1.3	
415	Car washes	0.0	0.4	0.7	1.2	
117	Asphalt shingle and coating materials manufacturing	0.0	1.1	0.0	1.1	
341	Newspaper publishers	0.0	0.4	0.6	1.0	
423	Religious organizations	0.0	0.0	1.0	1.0	
340	Warehousing and storage	0.0	0.5	0.5	1.0	
149	Other plastics product manufacturing	0.0	0.8	0.2	1.0	
403	Spectator sports companies	0.0	0.3	0.7	1.0	
346	Motion picture and video industries	0.0	0.2	0.7	1.0	
102	Prefabricated wood building manufacturing	0.0	0.9	0.0	0.9	
363	General and consumer goods rental except video tapes and discs	0.0	0.4	0.5	0.9	

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166	Cut stone and stone product manufacturing	0.0	0.9	0.0	0.9	
370	Specialized design services	0.0	0.7	0.2	0.9	
359	Funds, trusts and other financial vehicles	0.0	0.0	0.9	0.9	
25	Mining and quarrying stone	0.0	0.8	0.0	0.8	
375	Environmental and other technical consulting services	0.0	0.6	0.2	0.8	
376	Scientific research and development services	0.0	0.5	0.3	0.8	
430	State and local government passenger transit	0.0	0.3	0.5	0.8	
348	Radio and television broadcasting	0.0	0.4	0.4	0.8	
362	Automotive equipment rental and leasing	0.0	0.4	0.4	0.8	
383	Travel arrangement and reservation services	0.0	0.4	0.4	0.8	
97	Engineered wood member and truss manufacturing	0.0	0.7	0.0	0.7	
189	Metal tank (heavy gauge) manufacturing	0.0	0.7	0.0	0.7	
60	Poultry processing	0.0	0.0	0.6	0.6	
333	Transport by rail	0.0	0.4	0.1	0.6	
420	Death care services	0.0	0.0	0.5	0.5	
364	Video tape and disc rental	0.0	0.0	0.5	0.5	
26	Mining and quarrying sand, gravel, clay and ceramic and refractory minerals	0.0	0.5	0.0	0.5	
406	Museums, historical sites, zoos and parks	0.0	0.0	0.5	0.5	
405	Independent artists, writers and performers	0.0	0.2	0.2	0.5	
95	Sawmills and wood preservation	0.0	0.4	0.0	0.4	
62	Bread and bakery product manufacturing	0.0	0.0	0.4	0.4	
107	Paperboard container manufacturing	0.0	0.3	0.1	0.4	
169	Miscellaneous nonmetallic mineral product manufacturing	0.0	0.4	0.0	0.4	
411	Hotels and motels, including casino hotels	0.0	0.1	0.2	0.4	
20	Extraction of oil and natural gas	0.0	0.3	0.1	0.4	
371	Custom computer programming services	0.0	0.3	0.1	0.4	
195	Machine shops	0.0	0.3	0.0	0.3	
350	Internet publishing and broadcasting	0.0	0.2	0.2	0.3	
14	Animal production, except cattle, poultry and eggs	0.0	0.0	0.3	0.3	
378	Photographic services	0.0	0.1	0.2	0.3	
70	Soft drink and ice manufacturing	0.0	0.0	0.3	0.3	
16	Commercial logging	0.0	0.3	0.0	0.3	
213	Other commercial and service industry machinery manufacturing	0.0	0.3	0.0	0.3	

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115	Petroleum refineries	0.0	0.2	0.0	0.3	
32	Natural gas distribution	0.0	0.1	0.1	0.3	
342	Periodical publishers	0.0	0.1	0.2	0.3	
295	Wood kitchen cabinet and countertop manufacturing	0.0	0.1	0.1	0.3	
429	Other federal government enterprises	0.0	0.1	0.2	0.3	
12	Dairy cattle and milk production	0.0	0.0	0.2	0.3	
349	Cable and other subscription programming	0.0	0.1	0.1	0.3	
353	Other information services	0.0	0.1	0.1	0.3	
144	Plastics pipe and pipe fitting manufacturing	0.0	0.2	0.0	0.2	
366	Lessors of nonfinancial intangible assets	0.0	0.2	0.1	0.2	
273	Wiring device manufacturing	0.0	0.2	0.0	0.2	
216	Air conditioning, refrigeration and warm air heating equipment manufacturing	0.0	0.2	0.0	0.2	
343	Book publishers	0.0	0.0	0.2	0.2	
116	Asphalt paving mixture and block manufacturing	0.0	0.2	0.0	0.2	
202	Other fabricated metal manufacturing	0.0	0.2	0.0	0.2	
194	Spring and wire product manufacturing	0.0	0.2	0.0	0.2	
197	Coating, engraving, heat treating and allied activities	0.0	0.2	0.0	0.2	
59	Animal (except poultry) slaughtering, rendering and processing	0.0	0.0	0.2	0.2	
196	Turned product and screw, nut and bolt manufacturing	0.0	0.2	0.0	0.2	
136	Paint and coating manufacturing	0.0	0.2	0.0	0.2	
2	Grain farming	0.0	0.0	0.1	0.2	
317	All other miscellaneous manufacturing	0.0	0.0	0.1	0.2	
345	Software publishers	0.0	0.1	0.1	0.2	
344	Directory, mailing list and other publishers	0.0	0.1	0.1	0.1	
159	Glass product manufacturing made of purchased glass	0.0	0.1	0.0	0.1	
19	Support activities for agriculture and forestry	0.0	0.0	0.1	0.1	
201	Fabricated pipe and pipe fitting manufacturing	0.0	0.1	0.0	0.1	
260	Lighting fixture manufacturing	0.0	0.1	0.0	0.1	
3	Vegetable and melon farming	0.0	0.0	0.1	0.1	
142	Plastics packaging materials and unlaminated film and sheet manufacturing	0.0	0.1	0.0	0.1	
100	Wood container and pallet manufacturing	0.0	0.1	0.1	0.1	
408	Bowling centers	0.0	0.0	0.1	0.1	
385	Facilities support services	0.0	0.1	0.0	0.1	

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314	Sign manufacturing	0.0	0.1	0.0	0.1	
215	Heating equipment (except warm air furnaces) manufacturing	0.0	0.1	0.0	0.1	
283	Motor vehicle parts manufacturing	0.0	0.1	0.0	0.1	
118	Petroleum lubricating oil and grease manufacturing	0.0	0.1	0.0	0.1	
188	Power boiler and heat exchanger manufacturing	0.0	0.1	0.0	0.1	
54	Fruit and vegetable canning, pickling and drying	0.0	0.0	0.1	0.1	
18	Commercial hunting and trapping	0.0	0.0	0.1	0.1	
53	Frozen food manufacturing	0.0	0.0	0.1	0.1	
55	Fluid milk and butter manufacturing	0.0	0.0	0.1	0.1	
250	Automatic environmental control manufacturing	0.0	0.1	0.0	0.1	
69	All other food manufacturing	0.0	0.0	0.1	0.1	
96	Veneer and plywood manufacturing	0.0	0.1	0.0	0.1	
198	Valve and fittings other than plumbing manufacturing	0.0	0.1	0.0	0.1	
228	Material handling equipment manufacturing	0.0	0.1	0.0	0.1	
239	Other communications equipment manufacturing	0.0	0.1	0.0	0.1	
11	Cattle ranching and farming	0.0	0.0	0.1	0.1	
337	Transport by pipeline	0.0	0.1	0.0	0.1	
103	All other miscellaneous wood product manufacturing	0.0	0.0	0.0	0.1	
272	Communication and energy wire and cable manufacturing	0.0	0.1	0.0	0.1	
141	All other chemical product and preparation manufacturing	0.0	0.1	0.0	0.1	
133	Pharmaceutical preparation manufacturing	0.0	0.0	0.1	0.1	
306	Surgical appliance and supplies manufacturing	0.0	0.0	0.1	0.1	
65	Snack food manufacturing	0.0	0.0	0.1	0.1	
114	Support activities for printing	0.0	0.0	0.0	0.1	
108	Coated and laminated paper, packaging paper and plastics film manufacturing	0.0	0.0	0.0	0.1	
56	Cheese manufacturing	0.0	0.0	0.1	0.1	
146	Polystyrene foam product manufacturing	0.0	0.1	0.0	0.1	
33	Water, sewage and other treatment and delivery systems	0.0	0.0	0.0	0.1	
347	Sound recording industries	0.0	0.0	0.1	0.1	
431	State and local government electric utilities	0.0	0.0	0.0	0.1	
171	Steel product manufacturing from purchased steel	0.0	0.1	0.0	0.1	
152	Other rubber product manufacturing	0.0	0.1	0.0	0.1	
267	Motor and generator manufacturing	0.0	0.1	0.0	0.1	

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105	Paper mills	0.0	0.0	0.0	0.1	
58	Ice cream and frozen dessert manufacturing	0.0	0.0	0.1	0.1	
98	Reconstituted wood product manufacturing	0.0	0.1	0.0	0.1	
71	Breweries	0.0	0.0	0.1	0.1	
302	Showcase, partition, shelving and locker manufacturing	0.0	0.0	0.0	0.1	
6	Greenhouse, nursery and floriculture production	0.0	0.0	0.1	0.1	
291	Boat building	0.0	0.0	0.1	0.1	
268	Switchgear and switchboard apparatus manufacturing	0.0	0.0	0.0	0.1	
305	Surgical and medical instrument, laboratory and medical instrument manufacturing	0.0	0.0	0.0	0.1	
63	Cookie, cracker and pasta manufacturing	0.0	0.0	0.0	0.1	

<b>Employment</b>	CAPX 2020 Hampton-Rochester-La Crosse 2014	Copyright 2010 Minnesota IMPLAN Group, Inc.				
<b>Sector</b>	<b>Description</b>	<b>Direct</b>	<b>Indirect</b>	<b>Induced</b>	<b>Total</b>	<b>Multiplier</b>
0	Total	274.6	115.1	151.5	541.2	1.97
36	Construction of other new nonresidential structures	274.6	0.0	0.0	274.6	
369	Architectural, engineering and related services	0.0	27.6	0.5	28.1	
413	Food services and drinking places	0.0	4.2	18.0	22.2	
319	Wholesale trade businesses	0.0	6.3	4.6	10.9	
382	Employment services	0.0	7.2	3.0	10.2	
397	Private hospitals	0.0	0.0	8.8	8.8	
360	Real estate establishments	0.0	2.6	6.1	8.7	
324	Retail stores – food and beverage	0.0	1.8	5.6	7.4	
329	Retail stores – general merchandise	0.0	1.8	5.3	7.1	
394	Offices of physicians, dentists and other health practitioners	0.0	0.0	6.8	6.8	
320	Retail stores – motor vehicle and parts	0.0	2.0	3.6	5.6	
398	Nursing and residential care facilities	0.0	0.0	5.6	5.6	
354	Monetary authorities and depository credit intermediation activities	0.0	2.5	2.8	5.3	
335	Transport by truck	0.0	3.8	1.4	5.1	
425	Civic, social, professional and similar organizations	0.0	2.2	2.9	5.1	
388	Services to buildings and dwellings	0.0	3.0	1.8	4.8	
331	Retail non-stores – direct and electronic sales	0.0	1.6	3.1	4.8	
414	Automotive repair and maintenance, except car washes	0.0	2.3	2.0	4.3	
330	Retail stores – miscellaneous	0.0	1.1	2.8	3.9	
367	Legal services	0.0	2.5	1.4	3.9	
323	Retail stores – building material and garden supply	0.0	0.9	2.6	3.5	
426	Private household operations	0.0	0.0	3.2	3.2	
357	Insurance carriers	0.0	0.5	2.6	3.0	
400	Individual and family services	0.0	0.0	3.0	3.0	
327	Retail stores – clothing and clothing accessories	0.0	0.7	2.2	2.9	
368	Accounting, tax preparation, bookkeeping and payroll services	0.0	1.9	0.8	2.7	
417	Commercial and industrial machinery and equipment repair and maintenance	0.0	2.5	0.2	2.7	
356	Securities, commodity contracts, investments and related activities	0.0	0.8	1.8	2.6	

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325	Retail stores – health and personal care	0.0	0.6	1.9	2.5	
326	Retail stores – gasoline stations	0.0	0.6	1.8	2.4	
392	Private junior colleges, colleges, universities and professional schools	0.0	0.0	2.3	2.3	
399	Child day care services	0.0	0.0	2.2	2.2	
328	Retail stores – sporting goods, hobby, book and music	0.0	0.6	1.6	2.1	
381	Management of companies and enterprises	0.0	1.3	0.7	2.0	
161	Ready-mix concrete manufacturing	0.0	1.9	0.0	1.9	
351	Telecommunications	0.0	1.1	0.9	1.9	
396	Medical and diagnostic labs and outpatient and other ambulatory care services	0.0	0.0	1.9	1.9	
419	Personal care services	0.0	0.0	1.9	1.9	
386	Business support services	0.0	1.2	0.7	1.8	
432	Other state and local government enterprises	0.0	0.4	1.1	1.5	
355	Non-depository credit intermediation and related activities	0.0	0.5	1.0	1.5	
393	Other private educational services	0.0	0.0	1.5	1.5	
322	Retail stores – electronics and appliances	0.0	0.5	0.9	1.4	
186	Plate work and fabricated structural product manufacturing	0.0	1.4	0.0	1.4	
321	Retail stores – furniture and home furnishings	0.0	0.3	1.0	1.3	
39	Maintenance and repair construction of nonresidential structures	0.0	0.8	0.5	1.3	
401	Community food, housing and other relief services, including rehabilitation services	0.0	0.0	1.3	1.3	
374	Management, scientific and technical consulting services	0.0	0.8	0.4	1.2	
424	Grant-making, giving and social advocacy organizations	0.0	0.0	1.2	1.2	
365	Commercial and industrial machinery and equipment rental and leasing	0.0	1.2	0.0	1.2	
427	U.S. Postal Service	0.0	0.5	0.7	1.2	
99	Wood windows and doors and millwork manufacturing	0.0	1.1	0.0	1.1	
395	Home health care services	0.0	0.0	1.1	1.1	
377	Advertising and related services	0.0	0.5	0.5	1.1	
358	Insurance agencies, brokerages and related activities	0.0	0.2	0.9	1.1	
336	Transit and ground passenger transportation	0.0	0.4	0.6	1.0	
339	Couriers and messengers	0.0	0.5	0.5	1.0	
389	Other support services	0.0	0.6	0.3	1.0	
163	Other concrete product manufacturing	0.0	1.0	0.0	1.0	
409	Amusement parks, arcades and gambling industries	0.0	0.0	1.0	1.0	
407	Fitness and recreational sports centers	0.0	0.2	0.8	1.0	

