



N O R T H S P A N

2026

# **SAINT PAUL'S INDUSTRIAL LAND**

**Analysis of the Economic Impact  
of the Saint Paul Industrial Sector**

**Prepared by Northspan on Behalf of the Saint Paul Port Authority**

# **ANALYSIS OF THE ECONOMIC IMPACT OF THE SAINT PAUL INDUSTRIAL SECTOR**

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## **Report Highlights**

- The industrial sector in Saint Paul supports over 31,000 jobs, yields nearly \$2.8 billion in labor income, and over \$9 billion in direct economic output.
- Industrially zoned land accounts for 9.3% of Saint Paul's property tax revenues.
- Over half of land currently zoned industrial cannot be further improved because it is a designated airport land, railroad corridor, regional park, or owned by Metropolitan Council Environmental Services. The remaining productive acreage that is zoned industrial has the highest tax capacity per acre of any broad zoning classification in the city.
- Every \$1 in tax revenue spent on services to industrially zoned land yields \$1.80 in tax revenue for the city. Industrial land is a net positive for city property tax revenue, while all other uses combined are negative. Housing, for example, yields only \$.87 in revenue for every dollar of expenditures.
- One average-valuation acre of productive industrial land in Saint Paul produces nearly \$14,000 more in property tax revenue than an average-valuation residential acre.
- Changes in commute patterns and land values stemming from an increase in remote work in some parts of the economy increases the relative value of industrial land for City of Saint Paul tax revenues.

## **Introduction**

This report explores the economic impact of the industrial sector in the city of Saint Paul, Minnesota. It focuses on industrially zoned land across the city and illustrates the benefits to the city in economic impact and tax capacity, showing its long-term value to the community. It was commissioned by the Saint Paul Port Authority (SPPA), which has previously conducted research into the economic impact of the industrial sector, including an initial 2011 report and a 2022-2024 follow-up analysis from the Institute for a Competitive Inner City (ICIC). Unlike some of the previous studies, which focused specifically on Port Authority-owned properties, this analysis explored all industrially zoned land in Saint Paul.

## **Economic Impact Modeling**

Northspan used IMPLAN input-output modeling to assess the economic impact of industries that use industrially zoned land in Saint Paul. This analysis was conducted across the 11 ZIP codes that account for most of Saint Paul's land area. Because the total employment count within this region was higher than DEED Quarterly Census of Employment and Wages figures due to some ZIP codes overlapping, it was adjusted proportionally to avoid overcounting the employment in the Saint Paul industrial sector.

The decision over which industries to include in the analysis required a review of industries used in similar studies in other locations and discussions with SPPA. Analysis at this level

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cannot precisely define the economic impact strictly on industrially zoned land, as industrially zoned land in Saint Paul features numerous non-conforming uses (e.g., offices, housing, schools), and some businesses that play prominent roles in supporting the industry may not be located on industrially zoned land. As a result, Northspan and SPPA sought to identify industries that can be broadly defined as industrial for inclusion in the analysis.

In the interest of providing an accurate economic impact assessment, Northspan and SPPA used a shorter list than some other analyses. Industries that tended to be broader than obvious industrial uses were included only if they had known uses on industrial land in Saint Paul. For example, Cintas and St. Croix Linens are known industrial land users in the Linen and Uniform Supply sector, and Warners Stellian is a known industrial land user in the Appliance Repair and Maintenance sector. Table 1 includes all sectors included in the economic impact analysis, along with their NAICS codes.

Table 1: Industries Included in Economic Impact Analysis

NAICS	NAICS Sector Name
31-33	Manufacturing
23	Construction
22	Utilities
42	Wholesale trade
48-49	Transportation and warehousing
518210	Data processing, hosting, & related services
5324	Commercial & industrial machinery renting and leasing
8113	Commercial & industrial machinery & equipment repair/maintenance
81233	Linen & uniform supply
811412	Appliance repair & maintenance
562	Waste management and remediation
53212	Truck, utility trailer, & RV rental/leasing
562	Waste management and remediation
517	Telecommunications

Conducting the IMPLAN analysis yielded the following figures for the City of Saint Paul:

- Employment: Total number of people employed in the industrial sector in Saint Paul
- Labor Income: Total income earned by these employees, including proprietor income for the businesses.
- Value Added: Total wealth created by activity in the industry (i.e., its contribution to the region’s gross domestic product); includes labor income plus other property income and taxes on production and imports

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- Output: Adds Value Added plus intermediate inputs (i.e., goods and services required by the industrial sector needed to produce its final products)

Table 2: Direct Economic Impacts of the Saint Paul Industrial Sector

Employment	Labor Income	Value Added	Output
31,448	\$2,793,454,515	\$4,583,905,960	\$9,231,208,837

Source: IMPLAN, 2025.

The IMPLAN analysis shows a substantial economic impact from the industrial sector, with over 31,000 employees (totaling 17.8% of the city’s 2024 annual employment figure of 176,576), nearly \$2.8 billion in labor income, over \$4.5 billion added to the local economy, and total economic output of over \$9 billion.

IMPLAN also produces estimates of the tax impact of the industrial sector. While likely not as accurate as a rigorous, parcel-based analysis of overall tax capacity, these figures provide some guidance on tax revenue generated by the activity in an industry and their breakdown by level of government. These figures also include business and personal income tax directly produced by the industrial sector and are therefore substantially higher than the tax values elsewhere in this report, which focus specifically on property taxes.

Table 3: Tax Impacts of the Saint Paul Industrial Sector According to IMPLAN, 2025

Sub County General	Sub County Special Districts	County	State	Federal	Total
\$81,507,494	\$77,107,300	\$82,572,409	\$317,622,170	\$558,620,702	\$1,117,430,075

Source: IMPLAN, 2025.

**Tax Base Impact**

The Saint Paul Port Authority sought an assessment of the relative impact of industrially zoned land on the Saint Paul tax base relative to other zoning classifications. To complete this analysis, Northspan created used ArcGIS mapping tools to join shapefiles including Ramsey County tax data for all Saint Paul parcels and a City of Saint Paul zoning layer. This allowed researchers to categorize every parcel by its zoning classification and calculate the taxes generated by different land uses. This process included considerable cleanup work to ensure accurate tax data for parcels that feature leased public property (LPPs) or payment in lieu of taxes (PILT or PILOT) that do not appear on parcel tax records. While Northspan cannot guarantee that it accounted for every unique taxing district in the city, it made a wide-reaching and sustained effort to calculate the total tax capacity of every parcel in Saint Paul. Table 4 includes data for all zoning classes, and Tables 5 and 6 compile data by several large categories.

Table 4: Tax Capacity by All Saint Paul Zoning Classifications

Zoning Classification	No. of Parcels	Total Acres	Total Tax Capacity	Capacity Per Parcel	Capacity Per Acre
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Capitol Area Jurisdiction	512	320	\$3,539,358	\$6,913	\$11,053
Central Business	1,525	1,001	\$31,879,079	\$20,904	\$31,838
Central Business Service	1,304	871	\$18,405,535	\$14,115	\$21,141
Community Business	625	176	\$9,615,980	\$15,386	\$54,693
Community Business (Converted)	53	7	\$722,365	\$13,630	\$96,315
Ford Business Mixed District	12	17	\$4,082,346	\$340,196	\$237,346
Ford Gateway District	11	31	\$2,034,056	\$184,914	\$65,870
Ford Residential Mixed High District	6	9	\$221,248	\$36,875	\$24,260
Ford Residential Mixed Low District	74	9	\$513,598	\$6,941	\$55,285
Ford Residential Mixed Mid District	81	19	\$2,662,092	\$32,865	\$139,669
Ford River Residential	56	12	\$815,941	\$14,570	\$69,620
General Business	180	56	\$2,759,754	\$15,332	\$48,944
General Industrial	390	1,446	\$13,709,429	\$35,152	\$9,482
High-Rise Multiple-Family Residential	224	675	\$1,123,249	\$5,015	\$1,665
IT with Master Plan	36	116	\$1,761,907	\$48,942	\$15,189
Light Industrial	1,041	1,571	\$35,686,597	\$34,281	\$22,713
Local Business	50	10	\$378,041	\$7,561	\$39,710
Low-Density Multiple-Family Residential	1,195	357	\$5,485,427	\$4,590	\$15,347
Medium-Density Multiple-Family Residential	4,911	1,589	\$43,027,829	\$8,762	\$27,083
Office-Service	39	22	\$466,820	\$11,970	\$20,894
One-Family Large Lot Residential	254	219	\$1,343,428	\$5,289	\$6,126
Planned Development	64	172	\$261,789	\$4,090	\$1,524
Residential	62,616	13,071	\$324,038,661	\$5,175	\$24,791
Restricted Industrial	1	15	\$199,214	\$199,214	\$13,281
T1 with Master Plan	90	12	\$6,602	\$73	\$564
T3 with Master Plan	703	1,035	\$8,356,955	\$11,888	\$8,077

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T4 with Master Plan	21	28	\$721,771	\$34,370	\$26,057
Traditional Neighborhood	3,055	2,310	\$62,050,134	\$20,311	\$26,861
Transitional Industrial	67	43	\$2,700,297	\$40,303	\$63,074
Vehicular Parking	25	5	\$153,175	\$6,127	\$31,070
<b>Total</b>	<b>79,221</b>	<b>25,223.58</b>	<b>\$578,722,677.00</b>	<b>\$7,305.17</b>	<b>\$22,943.72</b>