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391	Private elementary and secondary schools	0.0	0.0	0.9	0.9	
410	Other amusement and recreation industries	0.0	0.1	0.9	0.9	
387	Investigation and security services	0.0	0.5	0.4	0.9	
113	Printing	0.0	0.4	0.4	0.9	
31	Electric power generation, transmission and distribution	0.0	0.3	0.5	0.8	
187	Ornamental and architectural metal products manufacturing	0.0	0.8	0.0	0.8	
102	Prefabricated wood building manufacturing	0.0	0.8	0.0	0.8	
40	Maintenance and repair construction of residential structures	0.0	0.0	0.8	0.8	
340	Warehousing and storage	0.0	0.4	0.4	0.8	
380	All other miscellaneous professional, scientific and technical services	0.0	0.6	0.1	0.7	
25	Mining and quarrying stone	0.0	0.7	0.0	0.7	
416	Electronic and precision equipment repair and maintenance	0.0	0.6	0.1	0.7	
421	Dry-cleaning and laundry services	0.0	0.1	0.6	0.7	
402	Performing arts companies	0.0	0.1	0.6	0.7	
372	Computer systems design services	0.0	0.5	0.2	0.7	
404	Promoters of performing arts and sports and agents for public figures	0.0	0.1	0.5	0.6	
415	Car washes	0.0	0.2	0.4	0.6	
338	Scenic and sightseeing transportation and support activities for transportation	0.0	0.4	0.2	0.6	
379	Veterinary services	0.0	0.0	0.6	0.6	
341	Newspaper publishers	0.0	0.3	0.3	0.6	
422	Other personal services	0.0	0.0	0.5	0.6	
390	Waste management and remediation services	0.0	0.3	0.3	0.6	
352	Data processing, hosting, ISP, web search portals and related services	0.0	0.2	0.3	0.5	
384	Office administrative services	0.0	0.4	0.1	0.5	
95	Sawmills and wood preservation	0.0	0.5	0.0	0.5	
149	Other plastics product manufacturing	0.0	0.4	0.1	0.5	
403	Spectator sports companies	0.0	0.1	0.4	0.5	
346	Motion picture and video industries	0.0	0.1	0.3	0.4	
375	Environmental and other technical consulting services	0.0	0.3	0.1	0.4	
12	Dairy cattle and milk production	0.0	0.0	0.4	0.4	
348	Radio and television broadcasting	0.0	0.2	0.2	0.4	
359	Funds, trusts and other financial vehicles	0.0	0.0	0.4	0.4	
418	Personal and household goods repair and maintenance	0.0	0.3	0.1	0.4	

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363	General and consumer goods rental except video tapes and discs	0.0	0.2	0.2	0.4	
383	Travel arrangement and reservation services	0.0	0.2	0.2	0.4	
332	Transport by air	0.0	0.1	0.2	0.3	
362	Automotive equipment rental and leasing	0.0	0.2	0.2	0.3	
376	Scientific research and development services	0.0	0.2	0.1	0.3	
370	Specialized design services	0.0	0.2	0.1	0.3	
420	Death care services	0.0	0.0	0.3	0.3	
166	Cut stone and stone product manufacturing	0.0	0.3	0.0	0.3	
97	Engineered wood member and truss manufacturing	0.0	0.3	0.0	0.3	
162	Concrete pipe, brick and block manufacturing	0.0	0.3	0.0	0.3	
364	Video tape and disc rental	0.0	0.0	0.3	0.3	
405	Independent artists, writers and performers	0.0	0.2	0.1	0.3	
189	Metal tank (heavy gauge) manufacturing	0.0	0.3	0.0	0.3	
430	State and local government passenger transit	0.0	0.1	0.2	0.3	
373	Other computer related services, including facilities management	0.0	0.2	0.1	0.3	
202	Other fabricated metal manufacturing	0.0	0.2	0.0	0.2	
26	Mining and quarrying sand, gravel, clay and ceramic and refractory minerals	0.0	0.2	0.0	0.2	
16	Commercial logging	0.0	0.2	0.0	0.2	
371	Custom computer programming services	0.0	0.2	0.1	0.2	
59	Animal (except poultry) slaughtering, rendering and processing	0.0	0.0	0.2	0.2	
411	Hotels and motels, including casino hotels	0.0	0.1	0.1	0.2	
96	Veneer and plywood manufacturing	0.0	0.2	0.0	0.2	
14	Animal production, except cattle, poultry and eggs	0.0	0.0	0.2	0.2	
342	Periodical publishers	0.0	0.1	0.1	0.2	
107	Paperboard container manufacturing	0.0	0.1	0.1	0.2	
378	Photographic services	0.0	0.1	0.1	0.2	
333	Transport by rail	0.0	0.1	0.0	0.2	
406	Museums, historical sites, zoos and parks	0.0	0.0	0.2	0.2	
3	Vegetable and melon farming	0.0	0.0	0.2	0.2	
60	Poultry processing	0.0	0.0	0.2	0.2	
62	Bread and bakery product manufacturing	0.0	0.0	0.2	0.2	
260	Lighting fixture manufacturing	0.0	0.2	0.0	0.2	
195	Machine shops	0.0	0.1	0.0	0.1	

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216	Air conditioning, refrigeration and warm air heating equipment manufacturing	0.0	0.1	0.0	0.1	
4	Fruit farming	0.0	0.0	0.1	0.1	
283	Motor vehicle parts manufacturing	0.0	0.1	0.0	0.1	
345	Software publishers	0.0	0.1	0.0	0.1	
423	Religious organizations	0.0	0.0	0.1	0.1	
19	Support activities for agriculture and forestry	0.0	0.0	0.1	0.1	
429	Other federal government enterprises	0.0	0.0	0.1	0.1	
11	Cattle ranching and farming	0.0	0.0	0.1	0.1	
197	Coating, engraving, heat treating and allied activities	0.0	0.1	0.0	0.1	
169	Miscellaneous nonmetallic mineral product manufacturing	0.0	0.1	0.0	0.1	
117	Asphalt shingle and coating materials manufacturing	0.0	0.1	0.0	0.1	
314	Sign manufacturing	0.0	0.1	0.0	0.1	
53	Frozen food manufacturing	0.0	0.0	0.1	0.1	
70	Soft drink and ice manufacturing	0.0	0.0	0.1	0.1	
136	Paint and coating manufacturing	0.0	0.1	0.0	0.1	
201	Fabricated pipe and pipe fitting manufacturing	0.0	0.1	0.0	0.1	
188	Power boiler and heat exchanger manufacturing	0.0	0.1	0.0	0.1	
142	Plastics packaging materials and unlaminated film and sheet manufacturing	0.0	0.1	0.0	0.1	
105	Paper mills	0.0	0.0	0.1	0.1	
56	Cheese manufacturing	0.0	0.0	0.1	0.1	
366	Lessors of nonfinancial intangible assets	0.0	0.1	0.0	0.1	
213	Other commercial and service industry machinery manufacturing	0.0	0.1	0.0	0.1	
100	Wood container and pallet manufacturing	0.0	0.0	0.0	0.1	
273	Wiring device manufacturing	0.0	0.1	0.0	0.1	
268	Switchgear and switchboard apparatus manufacturing	0.0	0.1	0.0	0.1	
54	Fruit and vegetable canning, pickling and drying	0.0	0.0	0.1	0.1	
408	Bowling centers	0.0	0.0	0.1	0.1	
214	Air purification and ventilation equipment manufacturing	0.0	0.1	0.0	0.1	
196	Turned product and screw, nut and bolt manufacturing	0.0	0.1	0.0	0.1	
108	Coated and laminated paper, packaging paper and plastics film manufacturing	0.0	0.0	0.0	0.1	
164	Lime and gypsum product manufacturing	0.0	0.1	0.0	0.1	
317	All other miscellaneous manufacturing	0.0	0.0	0.1	0.1	
295	Wood kitchen cabinet and countertop manufacturing	0.0	0.0	0.0	0.1	

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350	Internet publishing and broadcasting	0.0	0.0	0.0	0.1	
228	Material handling equipment manufacturing	0.0	0.1	0.0	0.1	
194	Spring and wire product manufacturing	0.0	0.1	0.0	0.1	
144	Plastics pipe and pipe fitting manufacturing	0.0	0.1	0.0	0.1	
103	All other miscellaneous wood product manufacturing	0.0	0.0	0.0	0.1	
55	Fluid milk and butter manufacturing	0.0	0.0	0.1	0.1	
32	Natural gas distribution	0.0	0.0	0.0	0.1	
71	Breweries	0.0	0.0	0.1	0.1	

<b>Employment</b>	Bemidji-Grand Rapids 2012	Copyright 2010 Minnesota IMPLAN Group, Inc.				
<b>Sector</b>	<b>Description</b>	<b>Direct</b>	<b>Indirect</b>	<b>Induced</b>	<b>Total</b>	<b>Multiplier</b>
0	Total	255.1	105.6	146.7	507.4	1.99
36	Construction of other new nonresidential structures	255.1	0.0	0.0	255.1	
369	Architectural, engineering and related services	0.0	24.5	0.5	24.9	
413	Food services and drinking places	0.0	3.5	15.3	18.8	
319	Wholesale trade businesses	0.0	5.9	4.5	10.3	
360	Real estate establishments	0.0	2.8	6.4	9.2	
382	Employment services	0.0	6.1	2.8	8.8	
397	Private hospitals	0.0	0.0	7.0	7.0	
394	Offices of physicians, dentists and other health practitioners	0.0	0.0	6.9	6.9	
329	Retail stores – general merchandise	0.0	1.6	5.1	6.7	
324	Retail stores – food and beverage	0.0	1.4	4.8	6.2	
398	Nursing and residential care facilities	0.0	0.0	5.7	5.7	
331	Retail non-stores – direct and electronic sales	0.0	1.8	3.7	5.5	
425	Civic, social, professional ,and similar organizations	0.0	2.0	2.8	4.8	
320	Retail stores – motor vehicle and parts	0.0	1.6	3.2	4.8	
335	Transport by truck	0.0	3.2	1.2	4.5	
354	Monetary authorities and depository credit intermediation activities	0.0	2.0	2.3	4.3	
388	Services to buildings and dwellings	0.0	2.5	1.6	4.1	
367	Legal services	0.0	2.5	1.6	4.1	
414	Automotive repair and maintenance, except car washes	0.0	2.0	1.9	3.9	
356	Securities, commodity contracts, investments and related activities	0.0	1.0	2.6	3.7	
330	Retail stores – miscellaneous	0.0	0.9	2.5	3.5	
426	Private household operations	0.0	0.0	3.4	3.4	
400	Individual and family services	0.0	0.0	3.1	3.1	
323	Retail stores – building material and garden supply	0.0	0.8	2.3	3.1	
327	Retail stores – clothing and clothing accessories	0.0	0.7	2.4	3.0	
368	Accounting, tax preparation, bookkeeping and payroll services	0.0	2.1	0.9	3.0	
357	Insurance carriers	0.0	0.4	2.2	2.6	
417	Commercial and industrial machinery and equipment repair and maintenance	0.0	2.3	0.2	2.5	

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392	Private junior colleges, colleges, universities and professional schools	0.0	0.0	2.3	2.3	
326	Retail stores – gasoline stations	0.0	0.5	1.7	2.3	
325	Retail stores – health and personal care	0.0	0.5	1.6	2.1	
328	Retail stores – sporting goods, hobby, book and music	0.0	0.5	1.5	2.0	
391	Private elementary and secondary schools	0.0	0.0	1.9	1.9	
161	Ready-mix concrete manufacturing	0.0	1.8	0.0	1.8	
393	Other private educational services	0.0	0.0	1.7	1.8	
381	Management of companies and enterprises	0.0	1.1	0.7	1.8	
399	Child day care services	0.0	0.0	1.7	1.7	
351	Telecommunications	0.0	0.9	0.8	1.7	
355	Non-depository credit intermediation and related activities	0.0	0.5	1.1	1.6	
395	Home health care services	0.0	0.0	1.6	1.6	
396	Medical and diagnostic labs and outpatient and other ambulatory care services	0.0	0.0	1.6	1.6	
386	Business support services	0.0	0.9	0.6	1.6	
419	Personal care services	0.0	0.0	1.5	1.5	
374	Management, scientific and technical consulting services	0.0	0.9	0.5	1.5	
377	Advertising and related services	0.0	0.7	0.7	1.4	
321	Retail stores – furniture and home furnishings	0.0	0.3	1.0	1.4	
339	Couriers and messengers	0.0	0.7	0.6	1.3	
322	Retail stores – electronics and appliances	0.0	0.4	0.9	1.3	
39	Maintenance and repair construction of nonresidential structures	0.0	0.8	0.5	1.3	
401	Community food, housing and other relief services, including rehabilitation services	0.0	0.0	1.3	1.3	
424	Grant-making, giving and social advocacy organizations	0.0	0.0	1.2	1.2	
427	U.S. Postal Service	0.0	0.5	0.7	1.2	
358	Insurance agencies, brokerages and related activities	0.0	0.2	1.0	1.2	
432	Other state and local government enterprises	0.0	0.3	0.8	1.1	
336	Transit and ground passenger transportation	0.0	0.5	0.7	1.1	
365	Commercial and industrial machinery and equipment rental and leasing	0.0	1.1	0.0	1.1	
387	Investigation and security services	0.0	0.6	0.5	1.1	
407	Fitness and recreational sports centers	0.0	0.2	0.8	1.0	
99	Wood windows and doors and millwork manufacturing	0.0	1.0	0.0	1.0	
187	Ornamental and architectural metal products manufacturing	0.0	1.0	0.0	1.0	
409	Amusement parks, arcades and gambling industries	0.0	0.0	1.0	1.0	