Source: Ramsey County and City of Saint Paul, 2025

Table 5: Tax Capacity by Parcel by Zoning Category

	Total	% Total Tax Capacity	No. of Parcels	% Total Parcels	Capacity Per Parcel	Tax Capacity : Parcel Ratio
All Industrial	\$54,057,444	9.3%	1535	1.9%	\$35,217	4.8
All Residential	\$379,231,473	65.5%	69417	87.6%	\$5,463	0.7
Master Planned	\$9,085,328	1.6%	814	1.0%	\$11,161	1.5
Business/ Commercial	\$64,227,574	11.1%	3776	4.8%	\$17,009	2.3

Source: Ramsey County and City of Saint Paul, 2025

Table 5 aggregates zoning into several large categories and provides data by parcel, while Table 6 provides it by acre. These tables show that industrially zoned land, while about 9.3% of total tax capacity, accounts for just 1.9% of total acres in the city, yielding a very high capacity per parcel. The 9.3% figure represents a .2% increase from the 9.1% figure found in previous ICIC research.

Table 6: Tax Capacity by Acre by Zoning Category

	Total	% Total Tax Capacity	Total Acres	% Total Acres	Capacity Per Acre	Tax Capacity : Acre Ratio
All Industrial	\$54,057,444	9.3%	3191	12.7%	\$16,941	0.7
All Residential	\$379,231,473	65.5%	15960	63.3%	\$23,761	1.0
Master Planned	\$9,085,328	1.6%	1074	4.3%	\$8,459	0.4
Business/ Commercial	\$64,227,574	11.1%	2143	8.5%	\$29,964	1.3

Source: Ramsey County and City of Saint Paul, 2025

Tax impacts per acre, on the other hand, appear somewhat less robust for industrial land. However, as Northspan reviewed the results of this research, it became apparent that large swaths of industrially zoned land in Saint Paul do not pay property taxes or serve a real industrial use. For example, while the Saint Paul Downtown Airport has numerous tax-generating properties or LPP properties associated with it in various hangars or surrounding buildings, the vast majority of its land is devoted to runways and open space buffer areas. Several other large parcels are not available for improvement and will likely never see a productive use, including a substantial tract of industrially zoned land in Pigs Eye Regional Park, a series of undeveloped parcels owned by Metropolitan Council Environmental

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Services, and portions of numerous railroad corridors across the city. While most land uses across the city have some percentage of their land that is not buildable, the proportion of industrial land in this category is substantially higher than it is for others, and this land is not currently and will likely never be truly industrial in nature. (For example, some cities have a designated zoning classification for their airports or municipal waste operations.)

In response to these data limitations, Northspan re-ran the analysis to exclude all parcels that were in the airport zone, dedicated parkland, vacant land owned by Metropolitan Council Environmental Services, or railroad only.<sup>1</sup> Together, these parcels account for over 1,700 acres, or over half of all industrial land in Saint Paul. Table 7 shows these adjustments relative to the initial data.

**Table 7: Tax Capacity by Parcel by Zoning Category with Industrial Land Adjustments**

	Total	% Total Tax Capacity	No. of Parcels	% Total Parcels	Capacity Per Parcel	Tax Capacity : Parcel Ratio
All Industrial (Adjusted)	\$54,057,444	9.3%	1,330	1.7%	\$40,645	5.6
All Residential	\$379,231,473	65.5%	69,417	87.6%	\$5,463	0.7
Master Planned	\$9,085,328	1.6%	814	1.0%	\$11,161	1.5
Business/ Commercial	\$64,227,574	11.1%	3,776	4.8%	\$17,009	2.3

*Source: Ramsey County and City of Saint Paul, 2025*

**Table 8: Tax Capacity by Acre by Zoning Category with Industrial Land Adjustments**

	Total	% Total Tax Capacity	Total Acres	% Total Acres	Capacity Per Acre	Tax Capacity : Acre Ratio
All Industrial (Adjusted)	\$54,057,444	9.3%	1,434	5.7%	\$37,704	1.6
All Residential	\$379,231,473	65.5%	15,960	63.3%	\$23,761	1.0
Master Planned	\$9,085,328	1.6%	1,074	4.3%	\$8,459	0.4
Business/ Commercial	\$64,227,574	11.1%	2,143	8.5%	\$29,964	1.3

*Source: Ramsey County and City of Saint Paul, 2025*

The updated data shows the impact of productive industrial land in Saint Paul. With the adjustments complete, industrial land creates the highest value per acre in the city. The average industrial parcel generates \$14,000 more in tax revenues than the average residential parcel.

As a methodological note, Table 9 lists which zoning classifications fit into the larger categories in tables 5-8.

<sup>1</sup> Northspan staff conservatively counted 197 parcels totaling 769 acres of industrially zoned railroad land in the City of Saint Paul. This includes an adjustment in which one-half of parcels and their acreages that were split between industrial and non-industrial zoned land were counted in the final figure.