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402	Performing arts companies	0.0	0.1	0.8	1.0	
372	Computer systems design services	0.0	0.7	0.3	0.9	
31	Electric power generation, transmission and distribution	0.0	0.4	0.5	0.9	
410	Other amusement and recreation industries	0.0	0.1	0.8	0.9	
404	Promoters of performing arts and sports and agents for public figures	0.0	0.2	0.7	0.8	
163	Other concrete product manufacturing	0.0	0.8	0.0	0.8	
113	Printing	0.0	0.4	0.4	0.8	
389	Other support services	0.0	0.5	0.3	0.8	
40	Maintenance and repair construction of residential structures	0.0	0.0	0.7	0.7	
162	Concrete pipe, brick and block manufacturing	0.0	0.7	0.0	0.7	
380	All other miscellaneous professional, scientific and technical services	0.0	0.6	0.2	0.7	
416	Electronic and precision equipment repair and maintenance	0.0	0.5	0.1	0.7	
422	Other personal services	0.0	0.0	0.6	0.7	
186	Plate work and fabricated structural product manufacturing	0.0	0.6	0.0	0.6	
384	Office administrative services	0.0	0.4	0.2	0.6	
418	Personal and household goods repair and maintenance	0.0	0.4	0.2	0.6	
373	Other computer related services, including facilities management	0.0	0.5	0.1	0.6	
390	Waste management and remediation services	0.0	0.3	0.3	0.6	
338	Scenic and sightseeing transportation and support activities for transportation	0.0	0.4	0.2	0.6	
421	Dry-cleaning and laundry services	0.0	0.1	0.5	0.6	
352	Data processing, hosting, ISP, web search portals and related services	0.0	0.2	0.4	0.6	
332	Transport by air	0.0	0.2	0.4	0.6	
379	Veterinary services	0.0	0.0	0.6	0.6	
415	Car washes	0.0	0.2	0.3	0.5	
117	Asphalt shingle and coating materials manufacturing	0.0	0.5	0.0	0.5	
341	Newspaper publishers	0.0	0.2	0.3	0.5	
423	Religious organizations	0.0	0.0	0.5	0.5	
340	Warehousing and storage	0.0	0.2	0.2	0.5	
149	Other plastics product manufacturing	0.0	0.4	0.1	0.5	
403	Spectator sports companies	0.0	0.1	0.3	0.5	
346	Motion picture and video industries	0.0	0.1	0.3	0.4	
102	Prefabricated wood building manufacturing	0.0	0.4	0.0	0.4	
363	General and consumer goods rental except video tapes and discs	0.0	0.2	0.2	0.4	

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166	Cut stone and stone product manufacturing	0.0	0.4	0.0	0.4	
370	Specialized design services	0.0	0.3	0.1	0.4	
359	Funds, trusts and other financial vehicles	0.0	0.0	0.4	0.4	
25	Mining and quarrying stone	0.0	0.4	0.0	0.4	
375	Environmental and other technical consulting services	0.0	0.3	0.1	0.4	
376	Scientific research and development services	0.0	0.2	0.1	0.4	
430	State and local government passenger transit	0.0	0.1	0.2	0.4	
348	Radio and television broadcasting	0.0	0.2	0.2	0.4	
362	Automotive equipment rental and leasing	0.0	0.2	0.2	0.4	
383	Travel arrangement and reservation services	0.0	0.2	0.2	0.3	
97	Engineered wood member and truss manufacturing	0.0	0.3	0.0	0.3	
189	Metal tank (heavy gauge) manufacturing	0.0	0.3	0.0	0.3	
60	Poultry processing	0.0	0.0	0.3	0.3	
333	Transport by rail	0.0	0.2	0.1	0.3	
420	Death care services	0.0	0.0	0.2	0.2	
364	Video tape and disc rental	0.0	0.0	0.2	0.2	
26	Mining and quarrying sand, gravel, clay and ceramic and refractory minerals	0.0	0.2	0.0	0.2	
406	Museums, historical sites, zoos and parks	0.0	0.0	0.2	0.2	
405	Independent artists, writers and performers	0.0	0.1	0.1	0.2	
95	Sawmills and wood preservation	0.0	0.2	0.0	0.2	
62	Bread and bakery product manufacturing	0.0	0.0	0.2	0.2	
107	Paperboard container manufacturing	0.0	0.1	0.1	0.2	
169	Miscellaneous nonmetallic mineral product manufacturing	0.0	0.2	0.0	0.2	
411	Hotels and motels, including casino hotels	0.0	0.1	0.1	0.2	
20	Extraction of oil and natural gas	0.0	0.1	0.0	0.2	
371	Custom computer programming services	0.0	0.1	0.0	0.2	
195	Machine shops	0.0	0.1	0.0	0.2	
350	Internet publishing and broadcasting	0.0	0.1	0.1	0.2	
14	Animal production, except cattle, poultry and eggs	0.0	0.0	0.1	0.1	
378	Photographic services	0.0	0.0	0.1	0.1	
70	Soft drink and ice manufacturing	0.0	0.0	0.1	0.1	
16	Commercial logging	0.0	0.1	0.0	0.1	
213	Other commercial and service industry machinery manufacturing	0.0	0.1	0.0	0.1	

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115	Petroleum refineries	0.0	0.1	0.0	0.1	
32	Natural gas distribution	0.0	0.1	0.1	0.1	
342	Periodical publishers	0.0	0.0	0.1	0.1	
295	Wood kitchen cabinet and countertop manufacturing	0.0	0.1	0.1	0.1	
429	Other Federal Government enterprises	0.0	0.0	0.1	0.1	
12	Dairy cattle and milk production	0.0	0.0	0.1	0.1	
349	Cable and other subscription programming	0.0	0.1	0.1	0.1	
353	Other information services	0.0	0.1	0.1	0.1	
144	Plastics pipe and pipe fitting manufacturing	0.0	0.1	0.0	0.1	
366	Lessors of nonfinancial intangible assets	0.0	0.1	0.0	0.1	
273	Wiring device manufacturing	0.0	0.1	0.0	0.1	
216	Air conditioning, refrigeration and warm air heating equipment manufacturing	0.0	0.1	0.0	0.1	
343	Book publishers	0.0	0.0	0.1	0.1	
116	Asphalt paving mixture and block manufacturing	0.0	0.1	0.0	0.1	
202	Other fabricated metal manufacturing	0.0	0.1	0.0	0.1	
194	Spring and wire product manufacturing	0.0	0.1	0.0	0.1	
197	Coating, engraving, heat treating and allied activities	0.0	0.1	0.0	0.1	
59	Animal (except poultry) slaughtering, rendering and processing	0.0	0.0	0.1	0.1	
196	Turned product and screw, nut and bolt manufacturing	0.0	0.1	0.0	0.1	
136	Paint and coating manufacturing	0.0	0.1	0.0	0.1	
2	Grain farming	0.0	0.0	0.1	0.1	
317	All other miscellaneous manufacturing	0.0	0.0	0.1	0.1	
345	Software publishers	0.0	0.0	0.0	0.1	
344	Directory, mailing list and other publishers	0.0	0.0	0.0	0.1	
159	Glass product manufacturing made of purchased glass	0.0	0.0	0.0	0.1	
19	Support activities for agriculture and forestry	0.0	0.0	0.0	0.1	
201	Fabricated pipe and pipe fitting manufacturing	0.0	0.1	0.0	0.1	
260	Lighting fixture manufacturing	0.0	0.1	0.0	0.1	
3	Vegetable and melon farming	0.0	0.0	0.1	0.1	
142	Plastics packaging materials and unlaminated film and sheet manufacturing	0.0	0.0	0.0	0.1	
100	Wood container and pallet manufacturing	0.0	0.0	0.0	0.1	
408	Bowling centers	0.0	0.0	0.1	0.1	
385	Facilities support services	0.0	0.0	0.0	0.1	

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314	Sign manufacturing	0.0	0.0	0.0	0.1	
215	Heating equipment (except warm air furnaces) manufacturing	0.0	0.1	0.0	0.1	
283	Motor vehicle parts manufacturing	0.0	0.0	0.0	0.1	
118	Petroleum lubricating oil and grease manufacturing	0.0	0.0	0.0	0.1	
188	Power boiler and heat exchanger manufacturing	0.0	0.1	0.0	0.1	
54	Fruit and vegetable canning, pickling and drying	0.0	0.0	0.1	0.1	
18	Commercial hunting and trapping	0.0	0.0	0.1	0.1	
53	Frozen food manufacturing	0.0	0.0	0.0	0.1	
55	Fluid milk and butter manufacturing	0.0	0.0	0.0	0.1	

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<b>Sector</b>	<b>Description</b>	<b>Direct</b>	<b>Indirect</b>	<b>Induced</b>	<b>Total</b>	<b>Multiplier</b>
0	Total	2,258.1	934.8	1,298.7	4,491.6	1.99
36	Construction of other new nonresidential structures	2,258.1	0.0	0.0	2,258.1	
369	Architectural, engineering and related services	0.0	216.6	4.0	220.6	
413	Food services and drinking places	0.0	30.6	135.8	166.5	
319	Wholesale trade businesses	0.0	51.9	39.5	91.4	
360	Real estate establishments	0.0	24.4	57.0	81.4	
382	Employment services	0.0	53.8	24.4	78.2	
397	Private hospitals	0.0	0.0	61.6	61.6	
394	Offices of physicians, dentists and other health practitioners	0.0	0.0	60.8	60.8	
329	Retail stores – general merchandise	0.0	14.1	44.9	59.1	
324	Retail stores – food and beverage	0.0	12.8	42.3	55.1	
398	Nursing and residential care facilities	0.0	0.0	50.3	50.3	
331	Retail non-stores – direct and electronic sales	0.0	15.9	32.5	48.4	
425	Civic, social, professional and similar organizations	0.0	17.9	25.0	42.9	
320	Retail stores – motor vehicle and parts	0.0	14.0	28.1	42.1	
335	Transport by truck	0.0	28.6	10.8	39.4	
354	Monetary authorities and depository credit intermediation activities	0.0	17.3	20.6	37.9	
388	Services to buildings and dwellings	0.0	22.3	14.4	36.7	
367	Legal services	0.0	22.4	13.9	36.4	
414	Automotive repair and maintenance, except car washes	0.0	17.8	16.9	34.7	
356	Securities, commodity contracts, investments and related activities	0.0	9.1	23.3	32.4	
330	Retail stores – miscellaneous	0.0	8.1	22.5	30.6	
426	Private household operations	0.0	0.0	30.4	30.4	
400	Individual and family services	0.0	0.0	27.7	27.7	
323	Retail stores – building material and garden supply	0.0	7.0	20.7	27.6	
327	Retail stores – clothing and clothing accessories	0.0	5.9	20.9	26.8	
368	Accounting, tax preparation, bookkeeping and payroll services	0.0	18.5	8.0	26.5	
357	Insurance carriers	0.0	3.4	19.4	22.7	
417	Commercial and industrial machinery and equipment repair and maintenance	0.0	20.0	1.9	21.9	

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392	Private junior colleges, colleges, universities and professional schools	0.0	0.4	20.0	20.4	
326	Retail stores – gasoline stations	0.0	4.8	15.2	20.0	
325	Retail stores – health and personal care	0.0	4.1	14.5	18.7	
328	Retail stores – sporting goods, hobby, book and music	0.0	4.5	13.2	17.7	
391	Private elementary and secondary schools	0.0	0.0	16.7	16.7	
161	Ready-mix concrete manufacturing	0.0	15.7	0.2	15.9	
393	Other private educational services	0.0	0.4	15.4	15.7	
381	Management of companies and enterprises	0.0	9.8	5.9	15.7	
399	Child day care services	0.0	0.0	15.4	15.4	
351	Telecommunications	0.0	8.0	6.9	14.9	
355	Non-depository credit intermediation and related activities	0.0	4.5	9.9	14.3	
395	Home health care services	0.0	0.0	14.2	14.2	
396	Medical and diagnostic labs and outpatient and other ambulatory care services	0.0	0.0	14.1	14.1	
386	Business support services	0.0	8.4	5.3	13.7	
419	Personal care services	0.0	0.0	13.3	13.3	
374	Management, scientific and technical consulting services	0.0	8.1	4.8	12.9	
377	Advertising and related services	0.0	6.0	6.4	12.4	
321	Retail stores – furniture and home furnishings	0.0	3.0	9.3	12.3	
339	Couriers and messengers	0.0	6.2	5.6	11.7	
322	Retail stores – electronics and appliances	0.0	3.9	7.8	11.7	
39	Maintenance and repair construction of nonresidential structures	0.0	6.9	4.7	11.6	
401	Community food, housing and other relief services, including rehabilitation services	0.0	0.0	11.2	11.2	
424	Grant-making, giving and social advocacy organizations	0.0	0.0	11.0	11.0	
427	U.S. Postal Service	0.0	4.5	6.2	10.7	
358	Insurance agencies, brokerages and related activities	0.0	1.7	8.8	10.6	
432	Other state and local government enterprises	0.0	2.7	7.3	10.0	
336	Transit and ground passenger transportation	0.0	4.1	5.8	9.9	
365	Commercial and industrial machinery and equipment rental and leasing	0.0	9.5	0.4	9.9	
387	Investigation and security services	0.0	5.2	4.2	9.3	
407	Fitness and recreational sports centers	0.0	1.7	7.5	9.2	
99	Wood windows and doors and millwork manufacturing	0.0	8.8	0.4	9.2	
187	Ornamental and architectural metal products manufacturing	0.0	8.7	0.2	8.9	
409	Amusement parks, arcades and gambling industries	0.0	0.0	8.5	8.5	