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Table 9: Individual Zoning Categories Included in Summary Table

Larger Category	Zoning Categories within Larger Category
Industrial	General Industrial Light Industrial IT with Master Plan Restricted Industrial Transitional Industrial
Residential	Residential One-Family Large Lot Residential Low-Density Multiple-Family Residential Medium-Density Multiple-Family Residential Ford Residential Mixed Low District Ford Residential Mixed Medium District Ford Residential Mixed High District Ford River Residential High-Rise Multiple-Family Residential
Master Planned	T1 with Master Plan T2 with Master Plan T3 with Master Plan
Business/Commercial	Central Business Central Business Service Community Business Community Business (Converted) General Business Local Business Office-Service

**Application of Revenues to City Budget**

With the share of tax base revenue derived from industrially zoned land established as 9.3%, we now proceed to analyze its contribution relative to other zoning classifications to the city general fund. We assume that revenues are evenly distributed across expenditure categories in the City of Saint Paul budget. In order to use full year data for usage of some city services in later stages of this analysis, we used the 2024 city budget, as it is the most recent full calendar year available. Table 10 details the contributions of taxes from industrially zoned land to each expenditure category.

Table 10: Revenues by City of Saint Paul Expenditure Category, 2024

Expenditure Category	Industrial Revenue	Non-Industrial Revenue	Total Revenue
City Attorney	\$1,131,285	\$10,979,916	\$12,111,201
Council	\$429,273	\$4,166,393	\$4,595,666
Emergency Management	\$505,267	\$4,903,965	\$5,409,232

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Financial Services	\$450,843	\$4,375,751	\$4,826,594
Fire and Safety Services	\$7,187,068	\$69,755,516	\$76,942,584
General Government Accounts	\$1,541,853	\$14,964,760	\$16,506,613
HREEO	\$401,641	\$3,898,203	\$4,299,844
Human Resources - Talent and Equity Resources	\$604,201	\$5,864,188	\$6,468,389
Mayor's Office	\$227,250	\$2,205,625	\$2,432,875
Parks and Recreation	\$4,339,301	\$42,115,941	\$46,455,242
Planning and Economic Development	\$87,901	\$853,144	\$941,045
Police	\$10,250,360	\$99,486,897	\$109,737,257
Public Works	\$4,060,258	\$39,407,643	\$43,467,901
Safety and Inspection	\$2,279,032	\$22,119,592	\$24,398,624
Technology	\$1,049,673	\$10,187,808	\$11,237,481
Library General Fund	\$2,165,394	\$21,016,664	\$23,182,058
<b>Total</b>	<b>\$36,710,600</b>	<b>\$356,302,006</b>	<b>\$393,012,606</b>

Source: City of Saint Paul Budget and Northspan Analysis

*Excluded from Analysis*

Due to data opacity, this research did not consider the implications of intradepartmental transfers, which are a regular feature of the City of Saint Paul budget. It also excluded debt service; while there are some details on debt service data in the city budget, it does not align neatly by expenditure category and may vary significantly from year to year, making it difficult to generalize about the relative impact of different sectors. City special funds are also excluded because they, by definition, do not derive from property tax funds.

**Cost of Services Relative to Other Land Uses**

To determine the industrial sector’s cost burden for City of Saint Paul services, this analysis followed methodology in a previous ICIC study. That report calculated the percentage of industrial sector users of city services as a percentage of daytime population in Saint Paul, with commuters counted as one-half of a resident to reflect the lesser demand for services from people who are only in the city part time. Using data from the 2022 American Community Survey and the Census’s OnTheMap commuting data tool (the most recent year for which OnTheMap data is available), the city had a population of 308,806 and an influx of 143,349 commuters, which, when the one-half usage ratio is applied, yields an adjusted daytime population of 344,643. The IMPLAN analysis in this report generated a total industrial employment figure of 31,448; OnTheMap data indicates that 9,276 individuals in “Goods Producing” industries and 14,169 people in the “Trade, Transportation, and Utilities” industries commute into Saint Paul from the outside. We use these combined figures as a proxy for total industrial commuters, and, when the one-half

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usage ratio is used for commuters, it produces an adjusted industrial employment of 19,726.

The adjusted industrial employment figure of 19,726 constitutes 5.7% of the Saint Paul adjusted daytime population of 344,643. We therefore apply a 5.7% cost to the industrial sector to most expenditure categories in the city budget. For several line items, however, we were able to gather more specific data or make other inferences based on knowledge and assumptions about service usage. These adjustments are outlined below.