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402	Performing arts companies	0.0	1.3	7.2	8.5	
372	Computer systems design services	0.0	5.8	2.4	8.2	
31	Electric power generation, transmission and distribution	0.0	3.1	4.9	8.0	
410	Other amusement and recreation industries	0.0	0.5	7.4	7.9	
404	Promoters of performing arts and sports and agents for public figures	0.0	1.4	5.8	7.2	
163	Other concrete product manufacturing	0.0	6.9	0.1	7.0	
113	Printing	0.0	3.2	3.7	6.9	
389	Other support services	0.0	4.3	2.5	6.8	
40	Maintenance and repair construction of residential structures	0.0	0.2	6.4	6.6	
162	Concrete pipe, brick, and block manufacturing	0.0	6.5	0.1	6.5	
380	All other miscellaneous professional, scientific and technical services	0.0	4.9	1.4	6.3	
416	Electronic and precision equipment repair and maintenance	0.0	4.8	1.3	6.1	
422	Other personal services	0.0	0.4	5.6	6.0	
186	Plate work and fabricated structural product manufacturing	0.0	5.7	0.0	5.7	
384	Office administrative services	0.0	3.8	1.7	5.5	
418	Personal and household goods repair and maintenance	0.0	3.7	1.7	5.4	
373	Other computer related services, including facilities management	0.0	4.1	1.3	5.4	
390	Waste management and remediation services	0.0	2.7	2.5	5.2	
338	Scenic and sightseeing transportation and support activities for transportation	0.0	3.3	1.9	5.2	
421	Dry-cleaning and laundry services	0.0	0.6	4.5	5.2	
352	Data processing, hosting, ISP, web search portals and related services	0.0	1.8	3.3	5.2	
332	Transport by air	0.0	1.6	3.4	5.1	
379	Veterinary services	0.0	0.0	5.1	5.1	
415	Car washes	0.0	1.8	3.0	4.9	
117	Asphalt shingle and coating materials manufacturing	0.0	4.3	0.0	4.4	
341	Newspaper publishers	0.0	1.7	2.5	4.3	
423	Religious organizations	0.0	0.0	4.2	4.2	
340	Warehousing and storage	0.0	1.9	2.2	4.2	
149	Other plastics product manufacturing	0.0	3.3	0.7	4.1	
403	Spectator sports companies	0.0	1.0	3.0	4.0	
346	Motion picture and video industries	0.0	1.0	2.9	3.9	
102	Prefabricated wood building manufacturing	0.0	3.8	0.0	3.8	
363	General and consumer goods rental except video tapes and discs	0.0	1.5	2.2	3.7	

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166	Cut stone and stone product manufacturing	0.0	3.6	0.1	3.7	
370	Specialized design services	0.0	2.8	0.8	3.6	
359	Funds, trusts and other financial vehicles	0.0	0.1	3.5	3.6	
25	Mining and quarrying stone	0.0	3.4	0.0	3.4	
375	Environmental and other technical consulting services	0.0	2.4	0.9	3.3	
376	Scientific research and development services	0.0	2.1	1.2	3.2	
430	State and local government passenger transit	0.0	1.3	1.8	3.1	
348	Radio and television broadcasting	0.0	1.4	1.7	3.1	
362	Automotive equipment rental and leasing	0.0	1.5	1.6	3.1	
383	Travel arrangement and reservation services	0.0	1.5	1.6	3.1	
97	Engineered wood member and truss manufacturing	0.0	2.8	0.1	2.9	
189	Metal tank (heavy gauge) manufacturing	0.0	2.7	0.0	2.7	
60	Poultry processing	0.0	0.1	2.3	2.4	
333	Transport by rail	0.0	1.7	0.6	2.2	
420	Death care services	0.0	0.0	2.0	2.0	
364	Video tape and disc rental	0.0	0.0	2.0	2.0	
26	Mining and quarrying sand, gravel, clay and ceramic and refractory minerals	0.0	2.0	0.0	2.0	
406	Museums, historical sites, zoos and parks	0.0	0.0	1.9	1.9	
405	Independent artists, writers and performers	0.0	1.0	0.9	1.9	
95	Sawmills and wood preservation	0.0	1.7	0.1	1.8	
62	Bread and bakery product manufacturing	0.0	0.0	1.6	1.6	
107	Paperboard container manufacturing	0.0	1.2	0.5	1.6	
169	Miscellaneous nonmetallic mineral product manufacturing	0.0	1.5	0.0	1.5	
411	Hotels and motels, including casino hotels	0.0	0.5	1.0	1.5	
20	Extraction of oil and natural gas	0.0	1.1	0.3	1.4	
371	Custom computer programming services	0.0	1.0	0.4	1.4	
195	Machine shops	0.0	1.3	0.1	1.4	
350	Internet publishing and broadcasting	0.0	0.6	0.7	1.3	
14	Animal production, except cattle, poultry and eggs	0.0	0.1	1.2	1.3	
378	Photographic services	0.0	0.4	0.9	1.3	
70	Soft drink and ice manufacturing	0.0	0.0	1.2	1.2	
16	Commercial logging	0.0	1.1	0.1	1.2	
213	Other commercial and service industry machinery manufacturing	0.0	1.1	0.0	1.2	

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115	Petroleum refineries	0.0	1.0	0.2	1.1	
32	Natural gas distribution	0.0	0.6	0.6	1.1	
342	Periodical publishers	0.0	0.4	0.7	1.1	
295	Wood kitchen cabinet and countertop manufacturing	0.0	0.6	0.5	1.1	
429	Other federal government enterprises	0.0	0.3	0.8	1.0	
12	Dairy cattle and milk production	0.0	0.0	1.0	1.0	
349	Cable and other subscription programming	0.0	0.5	0.6	1.0	
353	Other information services	0.0	0.4	0.6	1.0	
144	Plastics pipe and pipe fitting manufacturing	0.0	0.9	0.0	1.0	
366	Lessors of nonfinancial intangible assets	0.0	0.7	0.3	1.0	
273	Wiring device manufacturing	0.0	0.9	0.0	0.9	
216	Air conditioning, refrigeration and warm air heating equipment manufacturing	0.0	0.9	0.1	0.9	
343	Book publishers	0.0	0.1	0.8	0.9	
116	Asphalt paving mixture and block manufacturing	0.0	0.9	0.0	0.9	
202	Other fabricated metal manufacturing	0.0	0.8	0.1	0.9	
194	Spring and wire product manufacturing	0.0	0.8	0.0	0.8	
197	Coating, engraving, heat treating and allied activities	0.0	0.7	0.1	0.8	
59	Animal (except poultry) slaughtering, rendering and processing	0.0	0.0	0.8	0.8	
196	Turned product and screw, nut and bolt manufacturing	0.0	0.7	0.0	0.7	
136	Paint and coating manufacturing	0.0	0.6	0.0	0.7	
2	Grain farming	0.0	0.1	0.6	0.7	
317	All other miscellaneous manufacturing	0.0	0.1	0.6	0.6	
345	Software publishers	0.0	0.4	0.2	0.6	
344	Directory, mailing list and other publishers	0.0	0.3	0.3	0.6	
159	Glass product manufacturing made of purchased glass	0.0	0.4	0.2	0.6	
19	Support activities for agriculture and forestry	0.0	0.2	0.4	0.6	
201	Fabricated pipe and pipe fitting manufacturing	0.0	0.6	0.0	0.6	
260	Lighting fixture manufacturing	0.0	0.6	0.0	0.6	
3	Vegetable and melon farming	0.0	0.0	0.6	0.6	
142	Plastics packaging materials and unlaminated film and sheet manufacturing	0.0	0.4	0.2	0.6	
100	Wood container and pallet manufacturing	0.0	0.3	0.3	0.6	
408	Bowling centers	0.0	0.0	0.6	0.6	
385	Facilities support services	0.0	0.4	0.2	0.5	

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314	Sign manufacturing	0.0	0.3	0.2	0.5	
215	Heating equipment (except warm air furnaces) manufacturing	0.0	0.5	0.0	0.5	
283	Motor vehicle parts manufacturing	0.0	0.4	0.1	0.5	
118	Petroleum lubricating oil and grease manufacturing	0.0	0.4	0.1	0.5	
188	Power boiler and heat exchanger manufacturing	0.0	0.5	0.0	0.5	
54	Fruit and vegetable canning, pickling and drying	0.0	0.0	0.5	0.5	
18	Commercial hunting and trapping	0.0	0.0	0.5	0.5	
53	Frozen food manufacturing	0.0	0.0	0.4	0.5	
55	Fluid milk and butter manufacturing	0.0	0.0	0.4	0.4	
250	Automatic environmental control manufacturing	0.0	0.4	0.0	0.4	
69	All other food manufacturing	0.0	0.0	0.4	0.4	
96	Veneer and plywood manufacturing	0.0	0.4	0.0	0.4	
198	Valve and fittings other than plumbing manufacturing	0.0	0.4	0.0	0.4	
228	Material handling equipment manufacturing	0.0	0.4	0.0	0.4	
239	Other communications equipment manufacturing	0.0	0.4	0.0	0.4	
11	Cattle ranching and farming	0.0	0.0	0.3	0.4	
337	Transport by pipeline	0.0	0.2	0.1	0.4	
103	All other miscellaneous wood product manufacturing	0.0	0.2	0.2	0.4	
272	Communication and energy wire and cable manufacturing	0.0	0.3	0.0	0.3	
141	All other chemical product and preparation manufacturing	0.0	0.2	0.1	0.3	
133	Pharmaceutical preparation manufacturing	0.0	0.0	0.3	0.3	
306	Surgical appliance and supplies manufacturing	0.0	0.0	0.3	0.3	
65	Snack food manufacturing	0.0	0.0	0.3	0.3	
114	Support activities for printing	0.0	0.2	0.1	0.3	
108	Coated and laminated paper, packaging paper and plastics film manufacturing	0.0	0.2	0.1	0.3	
56	Cheese manufacturing	0.0	0.0	0.3	0.3	
146	Polystyrene foam product manufacturing	0.0	0.2	0.0	0.3	
33	Water, sewage and other treatment and delivery systems	0.0	0.1	0.2	0.3	
347	Sound recording industries	0.0	0.0	0.3	0.3	
431	State and local government electric utilities	0.0	0.1	0.2	0.3	
171	Steel product manufacturing from purchased steel	0.0	0.3	0.0	0.3	
152	Other rubber product manufacturing	0.0	0.2	0.0	0.3	
267	Motor and generator manufacturing	0.0	0.2	0.0	0.3	

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105	Paper mills	0.0	0.1	0.2	0.3	
58	Ice cream and frozen dessert manufacturing	0.0	0.0	0.2	0.3	
98	Reconstituted wood product manufacturing	0.0	0.2	0.0	0.2	
71	Breweries	0.0	0.0	0.2	0.2	
302	Showcase, partition, shelving and locker manufacturing	0.0	0.2	0.0	0.2	
6	Greenhouse, nursery, and floriculture production	0.0	0.0	0.2	0.2	
291	Boat building	0.0	0.0	0.2	0.2	
268	Switchgear and switchboard apparatus manufacturing	0.0	0.2	0.0	0.2	
305	Surgical and medical instrument, laboratory and medical instrument manufacturing	0.0	0.0	0.2	0.2	
63	Cookie, cracker and pasta manufacturing	0.0	0.0	0.2	0.2	
10	All other crop farming	0.0	0.2	0.0	0.2	
134	In-vitro diagnostic substance manufacturing	0.0	0.0	0.2	0.2	
85	All other textile product mills	0.0	0.1	0.1	0.2	
137	Adhesive manufacturing	0.0	0.2	0.0	0.2	
87	Cut and sew apparel contractors	0.0	0.1	0.1	0.2	
183	Crown and closure manufacturing and metal stamping	0.0	0.1	0.1	0.2	
170	Iron and steel mills and ferroalloy manufacturing	0.0	0.2	0.0	0.2	
139	Toilet preparation manufacturing	0.0	0.0	0.2	0.2	
143	Unlaminated plastics profile shape manufacturing	0.0	0.2	0.0	0.2	
226	Pump and pumping equipment manufacturing	0.0	0.2	0.0	0.2	
309	Dental laboratories manufacturing	0.0	0.0	0.2	0.2	
185	Hand tool manufacturing	0.0	0.1	0.0	0.2	
38	Construction of other new residential structures	0.0	0.0	0.1	0.2	
1	Oilseed farming	0.0	0.0	0.2	0.2	
9	Sugarcane and sugar beet farming	0.0	0.0	0.2	0.2	
42	Other animal food manufacturing	0.0	0.0	0.2	0.2	
154	Brick, tile and other structural clay product manufacturing	0.0	0.2	0.0	0.2	
13	Poultry and egg production	0.0	0.0	0.2	0.2	
311	Sporting and athletic goods manufacturing	0.0	0.0	0.1	0.2	
47	Breakfast cereal manufacturing	0.0	0.0	0.2	0.2	
30	Support activities for other mining	0.0	0.1	0.0	0.2	
299	Institutional furniture manufacturing	0.0	0.1	0.0	0.1	
168	Mineral wool manufacturing	0.0	0.1	0.0	0.1	