#### *Police Call Data*

The Saint Paul Police Department provided data on Calls for Service (CFS) on all industrially zoned properties in Saint Paul, along with data on total CFS across the city. Industrial properties accounted for 7,491 CFS out of 241,404 total CFS, or about 3.1% of all calls. Moreover, over half of calls came from a handful of properties, many of which have nonconforming land uses, including over 2,000 at a police headquarters (which are a default location for walk-in CFS or other situations in which police are not responding directly to an address), plus very high volume at several gas stations, residential facilities, and offices. Of the 23 properties with over 40 calls, 19 involved non-industrial uses even under the broadest definition of the sector, and these 19 properties accounted for 61% of all CFS on industrially zoned land. Simply removing them from the figure drops the call volume for industrial properties to just 1.9% of total city CFS. The actual figure for industrial uses is almost certainly smaller due to the presence of additional non-conforming uses among lower call volume properties. We use the 1.9% figure in this analysis.

#### *Fire Department Call Data*

As with the Police Department, Saint Paul Fire Department provided data on all calls for the City of Saint Paul in 2024. Calls that were canceled were excluded from the dataset at the recommendation of the Department. Industrially zoned land accounted for 366 fire calls and 1,584 EMS calls for a total of 1,950 total calls. This figure accounts for 2.3% of the 84,321 uncanceled calls in 2024. We therefore use 2.3% as the share of the industrial sector's cost burden for the Fire and Safety Services expenditure category.

#### *HREEO*

The Human Rights and Equal Employment Office is designed to investigate workplace discrimination, assist with accommodations, enforce labor standards laws, and manage contracts and purchases in the City of Saint Paul. This analysis assumes concerns in these areas are evenly distributed across business sectors based on their proportions of overall employment. Drawing from the Economic Impact Modeling section above, this analysis applies 17.8% of the HREEO budget to the industrial sector and the remainder to all other sectors.

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*Public Works*

The previous ICIC analysis used a complex formula to analyze public works budget. It estimated that 30% of the department budget directly supported the commercial sector; of this, 68.5% of the budget could be attributed to industrial uses, given the substantial wear and tear on roads and infrastructure that can derive from industry. For the remaining 70%, ICIC used the standard ratio for other line items. Combining these figures yields a 24.5% cost share for the industrial sector.

*Parks and Recreation and Libraries*

Parks, recreational programming, and libraries in the City of Saint Paul are designed for, and almost exclusively used by, non-industrial users. They are amenities for local residents and, in some cases, visitors who are almost always using them for reasons unrelated to industrial work. Given these usage patterns, we apply 0% of the parks and recreation and library budgets to industrial uses.

With these assumptions in place, we developed the following expense figures:

**Table 11: Expenses by City of Saint Paul Expenditure Category, 2024**

Expenditure Category	Industrial Expenses	Non-Industrial Expenses	Total Expenses
City Attorney	\$ 693,179	\$ 11,418,022	\$ 12,111,201
Council	\$ 263,031	\$ 4,332,635	\$ 4,595,666
Emergency Management	\$ 309,595	\$ 5,099,637	\$ 5,409,232
Financial Services	\$ 276,248	\$ 4,550,346	\$ 4,826,594
Fire and Safety Services	\$ 1,769,679	\$ 75,172,905	\$ 76,942,584
General Government Accounts	\$ 944,749	\$ 15,561,864	\$ 16,506,613
HREEO	\$ 765,372	\$ 3,534,472	\$ 4,299,844
Human Resources - Talent and Equity Resources	\$ 370,215	\$ 6,098,174	\$ 6,468,389
Mayor's Office	\$ 139,244	\$ 2,293,631	\$ 2,432,875
Parks and Recreation	\$0	\$ 46,455,242	\$ 46,455,242
Planning and Economic Development	\$ 53,860	\$ 887,185	\$ 941,045
Police	\$ 2,085,008	\$ 107,652,249	\$ 109,737,257
Public Works	\$ 10,670,935	\$ 32,796,966	\$ 43,467,901
Safety and Inspection	\$ 1,396,444	\$ 23,002,180	\$ 24,398,624
Technology	\$ 643,172	\$ 10,594,309	\$ 11,237,481
Library General Fund	\$0	\$ 23,182,058	\$ 23,182,058
<b>Total</b>	<b>\$20,380,732</b>	<b>\$372,631,874</b>	<b>\$ 393,012,606</b>

*Source: City of Saint Paul Budget and Northspan Analysis*

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Calculating tax revenue by and expense to the city by expenditure category allows us to determine the overall impact of the industrial sector on Saint Paul's property tax revenues. The industrial sector pulls in over \$16,000,000 more in revenue than it creates in expenses for the general fund and Saint Paul's library budget, and every \$1 in tax revenue spent on services to industrially zoned land yields \$1.80 in tax revenue for the city. The combined effects of all other land uses, on the other hand, have a slightly negative impact on the city's general fund. Table 12 outlines this comparison.

Table 12: Comparison of Industrial to Non-Industrial Tax Revenue and Expense to City of Saint Paul

	Industrial Sector	Non-Industrial Sector
Revenues	\$36,710,600	\$356,302,006
Expenses	\$20,380,732	\$372,631,874
Revenue Less Expenses	\$16,329,868	\$(16,329,868)
Revenue to Expense Ratio	1.80	0.96

Source: *City of Saint Paul Budget and Northspan Analysis*

### Comparison of Net Revenues to Other Land Uses

As a follow-up to a discussion of results by sector, Northspan conducted a similar land use on all residentially zoned land in Saint Paul. Following the same method as we did for the industrial sector, we calculated the percentage of property tax revenue generated by residentially zoned land out of the overall tax base and applied it evenly to each expenditure item in the city budget to obtain the total revenue generated by the residential sector. We were then able to subtract out non-industrial commuters from the daytime population for the city to obtain an overall percentage of costs to the city generated by residents only. This figure of 76.9% was applied to most expenditure areas in the budget, with the following exceptions:

- Fire department and police shares of the budget were calculated as a percentage of daytime population after the industrial call data, which was known to be substantially lower, was removed. These calculations produced cost shares of 78.7% for fire and 78.3% for police, respectively.
- As the Human Rights and Equal Employment Office only addresses employer-based concerns, it was given a figure of 0%.
- As parks and recreation and libraries are primarily maintained for residents of Saint Paul, we applied 100% of costs to residentially zoned areas.

Table 13 compares the tax revenue generation and cost impacts of industrial land. As a frame of reference, we include all other land uses, which primarily encompass business and commercial uses but include some master planned, non-industrial mixed use zones.

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Table 13: Tax Revenue and Cost Comparison by Zoning Category in Saint Paul

	Revenue	Costs	Revenue Less Cost	Ratio	Revenue per Acre
Industrial	\$ 36,710,600	\$ 20,380,732	\$ 16,329,868	1.80	\$ 11,388
Residential	\$ 257,423,257	\$ 295,277,795	\$ (37,854,538)	0.87	\$ (2,372)
All Other	\$ 75,696,690	\$ 54,172,020	\$ 21,524,670	1.40	\$ 6,691

Source: City of Saint Paul Budget and Northspan Analysis

Table 13 shows the substantial benefits of industrial land relative to other uses. Together, all industrial parcels have a net benefit of over \$16 million to the city budget, while residential uses lose nearly \$38 million. All other uses also produce substantial revenue, though revenue per acre is substantially lower than it is for the industrial sector. The industrial sector also maintains a higher ratio of revenues to costs than other uses, and the revenue generated by an average acre of industrial land yields nearly \$14,000 more in tax revenue for the city than an average acre with a residential use.

**Background Research: Economic Benefits of In-Person Industrial Work**

An emerging body of academic research explores shifts in work arrangements and the impact of in-person and remote work options on local businesses, commercial real estate, tax base, and municipal finance. While most of these studies are in the context of Covid-19 era moves toward work from home arrangements, particularly as they affect core downtown areas, it is not difficult to extrapolate their relevance for the industrial sector.

Industrial sector jobs are more likely to be in person than those in many other sectors. A 2023 paper from Purdue University looked at Indiana state data and concluded that 12.5% of employees working from home in Indiana were in manufacturing; as this sector accounts for 18.3% of the overall workforce (according to 2023 five-year ACS data), it suggests that people in the manufacturing sector are nearly 1.5 times as likely to work in person than those in all other sectors.<sup>2</sup>

Table 14: Industries by Share of Teleworking Employees, September 2025

Industry	Percent Teleworking Some or All Hours
Finance, insurance, and real estate	53.3%
Information	48.0%
Professional and business services	45.7%
<b>Wholesale trade</b>	<b>28.1%</b>
<i>All industries</i>	22.3%

<sup>2</sup> Roberto Gallardo, “Research and Policy Insights: The Impact of Remote Work,” Purdue University Center for Regional Development, August 2023, <https://pcrd.purdue.edu/wp-content/uploads/2023/08/The-Impact-of-Remote-Work-1.pdf>.

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Public administration	20.6%
<b>Manufacturing</b>	<b>19.2%</b>
Health care and social assistance	18.4%
Other services	18.3%
Educational services	15.5%
<b>Transportation and utilities</b>	<b>11.3%</b>
Retail trade	10.9%
<b>Construction</b>	<b>10.2%</b>
Leisure and hospitality	8.1%

Source: Bureau of Labor Statistics Current Population Survey, 2025.<sup>3</sup>

National data from the Bureau of Labor Statistics (see Table 14) calculates remote work percentages by sector, and it underscores the trends found in the Purdue paper. Businesses in industrial industries are more likely to yield in-person work than many white-collar professional jobs, which have the highest rates of remote work. Industrial sectors such as manufacturing and wholesale trade are comparable to social service focused-jobs; the only sectors with notably lower remote work rates are in areas such as retail and leisure and hospitality, which are among the lowest-paying industries. Transportation and utilities and Construction, two more key components of the industrial sector, had remote work rates among the lowest of any of the sectors studied. The industrial sector is uniquely positioned to provide high-paying, in-person jobs.