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334	Transport by water	0.0	0.1	0.0	0.1	
180	Nonferrous metal foundries	0.0	0.1	0.0	0.1	
277	Light truck and utility vehicle manufacturing	0.0	0.0	0.1	0.1	
57	Dry, condensed and evaporated dairy product manufacturing	0.0	0.0	0.1	0.1	
109	All other paper bag and coated and treated paper manufacturing	0.0	0.1	0.1	0.1	
147	Urethane and other foam product (except polystyrene) manufacturing	0.0	0.1	0.0	0.1	
121	Industrial gas manufacturing	0.0	0.1	0.0	0.1	
214	Air purification and ventilation equipment manufacturing	0.0	0.1	0.0	0.1	
52	Non-chocolate confectionery manufacturing	0.0	0.0	0.1	0.1	
248	Electro-medical and electrotherapeutic apparatus manufacturing	0.0	0.0	0.1	0.1	
412	Other accommodations	0.0	0.0	0.1	0.1	
234	Electronic computer manufacturing	0.0	0.0	0.1	0.1	
190	Metal can, box and other metal container (light gauge) manufacturing	0.0	0.0	0.1	0.1	
72	Wineries	0.0	0.0	0.1	0.1	
308	Ophthalmic goods manufacturing	0.0	0.0	0.1	0.1	
165	Abrasive product manufacturing	0.0	0.1	0.0	0.1	
294	All other transportation equipment manufacturing	0.0	0.0	0.1	0.1	
193	Hardware manufacturing	0.0	0.1	0.0	0.1	
51	Confectionery manufacturing from purchased chocolate	0.0	0.0	0.1	0.1	
242	Bare printed circuit board manufacturing	0.0	0.1	0.0	0.1	
265	Other major household appliance manufacturing	0.0	0.0	0.1	0.1	
179	Ferrous metal foundries	0.0	0.1	0.0	0.1	
167	Ground or treated mineral and earth manufacturing	0.0	0.1	0.0	0.1	
126	Other basic organic chemical manufacturing	0.0	0.1	0.0	0.1	
43	Flour milling and malt manufacturing	0.0	0.0	0.1	0.1	
230	Other general purpose machinery manufacturing	0.0	0.1	0.0	0.1	
200	Ball and roller bearing manufacturing	0.0	0.1	0.0	0.1	
269	Relay and industrial control manufacturing	0.0	0.1	0.0	0.1	
127	Plastics material and resin manufacturing	0.0	0.1	0.0	0.1	
41	Dog and cat food manufacturing	0.0	0.0	0.1	0.1	
88	Men's and boy's cut and sew apparel manufacturing	0.0	0.0	0.1	0.1	
110	Stationery product manufacturing	0.0	0.0	0.1	0.1	
138	Soap and cleaning compound manufacturing	0.0	0.0	0.1	0.1	
90	Other cut and sew apparel manufacturing	0.0	0.0	0.1	0.1	

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15	Forestry, forest products and timber tract production	0.0	0.1	0.0	0.1	
83	Curtain and linen mills	0.0	0.0	0.1	0.1	
205	Construction machinery manufacturing	0.0	0.1	0.0	0.1	
4	Fruit farming	0.0	0.0	0.1	0.1	
261	Small electrical appliance manufacturing	0.0	0.0	0.0	0.1	
29	Support activities for oil and gas operations	0.0	0.1	0.0	0.1	
84	Textile bag and canvas mills	0.0	0.0	0.0	0.1	
303	Mattress manufacturing	0.0	0.0	0.1	0.1	
246	Printed circuit assembly (electronic assembly) manufacturing	0.0	0.0	0.0	0.1	
251	Industrial process variable instruments manufacturing	0.0	0.0	0.0	0.1	
181	All other forging, stamping and sintering	0.0	0.1	0.0	0.1	
318	Broom, brush, and mop manufacturing	0.0	0.0	0.0	0.1	
256	Watch, clock, and other measuring and controlling device manufacturing	0.0	0.0	0.0	0.1	
158	Glass container manufacturing	0.0	0.0	0.1	0.1	
236	Computer terminals and other computer peripheral equipment manufacturing	0.0	0.0	0.0	0.1	
192	Arms, ordnance and accessories manufacturing	0.0	0.0	0.0	0.1	
61	Seafood product preparation and packaging	0.0	0.0	0.1	0.1	
182	Custom roll forming	0.0	0.1	0.0	0.1	
86	Apparel knitting mills	0.0	0.0	0.1	0.1	
297	Non-upholstered wood household furniture manufacturing	0.0	0.0	0.1	0.1	
93	Footwear manufacturing	0.0	0.0	0.1	0.1	
101	Manufactured home (mobile home) manufacturing	0.0	0.0	0.0	0.1	
68	Seasoning and dressing manufacturing	0.0	0.0	0.0	0.1	
174	Aluminum product manufacturing from purchased aluminum	0.0	0.0	0.0	0.1	

<b>Employment</b>	CAPX 2020 Brookings County-Hampton 2014	Copyright 2010 Minnesota IMPLAN Group, Inc.				
<b>Sector</b>	<b>Description</b>	<b>Direct</b>	<b>Indirect</b>	<b>Induced</b>	<b>Total</b>	<b>Multiplier</b>
0	Total	151.0	49.7	54.7	255.4	1.69
36	Construction of other new nonresidential structures	151.0	0.0	0.0	151.0	
369	Architectural, engineering and related services	0.0	11.4	0.1	11.5	
413	Food services and drinking places	0.0	1.8	6.4	8.1	
319	Wholesale trade businesses	0.0	3.6	1.8	5.4	
397	Private hospitals	0.0	0.0	3.7	3.7	
324	Retail Stores – food and beverage	0.0	1.0	2.1	3.2	
331	Retail Nnn-stores – direct and electronic sales	0.0	1.3	1.6	2.9	
329	Retail stores – general merchandise	0.0	1.0	1.9	2.9	
414	Automotive repair and maintenance, except car washes	0.0	1.6	1.0	2.6	
394	Offices of physicians, dentists and other health practitioners	0.0	0.0	2.5	2.5	
320	Retail stores – motor vehicle and parts	0.0	1.1	1.3	2.4	
417	Commercial and industrial machinery and equipment repair and maintenance	0.0	2.3	0.1	2.4	
360	Real estate establishments	0.0	0.8	1.6	2.4	
398	Nursing and residential care facilities	0.0	0.0	2.2	2.2	
425	Civic, social, professional and similar organizations	0.0	1.1	1.1	2.2	
354	Monetary authorities and depository credit intermediation activities	0.0	1.2	1.0	2.2	
335	Transport by truck	0.0	1.7	0.4	2.1	
355	Non-depository credit intermediation and related activities	0.0	0.9	1.0	1.8	
388	Services to buildings and dwellings	0.0	1.2	0.5	1.7	
367	Legal services	0.0	1.1	0.5	1.6	
382	Employment services	0.0	1.2	0.4	1.6	
330	Retail stores – miscellaneous	0.0	0.6	1.0	1.5	
426	Private household operations	0.0	0.0	1.5	1.5	
323	Retail stores – building material and garden supply	0.0	0.5	0.9	1.3	
368	Accounting, tax preparation, bookkeeping and payroll services	0.0	1.0	0.3	1.3	
327	Retail stores – clothing and clothing accessories	0.0	0.3	0.7	1.0	
386	Business support services	0.0	0.7	0.3	1.0	
356	Securities, commodity contracts, investments and related activities	0.0	0.4	0.7	1.0	

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351	Telecommunications	0.0	0.6	0.4	1.0	
399	Child day care services	0.0	0.0	1.0	1.0	
326	Retail stores – gasoline stations	0.0	0.3	0.6	1.0	
325	Retail stores – health and personal care	0.0	0.3	0.7	1.0	
392	Private junior colleges, colleges, universities and professional schools	0.0	0.0	0.9	1.0	
357	Insurance carriers	0.0	0.2	0.8	0.9	
400	Individual and family services	0.0	0.0	0.9	0.9	
358	Insurance agencies, brokerages and related activities	0.0	0.2	0.7	0.9	
328	Retail stores – sporting goods, hobby, book and music	0.0	0.3	0.5	0.8	
365	Commercial and industrial machinery and equipment rental and leasing	0.0	0.7	0.0	0.7	
419	Personal care services	0.0	0.0	0.7	0.7	
322	Retail stores – electronics and appliances	0.0	0.3	0.4	0.6	
39	Maintenance and repair construction of nonresidential structures	0.0	0.4	0.2	0.6	
161	Ready-mix concrete manufacturing	0.0	0.6	0.0	0.6	
321	Retail stores – furniture and home furnishings	0.0	0.2	0.4	0.6	
432	Other state and local government enterprises	0.0	0.2	0.4	0.6	
393	Other private educational services	0.0	0.0	0.6	0.6	
409	Amusement parks, arcades and gambling industries	0.0	0.0	0.6	0.6	
401	Community food, housing and other relief services, including rehabilitation services	0.0	0.0	0.5	0.5	
427	U.S. Postal Service	0.0	0.3	0.3	0.5	
396	Medical and diagnostic labs and outpatient and other ambulatory care services	0.0	0.0	0.5	0.5	
381	Management of companies and enterprises	0.0	0.3	0.1	0.5	
339	Couriers and messengers	0.0	0.3	0.2	0.5	
415	Car washes	0.0	0.2	0.2	0.4	
424	Grant-making, giving and social advocacy organizations	0.0	0.0	0.4	0.4	
416	Electronic and precision equipment repair and maintenance	0.0	0.3	0.1	0.4	
377	Advertising and related services	0.0	0.2	0.2	0.4	
391	Private elementary and secondary schools	0.0	0.0	0.4	0.4	
31	Electric power generation, transmission and distribution	0.0	0.2	0.2	0.4	
40	Maintenance and repair construction of residential structures	0.0	0.0	0.4	0.4	
387	Investigation and security services	0.0	0.2	0.1	0.4	
338	Scenic and sightseeing transportation and support activities for transportation	0.0	0.2	0.1	0.3	

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372	Computer systems design services	0.0	0.3	0.1	0.3	
336	Transit and ground passenger transportation	0.0	0.1	0.2	0.3	
341	Newspaper publishers	0.0	0.2	0.1	0.3	
407	Fitness and recreational sports centers	0.0	0.1	0.2	0.3	
348	Radio and television broadcasting	0.0	0.2	0.1	0.3	
384	Office administrative services	0.0	0.2	0.1	0.3	
374	Management, scientific and technical consulting services	0.0	0.2	0.1	0.3	
390	Waste management and remediation services	0.0	0.2	0.1	0.3	
163	Other concrete product manufacturing	0.0	0.3	0.0	0.3	
389	Other support services	0.0	0.2	0.1	0.3	
95	Sawmills and wood preservation	0.0	0.2	0.0	0.3	
404	Promoters of performing arts and sports and agents for public figures	0.0	0.1	0.2	0.2	
403	Spectator sports companies	0.0	0.1	0.2	0.2	
410	Other amusement and recreation industries	0.0	0.0	0.2	0.2	
314	Sign manufacturing	0.0	0.1	0.1	0.2	
395	Home health care services	0.0	0.0	0.2	0.2	
421	Dry-cleaning and laundry services	0.0	0.0	0.2	0.2	
102	Prefabricated wood building manufacturing	0.0	0.2	0.0	0.2	
379	Veterinary services	0.0	0.0	0.2	0.2	
363	General and consumer goods rental except video tapes and discs	0.0	0.1	0.1	0.2	
422	Other personal services	0.0	0.0	0.2	0.2	
162	Concrete pipe, brick and block manufacturing	0.0	0.2	0.0	0.2	
346	Motion picture and video industries	0.0	0.1	0.1	0.2	
97	Engineered wood member and truss manufacturing	0.0	0.2	0.0	0.2	
420	Death care services	0.0	0.0	0.2	0.2	
383	Travel arrangement and reservation services	0.0	0.1	0.1	0.2	
359	Funds, trusts and other financial vehicles	0.0	0.0	0.1	0.2	
186	Plate work and fabricated structural product manufacturing	0.0	0.1	0.0	0.1	
429	Other federal government enterprises	0.0	0.0	0.1	0.1	
402	Performing arts companies	0.0	0.0	0.1	0.1	
340	Warehousing and storage	0.0	0.1	0.1	0.1	
380	All other miscellaneous professional, scientific and technical services	0.0	0.1	0.0	0.1	
364	Video tape and disc rental	0.0	0.0	0.1	0.1	
375	Environmental and other technical consulting services	0.0	0.1	0.0	0.1	

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16	Commercial logging	0.0	0.1	0.0	0.1	
99	Wood windows and doors and millwork manufacturing	0.0	0.1	0.0	0.1	
113	Printing	0.0	0.1	0.0	0.1	
187	Ornamental and architectural metal products manufacturing	0.0	0.1	0.0	0.1	
333	Transport by rail	0.0	0.1	0.0	0.1	
411	Hotels and motels, including casino hotels	0.0	0.0	0.1	0.1	
362	Automotive equipment rental and leasing	0.0	0.0	0.0	0.1	
423	Religious organizations	0.0	0.0	0.1	0.1	
60	Poultry processing	0.0	0.0	0.1	0.1	
26	Mining and quarrying sand, gravel, clay and ceramic and refractory minerals	0.0	0.1	0.0	0.1	
405	Independent artists, writers and performers	0.0	0.0	0.0	0.1	
431	State and local government electric utilities	0.0	0.0	0.0	0.1	
378	Photographic services	0.0	0.0	0.0	0.1	
189	Metal tank (heavy gauge) manufacturing	0.0	0.1	0.0	0.1	
166	Cut stone and stone product manufacturing	0.0	0.1	0.0	0.1	
418	Personal and household goods repair and maintenance	0.0	0.0	0.0	0.1	
370	Specialized design services	0.0	0.0	0.0	0.1	
352	Data processing, hosting, ISP, web search portals and related services	0.0	0.0	0.0	0.1	
332	Transport by air	0.0	0.0	0.0	0.1	
406	Museums, historical sites, zoos and parks	0.0	0.0	0.1	0.1	
33	Water, sewage and other treatment and delivery systems	0.0	0.0	0.0	0.1	
376	Scientific research and development services	0.0	0.0	0.0	0.1	
371	Custom computer programming services	0.0	0.0	0.0	0.1	



## **Appendix C: Tax Detail for Peak Years by CapX2020 Project**

All tax details reported from the IMPLAN model during the peak year employment for each proposed CapX2020 project are shown below:

Tables are presented in the following order:

1. Fargo-St. Cloud MN
2. Fargo-St. Cloud ND
3. Monticello-St. Cloud MN
4. Hampton-Rochester-La Crosse MN
5. Hampton-Rochester-La Crosse WI
6. Bemidji-Grand Rapids MN
7. Brookings County-Hampton MN
8. Brookings County-Hampton SD