Several studies also show measurable impacts of in-person work that can be applied to Saint Paul. A University of Chicago study suggests work from home will reduce spending by 5-10% in city centers,<sup>4</sup> with comparable impacts on tax base.<sup>5</sup> Althoff et al. (2022) find that areas with a high proportion of workers in what they call skilled scalable service (SSS) industries experienced significant declines in visits to local consumer establishments, such as hotels, restaurants, bars, and barbers during the pandemic. The change in foot traffic was accompanied by decreased consumer spending. Rents also fell by a greater amount in zip codes with a high proportion of workers in SSS industries.<sup>6</sup>

A 2023 Bureau of Labor Statistics report details the cascading impacts of a decrease in foot traffic stemming from an increase in remote jobs. “Percent teleworking has a positive and statistically significant effect on relocating and downsizing and a null effect on upsizing,” they write, noting the stabilizing effects of in-person work on the commercial real estate

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<sup>3</sup> Accessed from <https://www.bls.gov/web/empsit/cpseea42.htm>.

<sup>4</sup> Jose Maria Barrero, Nicholas Bloom, and Steven J. Davis. “Why Working from Home Will Stick,” University of Chicago Becker Friedman Institute for Economics, 22 April 2021, <https://bfi.uchicago.edu/working-paper/why-working-from-home-will-stick/>.

<sup>5</sup> Claudia Macaluso, “A Look at the Impact of the Work-From-Home Revolution.” Federal Reserve Bank of Richmond Economic Brief, August 2023, [https://www.richmondfed.org/publications/research/economic\\_brief/2023/eb\\_23-28](https://www.richmondfed.org/publications/research/economic_brief/2023/eb_23-28).

<sup>6</sup> Lukas Althoff, Fabian Eckert, Sharat Ganapati, and Conor Walsh, “The Geography of Remote Work,” National Bureau of Economic Research, January 2022, <https://www.nber.org/papers/w29181>.

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market. Their analysis also associates a 10% decrease in foot traffic with a 2.4% fall in housing rental prices, showing how the presence of in-person workers support the local housing market and, ultimately, its contributions to a growing tax base.<sup>7</sup>

Deeper analysis in this paper underscores the effects of specific industries on local economic activity and resulting tax capacity. Data comparing pre- and post-pandemic trends indicates that a 10% increase in foot traffic in a census tract (thanks to in-person workers) is correlated to a .9% increase in employment in the manufacturing sector and a 1.9% increase in the transportation and warehousing sector. The other leading industries (accommodation and food services, retail trade, and arts and entertainment) are all heavily dependent on in-person interaction. Other industries with more remote workers (e.g., information, professional and business services, and financial activities) show much weaker correlations between foot traffic and employment change. While we do not apply these foot traffic correlations to the analysis in the following section, we include them in the background research to further underscore the benefits of foot traffic and in-person work on the surrounding community.

### **Implications of Industrial Sector In-Person Work**

Given this research, it seems reasonable to expect that, absent other emerging trends or tax policy changes, the importance of in-person heavy employers for local tax base will only increase over time. Northspan found evidence to support this inference by analyzing two data points stemming from the data presented above: the change in the industrial sector's relative profitability to the city as a producer and consumer of tax revenue, and the tax implications of remote work on other parts of the city's tax base.

To determine the effects of remote work, Northspan applied remote work percentages from Table 14 to Saint Paul commuters to see how they altered previously calculated figures for the relative tax benefits of the industrial sector. Absent any downstream effects (e.g., the decision not to renew a lease leading to less revenue and, ultimately, lower taxes), the presence of remote workers do not directly affect the tax capacity of land. Relative expenses for the industrial sector, however, drop with remote work, as a large drop in daytime population in Saint Paul shifts a larger share of the tax burden on to residents of the city. This leads the revenue to expense ratio to increase for the industrial sector while declining slightly for the rest of the economy. Table 15 shows the combined effects of these changes when remote work is factored in relative to the initial impacts on tax revenues shown in Table 12. Should work from home rates increase in Saint Paul, this trend will only accelerate.

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<sup>7</sup> Dalton, Michael, Matthew Dey, and Mark Loewenstein, "The Impact of Remote Work on Local Employment, Business Relocation, and Local Home Costs," US Department of Labor Bureau of Labor Statistics Office of Employment and Unemployment Statistics, March 2023, <https://www.bls.gov/osmr/research-papers/2022/ec220080.htm>.

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Table 15: Comparison of Industrial to Non-Industrial Tax Revenue and Expense for City of Saint Paul with Remote Work Considerations Included

	Industrial Sector	Industrial Sector Pct. Change	Non-Industrial Sector	Non-Industrial Sector Pct. Change
Revenues	\$36,710,600	0.0%	\$356,302,006	0.0%
Expenses	\$19,712,533	-3.3%	\$373,300,073	0.2%
Revenue Less Expenses	\$16,998,068	4.1%	\$(16,998,068)	4.1%
Revenue to Expense Ratio	1.86	3.4%	0.95	-0.2%

Source: City of Saint Paul Budget and Northspan Analysis

To further analyze the implications of in-person versus work from home jobs, we made two adjustments to projected tax revenues based on the research presented in the previous section:

- A 5% decrease in tax capacity in the three zoning categories that comprise most of downtown Saint Paul and are home to many of the city's jobs most conducive to remote work: areas zoned B-4 (Central Business), B-5 (Central Business Service), and CA (Capitol Area Jurisdiction), per the most optimistic scenario in the University of Chicago study.
- A 2.4% decrease in housing rents and subsequent tax revenue across the city, per the 2.4% figure in the BLS study.

Table 16 shows the results of these changes on City of Saint Paul tax capacity.

Table 16: Effects of Work from Home vs. In-Person Adjustments on Total Tax Contribution by Select Zoning Classifications in Saint Paul, 2025

	Original Tax Contribution	Original Pct. Total Contribution	WFH Scenario Tax Contribution	WFH Pct. Total Contribution	Pct. Change Tax Revenue
All Industrial	\$54,057,444	9.3%	\$54,057,444	9.5%	0.0%
All Residential	\$379,231,473	65.5%	\$370,129,918	65.3%	-2.4%
Business/ Commercial	\$64,227,574	11.1%	\$61,536,375	10.9%	-4.2%
Total	\$578,722,677		\$566,929,923		-2.0%

Source: Ramsey County and City of Saint Paul, 2025; Northspan Analysis

These changes drop tax revenue collected from City of Saint Paul properties by nearly \$12 million, including declines of \$12 million for residential properties and \$3 million for business and commercial properties. These shifts raise the total contribution of the industrial sector to the city tax base from 9.3% to 9.5%; while this may not seem like a large figure, it leads the industrial sector to comprise a larger share of city revenue in order to maintain the same level of service.

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Table 17 shows this change when applied to the revenue and expense comparison in Table 15. In this scenario, the industrial sector produces more revenue for the city as it now comprises a larger share of the tax base. The resilience of in-person work in the industrial sector will only strengthen its relative importance if remote work trends accelerate, and the relative value of one acre of productive industrial land will also only increase.

Table 17: Comparison of Industrial to Non-Industrial Tax Revenue and Expense for City of Saint Paul with Remote Work Commuter and Tax Value Changes Taken into Consideration

	Industrial Sector	Industrial Sector Pct. Change	Non-Industrial Sector	Non-Industrial Sector Pct. Change
Revenues	\$37,336,198	1.7%	\$355,676,408	-0.2%
Expenses	\$19,712,533	0.0%	\$373,300,073	0.0%
Revenue Less Expenses	\$17,623,665	3.7%	\$(17,623,665)	3.7%
Revenue to Expense Ratio	1.89	1.7%	0.95	

Source: City of Saint Paul Budget and Northspan Analysis

Northspan cautions against quoting figures such as those in Table 17 with certainty over the level of impact. Our goal in this analysis was not to identify impacts with great specificity, but instead to seek out the trends of applying broader research to local data. We believe the framework presented in this section can lead to reasonable inferences about the relative stability of industrially zoned land as a tax revenue generator in a world where remote work is increasingly possible. The evidence shows strong positive spillover effects of in-person work on surrounding businesses and neighborhoods and underscores how their loss in other areas may require cities to lean further on industrial land to support their tax bases.

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### **About Northspan**

Northspan is a critical resource for businesses, organizations, and communities seeking dependable research, technical support, and financial assistance to advance their projects. Founded in 1985 during a period of economic hardship in northeast Minnesota, Northspan is a private, nonprofit consulting organization dedicated to strengthening businesses and communities across the Upper Midwest. For more than 30 years, Northspan has supported economic development through strategic partnerships, innovative thinking, and practical solutions that help communities build stronger, more resilient economies.

### **About Saint Paul Port Authority**

The Saint Paul Port Authority (SPPA) is an economic engine for Saint Paul and the entire state of Minnesota. It redevelops underused land into thriving business centers to bring jobs and tax base to Saint Paul; offers finance tools to help Minnesota companies become more energy efficient and resilient; and manages the Saint Paul Harbor on the Mississippi River, providing jobs and connecting the region to a global marketplace.