<b>Federal Tax Impact</b>	CAPX 2020 2013 Fargo-St. Cloud MN	Copyright 2010 Minnesota IMPLAN Group, Inc.			
Description	Employee Compensation	Proprietor Income	Indirect Business Taxes	Households	Corporations
Social Ins Tax: Employee Contribution	\$3,400,694	\$761,226			
Social Ins Tax: Employer Contribution	\$3,439,132				
Indirect Bus Tax: Excise Taxes			\$318,715		
Indirect Bus Tax: Custom Duty			\$148,429		
Indirect Bus Tax: Fed Non-Taxes			\$245,009		
Corporate Profits Tax					\$846,273
Personal Tax: Income Tax				\$5,065,439	
Total Federal Tax	\$6,839,826	\$761,226	\$712,154	\$5,065,439	\$846,273

<b>State and Local Tax Impact</b>	CAPX 2020 2013 Fargo-St. Cloud MN	Copyright 2010 Minnesota IMPLAN Group, Inc.			
Description	Employee Compensation	Proprietor Income	Indirect Business Taxes	Households	Corporations
Dividends					\$354,918
Social Ins Tax: Employee Contribution	\$28,069	\$0			
Social Ins Tax: Employer Contribution	\$120,762				
Indirect Bus Tax: Sales Tax			\$2,276,894		
Indirect Bus Tax: Property Tax			\$1,534,600		
Indirect Bus Tax: Motor Vehicle License			\$61,573		
Indirect Bus Tax: Severance Tax			\$16,324		
Indirect Bus Tax: Other Taxes			\$279,382		
Indirect Bus Tax: S/L Non-Taxes			\$284,495		
Corporate Profits Tax					\$219,255
Personal Tax: Income Tax				\$2,020,056	
Personal Tax: Non-Taxes (Fines/Fees)				\$216,937	
Personal Tax: Motor Vehicle License				\$101,670	
Personal Tax: Property Taxes				\$24,096	
Personal Tax: Other Tax (Fish/Hunt)				\$65,566	
Total State and Local Tax	\$148,831	\$0	\$4,453,267	\$2,428,325	\$574,173

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<b>Federal Tax Impact</b>	CAPX 2020 Fargo-St. Cloud 2015	Copyright 2010 Minnesota IMPLAN Group, Inc.			
Description	Employee Compensation	Proprietor Income	Indirect Business Taxes	Households	Corporations
Social Ins Tax: Employee Contribution	\$271,703	\$76,177			
Social Ins Tax: Employer Contribution	\$274,774				
Indirect Bus Tax: Excise Taxes			\$15,855		
Indirect Bus Tax: Custom Duty			\$7,384		
Indirect Bus Tax: Fed Non-Taxes			\$12,188		
Corporate Profits Tax					\$47,949
Personal Tax: Income Tax				\$183,871	
Total Federal Tax	\$546,477	\$76,177	\$35,427	\$183,872	\$47,950

<b>State and Local Tax Impact</b>	CAPX 2020 Fargo-St. Cloud 2015	Copyright 2010 Minnesota IMPLAN Group, Inc.			
Description	Employee Compensation	Proprietor Income	Indirect Business Taxes	Households	Corporations
Dividends					\$12,165
Social Ins Tax: Employee Contribution	\$1,660	\$0			
Social Ins Tax: Employer Contribution	\$7,142				
Indirect Bus Tax: Sales Tax			\$106,648		
Indirect Bus Tax: Property Tax			\$83,124		
Indirect Bus Tax: Motor Vehicle License			\$3,354		
Indirect Bus Tax: Severance Tax			\$82,769		
Indirect Bus Tax: Other Taxes			\$8,797		
Indirect Bus Tax: S/L Non-Taxes			\$17,516		
Corporate Profits Tax					\$10,607
Personal Tax: Income Tax				\$37,908	
Personal Tax: Non-Taxes (Fines/Fees)				\$10,619	
Personal Tax: Motor Vehicle License				\$6,558	
Personal Tax: Property Taxes				\$1,869	
Personal Tax: Other Tax (Fish/Hunt)				\$7,288	
Total State and Local Tax	\$8,802	\$0	\$302,208	\$64,242	\$22,772

<b>Federal Tax Impact</b>	CAPX 2020 2011 Monticello-St. Cloud	Copyright 2010 Minnesota IMPLAN Group, Inc.			
Description	Employee Compensation	Proprietor Income	Indirect Business Taxes	Households	Corporations
Social Ins Tax: Employee Contribution	\$3,400,694	\$761,226			
Social Ins Tax: Employer Contribution	\$3,439,132				
Indirect Bus Tax: Excise Taxes			\$318,715		
Indirect Bus Tax: Custom Duty			\$148,429		
Indirect Bus Tax: Fed Non-Taxes			\$245,009		
Corporate Profits Tax					\$846,273
Personal Tax: Income Tax				\$5,065,439	
Total Federal Tax	\$6,839,826	\$761,226	\$712,154	\$5,065,439	\$846,273

<b>State and Local Tax Impact</b>	CAPX 2020 2011 Monticello-St. Cloud	Copyright 2010 Minnesota IMPLAN Group, Inc.			
Description	Employee Compensation	Proprietor Income	Indirect Business Taxes	Households	Corporations
Dividends					\$354,918
Social Ins Tax: Employee Contribution	\$28,069	\$0			
Social Ins Tax: Employer Contribution	\$120,762				
Indirect Bus Tax: Sales Tax			\$2,276,894		
Indirect Bus Tax: Property Tax			\$1,534,600		
Indirect Bus Tax: Motor Vehicle License			\$61,573		
Indirect Bus Tax: Severance Tax			\$16,324		
Indirect Bus Tax: Other Taxes			\$279,382		
Indirect Bus Tax: S/L Non-Taxes			\$284,495		
Corporate Profits Tax					\$219,255
Personal Tax: Income Tax				\$2,020,056	
Personal Tax: Non-Taxes (Fines/Fees)				\$216,937	
Personal Tax: Motor Vehicle License				\$101,670	
Personal Tax: Property Taxes				\$24,096	
Personal Tax: Other Tax (Fish/Hunt)				\$65,566	

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Total State and Local Tax	\$148,831	\$0	\$4,453,267	\$2,428,325	\$574,173
<b>Federal Tax Impact</b>	CAPX 2020 Hampton-Rochester-La Crosse MN 2014	Copyright 2010 Minnesota IMPLAN Group, Inc.			
Description	Employee Compensation	Proprietor Income	Indirect Business Taxes	Households	Corporations
Social Ins Tax: Employee Contribution	\$2,673,711	\$598,495			
Social Ins Tax: Employer Contribution	\$2,703,932				
Indirect Bus Tax: Excise Taxes			\$250,582		
Indirect Bus Tax: Custom Duty			\$116,699		
Indirect Bus Tax: Fed Non-Taxes			\$192,632		
Corporate Profits Tax					\$665,361
Personal Tax: Income Tax				\$3,982,575	
Total Federal Tax	\$5,377,643	\$598,495	\$559,913	\$3,982,575	\$665,361

<b>State and Local Tax Impact</b>	CAPX 2020 Hampton-Rochester-La Crosse MN 2014	Copyright 2010 Minnesota IMPLAN Group, Inc.			
Description	Employee Compensation	Proprietor Income	Indirect Business Taxes	Households	Corporations
Dividends					\$279,045
Social Ins Tax: Employee Contribution	\$22,069	\$0			
Social Ins Tax: Employer Contribution	\$94,946				
Indirect Bus Tax: Sales Tax			\$1,790,151		
Indirect Bus Tax: Property Tax			\$1,206,541		
Indirect Bus Tax: Motor Vehicle License			\$48,410		
Indirect Bus Tax: Severance Tax			\$12,834		
Indirect Bus Tax: Other Taxes			\$219,657		
Indirect Bus Tax: S/L Non-Taxes			\$223,677		
Corporate Profits Tax					\$172,384
Personal Tax: Income Tax				\$1,588,219	
Personal Tax: Non-Taxes (Fines/Fees)				\$170,561	
Personal Tax: Motor Vehicle License				\$79,935	
Personal Tax: Property Taxes				\$18,945	
Personal Tax: Other Tax (Fish/Hunt)				\$51,549	

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Total State and Local Tax	\$117,015	\$0	\$3,501,270	\$1,909,210	\$451,429
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<b>Federal Tax Impact</b>	CAPX 2020 Hampton-Rochester-La Crosse 2014	Copyright 2010 Minnesota IMPLAN Group, Inc.			
Description	Employee Compensation	Proprietor Income	Indirect Business Taxes	Households	Corporations
Social Ins Tax: Employee Contribution	\$1,155,125	\$354,371			
Social Ins Tax: Employer Contribution	\$1,168,182				
Indirect Bus Tax: Excise Taxes			\$82,806		
Indirect Bus Tax: Custom Duty			\$38,564		
Indirect Bus Tax: Fed Non-Taxes			\$63,657		
Corporate Profits Tax					\$273,492
Personal Tax: Income Tax				\$1,531,543	
Total Federal Tax	\$2,323,307	\$354,371	\$185,027	\$1,531,543	\$273,492

<b>State and Local Tax Impact</b>	CAPX 2020 Hampton-Rochester-La Crosse 2014	Copyright 2010 Minnesota IMPLAN Group, Inc.			
Description	Employee Compensation	Proprietor Income	Indirect Business Taxes	Households	Corporations
Dividends					\$254,581
Social Ins Tax: Employee Contribution	\$8,564	\$0			
Social Ins Tax: Employer Contribution	\$36,847				
Indirect Bus Tax: Sales Tax			\$590,173		
Indirect Bus Tax: Property Tax			\$769,618		
Indirect Bus Tax: Motor Vehicle License			\$12,283		
Indirect Bus Tax: Severance Tax			\$655		
Indirect Bus Tax: Other Taxes			\$66,501		
Indirect Bus Tax: S/L Non-Taxes			\$88,998		
Corporate Profits Tax					\$61,437
Personal Tax: Income Tax				\$609,054	
Personal Tax: Non-Taxes (Fines/Fees)				\$73,584	
Personal Tax: Motor Vehicle License				\$23,036	
Personal Tax: Property Taxes				\$14,639	

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Personal Tax: Other Tax (Fish/Hunt)				\$27,135	
Total State and Local Tax	\$45,411	\$0	\$1,528,229	\$747,448	\$316,018

<b>Federal Tax Impact</b>	Bemidji-Grand Rapids 2012	Copyright 2010 Minnesota IMPLAN Group, Inc.			
Description	Employee Compensation	Proprietor Income	Indirect Business Taxes	Households	Corporations
Social Ins Tax: Employee Contribution	\$1,225,195	\$274,253			
Social Ins Tax: Employer Contribution	\$1,239,043				
Indirect Bus Tax: Excise Taxes			\$114,826		
Indirect Bus Tax: Custom Duty			\$53,476		
Indirect Bus Tax: Fed Non-Taxes			\$88,271		
Corporate Profits Tax					\$304,893
Personal Tax: Income Tax				\$1,824,966	
Total Federal Tax	\$2,464,238	\$274,253	\$256,573	\$1,824,966	\$304,893

<b>State and Local Tax Impact</b>	Bemidji-Grand Rapids 2012	Copyright 2010 Minnesota IMPLAN Group, Inc.			
Description	Employee Compensation	Proprietor Income	Indirect Business Taxes	Households	Corporations
Dividends					\$127,869
Social Ins Tax: Employee Contribution	\$10,113	\$0			
Social Ins Tax: Employer Contribution	\$43,508				
Indirect Bus Tax: Sales Tax			\$820,315		
Indirect Bus Tax: Property Tax			\$552,882		
Indirect Bus Tax: Motor Vehicle License			\$22,183		
Indirect Bus Tax: Severance Tax			\$5,881		
Indirect Bus Tax: Other Taxes			\$100,655		
Indirect Bus Tax: S/L Non-Taxes			\$102,497		
Corporate Profits Tax					\$78,993
Personal Tax: Income Tax				\$727,782	
Personal Tax: Non-Taxes (Fine/Fees)				\$78,158	
Personal Tax: Motor Vehicle License				\$36,629	
Personal Tax: Property Taxes				\$8,681	
Personal Tax: Other Tax (Fish/Hunt)				\$23,622	
Total State and Local Tax	\$53,621	\$0	\$1,604,414	\$874,872	\$206,862

<b>Federal Tax Impact</b>	CAPX 2020 Brookings County-Hampton MN 2013	Copyright 2010 Minnesota IMPLAN Group, Inc.			
Description	Employee Compensation	Proprietor Income	Indirect Business Taxes	Households	Corporations
Social Ins Tax: Employee Contribution	\$10,845,472	\$2,427,696			
Social Ins Tax: Employer Contribution	\$10,968,060				
Indirect Bus Tax: Excise Taxes			\$1,016,445		
Indirect Bus Tax: Custom Duty			\$473,369		
Indirect Bus Tax: Fed Non-Taxes			\$781,382		
Corporate Profits Tax					\$2,698,928
Personal Tax: Income Tax				\$16,154,666	
Total Federal Tax	\$21,813,530	\$2,427,696	\$2,271,196	\$16,154,670	\$2,698,928

<b>State and Local Tax Impact</b>	CAPX 2020 Brookings County-Hampton MN 2013	Copyright 2010 Minnesota IMPLAN Group, Inc.			
Description	Employee Compensation	Proprietor Income	Indirect Business Taxes	Households	Corporations
Dividends					\$1,131,901
Social Ins Tax: Employee Contribution	\$89,517	\$0			
Social Ins Tax: Employer Contribution	\$385,133				
Indirect Bus Tax: Sales Tax			\$7,261,455		
Indirect Bus Tax: Property Tax			\$4,894,136		
Indirect Bus Tax: Motor Vehicle License			\$196,367		
Indirect Bus Tax: Severance Tax			\$52,059		
Indirect Bus Tax: Other Taxes			\$891,004		
Indirect Bus Tax: S/L Non-Taxes			\$907,310		
Corporate Profits Tax					\$699,247
Personal Tax: Income Tax				\$6,442,352	
Personal Tax: Non-Taxes (Fines/Fees)				\$691,855	
Personal Tax: Motor Vehicle License				\$324,245	
Personal Tax: Property Taxes				\$76,846	
Personal Tax: Other Tax (Fish/Hunt)				\$209,101	
Total State and Local Tax	\$474,651	\$0	\$14,202,330	\$7,744,398	\$1,831,148

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<b>Federal Tax Impact</b>	CAPX 2020 Brookings County-Hampton SD 2014	Copyright 2010 Minnesota IMPLAN Group, Inc.			
Description	Employee Compensation	Proprietor Income	Indirect Business Taxes	Households	Corporations
Social Ins Tax: Employee Contribution	\$448,876	\$187,821			
Social Ins Tax: Employer Contribution	\$453,950				
Indirect Bus Tax: Excise Taxes			\$36,993		
Indirect Bus Tax: Custom Duty			\$17,228		
Indirect Bus Tax: Fed Non-Taxes			\$28,438		
Corporate Profits Tax					\$99,332
Personal Tax: Income Tax				\$415,949	
<b>Total Federal Tax</b>	<b>\$902,826</b>	<b>\$187,821</b>	<b>\$82,659</b>	<b>\$415,949</b>	<b>\$99,332</b>

<b>State and Local Tax Impact</b>	CAPX 2020 Brookings County-Hampton SD 2014	Copyright 2010 Minnesota IMPLAN Group, Inc.			
Description	Employee Compensation	Proprietor Income	Indirect Business Taxes	Households	Corporations
Dividends					\$42,811
Social Ins Tax: Employee Contribution	\$3,738	\$0			
Social Ins Tax: Employer Contribution	\$16,082				
Indirect Bus Tax: Sales Tax			\$320,419		
Indirect Bus Tax: Property Tax			\$221,411		
Indirect Bus Tax: Motor Vehicle License			\$5,510		
Indirect Bus Tax: Severance Tax			\$2,181		
Indirect Bus Tax: Other Taxes			\$28,810		
Indirect Bus Tax: S/L Non-Taxes			\$17,988		
Corporate Profits Tax					\$11,084
Personal Tax: Income Tax				\$0	
Personal Tax: Non-Taxes (Fines/Fees)				\$27,740	
Personal Tax: Motor Vehicle License				\$8,469	
Personal Tax: Property Taxes				\$3,851	
Personal Tax: Other Tax (Fish/Hunt)				\$22,111	
<b>Total State and Local Tax</b>	<b>\$19,820</b>	<b>\$0</b>	<b>\$596,319</b>	<b>\$62,171</b>	<b>\$53,895</b>

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## **Appendix D: General description of input/output analysis**

The following general description of input/output analysis, “A Readymade Input-Output Model” comes from *Urban Regional Economics: Concepts, Tools, Applications*, by Wilbur R. Maki and Richard W. Lichty. February 2000. Publisher: Iowa State, Press, pp. 233-245, ISBN: 0813826799. Rick Lichty, Morse Distinguished Teaching Professor in the UMD Labovitz School and UMD Department of Economics, was Bureau of Business and Economic Research Director from 1994 to 2000.

## 1) A Readymade Input-Output Model

The point of departure for this assessment is the suggestion that "... a truly flexible readymade model will enable the introduction of survey-based trade coefficients in some sectors while continuing to balance the rest of the sectors in a truly unbiased manner" (Brucker, Campbell, and Latham III, 1990, p.136). System effectiveness requires not only a truly flexible model but one that invites "coefficient fix-up" with superior information, coupled with "... software and/or handbooks that guide the user (professional or lay) through the intricacies of final demand determination" (p.137).

### **Forecasting Area Economic Impacts**

Use of the IMPLAN regional modeling system as an impact prediction model starts with the existing database. The U.S. Department of Commerce Regional Economic Measurements Division Annual Regional Economic Information System (REIS) series covering industry employment, labor earnings, total population, and total personal income is a common starting place.<sup>3</sup> The historical (REIS) series include every county in the United States. They cover total employment and total labor earnings in a two-digit industry breakdown based on the 1987 Standard Industrial Classification Manual.

The U.S. IMPLAN database calibrates to the REIS series. The IMPLAN series also use the individual state ES-202 covered (by the cooperative federal-state unemployment insurance program) employment and payroll files, especially for the three- and four-digit industry groups that are not available in the REIS database. IMPLAN has a 528-sector industry breakdown for each of 3,120 counties in the United States.

The 1988 U.S. Department of Commerce Office of Business Economics Regional Series (OBERS) on industry employment, labor earnings, total population, and total personal income extend the corresponding 57-industry REIS series to 2040. The 1988 OBERS series calibrate to the 1988 U.S. Bureau of Labor Statistics (BLS) moderate projection series. High and low projection series, which are derived for individual states, MSAS, and the Bureau of Economics economic areas in the auxiliary IMPLAN database, correspond to the U.S. BLS high and low projection series (Kutcher,

1991).

The IMPLAN database extends the OBERS series to equivalent measures of industry output and commodity production in a long-term forecast mode. It further allocates the commodity production to intermediate and final demand sectors in the United States and in each of the 50 states. The intermediate demand sectors include the two-digit industry groups in the OBERS sectors. Individual industries in the 528 sectors of the IMPLAN database aggregate to the three- and four-digit BLS sectors, the two-digit OBERS sectors, and many other combinations of two- and three-digit industry groups.

The final demand sectors in the IMPLAN database include (1) personal consumption expenditures, (2) gross private capital formation, (3) change in business inventory, (4) federal government purchases, (5) state and local government purchases, (6) exports, and (7) imports. Regional purchase coefficients (RPCs) that allocate imports to each local purchasing sector are calculated for each IMPLAN "model" (that is, a county or multi-county impact assessment). The uniquely estimated RPCs produce estimates of local exports and imports that are consistent with levels of industry output and commodity production in each IMPLAN impact assessment.

The IMPLAN-based regional forecast methodology presents a series of readily reproducible steps for converting BLS and OBERS projections to corresponding sets of county forecasts of industry employment, labor earnings, resident population, and personal income. The individual county series track their respective state projection series. Each state has a set of high, low, and moderate projections based on the 1988 OBERS projection series and the corresponding high, low, and moderate 1988 and 1990 BLS projections series for the United States. This method of approach to county-level forecasting thus extends the BLS and OBERS forecasting methods and results. It introduces the BLS county-level modeling capabilities and database for use in industry-specific assessments of local resource requirements and the effects of these requirements on local and state economies.

State, regional, and county projection series relate directly to corresponding data series from the IMPLAN models of one or more counties. Individual IMPLAN regional reports, for example, expand the number of variables that correlate with the two-digit employment and earnings projections, including commodity exports and commodity imports. They also provide a framework for assessing the differential rates of growth of individual counties and regions. Each IMPLAN model takes given changes in final demands and derives the effects of these changes on the local economy and its institutions. Included with each IMPLAN model is a social accounting matrix (SAM) for tracking changes in local income distributions in the local economy.

The IMPLAN input-output model has been constructed using 528 industry sectors, although the model can be run for any level of aggregation of these sectors. The underlying coefficients in the model are derived from the U.S. input-output accounts. Flows of goods and services in the Minnesota model are derived from commodities produced and consumed in Minnesota as well as

those that are imported into the state and exported to areas outside of the state. The system is run for all regions together to ensure consistency with both U.S. and individual regional input-output accounts.

One very useful aspect of the IMPLAN model is the IMPACT module. It permits the user to evaluate the effects of changes or variations in economic activity. For example, the impact of the direct purchase of goods and services by the air transportation industry can be traced through the economy as a series of spending iterations among all sectors, including households. The long-term multiplier used in the model includes indirect effects (to which multipliers are normally limited) as well as induced effects related to employment and population change.

The U.S. Departments of Commerce, Labor, and Agriculture maintain the *reference data systems* for Micro-IMPLAN. The Department of Commerce houses the periodic censuses of population and employment, agricultural, manufacturing, wholesale, and retail trade, and selected business services, as well as the annual statistical series on personal income and industry employment and earnings of the employed industry workforce. State- and county-level data sources most critical for early fix-up and updating of the current database are the individual state reports on county business patterns, ES-202 files on covered industry employment and payroll, and the agriculture censuses.

A common problem in using each of these data sources is the occurrence of nondisclosures. Use of supplementary information in the bi-proportional adjustment procedures for filling in the missing data, for example, allow for closer correspondence of the remaining calculated values with values reported by the U.S. Department of Commerce.

Delays in the reporting cycles for reference data systems result in two- to three-year lags in the availability of each new update of the county-level Micro-IMPLAN database. Reducing lags in data availability is probably a less feasible alternative, however, than forecasting new control totals for the bi-proportionally adjusted U.S., state, and county input-output tables.

A hybrid approach that combines local surveys of critically important industries with the forecast approach facilitates the likelihood of attaining both greater timeliness and greater accuracy in regional impact assessments. Such an approach incorporates various measures of linkage between core and peripheral labor market areas, like survey-based estimates of the physical volume and market value of commodity shipments between the core area and periphery.

Delineation of the LMAs within an economic region introduces a spatial structure into the organization of the Micro-IMPLAN database. This helps address the twofold problem focus—system bias and specification error. Each of the problem sources, whether industry production functions, RPCs, marketing margins, or industry output, varies between center and periphery. Investment per worker is lower in the periphery, and rate of return on investment also is lower when discounted for perceived investment risk. However, high levels of commodity trade occur between center and periphery. This emanates from the unique competitive advantage of each of the two types

of export-producing systems, with the center specializing in high-order, high-profit services, and the periphery specializing in standardized commodity production.

The use of LMAs and the center-periphery structure of these areas apply especially well to the organization of transportation and local land use impact assessments. Commodity transportation originates from dispersed farms, mines, and factories. It concentrates in major shipping centers that also are the primary and secondary core LMAs of the U.S. trading regions. Air transportation concentrates even more than commodity transportation in the primary core areas.

This concentration of high-order economic services near the globally connected air nodes of core metropolitan areas apparently accounts for the higher productivity of both labor and capital in the core areas.

### **Modeling System Formulation**

The first step in model reformation is to calculate *total regional commodity demand*. We multiply the regional absorption matrix by the regional industry output to obtain the intermediate input purchases of each industry. We add our estimate of gross final commodity demand to the estimate of intermediate demand to obtain total commodity demand. The U.S. estimates of industry purchases include both domestic production and foreign imports. Thus, the input profile for each industry includes all commodity inputs of that industry. In addition, each industry may produce more than one commodity. The estimates of gross domestic exports relate to both the commodity production and the regional demand for this production.

The next step relates to the calculation of *total regional commodity supply*. Again, the estimate of total regional industry output enters into the calculation, but in multiplication with the industry byproduct ratios from the U.S. byproduct matrix. The result is the regional matrix that shows the commodity production (columns) by each industry (rows). These estimates, together with the estimates of institutional commodity output (commodity sales by government and from inventory depletion), yield the total commodity output for the regional economy.

Finally, to estimate trade flows, the *RPC* is the key parameter.<sup>5</sup> The RPC value times the corresponding value in the regional gross use matrix yields the regional industry use of the locally supplied commodity. Similarly, the *import propensity* for a given commodity times the corresponding value in the regional gross use matrix yields the regional *industry domestic imports* of each commodity. This procedure applies also in estimating regional institutional use and regional institutional imports, that is, the commodity purchases for local final demand.

The calculation of *domestic commodity exports* results from subtracting regional commodity demand from regional gross commodity supply. The individual commodity imbalances in the U.S. estimates of foreign exports and imports carry through to the individual county or multi-county Micro-IMPLAN models. Domestic exports and imports theoretically balance for the domestic economy as a

whole, but not for individual counties or multi-county areas. However, the criteria for allocating the two sets of exports and imports differ greatly. Micro-IMPLAN allocates U.S. *foreign commodity exports* to regions according to their share of U.S. commodity production. It also allocates U.S. *foreign commodity imports* to regions according to the same rule. Estimates of a region's total imports and total exports thus derive from a variety of data sources and allocation criteria.

While local commodity production provides the basis for allocating foreign exports and imports, uniquely generated local RPCs provide the basis for estimating domestic exports and imports for each county or multi-county area. These estimates of gross domestic imports relate to both commercial production and the demand for this production in a given region. Model reformulation calls for similar criteria in allocating U.S. foreign imports to individual industries and regions.

Interregional trade is synonymous with commodity shipments. Most commodity shipments move from producing areas to export markets by truck, rail, and barge. However, an increasing volume of high-value manufactured products move by air transportation to and from the designated air transportation nodes. These shipments typically move by truck to the larger air transportation nodes, such as Chicago. Micro-IMPLAN currently fails to account for such multimodal shipments.

*Technology transfer* is an increasingly important form of interregional trade. It is also a singularly important factor in accounting for a region's competitive advantage in specialized production and its export to other regions. It is associated, in part, with the total value of technology-intensive manufactured products in a given region. Again, Micro-IMPLAN, when conjoined with an optimizing transportation network model, can simulate the local economic effects of technology transfer. This application may extend to the role of a state's research universities in the formation and strengthening of spatially separated, functionally integrated industry clusters. These clusters are viewed by at least one student of regional growth and change as the new industrial systems of the emerging information economy (Saxenian, 1994).



## **Refinements and Applications**

Several types of refinements are available for the outcomes of the preceding steps (Alward et al., 1989). These include (1) changing regional supply, (2) modifying industry production function, (3) editing RPCs, and (4) controlling for induced effects once better information becomes available. Superior local knowledge warrants changing the readymade database values in each category. Superior local knowledge also warrants changing regional purchase coefficients, by institution, industry, or commodity. The RPC adjustments for an industry or institution result in the given change being applied to all commodities, by industry or institution. Overlooked, however, is the further regionalization of the final local sales accounts and the industry margins that convert industry output from producer prices to purchaser prices. This process requires detailed, regionally differentiated estimates of final product sales to households, governments, and businesses. Furthermore, input-output models generally are demand-driven with no supply constraints.

The lack of capacity limits for industry expansion and the assumption of full resource use or availability, including labor, result in overestimating industry production response to demand changes. Fixed-price multipliers add to this problem by overestimating multiplier effects and underestimating the substitution effects from exogenous changes (Koh, Schreiner, and Shin, 1993). Also, the current modeling system sidesteps the issue of commuting effects. These attributes of input-output models ultimately result in underestimating or overestimating factor income responses to market changes.

### **A Simple Input-Output Model**

The model is triggered by changes in final demand; that is, demand for goods or services related to final uses. The components of final demand are exogenous to the model's structural characteristics in much the same way as final payments are, but the role of final demand as an initiator of impacts gives it a unique role in the input-output scheme.

The basic input-output model consists of a series of three separate tables. The first is called the transactions table. The transactions table lists all industrial sectors defined for the purposes of the analysis being conducted. It should be noted that these sectors have to be defined so as to account for every firm in the region. The individual sectors should be relatively homogeneous in terms of their input requirements and output distributions. They should generally be disaggregated enough to highlight the true structure of the region without being so disaggregated as to cause significant problems in data collection or in disclosure of the operations of any one firm in the region.

The transactions table also contains values for final demand, as discussed earlier, as well as the values for final payments. The grand totals of such a table contain the gross outputs for each industrial sector and the gross inputs required to produce those outputs.

Table 6-1A represents the structure of a hypothetical input-output table with three industrial sectors:

extractive, manufacturing, and services. Remember, the sectors should be defined so as to account for every firm in the region. The sectors should also, ideally, be as disaggregated as possible. For these reasons, this represents a very unrealistic example of the size of an actual table. Keeping the size of the model to just three industries, however, makes required computations much simpler. The structure and use of larger tables remains much the same.

One of the most important things to remember when reading an input-output table is that the rows of the table represent sales and the columns of the table represent purchases. Thus, the 700 that appears in the Extractive row and the Manufacturing column indicates that firms in the extractive industry sold \$700 worth of goods and services to firms in the manufacturing sector.

TABLE 6-1A Commodity transactions of a regional economy

Commodity	Intermediate Demand				Final Demand	Gross Output
	Extractive	Manufg	Services	Total		
	(mil.\$)	(mil.\$)	(mil.\$)	(mil.\$)	(mil.\$)	(mil.\$)
Extractive	100	700	0	800	4,625	5,425
Manufacturing	50	200	0	250	6,400	6,700
Services	75	300	75	450	4,905	5,355
Value added	5,000	5,500	230	10,730	1,800	28,730
Imports	200	0	5,000	5,200	0	5,200
Total inputs	5,425	6,700	5,355	17,480	17,730	33,930

Looked at the other way, we could say that the 700 also represents a \$700 purchase by the firms in the manufacturing sector from firms in the extractive sector. The 50 in the Manufacturing row and the Extractive column represents a \$50 transaction between manufacturing (the seller) and extractive (the buyer) and so on.

The same industrial sectors identified on the left-hand margin of the table appear along the top of the table. The sales and purchases between these sectors represent sales and purchases of “intermediate” goods and services. These are goods and services produced for the purpose of facilitating further production. Semi finished goods would be an obvious example of intermediate production but so would the services of lawyers, bankers, transportation agencies (in all cases not involving a final transportation use), and any other sector input or output oriented toward helping other industries with their own production.

The value added row of the table represents another form of sale—the sale of resources of production to each sector. In a theoretical sense, the resources of production include land, labor, capital, and enterprise. In a more practical sense, this row generally includes the income received by local households for whatever contribution they make to the production process.

These resource inputs are not generally considered to be intermediate even though the sale takes place so further production can occur. Rather, they represent final inputs that add to the income of households as opposed to industrial sectors.

Imports represent sales to local industries by industries and resource holders outside of the locality's defined boundaries. Although not shown above, in reality final demand accounts for a large, often a major, share of an area's imports; the smaller and less diversified the area, the larger the share. Remember, imports—and exports too, for that matter—are defined in terms of payments.

Finally, final demand consists of sales for final uses. The usual categories making up final demand include household consumption (by households located in the region), government purchases of goods and services, gross private domestic investment (including inventory changes), and exports (again, defined in terms of the payment made).

The gross output and input values are equal. This is due to the fact that the transactions table really represents a type of cost-accounting sheet for a regional economy—debits equal credits. The elements in the table that force this balance (which is a balance by definition) are profits or losses. This is because the final value of output is made up of all the costs that go into production, with profits and losses making up the difference.

In summary, the transactions table has three identifiable parts: the intermediate transactions component, representing sales and purchases between firms; the final payments plus imports component, representing resource inputs into the firm's production plus inputs from outside the region; and final demand, representing the sale of goods and services for final use. The table balances between inputs and outputs, with profit as the balancing mechanism.

The transactions table contains a great deal of useful information in its own right. The regional balance of trade (exports—imports) can be discerned from this table, as can gross regional product (the dollar value of all final goods and services produced with the economy minus imports). The level of interaction between local industries and between industries in the region and households can be seen in this table. Finally, the relation between local household income and production is depicted in the transactions matrix.

The principal use for this table is found in the construction of the other two tables of the input-output system. As mentioned, the transactions table alone represents a cost-accounting sheet for the region, nothing more or less. It is descriptive rather than analytical, and it does not allow for general equilibrium analysis of the type previously described without further modification. The next step uses the transactions table to construct a table of direct requirements, often called the technical coefficients matrix.

The question answered by the technical coefficients table is: if each local industrial sector sells to

other local industrial sectors some total value of intermediate goods and services so that the purchasing sectors can produce their own output, how much do the purchasing sectors require from the other local sectors per dollar of output? For example, Manufacturing purchased \$300 worth of intermediate output from Services in order to facilitate its own production of \$6,700 worth of intermediate and final outputs. How much did Manufacturing buy from Services per dollar of gross output? The answer is  $300/6,700 = \$0.45$ . The same computation can be made for each intermediate sale and purchase in the transactions table. The result of these divisions is shown in Table 6-2A.

TABLE 6-2A

Commodity	Extractive (mil.\$)	Manufg (mil.\$)	Services (mil.\$)
Extractive	0.018	0.104	0.000
Manufacturing	0.009	0.030	0.000
Services	0.014	0.045	0.014
Subtotal	0.041	0.179	0.014
Value added	0.922	0.821	0.043
Imports	0.037	0.000	0.934
Total inputs	1.000	1.000	1.000

The rows are still read as sales and the columns as purchases. Only now the sales are in terms of cents per dollar, and the purchases have the special interpretation of “input requirements” per dollar of output. We call these input requirements because they represent requirements during the period of analysis in order for each sector to produce its own outputs, scaled down to a “dollar of output” basis.

The technical coefficient matrix represents a recipe for production. To produce one dollar’s worth of output, the extractive industry needed a pinch of its own intermediate output, a dash of the intermediate output of the manufacturing sector, and a smidgen of the intermediate products of the services industry. For Manufacturing to produce a dollar’s worth of output, it required a pinch from Extractive, a dash from Manufacturing, and a smidgen from Services. And so it goes through all the identified industries for the region.

One of the key assumptions of input-output analysis, as mentioned earlier, is that this recipe does not change, regardless of the level of output. Thus, if the extractive industry were to experience an increase in final sales equal to \$10,000 it would require another \$180 worth of intermediate products from its own firms, \$90 from Manufacturing, and \$140 from Services. It should be emphasized that this process starts with a change in the final sales of an industry, or from “exogenous” forces. The coefficients in the inter-industry section of the table represent the “endogenous” component of the table

It can be seen that this first computed table gives the analyst limited ability for impact analysis. He or she could go through the process of assuming any number of changes in the final sales of the identified industries, multiply these assumed changes by the direct requirements coefficients, and come up with estimates as to the direct effects from these changing final sales on each identified industry in the region. To make sure that this process is understood, one might ask: What is the direct effect on each regional industry from an increase in the exports from the manufacturing sector equal to \$10 million? The answer is that Manufacturing would increase by \$10 million plus a direct intermediate production effect of \$300,000, for a total of \$10.3 million, the extractive industry would find its intermediate production increasing by \$1.4 million, and the services industry would see its intermediate production increase by \$450,000.

But this is not the end of the story if each industry has to increase its output in order to service the increase in final sales of the manufacturing industry, then each must, in turn, increase its intermediate purchases and sales from and to one another to service this second round of expansion in activity. The second round must then be serviced by a third round of outputs.

TABLE 6-3A Round one of \$10 million change in final sales

	Intermediate (mil.\$)	Final (mil.\$)
Extractive	0.300	0.000
Manufacturing	1.040	10.000
Services	0.450	0.000
Total	1.179	10.000

TABLE 6-4A Round two of \$10 million change in final sales

Commodity	Extractive (thou.\$)	Manufg. (thou.\$)	Services (thou.\$)	Total (thou.\$)
Extractive	18.720	31.200	0.000	499.200
Manufacturing	9.360	9.000	4.050	106.650
Services	14.560	4.200	6.300	156.100
Total	42.640	325.200	10.350	761.950

Each round is smaller than the previous one due to leakages to imports and to local value added, until the process has completely played itself out. The first of three rounds of such a \$10,000 increase in final sales is shown in Table 6-3A.

Note that the only exogenous change is the initial change in final demand assumed for the

manufacturing industry. The rest of the sales represent the direct first-round results from those sales on the intermediate output of all industries in the region, including Manufacturing. These are recipe requirements for Manufacturing to produce the hypothesized increased final sales.

Table 6-4A presents second-round totals. Note that Manufacturing requires still more intermediate inputs from its own firms, this time to service the additional \$300,000 of output it had to produce to directly allow for the initial \$10 million increase in final sales. Similarly, the services industry needs to buy from each of the other industries to enable it to produce the additional \$450,000 directly required by Manufacturing. Finally, the extractive industry must have additional inputs to produce its additional \$1,040,000 for Manufacturing. The rounds of production in Table 6-4A are *indirect* impacts.

Manufacturing has now increased its sales three times: the \$10 million that was initially assumed, the \$300,000 needed to directly service that increase in final sales, and the \$22,410 to service the \$300,000 in the first round. The extractive industry has increased its sales by \$1,040,000 to service the final sales change for Manufacturing plus the \$49,900 to service that first-round increase, for a total of \$1,089,920 to this point and so it goes.

We will now run through a third round of increased production (Table 6-5A), this time to service the second round.

TABLE 6-5A Round three of \$10 million change in final sales

Commodity	Extractive (thou.\$)	Manufg. (thou.\$)	Services (thou.\$)	Total (thou.\$)
Extractive	0.899	2.331	0.000	3.230
Manufacturing	0.449	0.672	0.225	1.346
Services	0.699	0.351	0.351	1.401
Total	2.047	3.354	0.576	5.977

Each additional round is computed in the manner shown above, and the totals are added to determine the total direct and indirect effects from the initial assumed change in the final sales of one of the regional industries. This process is obviously cumbersome. It would be even more difficult—impossible, probably—to work such an iterative scheme for a larger number of industries or for higher direct coefficient values. Fortunately, the system of simultaneous equations represented by an input-output system can be solved using high-speed computers in a matter of seconds, even for the largest of tables. The solution for the system in this example is given in Table 6-6A.

TABLE 6-6A Direct and indirect input requirements

Commodity	Extractive (mil.\$)	Manufg. (mil.\$)	Services (mil.\$)
Extractive	1.019	0.109	0.001
Manufacturing	0.010	1.032	0.010
Services	0.015	0.049	1.015
Total	1.044	1.190	.026

The diagonal of Table 6-6A shows “ones” plus some other number (for example, 1.032 in row 2, column 2.) These ones represent the dollar increase to final sales of the industry for which such an exogenous change is assumed. The numbers appearing after the decimal represent the direct (shown in Table 6-2A) plus indirect effects from each assumed change in final sales. Thus, the \$10 million change for the example using Manufacturing turns into \$10,320,000 total - increase in Manufacturing sales: \$10 million to final sales, \$300,000 in direct sales, and \$20,000 in indirect sales. That \$10 million in Manufacturing sales turns into an increase of \$1,090,000 in sales by the extractive industry—\$1,040,000 of that direct and \$50,000 indirect. Finally, the \$10 million assumed increase in manufacturing leads to an increase of \$490,000 in the sales of services—\$450,000 of that direct and \$40,000 of that indirect.

The total impact on all of the industries in the region combined is \$11.9 million ( $1.190 \times 10$  million). The 1.190 is called the demand multiplier for Manufacturing, or the total direct and indirect purchases this sector must make from itself and from the other regional industries in order to produce one dollar’s final output. To conduct an impact study, simply multiply an assumed change in final demand for any of the industries by the demand multiplier for that same industry. This indicates the direct and indirect effects on the region resulting from the assumed change. The impacts stem from the fact that industries in a region interact with one another through their purchases from and sales to one another. The greater this level of interaction, the greater the industrial demand multiplier.

Thus, the input-output model represents a detailed accounting of the economic base of a region. It can be used to delineate the export structure of the regional economy and the multipliers that emerge from that structure. It also identifies, in final demand, the relationship between local activity, investment, and export activity in relation to the identified industrial structure. As in most models, its weakness is in its assumptions. But, at the least, the input output system can be used for simulations and sensitivity analyses for a regional economy.

If we assume the technical coefficients are constant, we can solve for this linear set of equations. The result will be industrial demand multipliers based on each industry's need to purchase intermediate outputs from the other industries in the region in order to produce a dollar's worth of output in the reference industry. The solution is as follows:

$$(6) \quad Y = AY + D$$

$$(7) \quad (I - A)Y = D$$

$$(8) \quad Y = (I - A)^{-1}D$$

Where:  $I$  is the identity matrix,  
 $Y$  is a column vector of gross outputs,  
 $D$  is a column vector of final demands,  
 $A$  is a matrix of technical coefficients, and  
 $(I - A)^{-1}$  is the Leontief inverse.

This inverse represents the direct and indirect input requirements of all industries in a region in order to produce a dollar's worth of output. It is out of this matrix that industrial demand multipliers are determined.

Thus, the most usual form of input-output analysis emphasizes the input structure of the economy. This is because most tables are constructed for relatively large areas where production relationships are deemed to be the most important. The emphasis on production would miss the point for small economies since little or no manufacturing activity takes place in such rural areas. For these economies, the emphasis should be on trade rather than production relationships.

■